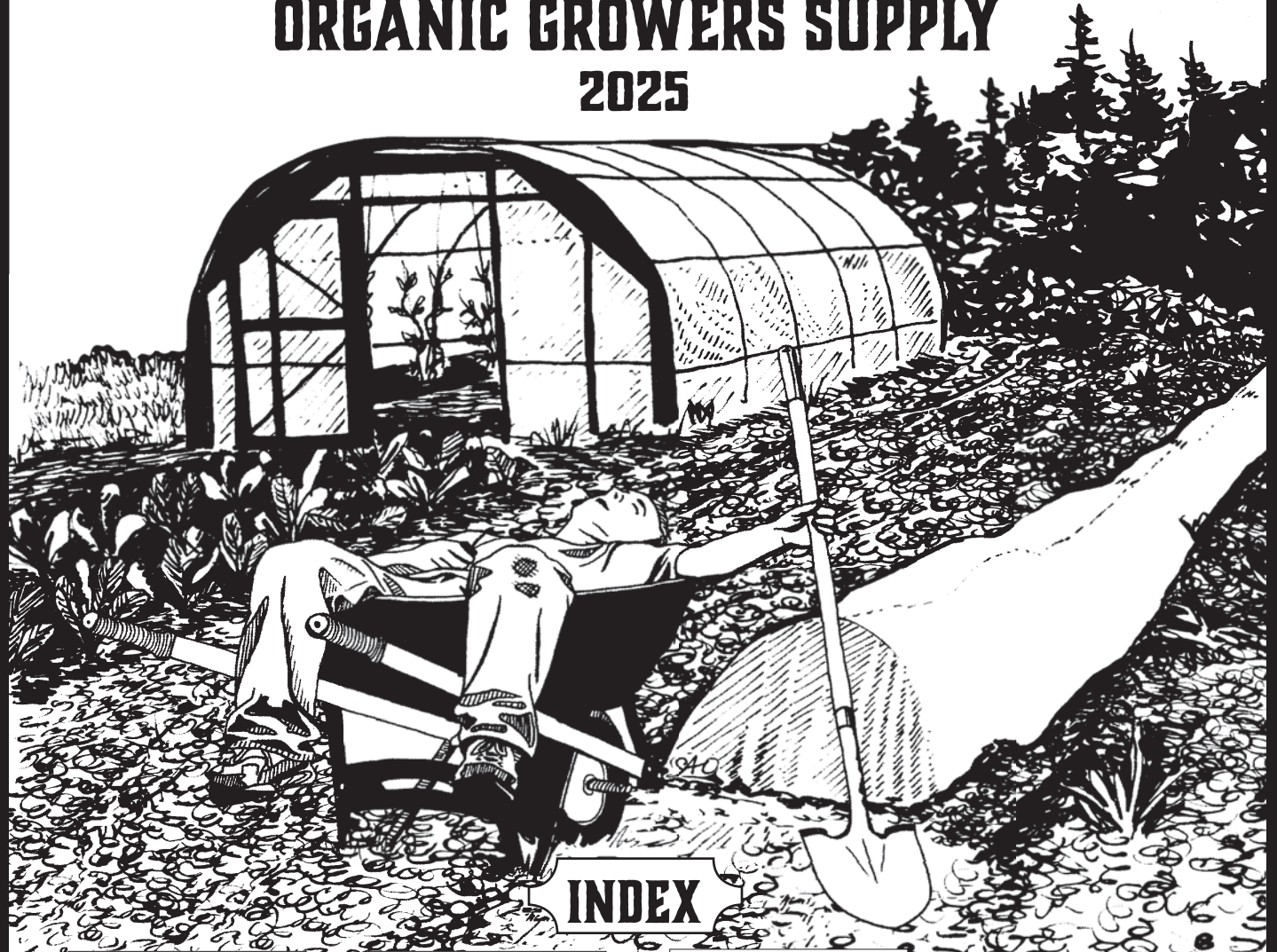


FEDCO SEEDS



Garden • Farm • Orchard

ORGANIC GROWERS SUPPLY 2025



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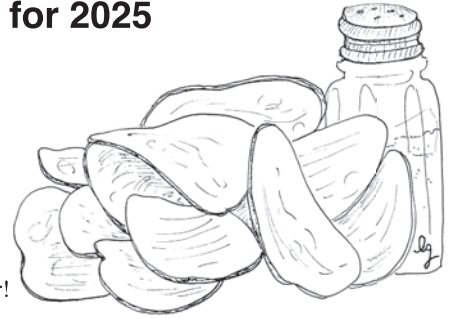
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ORGANIC GROWERS SUPPLY

NEW! Potatoes, Supplies and Books for 2025

- page item **Potatoes, Onions & Exotics:**
 119 7111 **Carla Rosa:** Giving Red Gold a run for its money!
 122 7006 **Maine Classics Collection:** Fill the root cellar!
 122 7007 **Blues Collection:** A sure-fire remedy for seasonal affective disorder!
 122 7008 **Chips Collection:** We're going all in on homemade potato chips?!
 122 7009 **New Potato Collection:** Potato salad for summer potlucks? Yes, please!
 122 7010 **Container Collection:** The best spuds to grow in a bucket!



- Cover Crops & Supplies:**
 128 8058 **Northern Growers' Winterkill Mix:** Organic winter soil protection that's to die for!
 128 8059 **Pea/Oat Mix OG:** Covercrop to give you peas of mind that can't be oat-done!
 131 8108 **Winter Triticale OG:** If you need coverage in winter, triticale will never fail!
 139 8316 **Tomato Sauce Fertilizer Mix:** Treat your tomatoes to this awesome sauce!
 141 8364 **Dirtcraft Peat-Free Levitation Seedling Mix:** Elevate your seedling game with a mix that can't be peat!
 141 8368 **Dirtcraft Peat-Free Critical Mass Supersoil:** In the canna-business, you gotta think critically so you don't get peat!
 143 8408 **Woven Tree Squares:** Weave your trees mulched and they won't be weft warped by weeds!
 143 8864 **15-Year Deer Fence:** Dear deer: your offense is no match for our defence!
 144 8869 **11" Fencing/Netting Ties:** How should you marry your fence to its posts? Tie the net!
 144 8882 **L-shaped Earth Staples:** It may seem L-ementary, but this L-egant design will L-evate your garden game!
 145 8879 **BioPlus Row Cover Weight Bag with Handle:** We finally got a handle on it—the innovation we've all been weighting for!

- 145 8881 **96" Galvanized Wire Hoops:** Wire you stuck on short hoops? Galvanize your garden tunnels with greater width and height!

- 151 8828 **High Domes with Light Tracks:**
 When they go low, we go high!

- 151 9890ff **2 1/2" Heavy-Duty Square Pots:**
 They sure are smokin' pots!

- 151 9897ff **5" Heavy-Duty Microgreen Trays:**
 We have zero doubt you'll love these trays... not even a micro-trace of doubt!

- 151 9903ff **Mega-Duty Bottom Trays:**
 The bottom will never fall out!

- 151 9910ff **Heavy-Duty Mesh Trays:** Deep or shallow, we dare you to mesh with these trays!

- 151 9918ff **Shallow Heavy-Duty Bottom Trays:** They're shallow, but only on the surface!

- 152 9880ff **SunPad Heat Mats:** You can't beat this heat, as a mat-ter of fact!

- 152 9885 **Temperature Controller for Heat Mats:** Set it, forget it, and the heat is on!

- 152 9860ff **Grow Light Stands:** A simple high-quality system we can stand by!

- 152 9875ff **LED Strip Grow Lights:** Strip down and grow light with these ultra-efficient, ready-to-use fixtures!

- 152 9869 **Adjustable Hanger for Grow Lights:** Our grow lights just called—they wanna hang out with your seedlings!

- 153 8779 **Garden Seed Storage Kit:** A storage unit for all your hopes and dreams!

- 153 8780 **Seed Starting Success Kit:** Your success starts here!

- 155 8998 **Pro Padded Fruit Picking Bag:** We like the way you work it, you go picking, then you got to bag it up!

- 159 9107 **Rubber Washers for Hose Fittings:** No doodad is too small to celebrate!

- 161 9387 **Vermont Glove Wool Liners:** Wool shearly be wearing these all winter!

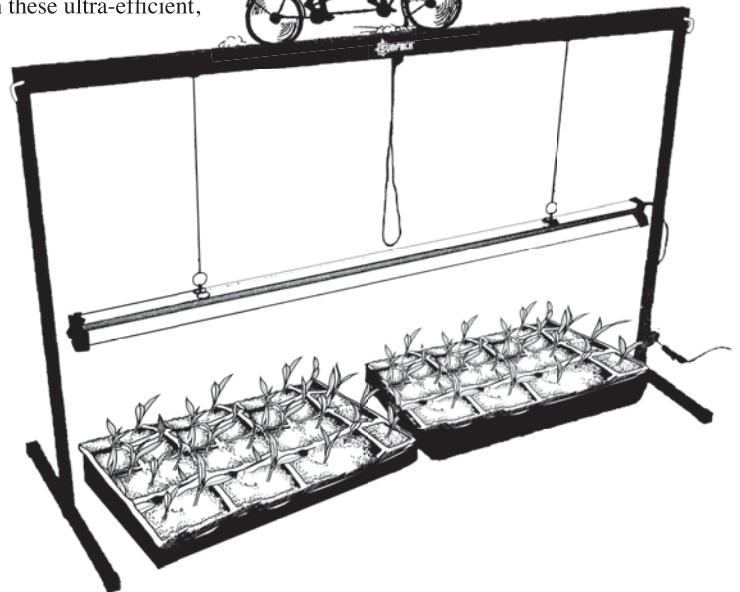
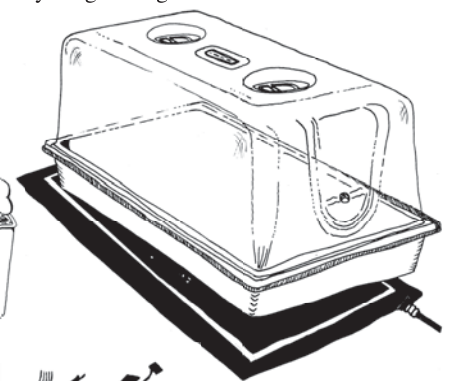
- 162 9412ff **Taters Gonna Tate Tee:** And these organic fibers ain't fake, fake, fake, fake, fake!

Books:

- 164 9540 **The Cut Flower Handbook**
 by Lisa Mason Ziegler

- 165 9587 **Grow Your Own Mushrooms**
 by Tavis Lynch

ff = and following



Supplier Codes Know where your seed comes from! This unique Fedco feature provides information about the source(s) of each seed variety. For more info about supplier codes, see page 4.

- ① Small seed farmers including Fedco staff.
- ② Family-owned companies or cooperatives, domestic and foreign.
- ③-⑤ None of our potatoes or farm seed comes from larger corporations!

Indigenous Royalties We pay royalties for products that bear Native American names. These royalties will go to Nibezun, a project of the Wabanaki community here in Maine. (See page 4.) This program is one small way to raise awareness of the agricultural traditions that predate European colonization of this continent and to support the descendants of those communities today.

So Many Ways to Save on Potatoes and Supplies!

Fedco is a big believer in the powers of planning and cooperation to save our customers money, and we offer many opportunities to do so:

Bulk Pricing - Most commercial customers and larger group orders can easily qualify for our bulk pricing program, which kicks in for Organic Grower Supply and Potato orders with a retail value of \$1200+. Bulk pricing offers discounts 10% off retail.

Fedco-wide Rolling Discounts - NEW this year!

Once you have ordered at least \$1,200 in products from Fedco, you will receive bulk pricing for a 12-month rolling cycle. Orders of any size from any Fedco division (Seeds, Trees, Bulbs, Potatoes, Supplies) will count toward this total.

Member Discount - Fedco co-op members receive a 5% discount on all orders. To join our cooperative, visit fedcoseeds.com/members.htm.

Group Ordering - Team up with friends and neighbors to save on shipping and to reach the bulk pricing threshold! Group orders can also share a pallet to reduce shipping costs. We make it easy and painless. For instructions, visit fedcoseeds.com/ogs/groups.htm.

Truck Shipping - For orders that weigh more than a few hundred pounds, shipping on a pallet instead of in a box usually offers the best rate on shipping. See page 174 for more info.

Depot Shipping - We have farms and storefronts throughout the Northeast lined up to accept pallet shipments of Growers Supply goods and seed potatoes so our customers can pick up their orders close to home at shipping costs up to 80% lower than FedEx rates. See page 174.

Special Ordering - Many of our soil amendments are available in bulk totes or full truckloads. We can also offer very reasonable prices on items special-ordered from our suppliers if we have enough lead time and don't need to warehouse the items for you. Contact us at ogs@fedcoseeds.com



POTATOES, ONIONS & EXOTICS SPRING PLANTING STOCK

The items on pages 116-122 ship in spring only.

Product availability is updated regularly at fedcoseeds.com. You'll find more ordering info on page 168. For mail orders, use the form on page 171.

- **Ginger** and **Turmeric** ship in late February.
- **Potatoes** and **Onion/shallot Sets** ship late March to early May.
- **Onion plants** and **sweet potato slips** are shipped based on your location, subject to our suppliers' field conditions; see next page.

Ordering Deadlines for Potatoes, Onions & Exotics

| | |
|--------------------|---|
| February 21 | For ginger and turmeric. |
| February 21 | For best availability of potatoes. Orders placed by Feb. 21 will ship according to planting zone. Orders placed after Feb. 21 ship in the order we receive them (after we ship orders above). |
| late spring | Ordering closes when we sell out. <i>Don't delay!</i> |



GROWERS SUPPLY

ORGANIC CERTIFICATION

We are a MOFGA-certified organic repacker and handler of seed and feed. Organically produced items (with **Organic** in the name) are certified by USDA-approved agencies. We have on file each grower's certificate; our products are labeled and handled in ways to ensure their integrity.

Conventionally grown seed is either untreated or coated with OMRI-listed coatings and inoculants. Certified-organic growers may be able to use such seed: consult with your certifier.

Agricultural inputs used on a certified-organic farm must be listed in your Organic System Plan and approved by your certifier. This does not necessarily mean that the inputs themselves are certified organic. We label the inputs we carry as follows:



OMRI: Listed by the Organic Materials Review Institute. Certificate available upon request, or on our website.

MOFGA: Reviewed and allowed by the Maine Organic Farmers & Gardeners Association Certification Services.

WSDA: Listed by the Washington State Department of Agriculture's Organic Certification division.

Nat'l List: One-ingredient products on the NOP List of Allowed Substances.

AYC: Ask your certifier. Has not been reviewed by a certifier, but the active ingredient is allowed.

Not Allowed: Has a place in sensible agriculture; may be used when certification is not an issue.

This information is correct to the best of our knowledge at press time. We cannot be responsible for errors or changes; changes are posted to our website as we become aware of them. In order to be certain that a product is allowed, check with your certifier.

Fedco Supports MOFGA

The Maine Organic Farmers and Gardeners Association is a broad-based community that educates about and advocates for organic agriculture, illuminating its interdependence with a healthy environment, local food production, and thriving communities. Fedco is a longstanding part of that community (we even inherited the Organic Growers Supply operation from them!) and a regular donor. We encourage you to join us in supporting them by making a donation when you place your OGS order.

What is Certified Potato Seed?

All certified seed potatoes start as disease-free clones and are sold to seed growers as mini-tubers. In Maine, seed potato growers are allowed to replant for four years before they need to start again with disease-free stock. Each year during the growing season, farmers seeking certification have their fields inspected for viral and bacterial diseases. After harvest the farmers must submit a sample of each variety for disease testing at the Maine Potato Testing Lab. To be labeled and sold as certified potato seed, lots need to be 100% free of certain pathogens and at least 95% free of others. **We sell only certified potato seed.**

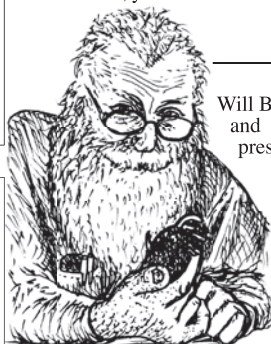
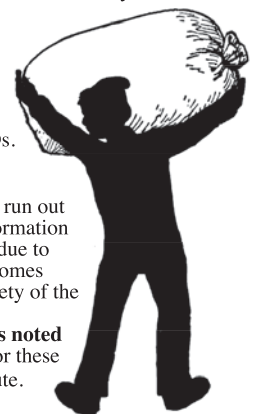
We also offer many varieties that are **certified organic**. Their growers have met both the standards of potato seed certification and the standards of organic production.

None of our potato varieties are genetically engineered. See page 5 for Fedco's policy on GMOs.

Substitutions

Potatoes are subject to crop limitations, and we will run out of some varieties. We strive to provide accurate information regarding stock levels, but availability may change due to factors beyond our control. If a specific product becomes unavailable, we may substitute it with a similar variety of the same or greater value, at no additional cost.

A few unusual varieties have no substitutes, as noted in their descriptions. If we cannot fill your order for these items, you will receive a refund instead of a substitute.



Fedco Supports the Scatterseed Project

Will Bonsall moved to Industry, ME, in 1971 to live simply and self-sufficiently. His Scatterseed Project hosts and preserves thousands of genetically diverse crops well-suited to Maine's seasons and soils. One of Will's main focuses is clonally propagated tubers with more than 700 varieties of potatoes and the most extensive Jerusalem artichoke collection in North America.

Scatterseed may be the only place on the planet where some of these varieties are still alive. To help keep Will's work going, consider making a donation when you place your potato order.

FARM SEED PLANTING GUIDE

| Item | Type | Best Uses ¹ | Planting Time ² | Optimum pH | Seeding Rate ³ /1000 sq ft | Seeding Rate ³ /acre | Nitrogen Fixation ⁴ | Organic Matter ⁵ |
|--------|--------------------------|------------------------------------|---|------------|--|------------------------------------|--------------------------------|-----------------------------|
| 8001 | Alfalfa, all types | hay, pasture, N-fix, OM, bees | 8+ weeks before FF | 6.5-7.0 | 1/2# | 15-25# | high | medium |
| 8004 | B&B Summer Mix | WC, OM | Early Summer | 6.0-7.5 | 2# | 75# | low | high |
| 8006ff | Barley | WC, food, SC-N, feed | Spring, soil at least 55° | 6.0-7.5 | 3-4# | 100-180# | — | medium |
| 8011 | Bell Bean | N-fix, OM, food, feed | Spring or Fall | 6.0-7.0 | 5# | 150-200# | high | medium |
| 8013 | BMR Sorghum/Sudangrass | pasture, OM, WC, SC-N, EC | Soil over 60° | 6.0-7.5 | 2# | 40-80# | — | high |
| 8019 | Buckwheat, common | food, bees WC, SC-P | 80-90 days before FF LF to 4 weeks before FF | 6.0-6.5 | 1# | 40-60# | — | low |
| 8020 | Camelina | bees, SC, food, feed | 2 wks before to 2 wks after FF | 5.6-6.5 | 1/4# | 5-10# | — | low |
| 8022 | Chicory, Forage | pasture | Soil over 55° | 5.5-7.5 | 1/4# | 10# | — | low |
| 8025 | Clover, Crimson | pasture, hay, N-fix, WC, bees | Soil over 65° | 5.0-8.0 | 1-2# | 25-50# | high | medium |
| 8028ff | Clover, Red, all types | N-fix, hay, pasture, OM, bees | Soil over 50° | 6.0-7.5 | 1/2# | 15-20# | medium | medium |
| 8037ff | Clover, White, all types | pasture, N-fix, OM, lawn, EC, bees | Late Winter to FF | 6.5-7.5 | 1/4-1/2# | 4-15# | medium | medium |
| 8046 | Clover, Yellow Sweet | N-fix, OM, bees | Spring & Summer | 6.0-8.0 | 1/2# | 15-20# | high | medium |
| 8058 | Northern Winterkill Mix | N-fix, WC, EC, SC | Late Summer | 6.0-7.0 | 5# | 150-200# | medium | high |
| 8059 | Pea/Oat Mix | N-fix, OM, WC | Soil over 50° until Late Summer | 6.0-7.0 | 5# | 150-200# | medium | high |
| 8060 | Cover Crop Cocktail | OM, SC, WC | MS to FF | 5.5-7.5 | 1-2# | 50-75# | medium | high |
| 8061 | CR Lawn Mix | lawn, orchard groundcover | LF to MS | 6.0-7.0 | 3-4# | 100-150# | low | medium |
| 8062 | Magic Carpet Mix | OM, WC, bees, SC, EC | Early to Mid-Spring | 6.0-7.0 | 1/2# | 25# | medium | medium |
| 8064 | Millet, Japanese | WC, OM, SC, silage, hay, pasture | 2 wks before LF, to MS | 5.5-6.0 | 1# | 40-60# | — | high |
| 8070 | Mustard | PC, SC | Spring to FF | 5.5-8.3 | 1# | 15-25# | — | low |
| 8076ff | Oats, all types | WC, OM, straw, feed | Soil over 50°, Spring to FF | 5.0-6.5 | 3-4# | 100-150# | — | high |
| 8088 | Orchard Grass | pasture, hay | Late Winter to Late Summer | 5.8-7.5 | 1# | 20-40# | — | high |
| 8094 | Pasture Mix | pasture | Mid-Spring to Late Summer | 6.0-7.0 | 1# | 40-50# | low | high |
| 8097 | Pea, Field/Forage | pasture, silage, N-fix, WC | Spring, soil over 45° | 6.0-7.0 | 5# | 100-200# | medium | low |
| 8103 | PVO Mix | OM, N-fix, WC | Mid-Spring to Late Summer | 6.0-7.0 | 5# | 150-200# | medium | medium |
| 8105 | Radish, Daikon | SC, EC | Late Summer to FF | 6.0-7.5 | 1/2# | 5-15# | — | low |
| 8109 | Rye, Winter | OM, WC, SC, food, EC | 2 wks before to 2 wks after FF | 5.0-7.0 | 3-5# | 100-200# | — | high |
| 8112 | Rye/Vetch Mix | N-fix, OM, WC, EC | 2 wks before FF to FF | 6.0-7.0 | 2-3# | 80-100# | low | high |
| 8121 | Ryegrass, Annual | OM, WC, EC, SC-N | Soil over 50° | 6.0-7.0 | 1-2# | 25-35# | — | high |
| 8124 | Ryegrass, Perennial | pasture, WC, OM, EC, SC-N | 2 weeks before LF, to FF | 5.2-8.0 | 1-2# | 30-60# | — | high |
| 8133 | Sunn Hemp | OM, N-fix, PC | Soil over 60°, to Late Summer | 5.0-7.5 | 1-2# | 30-50# | medium | medium |
| 8136 | Timothy | hay, pasture | Mid-Spring to Late Summer | 5.5-7.0 | 1/2# | 12-15# | — | high |
| 8108 | Triticale, Winter | OM, WC, SC, EC, feed | 2 wks before to 2 wks after FF | 6.0-7.0 | 3-5# | 100-200# | — | high |
| 8139 | Vetch, Hairy | N-fix | Mid-Spring to FF | 6.0-7.0 | 1# | 25-40# | medium | low |
| 8143 | Wheat, Spring | OM, food | Soil over 50° | 6.0-7.0 | 3-4# | 100-125# | — | medium |
| 8149ff | Wheat, Winter | OM, WC, food, feed | 2 wks before FF to FF | 6.0-7.0 | 3-4# | 100-150# | — | medium |

ff=and following



Our costs fluctuate with the weather, transportation costs and availability. We will make every effort to honor the prices published in the catalog, but if we have to purchase additional inventory we will adjust prices accordingly. See our website for the most current prices or call 207-426-9900 if you have questions.

fedcoseeds.com

Where variety is not stated, plant characteristics may vary. We purchase seed from multiple suppliers based on price and availability.

Chart Key:

¹Best Uses:

- bees:** provides bee forage for honey production
- feed:** produces a grain or bean suitable for animal consumption
- food:** produces a grain or bean suitable for human consumption
- EC:** erosion control—roots hold soil well
- hay:** maintains nutritional quality when dried
- lawn:** suitable for heavy traffic areas, withstands mowing
- N-fix:** green manure fixes nitrogen, available to subsequent crops when tilled into soil
- OM:** organic matter—soil builder green manure, produces fibrous biomass and improves soil structure
- pasture:** superior nutrition and yield, withstands grazing
- PC:** pest control—reduces insect, disease, or nematode pressure
- SC:** scavenger crop—quickly takes up nutrients from soil, preventing their loss to erosion or leaching. **N:** nitrogen, **P:** phosphorus
- WC:** weed control—physically out-competes or chemically inhibits weeds

²Planting Time:

- LF = Last Frost in spring
- FF = First Frost in autumn
- MS = Midsummer

³Seeding rates are based on drilled seed in organically managed fields. Seeding rates vary depending on crop use, timeliness of planting, method of seeding, weed pressure, soil conditions, seed size, and whether the crop is planted alone or in a mix.

- If you need help figuring out what seeding rate to use, please give us a call.
- For most seed, use the smaller amount in mixes and the larger amount solo.
- For broadcasting, increase 20–25%.
- For use in precision planters, decrease 10–50%.
- For late planting, increase 20–50%.
- For forage or weed control uses, increase 30–50%.

⁴**Nitrogen Fixation:** Rhizobial bacteria form symbiotic relationships specifically with the roots of leguminous crops to convert atmospheric nitrogen (which is unavailable to plants) to ammonia and nitrates (which are available to plants). Legumes can often furnish nearly all of their own nitrogen needs this way—exactly how much depends on the species, the soil structure, and weather conditions. If the crop is removed from the field, the fixed nitrogen is removed as well, with little or no residual added nitrogen remaining in the soil; however, if the crop is turned in and incorporated into the soil, the fixed nitrogen is added to the soil and is available in slow-release forms to the following crop. Legume species have varying capacity to fix atmospheric nitrogen.

⁵**Organic Matter, or Biomass:** These ratings reflect relative quantities of fibrous biomass. Succulent biomass makes a rapid contribution to available soil nutrients but does not contribute to the long-term carbon content of the soil. Fibrous biomass helps build humus, which improves soil texture and increases nutrient-holding capacity.

FARM SEED

See individual seed descriptions, alphabetized by common name, for more information about specific uses.

Cover Crops By adding sustainable sources of energy, such as soil amendments, organic fertilizers and cover crops that feed the soil, we enhance the health of our crops and ultimately ourselves. Green manures take up and store nutrients to be used by subsequent crops, suppress weeds, host beneficial insects, improve the structure and arability of the soil, and can even break up clay and hardpan. For cover crops, consider legumes (alfalfa, bell beans, clovers, peas, sunn hemp and vetch), grains (barley, Japanese millet, oats, rye, wheat and triticale), a few other special crops like BMR sorghum, buckwheat, camelina, mustard and daikon radish. Check out our cover crop mixes **8004 B&B Summer Mix**, **8058 Northern Growers' Winterkill Mix**, **8059 Pea/Oat Mix**, **8060 Cover Crop Cocktail**, **8062 Magic Carpet Mix**, **8103 PVO Soil-Building Mix**, and **8112 Vetch/Winter Rye Mix**.

Perennial Pasture Intensive rotational grazing allows the farmer to raise more animals per acre and reduces parasite loads, while maximizing the pasture's potential as a carbon sink. (See "Impacts of soil carbon sequestration on life cycle greenhouse gas emissions in Midwestern USA beef finishing systems" in *Agricultural Systems*, May 2018 issue.) For best results, reseed or overseed your perennial pastures at least once every 5 years. Consider **8094 Pasture Mix**, clovers, orchard grass, perennial ryegrass, timothy, tall fescue and chicory.

Perennial Hay Species for perennial hay are selected for hardiness, yield, ease of drying, palatability, and nutritional benefit. Begin your first cut as early as possible. Hay is at its prime when the plants are in the early flowering stage—while grass yields will increase after this point, quality and digestibility will decline sharply. An early first cut also increases the chance of getting that prime leafy second-cut hay in August or September. Consider alfalfa, crimson clover, Freedom red clover, orchard grass and timothy.

Annual Forage Producers seeking higher yields, top-quality feed and more rotation options in their field crops have begun turning more often to annual forages. These stands may be used for grazing, ensiling, baling or dry hay depending on your situation and equipment. Annual forages may also be used to help establish perennial hay or pasture, protecting the slower-growing perennials while allowing a harvest the first year. Consider BMR, chicory, mammoth red clover, Japanese millet, oats, peas, rye, triticale and annual ryegrass.

Grain for People There is a ready market for local food-grade grain suitable for brewing or baking; larger-scale growers are selling to specialty mills, while smaller growers are having grain custom-harvested and then milling their own "estate-grown" flours for sale at farmers markets. Many grains may even be grown in small gardens and processed with minimal investment for home use. Consider barley, buckwheat, camelina, oats, rye and wheat. Find more seed for specialty grains for human consumption on page 31 of the Seeds section.

Grain for Feed Grains are essential to growing hogs and poultry, whose single stomachs do not handle a high-fiber forage-based diet well. In ruminants, grains support high milk production, speed growth rates, and improve body condition, especially during the winter when energy demands are higher and forage quality lower. Consider barley, bell beans, buckwheat, camelina, field corn, oats, peas and wheat.

Pollinator-Friendly Crops Planting flowering crops on "idle" ground is a gift to your bees. Choosing a number of different cover crops that bloom at different times of the season will ensure your bees have a constant source of food. Consider alfalfa, buckwheat, camelina, clovers, mustard, daikon radish and vetch.

Lawn Seed You can't quite plant your entire yard to vegetables, herbs, flowers, berries and fruit trees, because then there would be no place for your reclining lawn chair and bocce tournaments. Try **8061 CR Lawn Mix** and Dutch white clover.

Alfalfa - Organic *Medicago sativa* Perennial legume. Up to 3' high. This fragrant plant with beautiful purple flowers is a favorite for multi-year stands. Home gardeners like to cut it and add it to their compost piles. Herbalists consider it a valuable nutritive tonic. Excellent feed for all classes of livestock. Best suited to light well-drained soils; establishment and winter survival will be inhibited by heavy or wet soils because alfalfa's taproot makes it susceptible to heaving. Delicate seedlings benefit from a nurse crop of barley or oats. Seed at 25#/acre, 15# in mixes, 1/2#/1000 sq ft. For best results, we recommend using **8158 Alfalfa/Clover Inoculant**. ①②

As perennial hay: Typically interplanted with grass in organic systems. Often rotated with field corn on livestock farms (2–3 year alfalfa stand followed by 1–2 years of corn).

As cover crop: An excellent choice to build organic matter and nitrogen in fields that will be taken out of production for more than one year. Regular mowing will help deter quackgrass and annual weeds.

8001 A: 0.5# (0#) for \$11.50 B: 2# for \$36.00
C: 10# for \$115.00 E: 50# for \$479.00

B&B Summer Mix Maybe "B&B" conjures images of a restful weekend with late-morning French toast on a sunny porch, or maybe you're a devotee of the fine digestif blend of Benedictine and brandy. Here, the Bs stand for buckwheat and BMR sorghum/sudangrass, plus we threw in enough sunn hemp to fix a little nitrogen (but not enough to ruin the alliteration). This popular **cover crop** blend reliably winter-kills. A first-rate smother crop and biomass builder. Perfect for areas where a cash crop has failed or weeds have taken over. Loves heat. Plant in June or July and mow when the buckwheat is in full flower. Till after the residue has broken down some if you want to plant a late-season crop, or mow periodically through the fall. The stubble will die back over the winter and you will enjoy weed-free high-till soil next spring. Availability of BMR sorghum/sudangrass has been spotty; we may substitute **8064 Japanese Millet** at our discretion. Plant at 75#/acre or 2#/1000 sq ft. ②

8004 A: 0.5# (0#) for \$8.50 B: 2# for \$12.50
C: 10# for \$50.00 D: 45# for \$155.00

Hullless Barley - Organic *Hordeum vulgare* Annual spring grain. Up to 4' high. Moderately frost-hardy. This barley is truly hullless, meaning you thresh it like wheat and it separates from the plant with no outer husk clinging on. Not having to remove the hulls means much less processing, which in turn means all the bran and germ are retained for maximum nutrition and depth of flavor. As a **food grain**, it takes a bit longer to cook than pearled barley, but we prefer the taste and texture of hullless! Our grower calls this variety Tibetan Hullless, and it is said to have entered the U.S. in the pocket of a servicemember returning home from a tour of duty. Tolerates drought and alkaline or heavy soils. Does not tolerate wet or acidic soils. Fast growing, it competes well with weeds and can mature faster than winter wheat. Some resistance to lodging. Ready to harvest as early as the end of July in Maine. Seed as early as the soil can be worked at 150–180# per acre, 3 1/2–4# per 1000 sq ft. ①

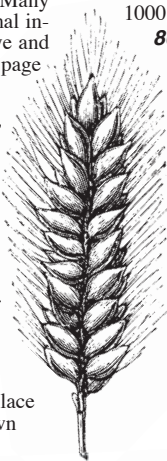
8006 B: 2# for \$16.00
C: 10# for \$46.00
D: 45# for \$149.00

Barley - Organic *Hordeum vulgare* Annual spring grain. Up to 3' high. Moderately frost-hardy. Tolerates drought and alkaline or heavy soils. Does not tolerate wet or acidic soils. May be planted later than other spring-sown small grains and maintain good yields. Seed from early May to mid-June at 100–125# per acre, 3#/1000 per sq ft. ②

As food grain: Suitable for malting—a local home brewer told us "when brewed with Cascade hops from Fedco Trees, it made excellent ale." Requires commercial dehulling to use as a cooking grain or flour.

As feed grain: More reliable in Maine's climate than corn or wheat, with nearly as much feed value, and better feed value than oats.

8007 B: 2# for \$13.00
C: 10# for \$28.00
E: 48# for \$79.00



Organic following an item name means the seed is certified organically grown. *All our seed is free of fungicide treatments.*

Supplier Codes Know where your seed comes from! This unique Fedco feature provides information about the source(s) of each seed variety. We source our farm seed from organic producers in Maine whenever possible; otherwise we buy from family-owned companies in the mid-Atlantic and the Midwest. For more info about supplier codes, see page 4.

- ① Small seed farmers including Fedco staff.
- ② Family-owned companies or cooperatives, domestic and foreign.
- ③-⑤ None of our farm seed comes from larger corporations!

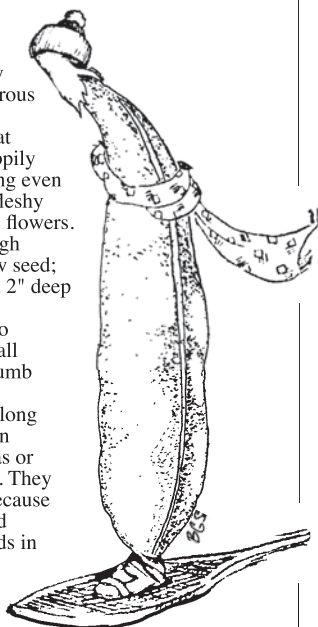
Bell Beans *Vicia faba* Annual or winter annual legume. Up to 5' high.

Frost-hardy. Bell beans (aka small-seeded fava beans) are like 8133 Sunn Hemp's tough cousin—the one with the full sleeve tattoos who hiked the Appalachian trail in the winter. Like sunn hemp, bell beans boast unusual versatility—by fixing atmospheric nitrogen and building generous amounts of carbonaceous biomass. But while sunn hemp is a tropical beauty who crumples at the first sign of frost, hardy bell beans will happily sprout in half-frozen soil and may keep growing even after the first snows. Stiff-stalked plants with fleshy glabrous leaves and pretty purple-tinged white flowers. Tolerates a wide range of soil conditions, though sensitive to heat and drought at flowering. Raw seed; use with 8161 Field Pea/Vetch inoculant. Seed 2" deep at 150-200#/acre, 5#/1000 sq ft. ②

As cover crop: Plant in very early spring to mow and incorporate at flowering, or in mid-fall to protect soil from fall rains before they succumb to cold at 10–15°.

As feed grain: In temperate climates with long cool springs or warmer winters than we have in Maine, bell beans are a great alternative to peas or soy; plant in late fall for harvest in mid-spring. They don't perform well as a grain crop in Maine because they won't survive winter and if spring-planted tend to drop their blossoms without setting pods in temperatures over 70°.

- 8011 B: 2# for \$8.00
- C: 10# for \$32.25
- E: 50# for \$97.00



BMR Sorghum/Sudangrass - Organic *Sorghum x drummondii* Annual grass. Up to 6' high. Will survive light frost. A vigorous, competitive and adaptable hybrid annual that likes heat and high fertility. Grows best in warm weather when other grasses slow down. Seed at 40–80#/acre, 2#/1000 sq ft when soil is thoroughly warmed. ②

As cover crop: Unsurpassed weed suppression and enormous amounts of organic matter.

As annual forage: BMR can outyield corn as a silage crop, especially when conditions are either too wet or too dry for optimum corn performance. Fields planted to BMR will suffer less soil erosion than fields planted to corn. Cut at 3–4' high for best quality. BMR silage tests at about 15% crude protein, with better fiber digestibility and only slightly lower total energy than corn. Tolerates mowing and can be used for hay, though it is high in moisture and must be conditioned to dry down properly. Severe drought and frost can increase prussic acid content to dangerous levels: do not feed to livestock under these conditions. Horses should not be grazed on pastures with sorghum or sorghum-sudangrass hybrids, nor should they be fed hay containing these species, to avoid poisoning.

- 8013 B: 2# for \$12.75
- C: 10# for \$55.75
- E: 50# for \$180.50

Buckwheat, Common - Organic *Fagopyrum esculentum*

Annual broadleaf. Up to 4' high. Frost-sensitive. Large-seeded Japanese buckwheat with short maturity will tolerate most conditions, including soil pH as low 4.8. Bees like its abundant nectar. As a cover crop, seed at 80–120#/acre, 3#/1000 sq ft. As a grain crop, seed at 40–60#/acre, 1–2#/1000 sq ft. ③②

As cover crop: Excellent smother crop. Short maturity allows 2–3 crops per season. Should be mowed short or tilled in before it sets seeds. Responds well to fertility, holding it for subsequent crops. Makes calcium and phosphorus available for the next crop. Loosens clay soils. This juicy low-cellulose plant does not help build organic matter.

As food grain: Buckwheat is indeterminate and will have mature seeds, green seeds and flowers simultaneously. When a majority of seeds are mature, scythe or swath the crop and field-dry for as long as possible before harvesting with a pickup head or threshing by hand. Buckwheat seeds are about 20% hull, which is removed during commercial milling, but the whole seed may be ground for flour if you don't mind a coarser texture and some black flecks.

As feed grain: High levels of lysine compared to other non-legumes can make buckwheat a valuable part of the ration. High in fiber and unsaturated fats. Contains a compound, fagopyrin, that can cause photosensitivity in light-skinned animals: restrict to less than 30% of the diet.

- 8019 B: 2# for \$12.50
- C: 10# for \$43.00
- D: 45# for \$125.00



Winter Camelina *Camelina sativa*

Also called **Gold-of-Pleasure**. Winter annual brassica.

Up to 3' high. Very hardy; seed can germinate at soil temperatures as low as 34°, and the plants overwinter as well as rye. Widely adaptable and versatile cover crop and oilseed plant. Native from Finland to Romania and east to the Ural mountains. Young plants grow in a rosette form, similar to mache; as plants mature, they stretch into fibrous stalks with branching golden inflorescences like mustard. Tolerates low fertility and drought, and not very susceptible to pests or disease. Does not like wet feet. Plant when you would plant winter rye, around first fall frost. Late-planted camelina can germinate in spring instead of fall and still produce a crop. Small seeds and delicate seedlings: can be difficult to establish. It is best not to plant camelina in rotation with other brassica crops such as cabbage, broccoli, and radish because the latter are susceptible to similar diseases. Seed no more than 1/2" deep at 5–10#/acre, 1/4# per 1000 sq ft. ②

As cover crop: May be interseeded into late-harvested crops without offering as much competition as rye. It is a very effective nutrient scavenger, holding excess soluble nitrogen for the following year's crops instead of allowing it to leach and damage groundwater quality. Very attractive to bees and other beneficial insects; blooms in early to mid-spring before other nectar-producing flowers. Not very competitive with weeds but it's a better nutrient scavenger than radishes and tolerates drought better than mustard.

As food: Seed is ready to harvest in early summer. It may be direct-combined but the little seeds easily leak from unsealed cracks and crevices in machinery: liberal use of duct tape is recommended. Seeds are approximately 40% oil by weight. Oil is very high in vitamin E and omega-3 fatty acids. Seed yields in Minnesota are around 1700#/acre.

As feed: Seed meal may be fed as up to 10% of the diet for cattle and chickens. May greatly increase the omega-3 fatty acid content of eggs and dairy products, but it will reduce growth rates in hogs.

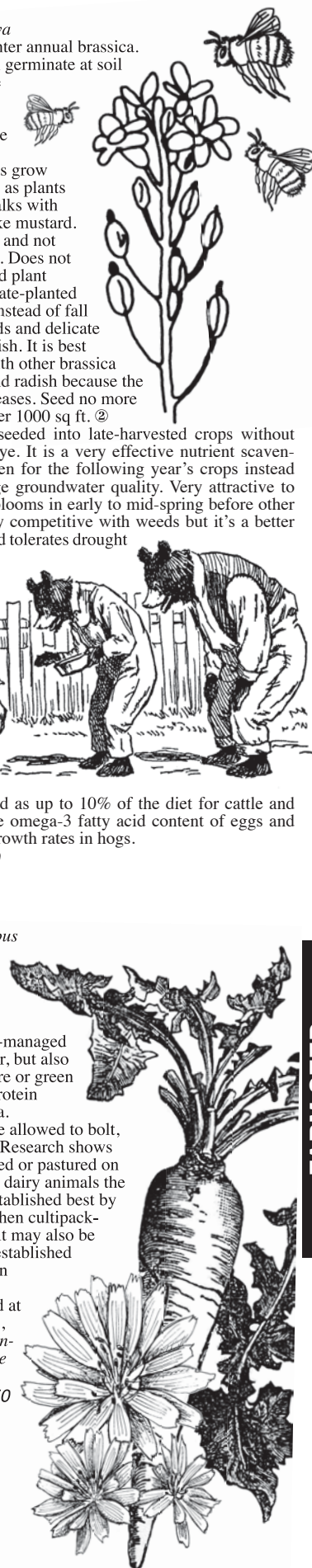
- 8020 A: 0.5# (0#) for \$9.50
- B: 2# for \$24.00
- C: 10# for \$86.00
- E: 50# for \$279.00

Forage Chicory *Cichorium intybus*

Perennial broadleaf. Up to 18" (flower stalks up to 6'). Tap-rooted plant with bright blue flowers suited to well-drained moderately acidic soils.

Annual or perennial forage: well-managed stands may persist 5 years or longer, but also valuable in annual stands for pasture or green chop. Very high digestibility and protein levels up to 50% higher than alfalfa. Digestibility is reduced if plants are allowed to bolt, but the flowers are very attractive! Research shows reduced parasite loads in animals fed or pastured on chicory. If large amounts are fed to dairy animals the milk may taste bitter. Chicory is established best by drilling 1/2" deep or broadcasting, then cultipacking, into a well-prepared seedbed; it may also be no-till drilled or frost-seeded on established pastures early in the season. Begin grazing when the plant is 8–10" high, and graze down to 1–2". Seed at 10#/acre alone, or 3#/acre in mixes, 1/4#/1000 sq ft. We usually source inoculated seed; please check website for current status. ②

- 8022 A: 0.5# (0#) for \$12.50
- B: 2# for \$33.50
- C: 10# for \$118.00
- E: 50# for \$475.00



FARM SEED

If shipping weight in parentheses is (0#), the item qualifies for free shipping!



CLOVER

Trifolium spp. (except Yellow Sweet Clover)

The *Trifolium* genus is home to more than 300 species, and most are native to the northern hemisphere. Clover is versatile, performs well in Maine's cool humid climate and acidic soils, fixes atmospheric nitrogen, and attracts pollinators. The taller red clovers are better hay plants, with more erect habit and greater biomass, and they dry more easily. Red clover blossoms, fresh or dried, make one of our favorite teas. White clovers perform better in pastures and lawns, as they tolerate close mowing (or nibbling) and heavy traffic.

No matter what kind of clover you choose, be sure to plant plenty to increase your chances of finding those lucky four-lobed specimens: a survey of approximately 7 million clovers found that 1 in 5,000 clover leaves exhibit this trait!

Clover may be planted from late winter through early fall. Seedlings are slow to establish and will benefit from a nurse crop of oats. If annual weeds come up with your clover, all is not lost: keep the plot regularly mowed and by midseason the clover will have outcompeted the weeds. See our website for more info about varieties.

Some of our clovers are pre-inoculated and clay-coated with an OMRI-approved coating, but for best results with all clovers, we recommend using **8158** Alfalfa/Clover Inoculant.

Crimson Clover *T. incarnatum* Tender biennial legume. Up to 18". Vigorous clover for cover cropping and bee forage. Stunning crimson spikes make good cutflowers. Biennial, often but not always winter-killed in Maine. Seed 25–50#/acre, 1 1/2#/1000 sq ft. ②

8025 A: 0.5# (0#) for \$7.50 B: 2# for \$15.00
C: 10# for \$65.00 E: 50# for \$229.00

Freedom Red Clover *T. pratense* Short-lived perennial legume. Up to 24". High-yielding red hay clover with glabrous stems for fast dry-down. Seed at 15–20#/acre alone, 8–10#/acre in mixes, 1/2#/1000 sq ft. ②

8028 A: 0.5# (0#) for \$10.00 B: 2# for \$26.00
C: 10# for \$119.00 D: 25# for \$249.00

Mammoth Red Clover - Organic *T. p.* Biennial legume. Up to 36". Vigorous red clover for cover cropping or grazing. Seed early at 15–20#/acre alone, 5–10#/acre in mixes, 1/2#/1000 sq ft. ②

8031 A: 0.5# (0#) for \$8.50 B: 2# for \$18.00
C: 10# for \$80.50 E: 50# for \$298.00

Medium Red Clover - Organic *T. p.* Short-lived perennial legume. Up to 24". Red clover for underseeding or grazing. Seed 15–20#/acre alone, 8–10#/acre when mixed with grass seed, 10–12#/acre in undisturbed sod, 1/2#/1000 sq ft. ②

8034 A: 0.5# (0#) for \$10.00 B: 2# for \$22.00
C: 10# for \$99.00 E: 50# for \$375.00

Alice White Clover *T. repens* Perennial legume. Up to 4–8". Vigorous large-leaved white clover. Readily self-seeds. Excellent for improving soil quality in areas transitioning from woody growth; plant with **8121** Annual Ryegrass for this purpose. Frost-seed at 4–5#/acre, or 2–3# when mixed with grasses, 1/4#/1000 sq ft. ②

8037 A: 0.5# (0#) for \$11.50 B: 2# for \$29.00
C: 10# for \$115.00 D: 25# for \$295.00

Dutch White Clover *T. r.* Perennial legume. Up to 6". The lowest-growing white clover. Recommended for lawns and living mulch. Shade-tolerant. Seed at 5–10#/acre, 1/2#/1000 sq ft. ②

8040 A: 0.5# (0#) for \$10.75 B: 2# for \$28.00
C: 10# for \$124.50 D: 25# for \$245.00

Ladino White Clover *T. r.* Perennial legume. 8–12" tall, among the largest white clovers. Among white clovers, Ladino is known to fix the most nitrogen per acre and will outperform others on poorly drained soil. Resents shallow soils prone to drought. Seed it on its own, or follow Will Bonsall's lead and sow under corn after hilling in midsummer. As a forage, high marks for protein, digestibility and ease of establishment. Frost-seed at 4–5#/acre, or 2–3# when mixed with grasses; 1/4#/1000 sq ft. ②

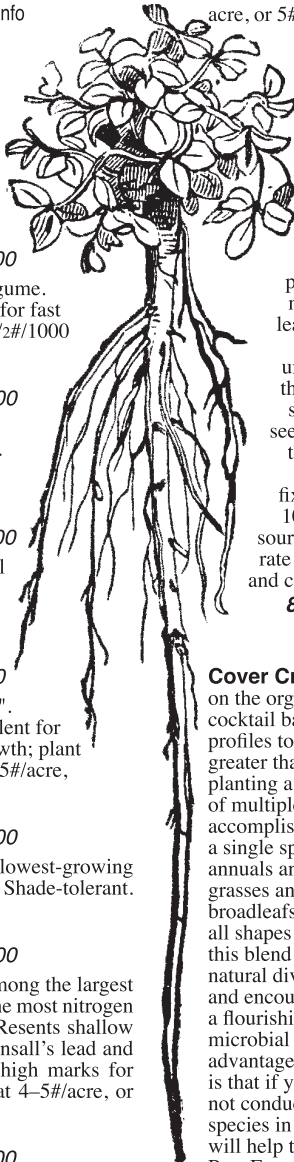
8041 A: 0.5# (0#) for \$9.25 B: 2# for \$22.50
C: 10# for \$89.00 E: 50# for \$375.00

Rivendell White Clover - Organic *T. r.* Perennial legume. Up to 9". Small-leaved white clover establishes quickly and withstands traffic and close mowing. Seed early at 5–10#/acre, 1/4# per 1000 sq ft. ②

8043 A: 0.5# (0#) for \$14.50 B: 2# for \$42.50
C: 10# for \$165.00 D: 25# for \$349.00

Yellow Sweet Clover - Organic *Melilotus officinalis* Biennial legume. Up to 6'. Vigorous taprooted thick succulent clover for cover cropping and bee forage. Seed at 15–20#/acre, 1/2#/1000 sq ft. ②

8046 A: 0.5# (0#) for \$9.50 B: 2# for \$24.00
C: 10# for \$89.00 E: 50# for \$325.00



Northern Growers' Winterkill Mix When summer is nearing its end and your garden crops are petering out, seize a golden opportunity by planting this powerhouse 5-way exclusive **cover crop mix!** Contains barley, oats, peas, bell beans and berseem clover. Thanks to Daniel Mays, author of **9689** *The No-Till Organic Vegetable Farm*, for sharing his trusty winterkill cover crop recipe with us. This mix is perfect for no-till growers and gardeners who work with hand tools only. The species diversity offers many benefits to your soil, including massive organic matter production, nitrogen fixation, nutrient scavenging, erosion control, and multi-season weed suppression. Agronomists strongly recommend that garden soil be kept covered with plant residue or mulch throughout winter to best preserve fertility, texture and biology. Sow in late summer and next spring your soil will be nicely protected by a mat of dead dry plant matter, which will prevent weeds and buy you time as you get ready for planting. Consider transplanting your seedlings right through the ready-made mulch, or rake it into your paths. For maximum growth and soil-building, we recommend treating this seed mix with **8173** Myco Seed Treat and **8161** Field Pea Inoculant (to ensure freshness, seed treatments are sold separately). Optimal seeding time for Zones 5/6 is early September, but it can be seeded as early as the beginning of August. Late September seeding can be done, but you will get suboptimal growth. Seed at a rate of 150–200#/acre, or 5#/1000 sq ft. Reliably winterkills in Zones 6 and colder. ①② **NEW!**

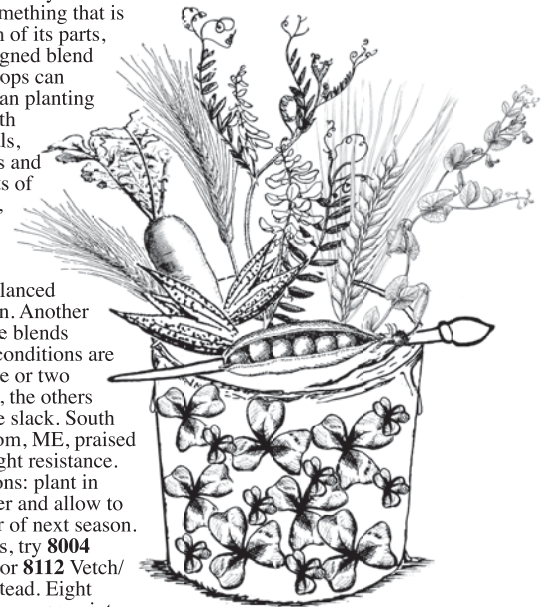
8058 B: 2# for \$9.50
C: 10# for \$35.00
E: 45# for \$119.00

Pea/Oat Mix - Organic 75% field peas, 25% common oats. This dynamic **cover crop** duo has become a favorite of growers who value its vigorous growth and soil-building prowess, along with the assurance that it will winterkill up North. If you plant in late summer for winter soil cover, come spring you'll be treated to a nice heavy mulch of dead plant material, instead of facing the prospect of being *oatdone* by a thicket of green regrowth—that's some real *peas* of mind! Alternatively, this powerhouse mix can be planted in spring (soil over 50°) to cover your ground solidly for 3+ months, and it will generate literally tons of biomass per acre, fix at least 100 lb of nitrogen per acre, and overtake any weeds that dare to challenge it. To get maximum benefit from a spring planting, wait until the pea vines have fully dry pods, then scythe or mow in a way that keeps those pods intact. Push the cuttings down so there is good soil contact and you'll get a second flush of peas from those mature seedpods! (Oats won't really grow back.) If spring sown, mow before the oats develop seeds, around 3 months, or oats will likely become a "weed" for you next year. For maximum growth and nitrogen fixation, use with **8161** Field Pea Inoculant (sold separately). We use 100% certified organic seed for this mix, and whenever possible, we source both organic components from New England growers. Seed at a rate of 150–200#/acre, or 5#/1000 sq ft. Reliably winterkills in Zones 6 and colder. ①② **NEW!**

8059 B: 2# for \$7.50
C: 10# for \$26.00
E: 45# for \$83.00

Cover Crop Cocktail - Organic Complex cover crop blends are trending on the organic ag scene; so what's all the buzz about? Just as a well-mixed cocktail balances a variety of flavor profiles to create something that is greater than the sum of its parts, planting a well-designed blend of multiple cover crops can accomplish more than planting a single species. With annuals and biennials, grasses and legumes and broadleaves, and roots of all shapes and sizes, this blend mimics natural diversity and encourages a flourishing and balanced microbial population. Another advantage of diverse blends is that if your field conditions are not conducive to one or two species in the blend, the others will help take up the slack. South Paw Farm in Freedom, ME, praised the mix for its drought resistance. Best for long rotations: plant in August or September and allow to grow to midsummer of next season. For shorter windows, try **8004** B&B Summer Mix or **8112** Vetch/Winter Rye Mix instead. Eight components including peas, winter grains, spring grains, clover, daikon radish and hairy vetch. Seed at 50–75#/acre or 1–2#/1000 sq ft. ①②

8060 B: 2# for \$12.00 C: 10# for \$52.75 D: 45# for \$179.00



Grass Seed: CR Lawn Mix All-purpose grass-seed mix for the Northeast, named for Fedco's belovedly idiosyncratic founder. Also called OVN (Orchard-Vineyard-Nursery) Mix because it makes a great understory for perennial woody crops. 50% bluegrass, 30% red fescue, 15% perennial ryegrass and 5% Dutch white clover. Good for a range of conditions, full sun to partial shade. Bluegrass does well in full sun, red fescue in shade. Ryegrass provides quick germination and good color while the other grasses get established; clover adds nitrogen and interest for bees. Seed at 100–150#/acre, 3–4#/1000 sq ft. ②

8061 B: 2# for \$23.00 C: 10# for \$102.50 D: 45# for \$295.00

Magic Carpet Mix You told us your dreams, and we designed this very diverse multi-species clover-heavy mix as a soil-building **living mulch** for use under tall-growing competitive crops. Could also be used for other crops if kept neatly trimmed. Suitable in raised beds, containers and high tunnels. The exact formula may vary according to what seed we have available, but expect a lush carpet of nitrogen-fixing legumes studded with grasses and forbs to contribute biomass and support microbial diversity in your soil. No need for Aladdin's lamp: all the components we use have some degree of shade tolerance. May be used for a single season, however most components are perennial and the remainder will often self-sow. Whether you are growing tomatoes or "tomatoes," take this mix for a ride. Seed at 25#/acre, 1/2# per 1000 sq ft. ①②

**8062 A: 0.25# (0#) for \$5.75 B: 2# for \$21.50
C: 10# for \$93.75 D: 45# for \$335.00**



Flowering heads of CR Lawn Mix

Groundbreaking Work

If you're starting a new garden from turf, follow these steps:

Take a soil sample. Before you can fertilize your ground, you need to know what's already there and what's lacking. Consider our **8194** Soil Testing Service, or contact your local cooperative extension for resources.

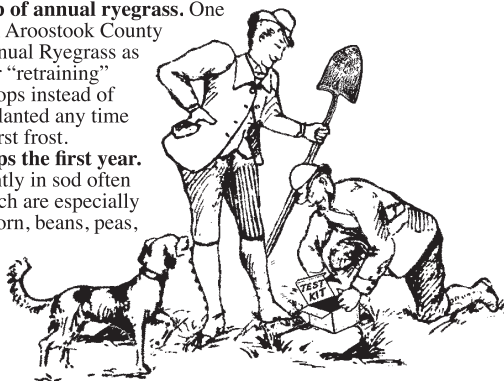
Smother the grass. This is the part that takes patience, but it's much better than trying to spade it under (which inverts the soil profile and usually is less effective at killing the grass) or digging it out (which removes precious topsoil too). You will need a thick, light-blocking barrier: old billboard covers have a reputation among commercial farmers for being the most effective, but many of them are made with a layer of PVC, which can leach unhealthy substances into the soil. A double or triple layer of cardboard (weighed down with compost, soil, or straw) will also do the trick. Don't use materials that will photodegrade (like plastic tarps) or try to get away with using only a thick layer of straw (the grass will laugh at you). It will take at least several weeks to thoroughly kill the grass, longer for established stands of perennial weeds. Vegetation should be completely withered and the roots will be brittle.

Add fertilizer and compost (according to your soil test results) and incorporate it into the soil. Yes, no-till techniques can do wonders for long-term soil health, but now is not the time: first you have to teach this ground to grow annual vegetative crops instead of perennial grasses. Liming materials must be worked 6" deep. If you can't or won't use mechanical tillage, we recommend investing in a Broad Fork (found at valleyoaktool.com).

Plant a cover crop of annual ryegrass. One of our seed growers in Aroostook County recommends **8121** Annual Ryegrass as the best cover crop for "retraining" soil to grow annual crops instead of perennials. It can be planted any time from early spring to first frost.

Avoid certain crops the first year.

Ground that was recently in sod often hosts wireworms, which are especially harmful to potatoes, corn, beans, peas, and root crops. (Yes, we know those are crops you really want to plant in a survival garden: reserve your existing garden space for them!)



If shipping weight in parentheses is (0#), the item qualifies for free shipping!

Millet, Japanese *Echinochloa frumentacea* Annual grass. Up to 5'. Frost sensitive. Vigorous and versatile! Tolerates waterlogged soil and low fertility. Prefers heat, but tolerates cool conditions better than BMR or other varieties of millet. Seed when soil is 60° or warmer at 40–60#/acre, 1#/1000 sq ft. ②

As cover crop: Very good smother crop with extensive root system to protect soils from erosion. Produces high levels of organic matter and holds available nutrients for the following crop.

As annual forage: Rick Kersbergen at UMaine Cooperative Extension recommends Japanese millet for summer grazing. Fast growing but yields less than BMR. Does not develop problems with prussic acid after frosts, but can be toxic to horses. Regrows quickly after grazing or mowing. For dry hay, mow before heading, as the thick stems are difficult to dry down. Similar protein levels to BMR, and its fine-textured leaves are highly palatable.

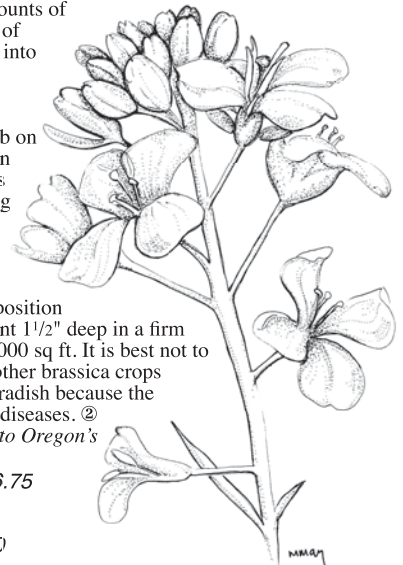
**8064 B: 2# for \$10.00
C: 10# for \$36.00
E: 50# for \$98.00**



Mustard *Brassica juncea* or *Sinapis alba* Annual broadleaf. Up to 5'. Moderately frost resistant. Does not tolerate drought. Best as a fall-planted **cover crop** to retain nutrients, suppress weeds, and improve water penetration. Produces large amounts of biomass containing high levels of glucosinolates that break down into compounds toxic to nematodes and soil-borne pathogens (like *Verticillium* wilt, *Rhizoctonia*, powdery scab and common scab on potatoes), a phenomenon known as "biofumigation." Some years ago, a lot came in bags featuring a cartoon knight dubbed "The Nematode Slayer." When plants achieve full flower, chop finely and incorporate into the soil. Allow 2 weeks for decomposition before planting a new crop. Plant 1 1/2" deep in a firm moist bed at 15–25#/acre, 1#/1000 sq ft. It is best not to plant mustard in rotation with other brassica crops such as cabbage, broccoli, and radish because the latter are susceptible to similar diseases. ②

Note: We cannot ship this item to Oregon's Willamette Valley.

**8070 A: 0.5# (0#) for \$6.75
B: 2# for \$10.75
C: 10# for \$45.75
E: 50# for \$159.00**



Using Cover Crops to Solve Problems in the Garden

| Problem | Easy Cover-Crop Solutions |
|-------------------------------|--|
| Poor soil drainage or hardpan | Deep-rooted Radish bores drainage holes into the soil with its powerful taproot. |
| Low organic matter | BMR Sorghum/Sudangrass produces more biomass than any other cover crop. It is frost-sensitive. Choose cold-tolerant Forage Oats for fall or spring planting. |
| Low soil nitrogen | Alfalfa and Yellow Sweet Clover are the most capable fixers of atmospheric nitrogen among all the legumes. Be sure to inoculate your seed! |
| High weed population | Winter Rye has vigorous growth and is a strong allelopath on small weed seeds. Buckwheat has vigorous seedling growth and competes well against warm-season weeds. |
| Soil erosion | Annual Ryegrass quickly forms a dense root mat that holds soil in place. |
| Poor pollination | Dutch White Clover can bloom among your crops all season to feed and attract pollinators. |
| Soil-borne fungal disease | Mustard residues release isothiocyanates, which may inhibit the growth of fusarium and other soil-borne fungi. |
| Root-knot nematodes | Sunn Hemp roots exude natural nematicides that can significantly reduce nematode populations in the short term. |
| Nutrient leaching | Deep-rooted Radish and Camelina scavenge unused soluble nitrogen from deep in the soil and hold it for later crops. |

OATS *Avena* spp.

Oats are a real workhorse of a cover crop. They are inexpensive to sow, they're not fussy about their soil, they build generous amounts of carbonaceous biomass, they're competitive with weeds, they love cool weather but tolerate warm weather, they get along well with legumes like peas and clover in mixes, and they die over the winter (at least in New England—they're hardy to 15°) so they don't cause the spring headache that winter rye does.

As if their prowess as a cover crop weren't enough, the grain may be used as food or feed, and oat straw makes some of the finest, softest mulch you'll ever have the pleasure to kneel on. Try planting oats in early August and then planting your garlic into the living oats around mid-October—the oats will die over the winter and your garlic beds will be already mulched come spring. And there's more! Herbalists favor milky oats (oat heads harvested when they are still green and the kernels exude a milky substance when squeezed) as a gentle restorative tonic.

Forage Oats - Organic *A. sativa* Annual grass. Up to 5'. These late-heading vigorous oats have gained a cult following among veggie growers and dairy farmers alike. Compared to common oats, forage oats grow faster, thicker and taller; produce significantly more biomass, making them superior for both cover-cropping/soil-building and for feeding livestock; and mature 2–3 weeks later. If grown to maturity for grain, they have strong straw and high yields of large plump seeds. Sow when soil is over 50°, spring through fall, at 100#/acre, 3#/1000 sq ft. ①

As cover crop: Remarkably quick lush leafy growth makes them especially competitive with weeds, and they generate organic matter like nobody's business. Faster seedling growth than BMR or millet, though these crops will eventually outstrip any oats in height. Customer Alex Redfield told us that his forage oats made as much biomass as common oats sown at twice the rate. Tolerates a wide range of weather and soil conditions. Reliably killed by New England winters, so a better choice for winter soil protection than Winter Rye if you don't want to deal with regrowth and tillage in the spring.

As forage: If cut in the early boot stage (when the flower head is only just detectable inside the leaf sheath) the hay can achieve protein levels of 19% and the plant will regrow for a second crop. Forage oats harvested at the soft-dough stage (when the kernel is developing but still soft enough to cut with a fingernail) achieved dry-matter yields of nearly 4 tons per acre in New England. Makes excellent bedding straw. Also suitable for grazing.

**8076 B: 2# for \$7.75
C: 10# for \$29.75
E: 48# for \$85.00**

Streaker Hullless Oats - Organic *A. nuda* Annual grass. Up to 4'. Moderately frost resistant. Most oats have a clinging hull that requires industrial-grade milling to render them suitable for human consumption. Hullless oats are not, in fact, hullless, but like wheat the hull sheds easily during the normal threshing process; for best results, delay harvest until the crop is fully mature. In a trial of ten oat varieties, University of Minnesota determined Streaker to be exceptionally high in protein and oil content. So delicious and satisfying, you may want to celebrate with a run through the streets! May be used as a cover crop like other oats, but hullless varieties tend to be somewhat less vigorous than common oats. Streaker has tall plants with medium straw strength; resistant to crown rust. Plant in early spring at 100#/acre, 3#/1000 sq ft. **PVP.** ①

As food grain: 17.5% protein, which is significantly higher than other oats. Higher in oil content, too. To cook, soak in water: what little hull remains will float.

As feed grain: The less-substantial hull lowers the crude fiber levels and improves digestibility compared to common oats. Higher in protein than other small grains, but not higher in lysine.

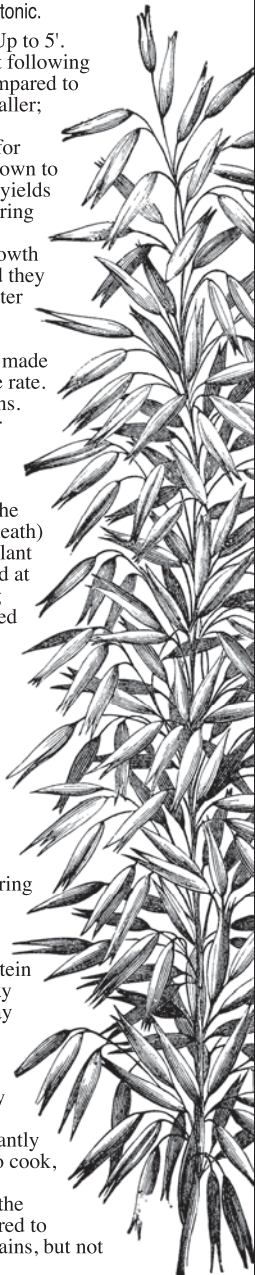
**8082 B: 2# for \$8.00
C: 10# for \$32.25
E: 48# for \$120.25**

Common Oats - Organic *A. sativa* Annual grass. Up to 4'. Moderately frost resistant. A solid all-purpose VNS (Variety Not Stated) oat. As cover crop, seed at 100–200#/acre. For grain, seed early at 100–150#/acre, 3–4#/1000 sq ft. ①

As cover crop: Offers high biomass and excellent weed competition. Tolerates a wide range of weather and soil conditions.

As feed grain: Excellent feed for cows and horses; too high in fiber for hogs.

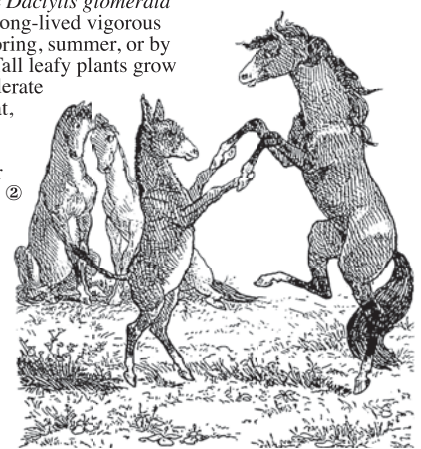
**8085 B: 2# for \$6.25
C: 10# for \$23.25
E: 48# for \$82.00**



Orchard Grass - Organic *Dactylis glomerata* Perennial grass. Up to 18". Long-lived vigorous grass can be established in spring, summer, or by frost-seeding in late winter. Tall leafy plants grow rapidly even in poor soils, tolerate moderately drained soils, heat, drought and shade. Seed at 20–40#/acre, or 5–6# with 8–12# of alfalfa or red clover per acre. 1#/1000 sq ft alone. ②

As perennial pasture: Grazing will help overcome its tendency to form coarse bunches. Provides good warm-weather growth.

As perennial hay: Bunching habit will be reduced if sown with red clover or alfalfa. More shade-tolerant than timothy. Makes a leafy palatable hay that is preferred for alpacas and horses.



8088 B: 2# for \$31.00 C: 10# for \$120.00 D: 25# for \$205.00

Pasture Mix - Organic 30% perennial rye, 35% endophyte-free tall fescue, 15% orchard grass, 10% timothy, 10% Rivendell white clover (pre-inoculated). **Perennial pasture** mix well-suited to Maine and other areas having our variable weather and temperatures. Provides season-long regrowth and good grazing. Plant at 40–50#/acre, 1#/1000 sq ft. ②

8094 B: 2# for \$33.00 C: 10# for \$135.00 D: 45# for \$385.00

Peas, Field - Organic *Pisum sativum* var. *arvense* Annual legume. Up to 40". Also called **Forage Peas**. Moderately frost tolerant. Likes cool moist conditions. Will grow in most soil types but prefers well-drained loams. It has come to our attention that some customers are purchasing our field peas for pea-shoot production: please check our website for info on our current lot and whether it's suitable for shoots. Raw seed: use with **8161 Field Pea/Vetch Inoculant**. For cover crop, seed at 100–200#/acre, 5#/1000 sq ft. For forage, seed early in the season, alone at 200#/acre, 5#/1000 sq ft, or 100#/acre, 2#/1000 sq ft, with oats or barley at 50#/acre, 1#/1000 sq ft. ①

As cover crop: A weed-smothering workhorse soil builder. Sow alone or with a nurse crop such as oats to help it stand.

As annual forage: Peas have excellent palatability and are highly digestible. Hanne Tierney of Cornerstone Farm conducted a 2009 SARE trial in which she reduced by 50% the grain fed out to hogs pastured on a barley and field-pea mix; the pastured hogs achieved an average slaughter weight not significantly different from the control group, although there was greater variation. Some potential for dry hay as well, though filled pods can be difficult to dry down. Peas may be seeded alone, but a companion crop of small grains will help to prevent lodging.

8097 B: 2# for \$6.50 C: 10# for \$24.50 D: 45# for \$86.50

PVO Soil-Building Seed Mix - Organic 71% field peas, 15% common oats, 14% hairy vetch. A superior soil-building **cover crop** seed mix. For springtime planting: allow for 60–90 days of growth. The oats come up first and are pulled down by the peas, which are eventually pulled down by the smothering vetch. Weeds don't stand a chance in that jungle. 4" mat of vegetation should be disked or mowed and incorporated in autumn. Use with **8161 Field Pea/Vetch Inoculant**. Seed at 150–200#/acre, 5#/1000 sq ft. ①②

8103 B: 2# for \$8.00 C: 10# for \$32.00 D: 45# for \$122.00

Radish, Tapmaster Deep-rooted Daikon - Organic

Raphanus sativus var. *niger* Annual broadleaf. Roots up to 21" long (with leafy tops around a foot tall). Moderately frost resistant.

A **cover crop** daikon radish bred for improved taproot performance.

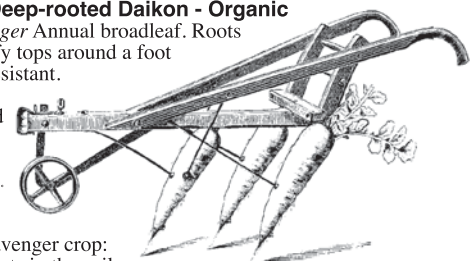
Also known as **oilseed radish** or **forage radish**.

Penetrates hardpan and loosens soil down to 30" or beyond. Excellent scavenger crop: takes up available nutrients in the soil

and prevents nutrient losses to leaching or runoff. Germinates quickly. Suppresses weeds if planted thickly. Winterkill occurs when several consecutive nights are in the low 20s. Leave plants in the ground all winter and into spring: roots decompose leaving large holes that fill with rainwater, eliminating runoff and improving soil drainage. Decomposed root and leaf matter release nutrients and increase microbial activity in the soil, contributing to increased yields in crops that follow. Mainers should plant in late August or early September for maximum benefit. Can be planted as late as October in mid-Atlantic states. Avoid planting in rotation with other brassica crops like cabbage, broccoli and kale that are susceptible to similar diseases. Do not plant in spring: the plants will bolt before they form taproots. Drill at 5–10#/acre or broadcast at 10–15#/acre, 1/2#/1000 sq ft. ② *Note: We cannot ship this to the Willamette Valley in Oregon.*

**8106 A: 0.5# (0#) for \$9.50
C: 10# for \$79.00**

**B: 2# for \$17.50
E: 50# for \$315.00**



Winter Rye - Organic *Secale cereale* Winter annual grass. Up to 5'. Extremely frost hardy, adaptable and competitive. For cover crop, seed at 100–200#/acre, 3–5#/1000 sq ft. For grain, seed in late September or early October at 100–125#/acre, 3#/1000 sq ft. ②

As cover crop: The most popular winter cover in the Northeast. Deep extensive roots help prevent compaction and improve soil tilth. Turn under early in spring before it gets out of hand. Vigorous growth is best controlled with mechanical tillage: if you are working with hand tools, we recommend oats for fall planting instead. Decomposed rye residue exudes allelopathic compounds that inhibit weed growth; may also inhibit germination and growth of subsequent crops, so incorporate rye into soil 3–4 weeks before direct-seeding of small-seeded crops. Large-seeded crops and transplants are less affected.

As food grain: Threshes easily and produces a flour suitable for blending with wheat in breads. Matures earlier than winter wheat. Susceptible to ergot contamination, so exercise caution and have grain tested before consuming: hallucinations from ergot poisoning are believed to have resulted in the Salem witch trials.

**8109 B: 2# for \$9.50
C: 10# for \$26.00
E: 50# for \$66.00**

Hairy Vetch/Winter Rye Mix - Organic

78% rye and 22% vetch. Superb **cover crop** mix for fall planting where mechanical tillage is available in the spring. Excellent choice for a field that will not be planted the following spring. Mow after flowering to kill the plants, then incorporate by tilling, and allow 3–4 weeks for the rye to decompose before replanting. Produces abundant biomass, adds nitrogen to the soil and suppresses weeds. The rye acts as a nurse crop for the vetch, protecting it from frost damage and providing support for the vines, making mowing much easier. Growers working with hand tools should consider our **8059** Pea/Oat Mix, or our **8058** Northern Growers' Winterkill Mix instead. Use with **8161** Field Pea/Vetch inoculant. Seed at 80–100#/acre, 2–3#/1000 sq ft. ①②

**8112 B: 2# for \$8.00
C: 10# for \$33.75
D: 45# for \$115.00**

You are wonderful to those of us working with the land.
– Sharone from Clarksburg, MO

Ryegrass, Annual - Organic *Lolium multiflorum* Annual or winter annual grass. Up to 4'. Extremely frost hardy. Widely adaptable to a variety of soils and to all but the hottest climates. Annual rye will establish quickly in cool wet spring weather.

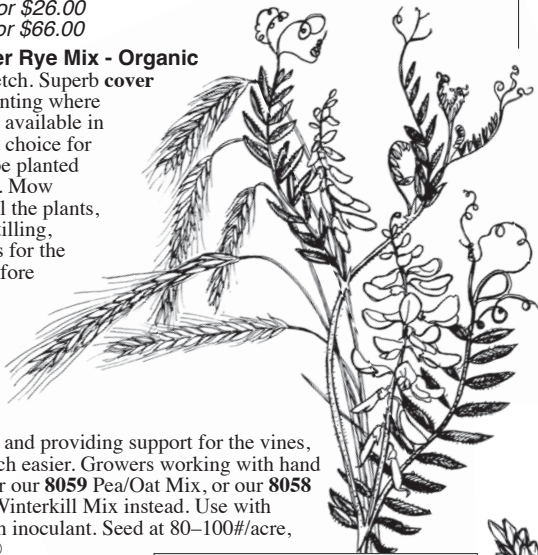
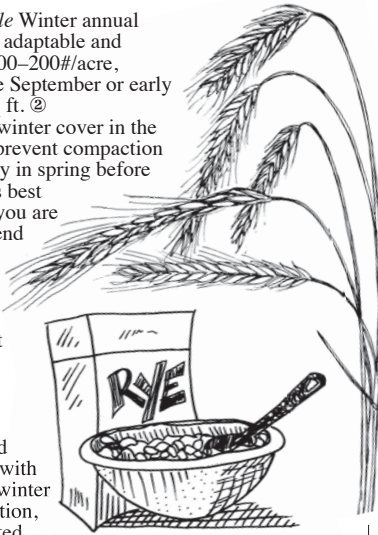
As cover crop: Provides a dense cover to outcompete weeds. Seed heavily for economical erosion control; seed thinly as a good nurse crop when establishing perennial stands for pasture or lawn. Dense fibrous root systems withstand temporary flooding and are effective at holding soil and improving tilth. Should be kept mowed if you wish to prevent reseeding. Does not reliably winterkill. A good choice for a first cover crop when converting forest land to cropland; it isn't picky about where it establishes, and it effectively "retrains" the soil's microbial population to foster annual plants instead of woody growth.

As annual forage: Nutritious and highly palatable until heading, but low quality after heading. Outstanding seedling vigor, readily reseeds, and tolerates close grazing. We stock diploid when we can, and tetraploid when we must—check the website for current stock. Seed at 25–35#/acre, 1–2#/1000 sq ft. ②

**8121 B: 2# for \$12.50
C: 10# for \$49.00
E: 50# for \$199.00**

Ryegrass, Perennial - Organic *L. perenne* Short-lived perennial grass. Up to 2'. Often used in grass seed mixtures. Extremely palatable forage grass with good early spring and fall growth in the **perennial pasture**; slows in the heat of summer. Germinates quickly and grows rapidly, suppressing weeds and allowing slower-growing companions to establish themselves. Holds up under heavy traffic and has good insect and disease resistance. Seed at 30–60#/acre, 1–2#/1000 sq ft. ②

8124 B: 2# for \$25.00 C: 10# for \$100.00 E: 50# for \$365.00



Sunn Hemp *Crotalaria juncea* Annual legume. Up to 6'. Frost sensitive. This rock star **cover crop** builds organic matter, fixes atmospheric nitrogen, controls harmful nematodes, and still finds time to be beautiful. Grows vigorously in good conditions, but is unlikely to reach its full size potential up here in the tundra. Effectively shades out weeds. In 60 days it can produce more than 5000#/acre biomass and fix 140#/acre of nitrogen! At this stage it will have just started producing its lovely yellow flowers. Used as a fiber crop in India since prehistoric times; with enough heat, plants can grow 6' high with stems 2" thick! Some varieties are suitable for livestock forage, but our seed comes to us "variety not stated" so we do not recommend it for that purpose. Not related to the other hemp and looks nothing like it, so you won't get suspicious looks from neighbors. Tolerates dry conditions. Raw seed; use with **8155** Exceed® Superior Legume Inoculant. Seed after soil reaches 60°, but before mid-August, 30–50#/acre, 1–2#/1000 sq ft. ②

**8133 A: 0.5# (0#) for \$6.50 B: 2# for \$12.50
C: 10# for \$46.50 E: 50# for \$150.00**

Timothy - Organic *Phleum pratense* Perennial grass. Up to 3'. A popular **perennial hay** species that produces good yields, resists lodging and is easily cut and cured. Harvest early, in the boot stage, to avoid stemmy hay. Leave plenty of stubble; timothy stores its energy reserves for regrowth in a corm at the base of the stem, which may be damaged by close cutting or heavy grazing. Very winter hardy. Best adapted to clay or loam soils with lots of moisture.

Does not tolerate heat or drought. In the fall, seed alone or with winter wheat; in spring, seed with red clover or alfalfa.

Seed at a rate of 12–15#/acre alone or 10#/acre when mixed, 1/2#/1000 sq ft. ②

**8136 B: 2# for \$24.00
C: 10# for \$107.50
E: 50# for \$350.00**

Winter Triticale - Organic *Triticosecale* var. 'FORAGE FX 1001'. Annual grain. Up to 5'. Triticale is a hybrid of wheat and rye. We were turned on to winter-hardy triticale by Seth Kroeck of Crystal Spring Farm in Brunswick, ME. As Seth pointed out, compared to winter rye, triticale boasts numerous advantages:

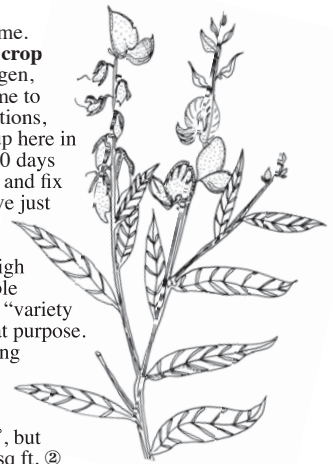
- Shorter plants than rye, making it easier to mow or crimp to terminate (rye can be hard to kill!)
- Earlier flower than rye (by about 2 weeks), so earlier termination and earlier transition to the next crop.
- Less allelopathic effect, so quicker turnaround to a cash crop.
- More leafiness; triticale better outcompetes weeds.

Like winter rye, triticale is excellent at scavenging nutrients and preventing erosion. Great at tolerating drought and low fertility; good at fighting compaction. Developed by Montana St U, FORAGE FX 1001 is a 97% awnless (forage-friendly) variety selected for winter hardiness and consistently high yields of both forage and seed yields. Performed well in the harsh northern climates of MT, ND, and WY, so you know it's tough! Minimum germination soil temp is 38°. Sow 2 weeks before to 2 weeks after first frost. Seed at 100–200#/acre, or 3–5#/1000 sq ft. If this variety becomes unavailable, we will substitute with another triticale. ② **NEW!**

**8108 B: 2# for \$7.00
C: 10# for \$22.00
E: 50# for \$68.50**

Vetch, Hairy - Organic *Vicia villosa* subsp. *villosa* Annual or winter annual legume. Up to 2' high; vines up to 8' long. Moderately frost resistant. Vigorous **cover crop** generates copious amounts of organic matter. Excellent nitrogen fixation. Its vigor can create problems, especially in the home garden: the tangled vines can clog even large mowers. Later planting allows for better control. Sometimes it will overwinter in Maine, sometimes it will die back: you have to be prepared to deal with it in the spring. Use a flail mower or scythe to cut it back in fall and incorporate the stubble in the spring before the regrowth becomes unmanageable. Tolerates acidic soils and low fertility, but not poor drainage. Raw seed; use with **8161** Field Pea/Vetch Inoculant. Seed at 25–40#/acre, 1#/1000 sq ft. ①②

**8139 B: 2# for \$18.25
C: 10# for \$75.00
D: 45# for \$ 279.00**



FARM SEED

WHEAT *Triticum aestivum*

Most modern wheats are broadly divided into categories by color (red or white), protein content (hard or soft), and by planting season (winter or spring). "Red" and "white" refer to the color of the kernel, which doesn't necessarily translate into the color of the flour, although red wheats tend to have darker-colored bran and white wheats tend to have sweeter flavor. "Hard" wheat is a high-protein wheat (typically 13–15% protein) that is ideal for bread-baking; "soft" wheat is a low-protein wheat (typically 10–11% protein) that is best for tender-crumbed pastries. Winter wheat is planted in the fall, around first frost or up to 3 weeks or so before. It grows several inches in the fall, goes dormant for the winter, sprouts early in the spring and is ready for harvest by mid-August in Maine. Spring wheat is planted in early to mid-spring and is harvested in the fall of the same year. Winter wheats tend to produce yields 25–50% higher than spring wheats and compete better with weeds, but hard spring wheats have the best potential for high protein content.

Glenn Spring Wheat - Organic Annual grain. Up to 3'. Moderately frost resistant. Hard red spring wheat released by ND State U in 2005 with medium-early maturity. Grows well even outside of regions known for production of hard red spring wheat. Since entering the wheat scene, Glenn has become a favorite of bakers for its superior milling and baking qualities. High in protein with very high test weight. Moderately resistant to scab, leaf rust and stem rust. Plants have good standability and straw strength. Threshing is easier once it is totally dried down. Plant at 100–125#/acre, 3–4#/1000 sq ft. **PVP.** ©

8143 B: 2# for \$5.75
C: 10# for \$22.50
E: 50# for \$84.50

Soft White Winter Wheat - Organic

Winter annual grain. Up to 4'. Extremely frost hardy. Soft white winter wheat suitable for feed or pastry flour. Cold-tolerant. Seed at 100–125#/acre, 3–4#/1000 sq ft. ①

As food grain: Makes tender pastries, quick breads and pancakes. Also suitable for brewing wheat beers.

As feed grain: Protein approximately equivalent to barley, but with lower fiber content. Wheat is the best whole grain to feed chickens and an ideal base for finisher and gestation rations for hogs. Highly palatable to ruminants, but should be fed carefully to prevent acidosis. Wheat should not be finely ground before feeding: cracking or soaking is preferable.

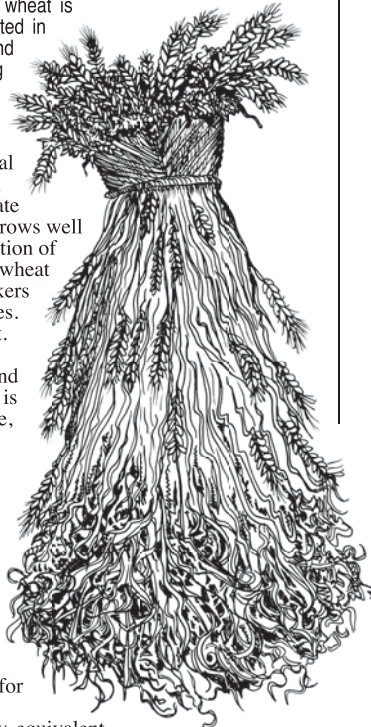
8149 B: 2# for \$6.25
C: 10# for \$23.25
D: 45# for \$92.75

Sirvinta Winter Wheat - Organic Winter annual grain. Up to 5'. Extremely frost hardy. Hard red winter wheat with medium-late maturity is ready to harvest in August in Maine. Most wheat varieties available in the U.S. are bred for and adapted to the prairie-type soils of the Upper Midwest and not as well-suited to the moist forest-based soils of the Northeast. Named after a river in Lithuania, Sirvinta was developed in the Baltics where soils and climate are more like New England's. Fedco friend Raivo Vihaman shared seed with Scatterseed founder Will Bonsall, who found the variety to be his favorite winter wheat to grow and eat. If you're tired of watching your wheat come in lushly only to fall over when it gets tall, you'll love how Sirvinta's sturdy stalks stand strong—great for straw. Even in smaller spaces, your dreams of baking with homegrown wheat can come true: A customer in Saint Albans, ME, yielded 59# of wheat berries from her 10x65' plot—that's a lot of loaves! Bonsall grows in Zone 4b and says, "I like to plant between early Sept. and mid-Oct.; too late [and it] doesn't get established well before [winter]. Mine is ready to harvest in August, [though] I pay more attention to the stage of kernels (hard dough stage), and the straw being roughly half yellow. In good weather, stooks should be cured in 3–7 days; if showers threaten, I may throw a tarp over them." Read more in Bonsall's *Essential Guide to Radical, Self-Reliant Gardening (9819)*! Seed at 100–150#/acre, 3–4#/1000 sq ft. Seed at the heavier rate for later plantings (after Sept. 15 in Maine). We offer smaller garden-scale packets of Sirvinta seed on page 32. ①

As food grain: Flour has great flavor and texture for all-purpose use. Maine bakers have found Sirvinta to have superb qualities for bread, including long-ferment loaves.

As feed grain: Protein approximately equivalent to barley but with lower fiber content. Wheat is the best whole grain to feed to chickens and an ideal base for finisher and gestation rations for hogs. Highly palatable to ruminants, but should be fed carefully to prevent acidosis. Wheat should not be finely ground before feeding: cracking or soaking is preferable.

8150 B: 2# for \$10.00
C: 10# for \$40.00
D: 45# for \$120.00



INOCULANTS & PROBIOTICS

All plants thrive on beneficial relationships established with soil-dwelling organisms and above-ground allies. Science has only begun to understand and document the many symbiotic exchanges at play between plants and the life forms with which they collaborate. Plants both depend on and give back to a dynamic soil biology. We're excited to offer the products listed in this section because they facilitate and enrich these creative partnerships of interconnectivity. Beneficial bacteria, fungi and their mineral counterparts—the gang's all here and ready to enliven some soil chemistry. We are all living in this beautifully entangled life...pass it on!

Our inoculants do not contain genetically modified materials.

LEGUME INOCULANTS

Our legume inoculants do have a shelf life. We don't ship expired inoculant, but inoculant ordered in fall may expire before spring. Like yogurt, inoculants do not instantly "go bad" when they hit their expiration date: they lose potency quite slowly, so it's unlikely to be a problem. However, if you are ordering inoculant for the spring season and want the date to look good at planting time, wait until spring to order it. Store inoculant in a cool, dry place out of direct sunlight. We recommend using fresh inoculant each time you plant.

Slurry mixing method: When you are ready to put seed in the ground, moisten it with water, pour the inoculant over it and mix till coated. For 1# of seed, dampen with 1 teaspoon of water, then add 1.5 teaspoons inoculant. Allow 1–3 minutes to dry, then plant immediately. For machine-planting, you'll need to let seed dry longer to prevent clogging.

Exceed® Superior Legume Inoculant, Garden Combo For peas, sweet peas, cowpeas, dry beans, peanuts, lentils, limas, vetch and sunn hemp. **OMRI**

8155 A: treats 8# (0#) for \$6.25
B: treats 50# (0#) for \$10.00

Exceed® Alfalfa/True Clover Inoculant For alfalfa, sweet clover and all the *Trifolium* clovers we list. **OMRI**

8158 A: treats 50# (0#) for \$8.75

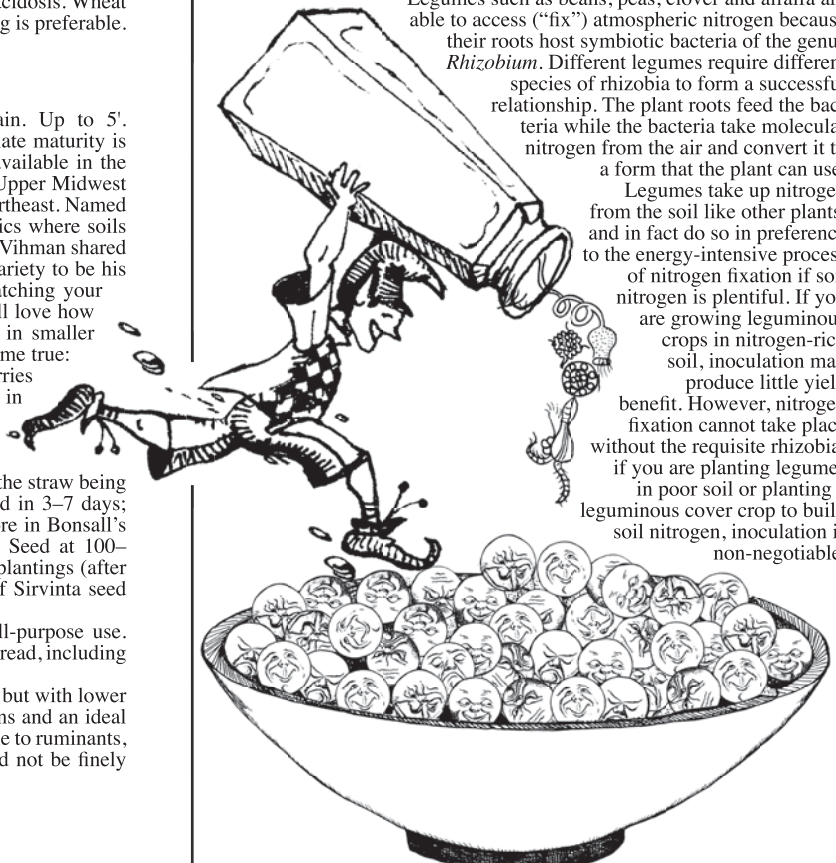
Field Pea and Vetch Inoculant Use for our **8059** Pea/Oat Mix, **8097** Field Peas, **8103** PVO soil-building mix and **8112** Vetch/Rye mix. Also treats garden peas, lentils, favas, bell beans. **MOFGA**

8161 A: treats 50# (0#) for \$8.50

Legume Inoculation

Legumes such as beans, peas, clover and alfalfa are able to access ("fix") atmospheric nitrogen because their roots host symbiotic bacteria of the genus *Rhizobium*. Different legumes require different species of rhizobia to form a successful relationship. The plant roots feed the bacteria while the bacteria take molecular nitrogen from the air and convert it to a form that the plant can use.

Legumes take up nitrogen from the soil like other plants, and in fact do so in preference to the energy-intensive process of nitrogen fixation if soil nitrogen is plentiful. If you are growing leguminous crops in nitrogen-rich soil, inoculation may produce little yield benefit. However, nitrogen fixation cannot take place without the requisite rhizobia: if you are planting legumes in poor soil or planting a leguminous cover crop to build soil nitrogen, inoculation is non-negotiable.



PROBIOTICS

Humic Acids Soluble Powder A dry soluble powder with humic acid concentration of 85%. Derived from the mineral leonardite. Please see below for the manifold functions of humic acids in the soil. Best used as a foliar feed in combination with **8170 Fulvic Acid**, the other soluble component of humus. Can also be applied directly to roots or in the soil before seeding or planting. This humic acid product is not compatible with solutions with pH less than 5.0, so test the pH of your solution before applying. Not corrosive to sprayers or irrigation equipment. *Caution:* Higher than recommended concentrations of humic substances in soil can be inhibitive to proper plant growth. Don't overdo it! See chart on page 138 for application rates. **MOFGA**

8167 A: 1# (0#) for \$19.00 B: 55# for \$479.00

Humic acids are the wild-card molecules of soil physics and chemistry, performing complex functions by way of several different electrical and chemical reactions. Both powerful chelators and bind-all stabilizers, humic acids can prevent leaching of trace minerals into subsoil and increase uptake rate of micronutrients. They neutralize soil pH and reduce the toxicity of heavy metals. With a water-holding capacity of seven times their volume, they contribute greatly to soil structure and indirectly buffer soil temperature. They stimulate growth of foliage and roots significantly. Humic acids also have the ability to retain soil carbon for more than 1,000 years, especially in conjunction with farming practices that prevent their decomposition, such as minimal or no tillage, cover cropping and mulching. These same practices increase the microbial populations responsible for new humus formation and cycling.

Fulvic Acid Liquid Fulvic acid is a powerful antioxidant and chelator: one molecule can transport 60 or more minerals into plant cells for a more efficient and effective fertilization program. Beneficial to plants growing in low-light conditions. Consider using in combination with **8167 Humic Acids**. Unlike humic acids, fulvic acids are soluble at any pH. 2% fulvic acid water-extracted from leonardite and filtered through a 200-mesh screen to eliminate clogging of drip tape and sprayers. Not corrosive to sprayers or irrigation equipment. See chart on page 138 for application rates. **MOFGA**

8170 A: 1 gal (10#) for \$55.00 B: 2.5 gal (25#) for \$85.00

Myco Seed Treat A blend of microorganisms and mycorrhizal fungi to provide protection and growth enhancement for potatoes, corn, legumes, grasses and vegetables. Highly recommended if you cut your seed potatoes or can't wait to get your corn and beans in the ground during a chilly spring. 1-2 oz treats 100# of potato seed pieces, 4-8 oz/100# of other seed. **MOFGA**

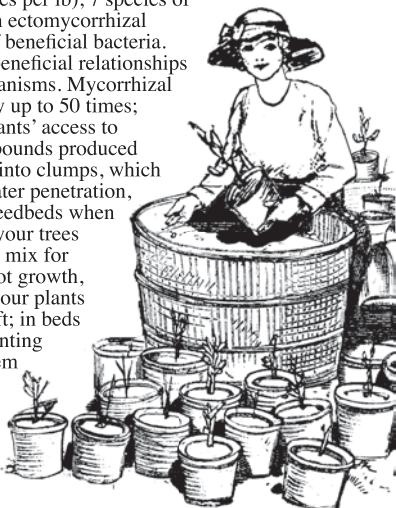
8173 A: 1 oz (0#) for \$8.50 B: 1# (0#) for \$81.50

BioOrganics™ Micronized Endomycorrhizal Inoculant Mycorrhizae form beneficial relationships with the roots of most plant species: they boost plant growth by improving the roots' ability to take up nutrients, water and oxygen, and by improving soil structure. The world of beneficial microbial products is in a frenzy of mergers and acquisitions: this formulation comes from a smaller independent company that promises never to sell out. We can only hope! Contains a blend of 9 top types of endomycorrhizal spores (*Glomus aggregatum*, *G. etunicatum*, *G. clarum*, *G. deserticola*, *G. intraradices*, *G. monosporus*, *G. mosseae*, *Gigaspora margarita* and *Paraglomus brasilianum*.) Spore count guarantee is a minimum of 40 spores per cubic centimeter. Water-soluble formula may be applied as a drench to turf or perennial plantings. Use 1 Tbsp in 1 gal water per 50 sq ft. May also be blended into potting soils at 2 Tbsp/cu ft; or sprinkled into planting rows at a rate of 1 tsp/linear ft. Do not use with fertilizers high in soluble phosphorus or with soil-drench fungicides, either of which would kill the spores. **OMRI**

8175 A: 1.5# for \$58.00

MycoApply Endo/Ecto Nine species of endomycorrhizal fungi (30,000 endomycorrhizal propagules per lb), 7 species of ectomycorrhizal fungi (140 million ectomycorrhizal propagules per lb) and 5 species of beneficial bacteria. About 95% of plant species form beneficial relationships with at least one of these microorganisms. Mycorrhizal filaments expand total root mass by up to 50 times; the larger surface area increases plants' access to nutrients, water and oxygen. Compounds produced by mycorrhizae bind soil particles into clumps, which improves porosity to encourage water penetration, root growth and aeration. Add to seedbeds when sowing, work into the soil around your trees and shrubs, or incorporate into soil mix for container-grown plants to boost root growth, nutrient uptake, and the health of your plants and soils. When seeding use 1 tsp/ft; in beds mix in 2#/100 sq ft. When transplanting bare-root trees, use 1 oz/inch of stem caliper. For container planting, use 1 oz per gallon of pot capacity. For restoring fields, broadcast 40#/acre before or during planting. A-size **MOFGA**; B-size **OMRI**.

8176 A: 1# (0#) for \$36.00 B: 40# for \$620.00



Mammoth® P Active Microbials Nutrient Liberator. Invented by a team of Colorado State University PhD soil microbiologists with a passion for soil health and sustainable agriculture. They used directed microbial phenotyping to create a concentrated blend of *Pseudomonas putida*, *Comamonas testosteroni*, *Citrobacter freundii* and *Enterobacter cloacae*, which act as tiny bioreactors, constantly emitting enzymes that liberate soil-bound phosphorus and micronutrients. Cannabis growers using Mammoth P see bud yields 16% higher than in untreated plants, as well as stronger plants less susceptible to lodging. Use may be restricted to the bloom stage, but for best results use throughout the growth cycle (even during flushing). Also useful after field applications of **8250 Fertoz Rock Phosphate** or **8252 Tennessee Brown Rock** to speed phosphorus release. Mix at 0.6 mL/gallon water. 500 mL treats 50 cannabis plants from clone to harvest. *This is a live product:* color changes and sediment are normal. It's a bit stinky but will help you grow more stinky, sticky buds. As they say in the distinctively scented paper-mill towns around here, "It smells like money." **OMRI**

8180 B: 500 mL (0#) for \$135.00

Dr. Higa's Original EM-1 Microbial Inoculant Concentrated Effective Microorganisms®. Active microbial life in the soil and on plants is a better solution than synthetic chemical fertilizers. A liquid combination of yeasts, actinomycetes and two kinds of bacteria, photosynthetic and lactic, which promotes plant health and growth and improves nutrient absorption and soil fertility. Further fermentation ("activation") of EM-1 increases the volume of microbes, but you can also just use it straight out of the bottle. The late Adam Tomash sprayed his tomatoes several times with activated EM-1 and they made it into September with no significant blight damage. Instructions for activating EM-1 can be found at fedcoseeds.com/ogs (search for "EM-1"). Our cannabis-growing friends can't do without it. **OMRI**

**8185 A: pint (1#) for \$38.50
B: quart (3#) for \$56.50
C: gal (10#) for \$135.00**

Recommended uses for "activated" EM-1:

- As a component of the Holistic Orchard Spray (see page 146).
- As a drench for transplants: make a 4% solution (1 part activated EM-1 to 24 parts water) and apply it to the furrow or hole.
- As a foliar spray: use 1 1/2-3 gal/acre or 4 1/2-9 oz/1000 sq ft, mixed with enough water to provide coverage (about 50 gal of solution covers an acre; 1 gal solution covers 1000 sq ft.)
- As a soil treatment: apply 40 gal/acre over the course of a year.
- To break down crop residue: spray 1-5 gal/acre on fields after harvest.
- Add to compost to speed up the breakdown of plant material.

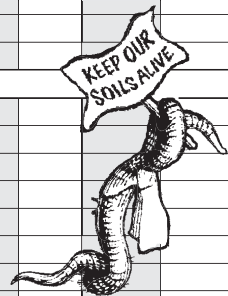
Monster Plant Mojo (4-4-0.5) We were devastated by the demise of well-loved MPM (Microbial Plant Mix) foliar fertilizer, the proprietary blend of a manufacturer who's closed shop. As a close substitute, we recommend applying this product in conjunction with activated **8185 EM-1**. Contains fish hydrolysate, kelp extract, humic and fulvic acids, and a dash of chilean nitrate to boost the nitrogen levels for rapid vegetative growth. Chilean nitrate has a shady reputation (because it is mined and high in soluble salts), but it sure gets the job done. Pending additional rule-making, certified organic operators using Chilean nitrate must demonstrate they're using it in a way that maintains or improves the natural resources of the operation (including soil and water quality) and complies with crop nutrient and soil fertility requirements. Dilute 2-4 oz per gal of water for fertigation, or 2 oz/gal for foliar feeding; apply monthly. Avoid foliar applications in the heat of the day. Do not store dilution. *No NH sale.* **MOFGA**

**8189 A: 1 gal (10#) for \$39.00
B: 5 gal (50#) for \$135.00**

If shipping weight in parentheses is (0#), the item qualifies for free shipping!

Nitrogen, Phosphorus, Potassium + Macronutrient and Micronutrient Values for Soil Amendments

| Item # | Amendment | Avg spreading rate (pounds per 1000 sq ft) | % Nitrogen | % Phosphorus | % Potassium | % Calcium | % Magnesium | % Sulfur | Micronutrients/Trace Elements | % Boron | % Silicon Dioxide | Improves Soil Texture/Structure |
|---------------------|-------------------|--|------------|--------------|-------------|-----------|-------------|----------|-------------------------------|---------|-------------------|---------------------------------|
| Mineral | | | | | | | | | | | | |
| 8195 | Aragonite | 10 | | | | 13.2 | | | | | | |
| 8198 | Calcitic Lime | MUST test soil! | | | | 35 | 2 | | | | | |
| 8201 | Dolomitic Lime | MUST test soil! | | | | 22 | 11.3 | | | | | |
| 8204 | Gypsum | 25-50 | | | | 21 | | 16 | | | | YES |
| 8207 | Wollastonite | 50-80 | | | | 48 | | | | | 52 | |
| 8213 | Azomite | 4-7 | | | 0.2 | 1.8 | 0.5 | | YES | | | |
| 8219 | Borax Solubor | MUST test soil! | | | | | | | | 20.5 | | |
| 8222 | BrixBlend Basalt | 50-500 | | | | 6.6 | trace | | YES | | 49.3 | YES |
| 8228 | Epsom Salts | 8 | | | | | 9.8 | 12.9 | | | | |
| 8231 | Granite Meal | 50-100 | | | 5 | | | | YES | | | YES |
| 8237 | K-Mag | 10-20 | | | 22 | | 10.8 | 22 | | | | |
| 8240 | Hum-Amend Max | 4-7# for improved nutrient uptake | | | | | | | YES | | | |
| 8246 | Sulfate of Potash | 5-10 | | | 50 | | | 17 | | | | |
| 8249 | Sulfur | 1# for S deficiency; or test soil for pH | | | | | | 90 | | | | |
| 8250 | Fertoz Rock Phos. | 50 | | 6 | | 30 | | | | | 10 | |
| 8252 | TN Brown Phos. | 75 | | 6 | | | | | | | | |
| 8255 | ZeoMax Garden Aid | 150-200 | | | | | | | | | | YES |
| Plant-based | | | | | | | | | | | | |
| 8260 | Alfalfa Meal | 20-30 | 2.5 | 0.4 | 3.3 | | | | | | | |
| 8263 | Kelp Meal | 7-14 | trace | trace | 1.7 | 1.9 | 0.8 | 2.7 | YES | trace | | |
| 8272 | Neem Cake | 10 | 6 | 1 | 3 | | | | | | | |
| website | Karanja Cake | 10 | 4.6 | 0.9 | 1.3 | | | | | | | |
| 8275 | Soybean Meal | 40 | 7 | 1.5 | 1 | | | | | | | |
| Animal-based | | | | | | | | | | | | |
| 8280 | Blood Meal | 20 | 13 | | | | | | | | | |
| 8283 | Bone Char | 15 | | 16 | | 30 | | | | | | |
| 8286 | Feather Meal | 20 | 13 | | | | | | | | | |
| 8295 | Fish Bone Meal | 20-35 | 6.9 | 11.9 | 0.8 | | | | | | | |
| 8301 | Poultry Manure | 35 | 5 | 4 | 3 | 9 | | | | | | |
| 8304 | Crab Meal | 60 | 4 | 4 | | 18 | | | | | | |
| 8350 | Worm Castings | 100 | 0.5 | 0.5 | 0.3 | | | | YES | | | |
| 8351 | Superworm Frass | 65 | 2 | 2 | 2 | | | | | | | |
| Mixes | | | | | | | | | | | | |
| 8307 | Sleepytime Blend | 100 | | | 2 | 2.5 | | 1.6 | YES | | | YES |
| 8309 | Vegemighty | 100 | 3.4 | 2.2 | 3.5 | | | | YES | | | |
| 8310 | Gungnir Asparagus | 45 | 2 | 5 | 7 | | | | | | | |
| 8315 | Turbo-Tuber | 45 | 7 | 2 | 9 | 2 | | 3.5 | | | | |
| 8316 | Tomato Sauce | 60 | 3 | 4 | 6.1 | 5.8 | 3 | 6.2 | YES | | 8.7 | |
| 8317 | 3G Greener Garlic | 100 | 3 | 3.5 | 3.5 | | | | | | | |
| 8337 | True Love Rose | 50-60 | 2.5 | 6 | 3 | | | | | | | |
| 8338 | CannaDiesel | 15 lb per plant | 0.8 | 2.2 | 0.2 | 6.3 | trace | 0.1 | YES | | 5.3 | YES |
| 8342 | NutriVeg | 50 | 5 | 4 | 4 | 5 | | | YES | | | |



Fertilizer Analyses of N-P-K

Fertilizer analyses report levels of soluble nitrogen (N), phosphate (P) and potash (K) available to your plants in the current growing season. Additional nitrogen, phosphorus and potassium contained in the material may become available at varying rates over time. Release rates depend on many factors, including particle size, temperature and microbial activity in your soil.

Plant and animal byproducts provide a natural source of plant nutrients and support the organic principle of recycling natural resources within agricultural systems, putting "waste" to productive use, reducing landfill space, and preventing contamination of our waterways. Unlike synthetic fertilizers, they provide tasty nibbles for soil life, and a well-fed microbial population will help to unlock the nutrients already held in your soil.

The analyses we provide for our plant and animal meals, and for the mixes we produce in-house using those products, are not guaranteed analyses. These natural products are highly variable. These analyses represent Maine state lab tests performed on the most recent lot we purchased, and we keep these numbers updated on our website as fresh lots come in and new tests are performed. The numbers here do provide some guidelines for determining the approximate ratios of nutrients in plant and animal meals.

Before scattering amendments like magic fairy dust all over your garden, try **Fedco's Soil Testing & Recommendation Service!**

We'll translate your test results into a clear plan to correct deficiencies and imbalances.

See p. 135 for details.

SOIL AMENDMENTS & FERTILIZERS

Thriving sustainable agriculture is built on the ground of healthy soil. In fact, organic certification requires a soil management plan. Do a soil test to determine your soil's needs before embarking on a program of soil improvement. Check with your local Cooperative Extension for testing in your area, or consider our testing and recommendation service listed below.

Soil amendments used with a program of crop rotation, composting and cover cropping can enhance fertility, improve soil tilth, promote disease resistance, and support beneficial soil microorganisms. Application rates vary depending on soil type and results of soil tests.

Fertilizers provide nitrogen and other nutrients in a form that is readily available to plants. Organic fertilizers can provide both an immediate boost and additional long-term fertility, feeding both the plants and the organisms that maintain soil health. We also offer soil amendments that have limited available plant nutrients but help to remineralize the soil, improve soil structure, or provide a long-term slow-release source of plant nutrients. Foliar sprays get nutrients directly to the leaves and can increase resistance to disease and to insect infestation.

Analyses provided here are those provided by the manufacturers, or, if none are available, from a Maine state lab test performed on our most recent lot: there is some variability in the nutritional analysis of natural fertilizers, so view these numbers as guides, not gospel. Fertilizers should be used as a supplement to, not a replacement for, the nutrients provided by healthy soil. Sustainability requires developing a long-term plan of cover cropping, green manuring and composting.

CALCIUM SOURCES

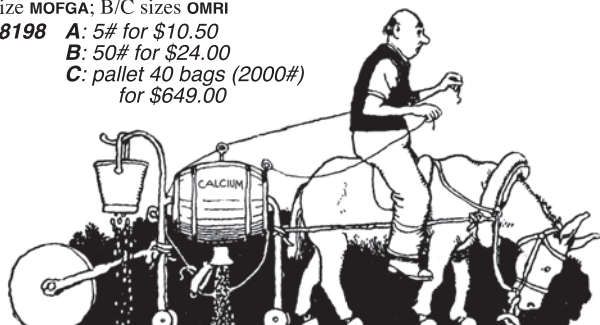
Aragonite (33% calcium as CaCO_3) Ground mollusk shells. Aragonite is even lower than Calcitic lime in magnesium, so it's the ideal choice for soils with excessive magnesium. Mined from the deposits that create the white sand beaches of the Bahamas—more expensive than calcitic lime, but less expensive than a tropical vacation. Application rate: use as a lime equivalent according to soil test, or spread 10# per 1000 sq ft. Feed quality. *No NH sale on A-size only.* **MOFGA**

8195 A: 5# for \$9.50
B: 50# for \$35.00
C: pallet 40 bags (2000#) for \$1250.00

Pro Pelleted Calcitic Limestone Pro-Select Prill (87% CaCO_3 , 7% MgCO_3). Cal Carb Equivalent 95.8%. The most common and most frequently used soil conditioner, Calcitic is the fancy name of the product we used to call **Hi-Cal lime**. It's recommended for soils with excess magnesium: contains just 1/6 the amount of magnesium carbonate as dolomitic lime. Aragonite and Calcitic are both calcium carbonate, just with a different crystalline structure and from different sources: Calcitic is mined rock, while aragonite is derived from mollusk shells. Calcitic contains marginally more magnesium than aragonite. Prilled with 2% sodium salt lignin, an NOP-allowed synthetic, as a binding agent. Apply according to soil test results.

A-size **MOFGA**; B/C sizes **OMRI**

8198 A: 5# for \$10.50
B: 50# for \$24.00
C: pallet 40 bags (2000#) for \$649.00



Understanding Calcium and pH Gardeners tend to worry first about the N-P-K levels of their soil, neglecting the soil's calcium. Without adequate calcium, all the fertilizer in the world will do little good. Calcium benefits soil and plants by improving the soil's physical structure, raising the pH of the soil and directly contributing to the plants' nutritional needs.

Soil Structure: Calcium increases soil porosity, which means more oxygen in the root zone and better water penetration.

Effects on pH: When calcium carbonate (lime) is applied to acidic soil, it increases the availability of many important plant nutrients.

Plant Nutrition: Calcium helps plants build strong cell walls, for bigger healthier plants with better disease resistance. It also helps plants metabolize other nutrients and cope with heat stress. Fruiting plants deficient in calcium may suffer blossom end rot or other quality problems.

How much lime should you apply? Don't even try to answer this question without a professional soil test! The quantity will depend not only on the current pH and calcium levels of your soil, but also on your soil's cation exchange capacity (CEC) and perhaps on what crops you plan to grow. Even on very acidic soils, most experts recommend that applications not exceed 3 tons per acre per year (about 140#/1000 sq ft).

When and how should you apply lime? Liming should coincide with a tillage event to incorporate it into the root zone. Applying in the fall gives the lime more time and moisture to react before the growing season. The good news is liming is for the long haul: you typically need to apply lime only once every 5–10 years.

Pro Pelleted Dolomitic Limestone Pro-Select Prill (57.7% CaCO_3 , 33% MgCO_3). Cal Carb Equivalent 96.9%. The least expensive liming agent. Use to sweeten soil (raise pH) and provide calcium where excess magnesium is not a problem. Apply according to soil test results. A-size **MOFGA**; B/C sizes **OMRI**

8201 A: 5# for \$7.50
B: 50# for \$16.50
C: pallet 40 bags (2000#) for \$560.00

Gypsum, pelletized (86% $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$, 21% Ca, 16% S) Gypsum is a good source of calcium when the pH is already at a desired level. The sulfur in gypsum reacts with water to form a weak sulfuric acid solution that frees the calcium in the soil. Application rate: 25-50# per 1000 sq ft. Prilled with 2% lignosulfates, an NOP-allowed binding agent. *No NH sale.* A-size **MOFGA**; B/C sizes **OMRI**

8204 A: 5# for \$10.50
B: 40# for \$36.00
C: pallet 50 bags (2000#) for \$1450.00

Wollastonite (48% CaO and 52% SiO_2). Cal Carb Equivalent 76.0%. Soluble-grade and at least 95% pure (may contain trace amounts of iron, manganese and magnesium). Silicon is not traditionally considered a limiting cofactor for plant growth, but researchers are finding that despite ample amounts of silicon in most soils, plants supplemented with silicon often yield better. Silicon strengthens cell walls, which reduces lodging and improves resistance to insects and disease; stimulates immune response pathways (possibly increasing production of resins and terpenes); and reduces transpiration (improving drought resistance). May be applied as a foliar spray to build resistance to powdery mildew; for yield benefits, incorporate into the soil. Particularly recommended for cannabis, orchard crops, cucurbits, sweet corn, grains and forage crops. Customer Norman B. of West Baldwin, ME, credits wollastonite for his exceptional potato crop in 2019: "I bought a 50 lb bag of wollastonite and sprinkled it into the rows as I went along and the Green Mountains, which have a reputation for low yield, did commendably. Out of that small bag of seed, I filled a five-gallon pail, over 35 lb, and that was after discarding some that I had damaged during hilling. My uncle stated that he had never seen so many large Green Mountains as well. I used a lot of composted horse manure, but I do every year. The only thing different was the wollastonite." Most soil tests do not offer recommended application rates for silicon: one approach is to use wollastonite to correct your soil pH, or apply 50–80# per 1000 sq ft but beware of the liming effect. Dusty! Wear a mask when handling. A-size **MOFGA**; B/C sizes **OMRI**

8207 A: 5# for \$11.50
B: 50# for \$36.00
C: pallet 40 bags (2000#) for \$1300.00

Soil Testing & Organic Fertilizer Recommendation Service for Garden, Farm and Orchard

Don't guess—test! Applying fertilizers and soil amendments without the guidance of a professional soil test is like driving downtown with your eyes shut. Applying too much of one nutrient can tie up others and wreak havoc on your soil biology. But even with test results in hand, which fertilizer do you choose and how much do you apply? Fedco to the rescue! We'll send you a soil test kit and sampling instructions, plus a box to return your soil sample and test form to the Maine State Soil Lab. You'll learn your soil pH, organic matter percentage, phosphorus, potassium, magnesium, calcium, sulfur, boron, copper, manganese, zinc, and available nitrogen, plus we'll offer **customized recommendations** for how to correct any deficiencies or imbalances in your soil. Customer Jake S. told us, "I followed [your] instructions in the spring. The garden thrived, I actually had full carrots this year, the garlic was huge and the spinach spectacular, all best-ers."

Please note that the lab's methods are most appropriate for soils in the northeastern U.S.; if you live elsewhere, please work with your local lab and consult them for amendment recommendations. Also, this kind of test is not well suited for container mixes; it's meant for in-the-ground soil.

Order **8194-A** for annual vegetable crops and **8194-B** for fruit tree orchards. If you order the orchard version, please let us know in your order notes if you are establishing a new orchard, or if your established trees are fruiting yet. For best results, take samples during the growing season while the soil is warm. Please be patient! We are at the mercy of how busy the soil lab is at any given time. You will need to spend about \$10 at the Post Office to ship the sample(s) to the lab. Each kit comes with one USPS flat-rate box, but two samples can fit into one box.

8194 A: for annual vegetable crops (0#) for \$62.00
B: for orchards (0#) for \$62.00



MORE MINERALS

AZOMITE® Granulated Natural Trace Minerals (0-0-0.2, 1.8% Ca and 0.5% Mg) Named for its **A-to-Z** of Minerals including Trace Elements. Mineralogically, it is a rhyolitic tuff breccia, which is a hard rock formation that formed from the dust of a volcano that erupted around 30 million years ago. The deposit resulted from the volcanic ash merging with seawater to form a mineral composition completely unique to its location and circumstance. Chemically, AZOMITE is a hydrated sodium calcium aluminosilicate (HSCAS) containing over 67 minerals beneficial to plants and animals. Broadcast at 150–300#/acre, approximately 4–7#/1000 sq ft. Mix into potting soil at a rate of 7–10# per cubic yard, or incorporate 50–100# per ton of compost, preferably at the beginning of the compost cycle. These small AZOMITE granules have almost zero dust and are easy to use with a broadcast spreader. Particle size: 1–3.4 mm. *No NH sale on A-size only.* A-size **MOFGA**; B/C sizes **OMRI**

8213 A: 4# for \$8.50
B: 44# for \$32.00
C: pallet 50 bags (2200#) for \$1600.00

20 Mule Team Borax Solubor (Sodium Tetraborate, 20.5% B) Soluble borate for fluid fertilizers and nutrient sprays. Boron is essential for all stages of tree growth and fruit set. Alfalfa, clover, brassicas, carrots, celery, corn, lettuce, onions, beets, tomatoes, strawberries, and tree fruits are particularly sensitive to boron deficiency. May be used in certified organic settings only to correct a documented boron deficiency. Excessive boron is toxic to plants. Mixes easily into spray solutions. A-size **MOFGA**; B-size **OMRI**

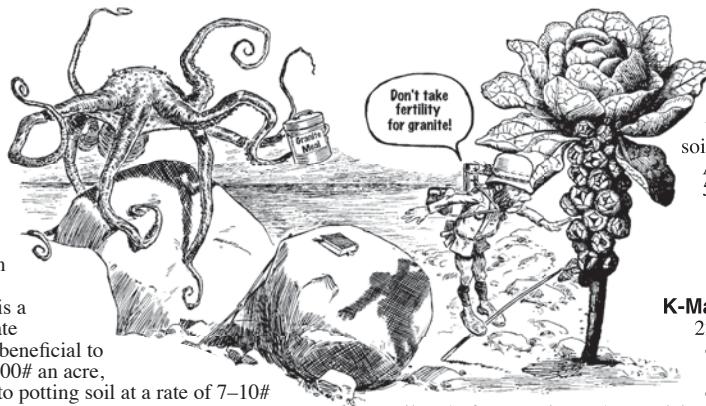
8219 A: 5# for \$36.00 **B: 50# for \$252.00**

BrixBlend Basalt (49.3% SiO₂, 13.3% Al₂O₃, 9.2% CaO, 5.7% MgO, plus trace minerals) A paramagnetic stone powder from the Pioneer Valley of Massachusetts for remineralizing and enhancing the general foundational fertility of the soil. Latest magnetic susceptibility reading is 2400 cgs units. Till in 2,000–20,000#/acre, 50–500#/1000 sq ft or broadcast at 2000–10,000#/acre, 50–250#/1000 sq ft. For compost, add 20–25#/cubic yard of raw material. Use up to 5% by volume in potting mixes. **Nat'l List**

8222 A: 5# for \$7.75
B: 45# for \$41.00
C: pallet 40 bags (1800#) for \$1490.00

Monterey Epsom Salts (9.8% water-soluble Mg, 12.9% S) Magnesium is a building block of chlorophyll and therefore essential to efficient photosynthesis. In magnesium-deficient soils, or in conditions that inhibit magnesium availability (low pH, low temperatures, dry soils, or soils with excess potassium or ammonium), supplementing with magnesium may boost yields significantly. May be applied to the soil or as a foliar spray. A favorite of rose fanatics and tomatoheads. Organic regulations require documentation of deficiency, preferably by soil test or tissue sampling, prior to application. If you are not seeking certification and you don't have a soil test, apply 8# per 1000 sq ft. **OMRI**

8228 A: 4# for \$16.00



Granite Meal Contains about 5% potassium in very slow-release form. Plants need potassium for sugar and starch production. Granite meal can be added to the soil in large amounts without altering the pH. Greatly enhances soil structure and promotes healthier plants. Application rates are 2000–4000#/acre or 50–100#/1000 sq ft. **MOFGA**

8231 A: 5# for \$9.00
B: 45# for \$39.00
C: pallet 40 bags (1800#) for \$1150.00

K-Mag Granular Trio 0-0-22 (10.8% Mg, 22% S) Langbeinite is a marine deposit of potassium sulfate and magnesium sulfate in soluble form. A good source of immediate potassium for depleted

soil and of magnesium where calcium is abundant. Alliums like its sulfur and potatoes like its quick boost of potassium. If you are looking for an allowed Sul-Po-Mag, this is it. Application rate: based on soil test, or 10-20# per 1000 sq ft. A-size **MOFGA**; B/C sizes **OMRI**

8237 A: 5# for \$15.50
B: 45# for \$75.00
C: pallet 40 bags (1800#) for \$2300.00

Hum-Amend Max Max out your soil health! This powerful soil-restoration amendment is designed to raise soil's cation exchange capacity while adding high levels of carbon and humus. Combines a soluble humate complex (containing fulvic and humic acids) with a soluble seaweed extract (a biostimulant and good source of trace minerals) on a base of raw leonardite and raw kelp meal for long-term effects. Humic and fulvic acids support plant health and increase yields by facilitating plants' uptake of nutrients and water. Granular texture with plenty of fines to provide a balanced release. Minimum 85% humic acids. Contains no animal manures—vegan-friendly and smells nice. For vegetables above ground, apply at a rate of 4–7#/1000 sq ft or 150#/acre in conjunction with your fertility program. For root crops, apply at a rate of 5#/1000 sq ft in the row at planting. For potting soil, incorporate 15–25#/cubic yard. **MOFGA**

8240 A: 5# for \$17.75 **B: 50# for \$110.00**

Micronutrients Liquid Minerals While trace mineral products like **8213** AZOMITE help maintain background levels of a wide variety of elements, they don't have the juice to correct deficiencies of specific micronutrients. Note that on certified-organic operations, these products may be applied only if there is a documented deficiency. Apply 1–4 qt per acre, or 3/4–3 oz/1000 sq ft, diluted 100:1 (1 pt in 12 1/2 gal water, 3/8 oz in 4 2/3 cups water). Repeat after 1–3 weeks if necessary. **OMRI**

Calcium helps strengthen plants' cell walls, improving crop quality, disease resistance and storage capacity. Calcium uptake may be reduced by cool or humid conditions. Midseason foliar applications of calcium can help prevent problems like blossom end rot and bitter pit. Contains 5% calcium chelated with an amino acid complex.

8241 A: liquid calcium, pint (3#) for \$16.00

Copper is necessary for efficient photosynthesis and respiration and affects the sugar content and flavor of produce. Copper availability may be limited by alkaline soils, high organic matter levels, saturated soils, or excessive zinc, nitrogen or phosphorus. Contains 4% chelated copper derived from copper sulfate.

8242 A: liquid copper, pint (3#) for \$16.00

Iron is essential for chlorophyll development and function, and is also involved in nitrogen fixation by legumes. Iron availability may be limited by alkaline soils, low organic matter levels, saturated soils, excessive phosphorus, or deficient zinc. Contains 5% chelated iron derived from ferrous sulfate.

8243 A: liquid iron, pint (3#) for \$16.00

Manganese helps plants to synthesize chlorophyll and is used in electron transport during photosynthesis. Manganese availability may be limited by alkaline soils, high organic matter, excessive iron, or deficient sulfur. Contains 1% nitrogen derived from hydrolyzed vegetable protein and 5% chelated manganese derived from manganese sulfate.

8244 A: liquid manganese, pint (3#) for \$16.00

Zinc is a component of auxin, an essential growth hormone, and is necessary for proper root development. Adequate zinc improves cold tolerance. Zinc availability may be limited by excessive phosphorus or copper, low organic matter, or magnesium deficiency. Contains 7% zinc derived from zinc sulfate.

8245 A: liquid zinc, pint (3#) for \$16.00

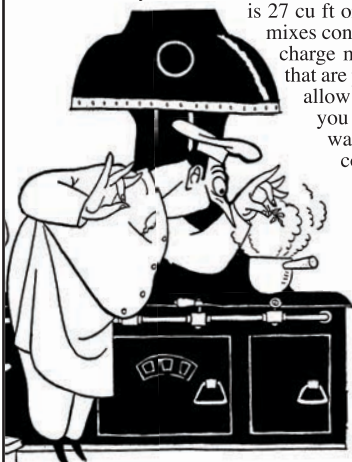
(Mostly) No Fertilizers Shipped to New Hampshire

New Hampshire demands a \$75 annual registration fee for every fertilizer we label. These fees would eat up more than a third of our gross margin on our fertilizer sales there, which isn't cost-effective. We made the difficult decision to stop fertilizer sales to NH until the regulatory environment is friendlier.

A few of our fertilizers are registered by the manufacturer in NH—the rest are unavailable to our NH customers as indicated by the *No NH sale* note in the product description. New Hampshireites are always welcome to come on over to Maine and shop in person at our warehouse.

Custom Mixing If you're tired of ineffectively mixing fertilizers or potting soil ingredients together in a wheelbarrow or tractor bucket, let us do the dirty work for you. Buy ingredients from us or bring your own. To estimate volume requirements for products sold by weight: dense products like rock powders are about 1 cu yd/ton, while fluffier products like crustacean meal are about 2 cu yds/ton. To convert other volume measurements: A cubic yard is 27 cu ft or about 700 dry qt. Our rates assume mixes contain ten or fewer ingredients; we may charge more for complex mixes or materials that are particularly difficult to handle. Please allow at least two weeks for completion. If you are supplying the ingredients and you want us to ship the mix to you, please contact us for a freight quote.

8193 A: per yard bulk (0#) for \$68.00
B: per yard bagged (0#) for \$130.00



Questions about custom mixing?
 Contact us at:
 ogs@fedcoseeds.com

Protassium+® Sulfate of Potash (0-0-50) The most economical source of available potassium. Fine-grained texture; moderate to fast release. If your soil has sufficient magnesium, this is the potassium fertilizer for you! UMaine soil scientist Bruce Hoskins says, "We recommend fine granular Sulfate of Potash for high tunnels. It will dissolve and release more completely, when tilled in, than the coarse granular material.

This is a particular problem in tunnels due to dry zones between drip lines. If the granules don't get wet, they will not dissolve and become available to the crop." Test your soil to determine the precise application rate you need. If your soil has a potassium deficiency, you will likely need to apply 200–500#/acre, or 5–10#/1000 sq ft.

A-size MOFGA; B/C sizes OMRI

8246 A: 5# for \$22.50
B: 50# for \$76.00
C: pallet 40 bags (2000#) for \$2800.00

Tiger Organic 90CR Sulfur Agricultural Sulfur. 90% elemental sulfur, 10% bentonite clay. Use to lower soil pH (make it more acidic). Often helpful for both lowbush and highbush blueberries, and for potatoes. Lowering pH of gravel paths will help control weeds. Not fine enough to be spread as fungicide; comes in small pastilles like yellow button candy. (Fungicidal sulfur is **8684-8690**.) Even in soils with correct pH, small amounts of sulfur are necessary for chlorophyll formation, the metabolism of nitrogen, and the synthesis of oils. Nutritional deficiency of sulfur is most likely on sandy soils low in organic matter. Application rates for pH correction are typically 500–1500#/acre or 12–35#/1000 sq ft (depending on current pH, target pH and soil type), with no more than 1000#/acre applied at once. To address nutritional deficiency of sulfur, apply 10–30#/acre, thoroughly blended into a larger quantity of fertilizer for even application. Wait to apply until soil temp is at least 60°. Sulfur-oxidizing bacteria are inactive below 55°—don't trust soil test results showing "sulfur deficiency" from samples taken early or late in the season. *No NH sale on A-size only.* A-size MOFGA; B/C sizes OMRI

8249 A: 5# for \$10.50
B: 50# for \$42.00
C: pallet 40 bags (2000#) for \$1650.00

Fertoz Organic Granulated Rock Phosphate Fertilizer (0-7-0), up to 20% total P, plus at least 30% Ca and 10% SiO₂. Natural phosphorus source from mines in British Columbia, Montana, and Mexico. Apply with **8249 Sulfur** or **8240 Hum-Amend Max** to improve solubility. Adequate phosphorus results in more vigorous early root formation, better flower and seed production, better growth in cold temperatures, and better water use efficiency. Typical deficiency symptoms are stunted growth, blue-green to purple coloration of the leaves, delayed maturity, and reduced production of flowers and seeds. This product is a better value than **Calphos**, which we carried for years: the price per ton is just slightly higher but it offers twice the level of soluble P. It is best to apply phosphate according to a soil test; if you have not tested your soil but have reason to believe phosphorus is low, a suggested spreading rate could be 50#/1000 sq ft. *No NH sale.* A-size MOFGA; B/C sizes OMRI

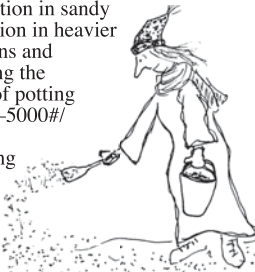
8250 A: 5# for \$12.50
B: 50# for \$59.00
C: pallet 40 bags (2000#) for \$2300.00

Tennessee Brown Rock Phosphate (0-3-0, 21–25% total P₂O₅, 40% CaO) The consistency of rich soil. Comes from the washing piles left behind when high-grade ore was extracted to produce superphosphate in the early 20th c. When tested in several Midwestern states' labs, concentrations of available phosphate were regularly over 6%. Lowest concentration of heavy metals of any phosphate source. Recommended by soil gurus Phil Callahan and Mark Fulford. It is best to apply phosphate according to a soil test; if you have not tested your soil but have reason to believe phosphorus is low, a suggested spreading rate could be 75#/1000 sq ft. *No NH sale.* A-size MOFGA; B/C sizes OMRI

8252 A: 5# for \$9.00
B: 45# for \$36.00
C: pallet 40 bags (1800#) for \$1100.00

ZeoMax Garden Aid Zeolites are aluminosilicate lattices, derived from volcanic ash, that hold up to 55% of their weight in water in the small cavities of their crystal structure. If one tablespoon of zeolite crystals were unfolded, they would cover an entire football field! Negatively charged, the lattices hold the cations of essential elements. Zeolites can improve the productivity of any texture of soil, improving water and mineral retention in sandy soils and improving aeration and minimizing compaction in heavier soils. Added to compost, zeolites retain ammonium ions and prevent their transformation to ammonia gases, keeping the nitrogen from escaping into the air. Add 2–3# to 10# of potting soil. Apply to the soil at 150–200#/1000 sq ft or 2000–5000#/acre and incorporate 6" deep. Water thoroughly after application so zeolites will adsorb the moisture, holding it in a thin film on their surfaces until needed. MOFGA

8255 A: 5# for \$16.00
B: 50# for \$68.00
C: pallet 40 bags (2000#) for \$2100.00



Fertilizers

PLANT-BASED FERTILIZERS

Alfalfa Meal - Organic (2.8-0.5-3.6)

Popular among veganic gardeners, and hands-down the best-smelling fertilizer out there. Gives plants a noticeable boost and feeds soil organisms. Blended with a trace quantity of certified organic soybean oil to reduce clumping. Apply at 800#/acre or 20–30#/1000 sq ft. *No NH sale.* MOFGA

8260 A: 5# for \$12.50
B: 50# for \$47.00
C: pallet 40 bags (2000#) for \$1750.00

Kelp Meal - Organic Dried and ground seaweed contains trace minerals, enzymes and amino acids, plus a small dose of N-P-K. Contains sugars that chelate micronutrients, making them more available to plants. A natural source of hormones that stimulate root growth. Mix into the soil at the rate of 300–600#/acre or 7–14#/1000 sq ft. *No NH sale.* A-size MOFGA; B/C sizes OMRI

8263 A: 5# for \$24.50
B: 50# for \$135.00
C: pallet 40 bags (2000#) for \$4995.00

Kelp-It Soluble Powder Dehydrated Seaweed Extract Highly concentrated powder makes an excellent foliar spray containing growth hormones, trace minerals, enzymes and carbohydrates. One package makes 1 gallon of liquid seaweed concentrate. Add the powder and 1/2 tsp of a mild biodegradable soap or non-ionic surfactant (as a wetting agent) to 1 gallon of water, agitating to dissolve the powder. Use this concentrate at a rate of 1 Tbsp/gal. To make a ready-to-use solution, mix 1/2 tsp soluble powder and 1/4 tsp soap to 1 gal water. Reseal package; the powder readily absorbs water. Can be applied every 1–4 weeks throughout the growing season. *No NH sale.* A-size MOFGA; B/C sizes OMRI

8266 A: 10.7 oz (0#) for \$24.00
B: 44# for \$749.00

Kelp Liquid Concentrate (0-0-4)

New formula is **twice as concentrated** as the liquid kelp we carried for years: higher price, but you need only half as much! Maine-harvested *Ascophyllum nodosum*, also known as rockweed, knotted wrack or kelp, is a source of growth-promoting and -regulating hormones. Along with the potassium content, its diverse micronutrient package enhances plant development and yield. Use when starting seeds to improve seed germination and increase root growth. Also useful as a drench to help prevent transplant shock. As a foliar feed, it will increase mineral uptake in leaves and improve photosynthesis. Can be applied to seed, root or foliage at 1 Tbsp/gal water. For an acre, use 2–4 pints of concentrate mixed with at least 50 gal water. Can be applied every 1–4 weeks throughout the growing season. Add 1/2 tsp/gal **8714 ThermX™ 70** as a spreader-sticker to increase coverage and absorption. Mix with **8289 Fish Hydrolysate** for a well-rounded nutrient boost! *No NH sale.* MOFGA

8270 A: pint (3#) for \$13.50
B: 1 gal (10#) for \$79.00
C: 5 gal (50#) for \$345.00

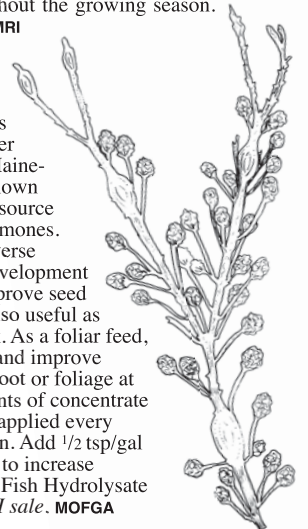
High Brix Molasses - Organic Plants and beneficial microbes have a sweet tooth, too! In addition to its sugar content, molasses is a source of important nutrients, including manganese, magnesium, copper, potassium and calcium. More and more growers are using molasses for annuals and perennials during certain growth periods (see below). Our unsulfured blackstrap molasses is 100% shelf stable, so it won't bubble up and swell in the bottle. The leading competitor of this product has only 72% sugar; ours is 79–80% sugar, food grade (though our warehouse isn't certified for handling food), and certified organic.

8271 A: 1 gal (10#) for \$33.50
B: 5 gal (50#) for \$159.00

Give plants and animals a boost with molasses!

Application rate: foliar feed or fertigation, 1 Tbsp molasses per gallon of water.

- **Cannabis/hemp:** During the vegetative phase, apply 1–2 times a week as fertigation, or every 14 days as a foliar feed; UMaine Professor John Jemison recommends it especially during flowering, fertigating 2–3 times during that period.
- **Veggies and other annuals:** For watering in newly transplanted seedlings.
- **Fruit trees:** Michael Phillips promoted molasses for use in conjunction with **8185 EM-1**, so that well-fed probiotics can better outcompete fruit tree pathogens. Research in the UK indicates that molasses can reduce transplant shock in bare-root fruit trees.
- **Livestock:** Add it to animals' drinking water in cold weather for a caloric boost. Add to finely ground feeds to reduce dust. May be fed liberally, but not free-choice: restrict to 10% of the ration or less.



SOIL AMENDMENTS

Ahimsa Organics® Neem Cake (6-1-3 avg) Pure full-strength neem cake. The residue of neem seed kernels after the oil has been pressed. Earthworm populations increase when neem cake is added to the soil. Added to the soil a few weeks before planting, neem's antifungal properties help suppress fusarium infestations. Use in combination with other soil conditioners (especially Karanja Cake, found on our website) and fertilizers at 10-15% by weight; neem and karanja can be combined for a total of 10-15%. Mix into the top 6-8" of the soil or apply as a topdressing around the base of your plants. Smells like old onion bagels. Contains growth-regulating hormones so be cautious using it in potting mix, adding no more than 1% by weight, or 0.5% neem cake plus 0.5% karanja cake. In the field, apply 180-360# per acre, or 10# per 1000 sq ft. *No NH sale. MOFGA*, B/C sizes **OMRI**

8272 A: 4# for \$18.50 B: 44# for \$129.00

Soybean Meal (7-1.5-1 avg) High levels of nitrogen and potassium are released as the soybean meal breaks down, providing fertility over time. Add when first planting or transplanting. (For sidedressing, use fish bone meal or blood meal instead.) Considered the most effective and economical nitrogen fertilizer for Northeast soils. Apply based on soil test, or 40# per 1000 sq ft. Certified non-GMO. *No NH sale. MOFGA*

**8275 A: 5# for \$14.75
B: 45# for \$59.50
C: pallet 40 bags (1800#) for \$2050.00**



ANIMAL-BASED FERTILIZERS

Blood Meal (13-0-0) One of the fastest release times of all organic nitrogen sources. Highly recommended for corn. The smell (understandably) freaks out deer. Till into soil at 20#/1000 sq ft, or apply as a sidedressing at 7 1/2#/1000 row ft 3 weeks after transplanting or 4 weeks after seeding. *No NH sale. MOFGA*

8280 A: 5# for \$19.00 B: 50# for \$105.00

North Country Organics® Bone Char (0-16-0, 32% total P₂O₅, approx. 30% Ca) Burned bone meal provides large amounts of readily available phosphorus. The most economical source of P for deficient soils (excepting fresh manure, which is bulkier and stinkier). Apply based on soil test, or 15#/1000 sq ft. *No NH sale. A-size MOFGA; B/C sizes OMRI*

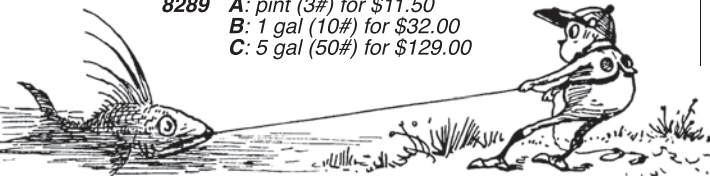
**8283 A: 5# for \$15.50
B: 50# for \$75.00
C: pallet 40 bags (2000#) for \$2800.00**

Feather Meal (13-0-0) Provides a strong and quick release of nitrogen, about as fast as 8280 Blood Meal. Apply in the row at planting time for sweet corn, melons, brassicas and other heavy feeders. Not water-soluble; should be worked into the soil. Till into soil at 20#/1000 sq ft. *No NH sale. MOFGA*

**8286 A: 5# for \$15.50
B: 50# for \$75.00
C: pallet 40 bags (2000#) for \$2800.00**

Fish Hydrolysate (2-5-0.2) Fish heads, bones, skin and guts finely ground, enzymatically digested, and filtered. The resulting gurry is stabilized with phosphoric acid. The wild fish scraps come from the fishing industry along the Great Lakes. Fish hydrolysate is cold-processed and preserves the maximum amount of nutrients; it is *not* fish emulsion, which involves heat processing to remove the oil and protein. Fish hydrolysate goes into solution readily and can be used as foliar feed. Strain before adding to a drip irrigation system to avoid clogging the lines. Concentrated: use 2-4 Tbsp/gal of water for garden application or foliar spray. Use 2 3/4-6 1/4 qt/50 gal water per acre. Apply every 1-3 weeks. *No NH sale. MOFGA*

**8289 A: pint (3#) for \$11.50
B: 1 gal (10#) for \$32.00
C: 5 gal (50#) for \$129.00**



Fish Hydrolysate with Kelp (2-5-0.2) All the N, P & K of Fish Hydrolysate (above), plus the micronutrients and growth hormones of kelp. Can be used as a foliar feed, in drip irrigation and for better seed germination and seedling growth. Alice's preferred drench for onions and other early transplants; provides readily available nitrogen when microbes are still sluggish in cold spring soil and encourages vigorous rooting. Improves plant vigor and stress resistance, increases storage life. Use 4 Tbsp/gal water for fertigation, 2-3 Tbsp/gal water for foliar spray. Use 2 3/4-6 1/4 qt/50 gal water per acre. Apply every 1-3 weeks. *No NH sale. MOFGA*

**8292 A: pint (3#) for \$12.00
B: 1 gal (10#) for \$32.00
C: 5 gal (50#) for \$129.00**

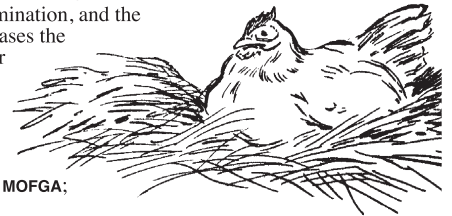
Fish Bone Meal (6.9-11.9-0.8 avg) Wild fish scraps (a fishing industry byproduct) are cooked, screened and milled to a uniform particle size. No stabilizers or additives. Works in a drop spreader and once in the ground, the odor fades quickly. Apply based on soil test, or 20-35#/1000 sq ft. Excellent source of nitrogen and phosphorus. Use as a sidedressing or mix into compost to provide added nitrogen and a bacterial boost. *No NH sale. MOFGA*

**8295 A: 5# for \$18.50
B: 45# for \$105.00
C: pallet 40 bags (1800#) for \$3800.00**



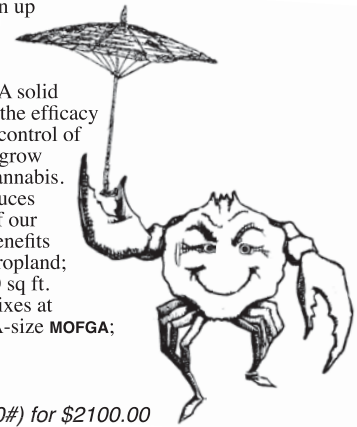
Poultry-Manure Compost Kreher Enterprises (5-4-3 with 9% Ca) Composted, pasteurized and pelletized poultry litter from New York farms provides a good balance of major plant nutrients and other essential elements. Pasteurization removes the threat of weed seed and pathogen contamination, and the composted material increases the biological activity of your soil. Extremely popular with our commercial veggie-farming customers. Apply based on soil test, or 35#/1000 sq ft. *No NH sale. A-size MOFGA; B/C sizes OMRI*

**8301 A: 5# for \$10.50
B: 40# for \$26.00
C: pallet 50 bags (2000#) for \$899.00**



Crab Meal Biogreux Crab Shell (4-4-0; 18% Ca) A nutrient-rich byproduct of blue crab facilities. As well as being an excellent source of macronutrients, crab shell meal is high in chitin (average 13.1%). Adding it to your soil puts beneficial chitin-eating bacteria into a feeding frenzy and subsequent population boom. Once they've eaten up all the chitin you applied, they will turn upon pathogenic fungi and nematodes and disease-causing bacteria like *E. coli* and salmonella. A solid body of scientific evidence supports the efficacy of chitinous soil amendments in the control of soil-borne pathogens. Will help you grow massive specimens of field-grown cannabis. Improves lodging resistance and reduces branch breakage. A key ingredient of our 8338 CanaDiesel Mix. The same benefits of NPK and chitin apply to veggie cropland; apply based on soil test, or 60#/1000 sq ft. Also a useful addition to compost mixes at 1/2 cup per cubic foot. *No NH sale. A-size MOFGA; B/C sizes OMRI*

**8304 A: 5# for \$12.50
B: 50# for \$75.00
C: pallet 30 bags (1500#) for \$2100.00**



The solution is all in solution!

No matter where you are or what you grow, you've probably noticed two trends:

- Rain is an increasingly unreliable source of water for crops.
 - A few more diseases and insect pests seem to arrive each year.
- Gardeners and farmers are having to irrigate when and where they've never had to before, and they are having to manage new, unfamiliar diseases and pests. It can be hard to decide whether it's worth the time and expense to irrigate or spray.

If you're taking the time to water or spray your crop, why not boost the water with some extra nutrients or beneficial organisms?

Fertigation means adding water-soluble products to an irrigation system. Foliar sprays can be applied on a small scale with pump sprayers (page 159.) Check out the chart to learn about all the great things you can use to supercharge your water!



| Item | Product | Primary function | Fertigation rate | Foliar spray rate |
|------|-------------------------|-------------------------|------------------|-------------------|
| 8167 | Humic Acid | Chelator | 1 oz/50 gal | 1 oz /50 gal |
| 8170 | Fulvic Acid | Chelator | 0.1-1 fl oz/gal | 0.1-1 fl oz/gal |
| 8175 | BioOrganics Endo | Mycorrhizal inoculant | 1 Tbsp/gal | |
| 8180 | Mammoth P | Beneficial bacteria | 0.6mL/gal | |
| 8185 | EM-1 | Beneficial bacteria | 5 fl oz/gal | 5 fl oz/gal |
| 8189 | Monster Plant Mojo | Macronutrients | 2-4 oz/gal | 2 oz/gal |
| 8266 | Kelp-It | Micronutrients | | 0.5 tsp/gal |
| 8270 | Liquid Kelp Concentrate | Micronutrients | 1 Tbsp/gal | 1 Tbsp/gal |
| 8289 | Fish Hydrolysate | Macronutrients | 4 Tbsp/gal | 2 Tbsp/gal |
| 8292 | Fish w/ Kelp | Macro & micronutrients | 4 Tbsp/gal | 2-3 Tbsp/gal |
| 8663 | Karanja Oil | Synergist | | 2 Tbsp/gal |
| 8710 | Cease | Biofungicide | 1.25 fl oz/gal | 1.25 fl oz/gal |
| 8714 | ThermX 70 | Soil and leaf penetrant | 0.5 tsp/gal | 0.5 tsp/gal |
| 8717 | Nu Film P | Sticker-spreader | | 4-6 fl oz/100 gal |

FEDCO'S FERTILIZER MIXES

All ingredients in our mixes, which are formulated and blended in-house, are on the National List and on the MOFGA list of allowed products.

Sleepytime Garden Blend (0-0-2 with 2.5% Ca and 1.6% Sulfur) The last of the root vegetables have been tucked into the cellar, and the soil microbes snooze contentedly under a blanket of young winter rye. Snow is coming soon, and a hush descends on the gardening season. The gardener may wish to feed the garden a bedtime snack before she curls up by the fire with the new Fedco catalog and a cup of tea, but this is not the time for fertilizer with soluble nutrients. Roots and microbes alike are too sleepy to do anything with rich food, and it will just get washed away before spring arrives. It's the perfect time to spread rock powders, which need time and moisture to release their benefits. Our blend of granite, zeolites, gypsum, microminerals and humates will improve soil structure, remineralize and enhance nutrient availability for the next growing season. Does not contain significant amounts of soluble nutrients and will have a gently balancing effect on soil pH, so may be applied to any soil without regard to soil test results. Apply 4000#/acre or 100#/1000 sq ft. **MOFGA**



8307 A: 5# for \$14.00
B: 45# for \$66.50
C: pallet 40 bags (1800#) for \$2350.00

Vegemighty (3.4-2.2-3.5) An excellent all-purpose slow-release fertilizer for those who prefer to avoid animal products. Great for flower bulbs because it won't attract critters. Use 1 Tbsp per transplant (or bulb) mixed into the loosened soil below planting depth; till in 100#/1000 sq ft. Also great as a topdressing after planting in the fall and again each spring. Contains non-GMO soybean meal, rock phosphate, organic alfalfa meal, sulfate of potash and kelp meal. Does not contain brewers' yeast extract, and may or may not encourage the adoption of an Australian accent. **No NH sale. MOFGA**

8309 A: 5# for \$18.00
B: 45# for \$79.00
C: pallet 40 bags (1800#) for \$2800.00

Gungnir Asparagus Mix (2-5-7) Named for the legendary dwarf-fashioned spear wielded by the Norse god Odin, our house mix will help you grow mighty spears of asparagus. Formulated to meet Penn State Extension's recommendations for the annual fertilization of asparagus beds: contains bone char, alfalfa meal, sulfate of potash, wollastonite, non-GMO soybean meal and compost. Masterful forging and magical runes ensured that Gungnir the spear would strike its target regardless of the strength and skill of the warrior's hand; Gungnir the fertilizer will help you strike your target yields regardless of your strength and skill as a gardener, but do start by ensuring that your soil pH is adequate (asparagus hates acidic soil) and keep your beds well-weeded and well-watered. Broadcast in early spring before spear emergence at 2.5# per 10 row feet or 2000#/acre. To keep this product shelf-stable, we pack the compost in a small plastic bag within the main bag; mix it with everything else at fertilization time. **No NH sale. MOFGA**

8310 A: 5# for \$18.00
B: 45# for \$79.00
C: pallet 40 bags (1800#) for \$2800.00

Turbo-Tuber (Approx. 7-2-9, plus 2% Ca and 3.5% S) Magic Molly, our potato superhero, is the fastest girl in town: her jacked-up hybrid pickup runs on our high-test organic fertilizer, formulated to meet the nutrient requirements of potatoes. Blended in-house from fish bone meal, feather meal, soybean meal, sulfate of potash, dolomitic lime, pasteurized poultry manure and K-mag. On balanced soils, apply at 2#/10 row feet, 45#/1000 sq ft, or 2000#/acre and work into the soil to planting depth. **No NH sale. MOFGA**

8315 A: 5# for \$16.00
B: 45# for \$69.00
C: pallet 40 bags (1800#) for \$2600.00



Tomato Sauce (3-4-6.1, plus 5.8% Ca, 6.2% S, 3% Mg, 8.7% SiO₂, 1.3% humic acids) By popular demand from our customers! Formulated to meet the needs of field-grown (outdoor) fruiting Solanaceous crops: tomatoes, peppers, eggplants and tomatillos. Making a fertility plan for these crops stumps many growers. We've eliminated the guesswork with this balanced blend that provides just the right macronutrients and micronutrients that nightshades need. Crafted with love; we dye each batch with red food coloring, so it looks like you're spreading marinara...just kidding! Contains feather meal, bone char, K-Mag, wollastonite, kelp meal, and Hum-Amend Max. At planting time, apply 6#/100 sq ft, or 2600#/acre; or 3 Tbsp per transplant hole; 4 Tbsp/gal soil for containers. If you're growing tomatoes in a hoophouse where they will grow much faster and longer, we recommend supplementing with additional nitrogen (27# feather meal per 1000 sq ft) and potassium (14# sulfate of potash per 1000 sq ft). To sidress midseason, spread 2 cups per 5 row feet; or 3 T around each plant; 1 1/2 Tbsp per 12" container. **No NH sale. MOFGA NEW!**

8316 A: 5# for \$14.50
B: 45# for \$81.00
C: pallet 40 bags (1800#) for \$2580.00

3G Greener Garlic Grower (approx. 3-3.5-3.5, plus sulfur) By popular demand, we designed a special Fedco mix to meet the nutrient requirements of garlic. 3G is about the fastest data speed you can expect in much of rural Maine, but we like life in the slow lane. We don't mind planting garlic in October and waiting until August to reap our pungent harvest. With 3G Greener Garlic Grower, you can expect better spring emergence, more vigorous plants, bigger bulbs and richer flavor. Blended in-house from sulfur, alfalfa meal, bone char, zeolites, sulfate of potash, feather meal and neem cake. On balanced soils, apply 4000#/acre or 100#/1000 row ft banded in-row, or 1 Tbsp per clove for small plantings. If you like gardening even more than cat videos, try 3G. If you're ready for an upgrade, check out our **8319 5G Garlic Growing Kit. No NH sale. MOFGA**

8317 A: 5# for \$16.50
B: 45# for \$85.00
C: pallet 40 bags (1800#) for \$2950.00

5G Grow Great Garlic Greener, Guaranteed Kit

Just as 5G ushered in a new telecom era, our 5G kit will revolutionize your garden's garlic game. You'll be effortlessly broadcasting and downloading high-fidelity organic fertility customized for garlic, and you can count on crisp vibrant scapes and bulbs to be streaming into your kitchen in high definition, even if you live in the willy-wacks. If you're new to growing garlic, worry not, because everyone gets great coverage with our garlic network! Includes everything but the garlic seed and mulch. We even have you covered post-harvest with a vigorous oats variety, for sowing where the garlic was and carrying those beds solidly through the rest of the growing season.

Kit includes supplies for up to 100 cloves of seed garlic (about 2-3 lb, which you can order seasonally from our Fedco Bulbs catalog). We recommend 1 sq ft per garlic plant, so kit covers about 100 sq ft of growing space. Kit contains:

- Our user-friendly garlic-growing instructions
- 5# 3G Greener Garlic Grower
- 2# blood meal
- 2# forage oat covercrop seed
- 8 wooden garden stakes
- 4 mesh produce bags.

No NH Sales. All inputs MOFGA.
8319 A: garlic-growing kit (13#) for \$39.50

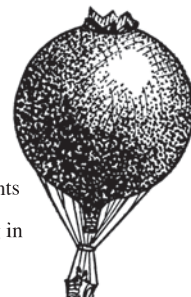
Blueberry Booster A blend of granite meal, K-Mag, sulfur, Tennessee brown phosphate, trace minerals and compost. Brings down the soil pH and provides the nutrients necessary for healthy blueberry plants and good fruit. Mix 3# per plant into the soil when planting. As a side dressing in spring or fall, apply 3# per plant. **No NH sale. MOFGA**

8321 A: 3# for \$8.00 B: 30# for \$36.00



Do you like our Grow Great Garlic Kit? We have **more fun kits** for gardeners of all ages and experience-levels on page 153.

SOIL AMENDMENTS



MORE FEDCO MIXES

Hole-istic Spring Planting Mix Recommended for establishing new fruit trees. Our own well-balanced blend of Tennessee brown phosphate, alfalfa meal, AZOMITE and K-Mag in a humus-rich base of worm castings. Add 3# per tree hole when planting. To keep this mix shelf-stable, we pack the alfalfa meal in a plastic bag within the main bag. When spreading this product, mix the alfalfa with the blended ingredients at approximately 1 part alfalfa to 6 parts blended ingredients. *No NH sale. MOFGA*



8324 A: 3# for \$8.50 B: 30# for \$39.00

Fruition Mix A balanced fertilizer to keep your bearing fruit trees healthy and productive. Gypsum (maintains optimum calcium levels to promote disease resistance), non-GMO soybean meal (for slow-release nitrogen and a small potassium boost), and AZOMITE in a compost base to fuel the microbial engine. Bearing fruit trees may not require fertilization every year, but if your tree put on 4" or less of terminal growth in the previous season then our Fruition Mix will put new spring in its step. In spring apply 10# per 1" trunk diameter, or 1 bag per tree 5" and over, out to the drip line, and then cover it with mulch. To keep this product shelf-stable, we pack the soybean meal in its own plastic bag inside the larger bag. When applying this mix, first spread the blended ingredients, then sprinkle the soybean meal on top, at a rate of 1 part soybean to 4 parts blended ingredients. *No NH sale. MOFGA*

8330 A: 45# for \$52.00

Fall Fruit Tree Prep Mix To prepare your land in fall or winter for spring fruit-tree planting, use this mix. Without digging a hole, spread one bag on an area 4-6' in diameter. Cover with 1/8 yd (about 3 1/2 cu ft) of compost and then with 1/8-1/4 yd of chipped branches and brush. As the chipped brush breaks down over the winter it promotes mycorrhizal fungi, which improve root growth and function. By spring you'll have a rich spot ready to plant; just pull back the mulch, dig the hole, and incorporate the supplements and compost (sold separately) as you back-fill around the tree roots. Contains calcitic lime, rock phosphate, AZOMITE, granite meal, humates, bone char, kelp meal and blood meal. *No NH sale. MOFGA*

8333 A: 32# for \$49.00

Ancients Rise Mix Whether they be abandoned heirlooms or wild seedlings, tucked in the woods or growing alongside an old road, apple trees live on for hundreds of years. More and more people are renovating these old and sometimes forgotten trees, not only to enhance production and fruit quality, but also as acts of reverence. Our unique blend of rock powders, trace minerals, biostimulants and humic acid is formulated to enhance the soil cation exchange capacity, build humus, and condition the soil in which the ancient roots reside. Best if spread at the tree's drip line and several feet beyond. No need to work into the soil—just cover with a thick layer of woody mulch. Can be applied in fall or spring, ideally in conjunction with a thoughtful pruning program. Apply one bag per old tree. *Ancients, rise! No NH sale. MOFGA*

8336 A: 45# for \$62.00

True Love Rose and Ornamental Mix (2.5-6-3) Show your flowers you appreciate them by treating them to dinner now and then. This mix is formulated to feed both soil and plant to encourage healthy foliage and lush, colorful blooms. Contains fish bone meal, alfalfa meal, bone char, gypsum, AZOMITE, sulfate of potash, epsom salts, kelp meal and humates. Supplemented with endomycorrhizae to improve the roots' ability to take up nutrients, water and oxygen. Roses are particularly high-maintenance garden partners (their preferred love language is gifts of fertilizer), but other ornamentals will also appreciate this mix if they look like they need a little tender loving care. Love might be blind, but you'll definitely see a difference in your blossoms. Apply 1/2-1 cup per plant once the soil has warmed (approx. 10 cups per 5# bag), or 50-60# per 1000 sq ft. *No NH sale. MOFGA*

8337 A: 5# for \$16.50 B: 45# for \$94.50

CannaDiesel Mix A high-octane well-balanced blend to fuel your grow! This fertilizer and amendment mix includes all the goodies contained in our well-loved (now retired) CannaLot MegaSoil, minus the compost and potting soil. Contains customer Dan K's time-honored blend of alfalfa, soybean, blood, crab and kelp meals, along with worm castings, zeolites, rock phosphate, AZOMITE, bone char, basalt, wollastonite and MycoApply. To maximize growth without overdoing the fertility, we recommend these proportions for each plant grown in a pot: 15# CannaDiesel mixed with 2 1/2 gallons of nice compost and 10 gallons of fertile potting soil. For planting in the ground, forgo the potting soil and use the same proportions CannaDiesel and compost for each 2 cu ft hole. As with anything, it's best to try it with just one plant before you switch over your entire operation to a different fertilizer. To keep this mix shelf-stable, the nitrogen-rich ingredients are packed in a small bag within the main bag. *No NH sales. MOFGA*

8338 A: 5# for \$15.50 B: 45# for \$84.00

OTHER MIXES AND ADDITIONS

NutriVeg® (5-4-4, 5% Ca) A blend of fertilizers and minerals to provide balanced nutrition for all your plants and vegetables. Contains alfalfa meal, crab meal, feather meal, fish meal, kelp meal, kelp extract, rock phosphate and sulfate of potash. Before planting, apply 50#/1000 sq ft, working it into the top of the soil. Reapply as needed during the growing season. For fruit trees and shrubs apply 1 cup per 1" of trunk diameter around the drip line and work into the top layer of soil where roots feed. Apply again if trees are under stress or if soil is poor. Made in Maine. *No NH sale. MOFGA*

8342 A: 5# for \$19.00 B: 50# for \$95.00 C: pallet 40 bags (2000#) for \$3800.00

Biochar Join the carbon-farming revolution. Biochar is the product of heating organic matter in a low-oxygen environment: instead of releasing the carbon into the atmosphere, this converts it to a highly stable form that can be held in the soil for hundreds or thousands of years. Think of biochar as a super-compost! Biochar helps your soil sequester more carbon and emit less nitrous oxide (a greenhouse gas 300 times more potent than carbon dioxide). It provides a dream home for beneficial bacteria and fungi and prevents essential plant nutrients from leaching out of the root zone. This is 100% pure horticultural-grade raw char, with 70-85% fixed carbon. Apply raw char at up to 20#/1000 sq ft or 700#/acre on ground you are resting or preparing to put into production for the first time. **Do not apply this product as-is to ground that is currently in production!** Raw char may inhibit plant growth for a year or two: the native soil microbes consume available nitrogen while slowly colonizing the micropore matrix. Then the magic happens and plant growth explodes in year three or four. If you can't wait that long, blend raw char with your compost feedstock, using up to 50% char. The compost will finish faster and the compost/biochar blend may be applied to growing plants with immediate benefits. And if you're REALLY in a hurry, soak biochar in compost tea for 24 hours (this is practical only for small operations, since the mucky wet biochar would not handle well in a mechanical spreader). But Mother Nature counsels patience. *MOFGA*

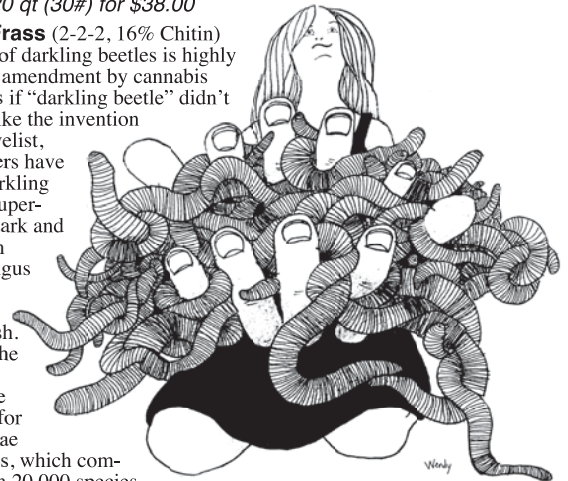
8348 A: 5# for \$12.50 B: 25# for \$29.50 C: pallet 80 bags (2000#) for \$2250.00

Worm Castings (0.5-0.5-0.3 avg. and trace minerals) Research at Ohio State University indicates that adding 10-20% worm castings by volume to potting mixes greatly improves germination, seedling growth and plant productivity, but greater amounts produce decreased benefits. Worm castings limit plant disease and have beneficial effects including enhanced mycorrhizal activity and the suppression of parasitic nematodes. Benefits are lost if castings are sterilized. Our non-sterile castings come from locally farmed worms. Garden application rate: 100# (~67 quarts) per 1000 sq ft. We offer 3 cu yd totes that weigh up to 2900#; **totes must be ordered online because they require a freight quote. MOFGA**

8350 A: 8 qt (12#) for \$24.75 B: 20 qt (30#) for \$38.00

Superworm Frass (2-2-2, 16% Chitin)

The excrement of darkling beetles is highly valued as a soil amendment by cannabis growers. And as if "darkling beetle" didn't already sound like the invention of a fantasy novelist, the manufacturers have dubbed their darkling beetle larvae "superworms." On a dark and stormy night, an evil band of fungus gnats swarms toward your Conspiracy Kush. Superworm to the rescue! Darkling beetle is the common name for the Tenebrionidae family of beetles, which comprises more than 20,000 species worldwide. Their frass (a polite word for insect poop) is a respectable source of N-P-K, but more importantly it is a rich source of plant-available chitin. Frass nourishes chitin-feeding bacteria and fungi, which in turn devour gnat eggs and root-feeding nematodes. Chitin also fortifies plants' cell walls, stimulates their immune systems, and fosters healthy blooms (think more and bigger and stickier buds!) Not just for cannabis: frass is suitable for houseplants, is a useful addition to potting soils, and is an excellent sidedressing for any crop. **For soil mixes:** Incorporate 1/2-1 cup frass per cubic foot of media. **For fertigation:** Add 1/2 cup per gallon of water, shake well, and apply every 3-4 weeks. **For sidedressing:** 2 Tbsp per plant, or 65# per 1000 sq ft, before watering every 2-3 weeks. **For foliar feeding:** 1-2 Tbsp/gal water; steep 30 minutes, screen solids, and spray onto leaves. *No NH sale. MOFGA*



8351 A: 1# (0#) for \$12.50 B: 5# for \$49.00 C: 45# for \$298.00

COMPOST & POTTING SOIL

Rainbow Valley Compost This top-quality compost, made in Sidney, ME, comes highly recommended by farm advisor Mark Fulford. The lab results we saw showed strong nitrogen levels and sky-high organic matter. Use as a top dressing, mix into garden soil at up to 4–8 cubic ft/1000 sq ft, or apply around the trees in your orchard in spring or summer. **MOFGA**

8362 A: 1 cu ft (35#) for \$19.50

bio365 BIOALL™ A premium high-test potting soil. Highly recommended for indoor growers, container gardening, soil blocking or slow-growing seedlings that will be in the greenhouse for six weeks or more. Seth Yentes of North Branch Farm said his onion seedlings thrived best in this soil. He observed that it has excellent water-retention capacity, and it doesn't get slimy on top like some organic potting soils. Coir, sphagnum peat and worm castings form the base of this top-quality mix; bio365's own biochar is added to encourage a thriving microbial population, and the whole concoction is topped off with a generous well-balanced helping of organic nutrients. Made in New York. **MOFGA**

8366 A: 1.5 cu ft (40#) for \$37.00

B: pallet 40 bags (1000#) for \$1450.00

Living Acres NP Germination Blend™ A light-textured potting soil with extra perlite, screened to 1/4". Recommended for the smallest flower and herb seeds. Seedlings more than three weeks old should be fertilized or transplanted to a more nutrient-rich blend to grow out. Made in Maine. **MOFGA**

8378 A: 2 cu ft (50#) for \$32.00

Dirtcraft Peat-Free Soils

Founded in 2018 and peat-free from day one, Dirtcraft blends high-performance, biologically active potting soils using the most local and renewable ingredients available. Their soils are all compost-based because as they assert,

"Living soil with a diversity of beneficial microbes is the secret to plant health, vigor and disease resistance." In Fedco's peat-free trials, Dirtcraft soils have yielded the healthiest plants with the most vigorous root systems. Peat-free is the way to be!

Peat-free mixes hold water differently than peat-based mixes; peat dries from the bottom-up, whereas peat-free dries from the top-down. Resist the urge to overwater! Use a popsicle stick to probe the center of a cell to see if the tray needs water—overwatering can inhibit good germination.

Dirtcraft Peat-Free Levitation Seedling Mix

Unique peat-free formulation optimized for the greenhouse grower for strong root growth. The base mix of coconut coir and compost holds water longer than traditional media. Charged with a fine-tuned organic fertilizer blend that provides for the initial weeks of plant growth until transplant time. Sustainably sourced and small-batch crafted. Recommended for seed starting, transplants, paper-pot trays and rooting cuttings. Contains coconut coir, organic compost, aged bark fines, rice hulls, wood fiber, biochar, blood meal, fish bone meal, alfalfa meal, gypsum and humic acid. **OMRI NEW!**

8364 A: 8 qts (8#) for \$16.50

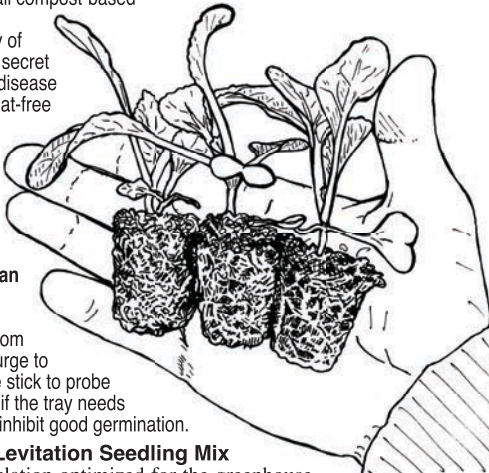
B: 40 qts (40#) for \$33.00

Dirtcraft Peat-Free Critical Mass Super Soil Supercharged for maximum yield! Critical Mass is Dirtcraft's most heavily amended living soil blend, made of 100% organic ingredients. Fortified with biostimulants, worm castings, biochar, and a diversity of nutrients to feed beneficial microbes (natural pest prevention) for seriously healthy growth. Ditch the bottled nutrients with this water-only mix for a successful crop with none of the guesswork. Preferred by cannabis growers, designed for maximum yield in flowering plants. Recommended for all fruiting and flowering plants; indoor and outdoor cannabis and hemp; and heavy-feeding crops. *Not intended for seed starting.* Contains coconut coir, organic compost, aged bark fines, wood fiber, perlite, vermiculite, biochar, fish bone meal, blood meal, feather meal, alfalfa meal, crab meal, gypsum, humic acid and AZOMITE. **AYC NEW!**

8368 A: 40 qts (40#) for \$36.00

Why go peat-free?

Peat is an extraordinary horticultural material, but it is mined from peatlands, which are beautiful and remarkably biodiverse ecosystems that deserve preservation. What's more, peat bogs sequester an incredible amount of carbon; it's estimated that per square meter, they hold 500% as much carbon as the Amazon rainforest. Let's wean ourselves off peat right away! Try **8364 and 8368 Dirtcraft peat-free mixes.**



VERMONT COMPOST POTTING MIXES

These tried-and-true mixes are crafted in Vermont. They are best used within 6 months of purchase.

Vermont Compost Plus® A great boost for transplants, potted plants and garden soils. Improves soil structure, provides a generous dose of slowly released nutrients, and enhances microbial activity. Rejuvenate potted plants by spreading a shallow layer on top and watering in. Add a few tablespoons to a planting hole to reduce seedling transplant shock. Sidedress greens after early cuttings to stimulate new growth. Improve your potting soils with 4–8 Tbsp/qt. Will not burn roots. Use as a top-dressing, mix into garden soil at 4–8 cubic feet/100 sq ft, or apply around orchard trees in spring or summer. Blended from manure compost, sphagnum peat, granite, basalt, coir, vermiculite, blood and bone meals, kelp and gypsum. **MOFGA**

8369 A: 6 qts (5#) for \$15.50

D: 45 qts (45#) for \$61.00

E: pallet 35 bags (1800#) for \$2100.00

8373 A: 2 cu yd tote, drop ship (2000#) for \$1350.00

Vermont Compost Jolly Roger™ Sick and tired of poor yields from your container-grown cannabis or hemp? Ahoy, matey, this flowering and fruiting mix is for you! Once plants are established enough to transplant into Jolly Roger, we're sure you'll be shouting "shiver me timbers!" as you witness a vigorous vegetative phase and an abundant booty-ful harvest. Also great for tomatoes and other vegetables, flowers or houseplants that need high fertility. For this finishing mix, be sure to use a container size commensurate with the size of the plant you hope to grow; smaller pots will limit yield potential. Not recommended for cloning or germination. Contains manure compost, sphagnum peat, granite meal, basalt, coconut coir, blood meal, feather meal, kelp meal, gypsum, bone meal, vermiculite and perlite. **MOFGA**

8370 C: 45 qts (45#) for \$61.00

D: pallet 35 bags (1800#) for \$2100.00

8373 B: 2 cu yd tote, drop ship (2000#) for \$1350.00

Vermont Compost Fort Vee™ Potting Soil This is Vermont Compost's flagship potting soil; a stellar performer for serious growers who rely on it as a complete all-purpose seedling mix. The seedling-growing pros at Villageside Farm in Freedom, ME, use Fort Vee for all the plant starts they market at various retailers. Widely used for soil-blocking. Containing a high proportion of compost, this living soil provides lasting and balanced fertility, great water retention, and exceptional texture to grow vibrant, sturdy transplants. Highly recommended for slow-growing seedlings that will be in the greenhouse for 6 weeks or more. Contains sphagnum peat, manure compost, vermiculite and coir with a blend of organic and mineral amendments. **MOFGA**

8371 A: 6 qts (5#) for \$14.50

D: 20 qts (15#) for \$25.00

E: 45 qts (45#) for \$55.00

F: pallet 35 bags (1800#) for \$1900.00

8373 C: 2 cu yd tote, drop ship (2000#) for \$1150.00

Vermont Compost Fort Light™ Potting Soil Recommended for cell-tray seedlings, but not soil blocks. (For soil blocks, consider **8371** Fort Vee.) Warms more quickly and drains better than Fort Vee. Might need additional fertilizing prior to transplanting if seedlings grow for more than 4 weeks; try topdressing with **8369** Compost Plus. Contains sphagnum peat, manure compost, coconut coir, perlite, and a blend of organic and mineral amendments. **MOFGA**

8374 A: 6 qts (5#) for \$14.50

D: 45 qts (45#) for \$55.00

E: pallet 35 bags (1800#) for \$1900.00

8373 D: 2 cu yd tote, drop ship (2000#) for \$1150.00

Vermont Compost Perennial Blend™ So many customers ask what to use for filling raised beds or big containers—we have an answer! Crafted by the soil experts at Vermont Compost, this blend meets our high standards. Coarser than potting mixes and formulated as a complete soil for organic cultivation of woody plants, shrubs, herbs, vegetables and flowers. As with any bed or container, periodic applications of quality compost are recommended. Fedco grower Jacob Mentlik of After the Fall Farm favors this mix for culturing all kinds of potted perennials. Contains manure compost, bark, granite, basalt, sphagnum peat, coconut coir, vermiculite, kelp meal, blood meal, gypsum and bone meal. **MOFGA**

8377 A: 6 qts (5#) for \$14.00

D: 45 qts (45#) for \$45.00

E pallet 35 bags (1800#) for \$1559.00

8373 E: 2 cu yd tote, drop ship (2000#) for \$1095.00

Vermont Compost Totes

Please Note! Totes are shipped from Vermont via freight (we do not stock them at our warehouse). If you do not have a forklift or loading dock to handle the delivery, you may pick the tote up at our warehouse but regular freight charges will still apply. Or, for an additional \$85, you may request a lift gate to lower the pallet from the truck to the ground once it reaches your location.

If your location cannot accommodate a full-sized tractor-trailer (with enough room for it to turn around), you may request a smaller "straight truck" or provide us with an alternative shipping address for a commercial location that can receive your shipment for you.

MULCHES



MORE PLANTING MEDIUMS

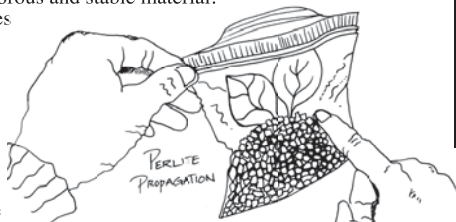
Coir Blocks This premium washed low-EC coconut coir is a biodegradable and environmentally sound substitute for peat moss. Compressed blocks of coconut fibers (coir) swell to eight or nine times their original size when placed in hot water. The fibers are quite short but have excellent moisture-retention capacity. pH 5.0-7.0, electrical conductivity of less than 0.5 S/m. Use in potting mixes or to add organic matter to your soil. Improves aeration and nutrient retention. Easy to store and ship. Coir has been commended by the Wildlife Conservation Society as ecologically sustainable. To hydrate, allow the block to soak in water for about twenty hours, or until it's wet through and breaks apart. **OMRI**

8380 A: one block (10#) for \$18.00
B: pallet 220 blocks (2200#) for \$2450.00

Perlite Volcanic glass that has been heated until it "pops" like corn, resulting in a lightweight, porous and stable material.

Widely used in potting mixes (usually as 20–25% of the total mix) to improve water retention and prevent compaction. Also used for rooting cuttings: place cuttings in a plastic bag of moistened perlite with the cut ends buried up to the node, then fill the rest of the bag with air, seal, and leave in indirect sunlight for 2–3 weeks. **OMRI**

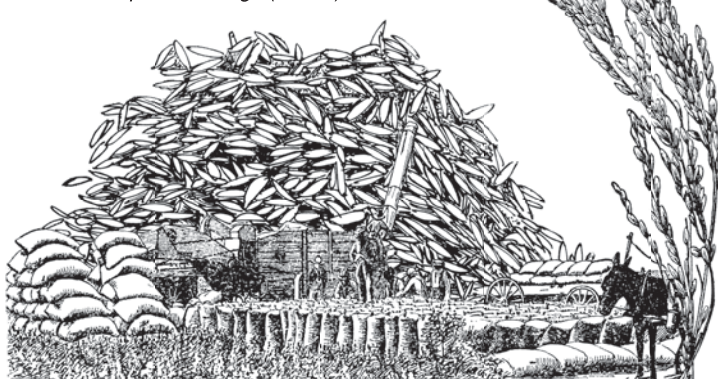
8389 A: 1.5 cu ft (15#) for \$29.50



Rice Hulls A great alternative to perlite in your growing medium—carbonaceous, renewable and less dusty to mix. May be included at up to a third of your potting mix by volume. Also used as a mulch for container plants to retain soil moisture and improve microbial activity. Parboiled to eliminate viable weed seeds. Improves aeration and retains moisture. May cause rapid surface dry-out even when underlying soil moisture is ample; be sure not to overwater. Remains stable during the average plant production cycle with minimal nitrogen tie-up.

Actual net weight is 50# per bag; the 65# shipping weight reflects the bulkiness of the bag and how much it costs to ship one in a box. (Approx. 7 cu ft/bag; 112 cu ft/pallet). **OMRI**

8392 A: 7 cu ft (65#) for \$32.00
B: pallet 16 bags (1800#) for \$429.00



Buckwheat Hulls An attractive economical sustainable mulching option. Cover your beds with a thin layer of hulls, 1/2–1" thick: it will look sparse at first and the hulls may seem light enough to blow away in a good breeze. They will swell up nicely after a rain or two and settle down to a summer of weed and grass suppression. Fedco staffer Renee uses them in chicken nest boxes to keep eggs clean, and they make chick brooder poop patrol a breeze—clumping litter for chickens! We have a surprise customer base for these hulls from people making zafus and other pillows. The actual weight of each 2 cu ft bag varies, but is roughly 25#; the 35# shipping weight reflects the bulkiness of the bag and how much it costs to ship one in a box. **MOFGA**

8397 A: 2 cu ft (35#) for \$12.50
B: pallet 44 bags (1122#) for \$450.00

EcoMulch Earthtone Heavy Weight Roll. Hooray for the release of this OMRI-listed heavy duty paper mulch! Reclaimed cardboard, 100% bio-based, biodegradable/compostable, it blocks weeds while preserving moisture and your conscience. Thicker and sturdier than most other paper mulches on the market, yet its clever crêped finish makes it a cinch to lay out because it naturally conforms to the shape of your beds. Can be laid by machine or by hand and secured with straw or soil along the edges. Breathable and water-penetrable, so it's compatible with both drip and overhead irrigation. Sure, plastic mulches are a cheaper investment at the beginning of the season, but factor in end-of-season labor when plastic must be pulled up and deposited in a landfill. EcoMulch can be left to break down in situ, where it adds organic matter (~400 lb of carbon per acre!), improving the soil physically and biologically. Some crops, like peppers, may yield higher with plastic mulch, but many crops perform better with the subtly cooling effects of paper mulch (~3° cooler than black plastic, ~2° cooler than bare soil). This becomes more advantageous every year as summers get hotter with climate change. Single-season plastic mulch has had its day in the sun; join us in making the transition sooner than later! Natural brown color. **OMRI**



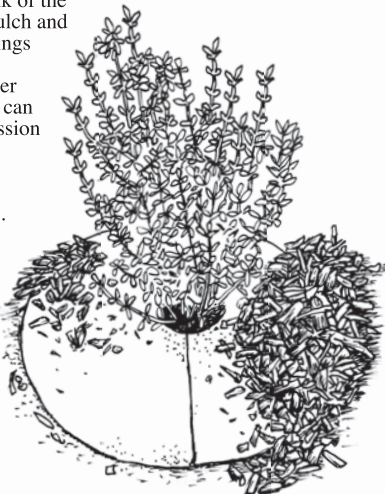
8401 A: 3x50' (4#) for \$19.50
8402 A: 4x100' (16#) for \$46.00
B: 4x500' (60#) for \$175.00

WeedGuardPlus® Standard Weight Roll. Sturdy dark brown paper provides a biodegradable mulch and weed barrier made from cellulose fibers. Porous enough to allow water penetration. Usually provides a season of weed suppression and soil-temperature moderation, although the rate of decomposition will depend on weather conditions and the degree of biological activity in the soil. Perfect for giving competitive crops a protected start. Recommended for pumpkins, squash, cabbage, broccoli and cauliflower. Not recommended for high-traffic areas or where reliable season-long protection is required. Please note that, as of 2022, WeedGuard is no longer OMRI listed, due to two FDA-approved colorants that serve to make it 100% opaque material. For a similar but heavier-duty paper mulch that is OMRI-listed, use **8401/8402 EcoMulch**. Still, for those not pursuing certification, it is a great alternative to plastic mulch if you want to reduce your footprint or your end-of-season labor bill. 36" wide.

8403 A: 3x250' (21#) for \$88.00
B: 3x500' (35#) for \$120.00

WeedGuard Circles Heavy Weight Sheets. Looking for Earth-friendly weed-barrier mats for your planting sprees? Circle up! Each round sheet comes with a neat slit and center X, so you can easily slip it around the trunk or stalk of the plant. Cover with a light layer of mulch and sit back while your weed-free plantings become the talk of the town. These sheets are heavy weight (54% heavier stock than WeedGuardPlus), so you can anticipate season-long weed suppression in established annual beds. For extended weed control (6+ months) when establishing new landscape plantings, consider using two layers. 18" diameter. Dark brown color.

8404 A: five 18" circles (2#) for \$5.75
B: case of 50 circles (8#) for \$52.00



Thanks for your prompt customer service. Also anytime I've written or called I receive friendly service.
 —Laurel from Trescott Twp, ME

Hemp Tree Squares

The magical medicine plant strikes again! These hemp-fiber squares block weeds and hold 5 times their weight in water to preserve moisture around the base of your young trees while you sit on the porch adjusting your attitude with other cannabis products if you'd like.

Would also work well for other large plants, like tomatoes—or cannabis, for that matter. Simply slip the square around the base of your plant and secure two diagonally opposite corners with **8882/8883 Earth Staples**. Easier and tidier to use than loose mulches; safe for humans, animals and the environment. Fully biodegradable, but quite rugged: expect them to last one or two seasons depending on soil and weather conditions. Will fully break down after three or four years. 18x18x1/2". **AYC**

- 8405 A:** five 18" squares (2#) for \$26.00
- B:** case of 50 squares (25#) for \$265.00

Woven Ground Cover Thick commercial-grade UV-stabilized polypropylene fabric that deters stubborn weeds (like dandelions). This super-rugged fabric will last at least a decade if protected from photodegradation by a thin layer of wood chips, straw, hay or **8397 Buckwheat Hulls**. Very resistant to tearing. Use around the base of trees, in perennial flower beds, or in permanent walkways in your garden. These days, many growers are cleverly using this fabric as mulch for heat-loving crops, and re-using it year after year; simply cut and/or burn holes in it according to your preferred spacing (for peppers, tomatoes, melons, squash, or what have you). Melting the cut edges prevents it from unraveling. Allows water penetration, but we do recommend putting drip tape under it if you use it for mulching crops directly. Comes in 4' and 6' widths. Material density: 3.2 oz/sq yd.

- 8406 A:** 4x50' (4#) for \$34.00
- B:** 4x300' (35#) for \$125.00
- 8407 A:** 6x50' (6#) for \$36.00
- B:** 6x300' (60#) for \$180.00

Woven Tree Squares Weeds swallowing up your trees and perennials is a buzzkill. With these large 36x36" long-lasting weed-control mats, you can say goodbye to tiresome weeding around your plants. Cover the mats with wood chips, leaves or straw, and they will likely last a decade. Your friends will wonder how you manage your plantings so fastidiously. The fabric is essentially the same as our **8406/8407 Woven Ground Cover**; durable but also allows water penetration, so it is fully compatible with our **9104 Orchard Irrigation Kit**. Each square mat has a slit, so you can slip it around the plant's base. We recommend securing mats with **8882/8883 Earth Staples**. Black with yellow stripes every 12". **NEW!**

- 8408 A:** five 36x36" squares (2#) for \$14.75
- B:** 25 squares (5#) for \$59.00
- C:** 100 squares (25#) for \$229.00

White-on-Black Plastic Mulch

Upper white layer reflects sunlight back on the plants, increasing photosynthesis. Black lower layer blocks light to suppress weeds. Less solar energy is transmitted to the soil, keeping soil temperatures lower. Growers on the Vermont Vegetable and Berry Growers Association listserv report that white-on-black mulch repels thrips as well as reflective silver mulch does, while being easier on workers' eyes. Recommended for strawberries, onions, brassicas and lettuce. 1.0 mil. 4' wide.



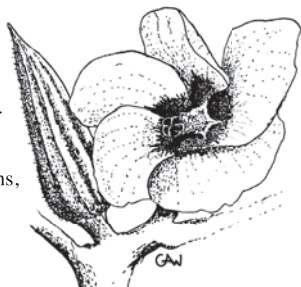
- 8412 A:** 4x50' (0#) for \$18.00
- B:** 4x250' (5#) for \$42.00
- C:** 4x4000' (80#) for \$345.00

Embossed Black Plastic Mulch Good all-purpose plastic mulch for cool-weather areas. Excellent weed suppression. Increases soil temperatures by several degrees. Put down a few weeks before planting to allow the soil to soak up some heat. Embossed texture increases strength and minimizes tearing. Recommended for tomatoes, cucurbits and sweet corn. 1.0 mil. 4' wide.

- 8418 A:** 4x50' (0#) for \$16.00
- B:** 4x250' (5#) for \$39.00
- C:** 4x2400' (50#) for \$185.00
- D:** 4x4000' (80#) for \$355.00

IRT 100 Mulch InfraRed Transmitting plastic suppresses weeds nearly as well as black mulch and lets infrared light through to warm the soil more quickly and to a higher temperature. For northern growers, IRT adds days to the growing season at both ends. Recommended for long-season squash, melons, peppers, eggplant and okra. 1.0 mil. 4' wide.

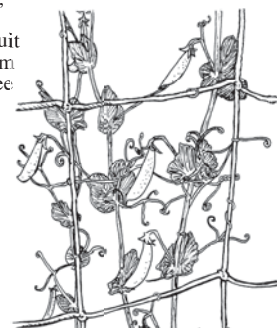
- 8421 A:** 4x50' (0#) for \$21.00
- B:** 4x250' (5#) for \$52.00
- C:** 4x2400' (50#) for \$310.00



FENCING & NETTING

Jute Trellis Netting A netted grid of 6x6" squares for all your vertical (vining crops) and horizontal (flowers and cannabis) support needs.

Made from the jute plant, *Corchorus* spp., which originated on the Indian subcontinent. Jute netting does not stretch, which is very advantageous for numerous applications. Some even wrap it around fruit trees to keep large birds and mammals from getting the ripe fruit. Withstands up to three seasons of use. Jute cultivation requires no pesticides, herbicides or fungicides, and it grows during the rainy season with little need for irrigation. The plants are hand-harvested instead of by machinery. Treated with food-grade vegetable oil. Made in India.



- 8858 A:** 6.5x150' (8#) for \$72.00

Nylon Trellis Netting 7" reach-through nylon mesh with a strand strength of 60# for tomatoes, climbing beans, peas, cucumbers and luffas. Weave a strand of fence wire through the top for extra support. May also be used horizontally to provide support for plants at risk of lodging. Will last for many years if you can avoid "the tangles"!

8859 A: 5x30' (0#) for \$18.25
B: 5x60' (0#) for \$30.50

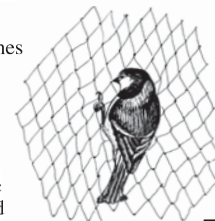
Easy-Drape Rip-Stop Bird/Critter Netting A Fedco customer requested this way-better bird netting that doesn't "make you want to attack anyone in your general vicinity whilst trying to untangle it." If you gather or weight it at the base of the plant, it can also keep out porcupines, squirrels and other garden meanies. Lasts significantly longer than other nettings; lifespan is 7-10 seasons, assuming you're using it for the 4-8 week fruiting season.

The 16.4x16.4' size is suitable for bushes/shrubs/trees up to 6' tall, and the 32.8x32.8' size is suitable for trees up to 12' tall. To lift the edge over tall plants, duct tape grip clamps or clips to the ends of two long poles, clip in the netting, and work with a buddy to lift the piece over the plant. Knitted high-density UV-resistant polyethylene with 3/4" diamond mesh is green.

- 8861 A:** 16.4x16.4' (1#) for \$29.00
- B:** 32.8x32.8' (5#) for \$92.00

Bird-X® Orchard Netting Throw over trees or bushes and fasten to protect fruit or berries from birds, deer and possibly raccoons. Strong and durable black polypropylene 5/8" mesh with UV inhibitors.

- 8862 A:** 7x20' (0#) for \$11.75
- B:** 14x14' (0#) for \$12.50



15-Year Deer Fence Deer are elegant and majestic creatures—until they start devouring your garden and orchard. If you're ready for a lasting solution to excluding deer (and other critters), this premium fence will do the job for at least 15 years! Once it's installed, you can breathe easy and focus on other things, knowing your plants are safe. This UV-resistant polypropylene mesh fence is recyclable (if you ever get done with it). Incredibly strong yet lightweight and easy to handle. The transverse-direction tensile strength is 685 lb/ft. Mesh size is 1.77" x 1.97". The material is discreet and practically invisible in shady and wooded areas. See box below for tips on setting up a deer fence that will last. Made in the USA. **NEW!**

- 8864 A:** 7'x100' (35#) for \$199.00

Deer-X® Protective Fencing Use as temporary fencing to protect plantings and fruit crops from deer, birds and other pests. Same durable black polypropylene 5/8" mesh with UV inhibitors as **8862 Orchard Netting** above. Almost invisible mesh makes the fence startling to invading critters.

- 8865 A:** 7x100' (0#) for \$32.00
- B:** 14x75' (2#) for \$46.00

Setting up your deer fence

We like to support deer fence with cedar poles or living trees, but if these aren't options for you, consider 10' steel T-posts that are sunk 2' into the ground. You can space the posts about 10' apart, farther if you run wire along the top edge of the fence.

To keep your perimeter free of weeds and grass, we recommend putting down **8406/8407 Woven Ground Cover** and covering it with wood chips. To keep porcupines from sneaking under the bottom, secure the bottom edge of the fence with **8882/8883 Earth Staples**.

If your posts are 3" in diameter or smaller, secure the fence to the posts using our handy **8869 11" Fencing/Netting Ties**.



If shipping weight in parentheses is (0#), the item qualifies for free shipping!

TWINE - TIES - STAPLES

Sisal Garden Twine Premium untreated 1-ply twine made from the sisal plant, *Agave sisalana*, which originated in Central America. The utility of this twine is endless (until you get to the end of the roll). A good companion to **8886 Biodegradable Tomato Clips** for trellising vine crops. Our new twine stock is compatible with our tomato clips; the entire thickness of the twine can now fit in the jaws of the clips, without you having to separate any of the strands. Natural fiber product—expect minor variations in twine thickness. Thrifty growers may get more than one year's use but don't count on that; whenever you're through with it, you can compost it. Comes in a 10# ball, 3000'. For best results, pull twine from inside the ball. Tensile strength 240 lb.

8866 A: 3000' (10#) for \$39.00

Hemp Twine Unwaxed hemp twine. Cut down vines along with the twine and compost the whole tangle. Tensile strength 48 lb, 2mm thick, perfect for tying up plants and marking rows.

8867 A: 400' (0#) for \$13.75

Poly Garden Twine Strong cheap multi-purpose white poly garden twine. 6300' of sheer usefulness in a cardboard box with handy belt slots so you can wear it instead of carrying it. Not biodegradable, so do remove it at the end of the season.

8868 A: 6300' (3#) for \$21.00

11" Fencing/Netting Ties UV-resistant zip ties designed for securing fencing, netting, and trellises to metal, fiberglass, or wooden posts up to 3" in diameter. They tighten up quickly and easily for a lasting secure hold. Will not rust or rot. 11" long. Made in China. **NEW!**

8869 A: 100 ties (0#) for \$9.00

Biodegradable Tomato Clips Easy to use and even easier on the Earth than conventional plastic clips! Use these 7/8" (internal diameter) clips made of non-GMO cornstarch to attach tomatoes (or cucumbers, or melons, or other thin-vined plants) to your trellis system. If you use a biodegradable material (like **8866 Sisal Twine**) for your trellises,

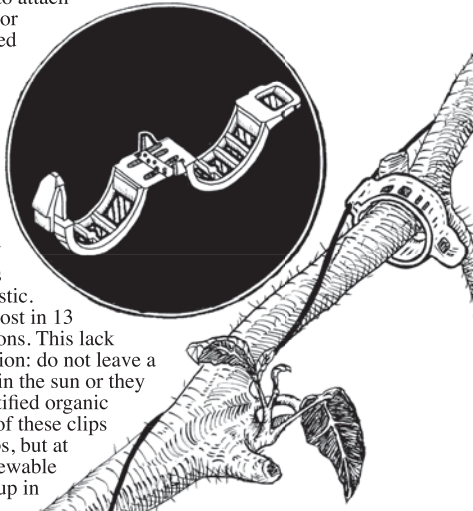
you can just cut the whole thing down at the end of the season and let it degrade in place, saving the labor of picking through the vines and strings for bits of plastic. The clips will fully compost in 13 weeks in suitable conditions. This lack of stability demands caution: do not leave a bag of these clips sitting in the sun or they might melt together! Certified organic operations must dispose of these clips as they would plastic clips, but at least they're made of renewable materials and won't pile up in the landfill.

8886 A: 100 count (0#) for \$12.75

Earth Staples The garden seems full of rocks until you need one to anchor your fabric! Galvanized steel wire anchor pins neatly hold down plastic mulch, row covers, woven ground cover/landscape fabric, irrigation line, plastic fencing, or bird netting. We've always carried U-shaped staples, and we now offer **NEW!** L-shaped staples in response to growers requesting the extra surface area and holding power; the L shape makes them much less likely to just rip through the fabric. Both styles are 6" long.

8882 A: L-shaped staples - bundle of 25 (0#) for \$8.75
B: L-shaped staples- bundle of 100 (4#) for \$30.00
C: L-shaped staples- case of 1000 (35#) for \$230.00

8883 A: U-shaped staples - bundle of 25 (0#) for \$7.75
B: U-shaped staples- bundle of 100 (4#) for \$19.00
C: U-shaped staples- case of 1000 (35#) for \$125.00



FLOATING ROW COVERS

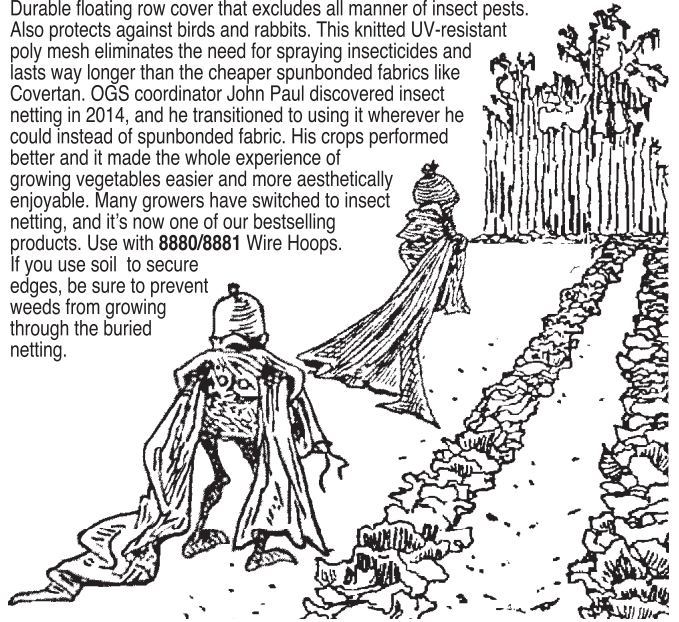
When seeking pest protection, think of floating row covers and hoops first. Floating row cover must be secured to the ground. Pin edges with rocks, soil or weight bags.

ProtekNet Exclusion Insect Netting

Durable floating row cover that excludes all manner of insect pests.

Also protects against birds and rabbits. This knitted UV-resistant poly mesh eliminates the need for spraying insecticides and lasts way longer than the cheaper spunbonded fabrics like Covertan. OGS coordinator John Paul discovered insect netting in 2014, and he transitioned to using it wherever he could instead of spunbonded fabric. His crops performed better and it made the whole experience of growing vegetables easier and more aesthetically enjoyable. Many growers have switched to insect netting, and it's now one of our bestselling products. Use with **8880/8881 Wire Hoops**.

If you use soil to secure edges, be sure to prevent weeds from growing through the buried netting.



ProtekNet 25-Gram Mesh size is 0.35mm x 0.35mm, small enough to exclude tiny guys like thrips, two-spotted spider mites and white flies. Secure to the ground with lightweight lumber or poles, or with mulch. Knitted polyamide; density is 25 grams/square meter. **Estimated lifespan is 2-3 years, 91% light transmission.** Choose between 6'10 1/2" wide, or 10' wide. We now offer longer (96") Wire Hoops (**8881**) for making taller tunnels with the wider netting!

8872 A: 6'10 1/2" x 20' (0#) for \$39.00
B: 6'10 1/2" x 51' (2#) for \$96.00
C: 6'10 1/2" x 205' (10#) for \$298.00
D: 6'10 1/2" x 820' (35#) for \$1249.00
8873 A: 10x20' (0#) for \$49.00
B: 10x51' (3#) for \$125.00
C: 10x205' (15#) for \$465.00
D: 10x820' (51#) for \$1900.00

ProtekNet 47-Gram Mesh size is 0.5mm x 0.75mm, small enough to exclude aphids, leaf hoppers, flea beetles, leek moths, spotted wing drosophila and swede midge. Knitted polyolefin; density is 47 grams/square meter. **Estimated lifespan 4-5 years! 88% light transmission.**

8874 A: 6'10 1/2" x 20' (2#) for \$41.00
B: 6'10 1/2" x 82' (6#) for \$159.00
C: 6'10 1/2" x 328' (35#) for \$595.00

Covertan®-PRO 19 Floating Row Cover This spunbonded fabric is soft and pliable, UV-stabilized, offers about 4° of frost protection, and transmits up to 90% of sunlight. Protects crops from flea beetles, swede midge, cabbage worms, potato beetles, leafhoppers, even woodchucks. Place over **8880 Wire Hoops** for a gently warmed environment to get sensitive crops like melons and peppers established. Can last 2-3 seasons if you take care of it: promptly remove it from the field, dry it, and store where rodents can't nest in it. Weighs 0.55 oz/sq yd.

8876 A: 7x50' (2#) for \$28.00
B: 7x250' (20#) for \$94.00
C: 7x1000' (35#) for \$310.00
D: 7x2000' (70#) for \$585.00

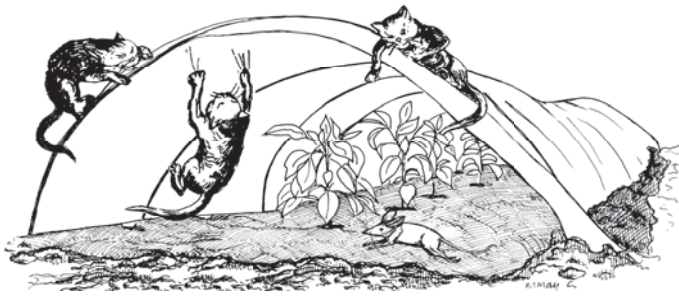
ProtekNet versus Covertan for crop protection

Heat-loving crops like the extra warmth that spunbonded Covertan confers, and Covertan helps with frost protection. But for pest protection, durability and overall performance, consider investing in ProtekNet.

Advantages include:

- significantly better airflow, which boosts crop growth and reduces incidence of disease
- rain easily penetrates the netting; spunbonded fabrics block lighter rains from reaching the crop
- easy visibility through the netting so you can better monitor plants
- more light transmission through netting, thus more vigorous growth
- netting is stretchy for a neater, tighter fit than with spunbonded fabrics

Maine grower Mary R. clued us in that white vinegar really helps remove rust buildup on steel Earth Staples: "We just soak the staples in a container of vinegar and eventually you can rub the rust off them easily. Kinda messy but it works."



Clear Slitted Plastic Row Cover Place over **8880** Wire Hoops to form small tunnels, creating a greenhouse environment to promote the growth of heat-loving plants. Self-venting on hot days. On a sunny day the temperature under cover can average 10–30° warmer than outside air. Offers a few degrees of frost protection. Especially recommended for sweet potatoes and long-season peppers. Tears more easily than fabrics; anchor edges with soil or **8879** BioPlus Row Cover Weight Bags (not rocks or staples!) Can be reused with care. 1.1 mil.

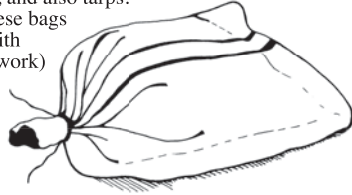
8877 A: 6x50' (2#) for \$21.75
B: 6x250' (10#) for \$75.50

BioPlus Row Cover Weight Bag with Handle Ideal for securing edges of any of the above floating row covers, and also tarps.

While earth staples puncture fabrics, these bags keep edges intact. Simply fill the bag with crushed stone (sand or gravel will also work) and secure the fastener. It's the handle that really makes these bags stand out against competitors; these bags are so easy to grab and move around!

Furthermore, the UV-resistant high-density polyethylene fabric is rated to last 7 growing seasons—good luck finding another row bag that lasts nearly that long! Green bag with a yellow stripe down the center. 15x26" when empty and flat. *Note:* Not recommended for 17g or 25g ProtekNet because the edges of the row bag can catch and tear lightweight nettings. **NEW!**

8879 A: weight bag (0#) for \$3.50



Galvanized Wire Hoops For building low tunnels with row covers like Covertan, ProtekNet, or slitted plastic. Most effective if spaced every 5' or less. "Hoops" are shipped as straight flexible rods of 10-gauge wire. Stick one end in the ground and then stick the other end in at the desired tunnel width to form a hoop. We've always carried the 74" length, but we now offer a **NEW!** 96" length to accommodate wider row covers, such as our 120" wide ProtekNet. A taller low tunnel gives plants more room to grow larger while staying protected. (The shipping weights for the hoops reflect the cost of shipping these awkwardly long bundles.)

8880 A: 74" - bundle of 20 (45#) for \$36.00
B: 74" - bundle of 100 (50#) for \$155.00
8881 A: 96" - bundle of 20 (45#) for \$39.00
B: 96" - bundle of 100 (50#) for \$172.00

Cheat Sheet for Gardeners

If you're a beginning gardener or new to Fedco, the choices can be overwhelming. Over time you'll learn what's right for you through reading, talking with neighbors, and the best teacher of all: trial and error. But here are some go-to items that are either especially versatile, especially easy to use, or that really make a difference between success and failure:

- **Cover Crop:** Choose **8019** Buckwheat if you're planting it after your last spring frost date or more than four weeks before your first fall frost date; **8076** Forage Oats if you're planting early or late in the season or **8040** Dutch White Clover if you want to plant something between rows of crops.
- **Fertilizer:** WAIT! Use our **8194** Soil Testing Service and we'll tell you what your soil needs. That being said, seedlings always like to be watered in with **8292** Fish Hydrolysate with Kelp.
- **Garden Fabric:** Protect your crops from insects, weather extremes and birds with **8872-8874** ProtekNet or **8876** Covertan. Warm the soil and block weeds with **8418** Black Plastic Mulch. They work well together.
- **Fungicide:** **8709** Monterey Complete Disease Control is broad-spectrum, low-toxicity and poses no threat to pollinators. Best used as a preventive spray.
- **Insecticide:** **8768** Bug-Buster-O is an effective broad-spectrum insecticide with quick knockdown. Do not use where pollinators are active.
- **Seedling Supplies:** **8791-8801** CowPots encourage the healthiest root growth. Hold them in sturdy **8831** Indestructible Bottom Trays. **8371** VT Compost Fort Vee potting soil is suitable for nearly all seedlings. Use a **9880-9885** Heat Mat system to ensure good germination rates.
- **Hand Tool:** The **8908** Weeding Knife (Hori-Hori) is versatile, classy and practically indestructible.
- **Pruning Tool:** The **9010/9011** Felco #7/#10 pruners cut branches up to an inch thick and won't strain your hands.
- **Irrigation Equipment:** Start with one of our kits (**9098** for gardens or **9104** for orchards).

PLANT PROTECTION & PEST CONTROL

The products in this section provide a degree of pest control and will help certified growers meet the requirements of rule 205.206 of the National Organic Program.

Bird-Scaring Balloon Successfully tested against some of Maine's toughest crows! Multi-colored strips around a menacing metallic eye. According to Cherokee artist Kade Twist, "The iconography on the balloon is indigenous iconography. It's called an 'open eye' and it's a pattern used from South America to Canada." The "open eye" motif was reinvented in Japan as a bird-scaring device and is widely used there for that purpose. Balloons are 14" in diameter and may deter birds from your sweet corn or blueberries. Most effective if moved around the garden from time to time. Protects a 15–20' radius. **Indigenous Royalties.**

8615 A: balloon (0#) for \$13.00

Birdscare Flash Tape® Silver and red metallized 7/16"x290' plastic tape is a cost-effective way to protect crops from bird damage. Suspend tape in a loose spiral above the crop. Tape flashes and flickers in the wind to resemble fire. Very effective against flocking birds and crows, may also help keep raptors away from your chickens. Less effective against robins, sparrows and their ilk. Don't apply too early or birds may get used to the tape.

8618 A: flash tape (0#) for \$8.75

Maggot Barriers for Tree Fruit Stretchable 100% nylon sleeves prevent apple maggot, codling moth and plum curculio from damaging tree fruits. Yes, these are essentially earhtone pantyhose coverings for individual apples, pears or stone fruits. This approach may seem like a bit of a "stretch," but when you consider how much time, energy and material inputs go into managing insect pests with spraying, it may be that nylon barriers are better-suited to your scenario. Apply barriers when fruitlets are less than 1" in diameter and leave plenty of sleeve beyond the tip of the fruit to allow for growth. Then twist neck of sleeve and secure with twist ties or clips. Made in the USA; reusable. Heavy weave and reinforced seam; outperforms others on the market.

8626 A: 100 barriers (0#) for \$16.50

Red Ball Trap Use to monitor and trap apple maggot flies. Sturdy 3 1/2" reusable hollow red plastic ball with hook and wire for hanging. For monitoring purposes, place several traps along the southern perimeter of your orchard after petal fall. Check traps twice weekly. To significantly reduce apple maggot damage, after petal fall hang 1–2 traps per dwarf tree, 2–4 per medium tree, or 4–8 per large tree. Coat traps with Sticky Stuff (below) and hang about eye-level with 18" of clearance between them and any foliage so insects can get a good look at them. More effective if used with an apple maggot lure (available on our website.)

8627 A: ball trap (0#) for \$6.50

Sticky Stuff All-weather adhesive used to coat red balls for monitoring and trapping insect populations. Sticky and odorless coating. To remove, use a blunt scraper and wipe with a paper towel or rag after each swipe. Then massage in mineral spirits, baby oil or CitraSolv with a cloth and wipe off. 8 oz covers approx. 2 sq ft, which our staff geometer calculates will coat at least 7 red ball traps. **AVC**

8630 A: 8 oz (0#) for \$15.00

Codling Moth Trap and Lure Codling moth (*Cydia pomonella*) is a pest that damages fruit of apple, pear, walnut and quince. It is the "worm in the apple." The larva typically bores through the end of the fruit, eating its way to the center and then eating an exit route that fills with frass. Codling moths go through two generations per year in most regions of the U.S. The first generation can contribute to fruitlets falling during "June drop." The second generation damages fruit but does not induce dropping, so affected fruit must be culled at harvest. The sex pheromone lure attracts males only; use for monitoring (as opposed to reducing population and fruit damage). When moths start to collect in the traps, that is the time to start spraying an organic insecticide: *Bacillus thuringiensis* (**8753** DiPel or **8756** Safer Caterpillar Killer) or Spinosad (**8762** Monterey Garden Insect Spray). Use 1–2 traps per tree, depending on the size of the tree. Set out at bloom time and keep traps in trees through August, replacing every 4 weeks. Installation instructions included. Set of 2 traps and 2 lures.

8646 A: traps and lures (0#) for \$26.00

Yellow Sticky Strips Conventional and organic growers alike commonly use sticky strip traps as part of their integrated pest management programs, to monitor the presence of insect pest species and determine when populations are high enough that crops will suffer significant damage and treatment will be economically justifiable. Used in high concentrations on small plantings, sticky strip traps can even control pests all by themselves. These yellow traps are for aphids, cucumber beetles, fungus gnats, corn root worms or whiteflies; for apple and blueberry maggots, use with ammonium bait enhancers, available on our website.

8648 A: yellow sticky strips, bundle of 10 (0#) for \$22.50

Apple Pest Kit Six red ball traps, one apple maggot lure and a jar of Sticky Stuff. Provides pest *monitoring* for a small orchard, or pest *management* for 1–3 trees.

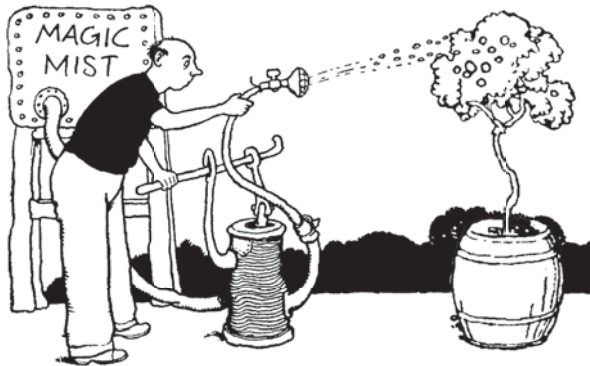
8636 A: one kit (5#) for \$46.00

If shipping weight in parentheses is (0#), the item qualifies for free shipping!

ORCHARD AND GARDEN HEALTH

Holistic Orchard Spray Kit To promote the health of your home orchard, this kit contains: 1 gal fish hydrolysate, 1 qt neem oil, 1 pint karanja oil, 1 qt EM-1 (effective microbes) and 2 pints Kelp Liquid Concentrate. These are the key ingredients in the Holistic Spray recipe developed and recommended by the late Michael Phillips and the Holistic Orchard Network. The five components work together to enhance tree and fruit growth and help ward off disease, especially during the primary infection window in spring. Includes all the ingredients needed except biodegradable dish soap and molasses (though we do sell molasses separately on page 137). Assuming a rate of ~1 1/2 gal of spray to cover a mature tree on standard rootstock to the point of runoff, the amounts in this kit will be enough to cover about 7 trees for one year. This will vary depending on your situation. Please see below for kit instructions.

8657 A: one kit (25#) for \$142.00



Holistic Orchard Spray Kit Guide

The renowned organic orchardist and author Michael Phillips recommended a “holistic” spray regimen to help prevent disease and enhance both tree and fruit growth. For a more detailed discussion of these ingredients and how they work together to serve your fruit trees, see Phillips’ book *The Holistic Orchard* (9624).

Fish Hydrolysate (8289): Feeds soil and arboreal food web.

Neem Oil (8660): Deters pests and disrupts their life cycles. Neem also stimulates the tree’s immune system, gives nutrients to foliage and feeds the arboreal food web. Caution: pears can have a phytotoxic response to neem oil, especially after bloom, so substitute with karanja oil if you’re spraying lots of pears.

Karanja Oil (8663): Works synergistically with neem. Enhances immune-boosting phytochemistry of the mix. Also deters foliar-feeding pests like aphids without affecting pollinators.

EM-1 (8185): A probiotic inoculant that colonizes the branches and fruit with beneficial microbes to promote fruit growth and disease resistance. See our website (fedcoseeds.com/ogs) for instructions to “activate” EM-1.

Kelp Liquid Concentrate (8270): Promotes growth and helps trees adapt to stress.

RECIPE:

Makes a 4-gal ready-to-spray batch. Please read through the Spray Schedule below, and note that not all ingredients are used in every application. Mix in a 5-gal bucket in this order:

- 1/4 cup (2 fl oz) Neem Oil—warm up to liquefy.
- 2 Tablespoons Karanja Oil
- 1 teaspoon biodegradable dish soap—stir to emulsify neem.
- 1 quart warm water
- 1/2 cup blackstrap molasses (then stir again)
- 1/4 cups Fish Hydrolysate
- 3 Tablespoons Kelp Liquid Concentrate
- 1/4 cups activated EM-1
- Add water until you reach the 4 gallon mark, then stir one last time.

SPRAY SCHEDULE:

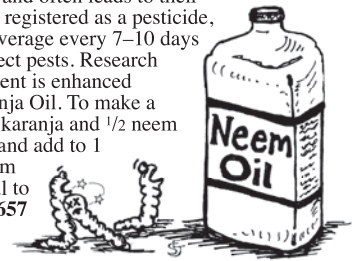
Coat trees including the trunks to the point of runoff, about 1 1/2 gal per mature fruit tree. We recommend using the **9231 Solo Backpack Sprayer** (p. 159). Treat this schedule as a starting point; every site is different and requires a custom program. For example, trees with cedar apple rust or brown rot issues require additional spraying for effective management.

- 1. When green leaf tips emerge:** Fish, neem, karanja, EM-1 and kelp (all ingredients). Optional: Fish, neem and karanja rates can be doubled for this first spray, except on pears.
- 2. When buds turn pink:** All ingredients.
- 3. When blossoms open (optional):** ONLY EM-1, kelp and half-portion of karanja. To help prevent apple scab and fireblight, to increase Brix, and to attract pollinators.
- 4. When petals fall:** All ingredients.
- 5. 7–10 days after petals fall:** All ingredients.
- 6. Post-harvest, after about half the leaves have fallen:** Fish, neem, karanja and EM-1. Spray trees as usual, but also aim at the ground to hasten leaf decomposition.

Questions? Send an email to: ogs@fedcoseeds.com

Neem Oil - Organic Promotes the health and vitality of trees and plants. Neem has long been recognized for its antifungal, antibacterial and antiparasitic properties. Neem’s azadirachtin content deters a wide range of insect pests, disrupts their life cycles, and often leads to their mortality. For a processed neem product registered as a pesticide, see **8735 AzaMax**. Spray for full leaf coverage every 7–10 days as needed for suppressing disease or insect pests. Research indicates that pest and disease management is enhanced when neem oil is mixed with **8663 Karanja Oil**. To make a spray, mix 1 oz warmed neem oil (or 1/2 karanja and 1/2 neem oil) with 2 tsp biodegradable dish soap, and add to 1 gal lukewarm water. Avoid spraying neem when bees are pollinating as it is harmful to larvae and developing grubs. Also see **8657 Holistic Orchard Spray Kit. MOFGA**

8660 A: quart (3#) for \$27.50
B: gal (10#) for \$90.00



Ahimsa Organics® Karanja Oil Eastern tradition and Western utilitarianism meet again! Enlightened growers of veggies, fruits and medical ganja value karanja oil for its noteworthy pest- and disease-fighting properties. Pressed from the seed of the pongam tree of India, the oil is rich in several bitter flavonoids that stimulate plant immune function. Numerous studies have shown the oil to prevent many pests from feeding and laying eggs and to kill pests such as mites, aphids and leafminer larvae. Studies also show karanja works synergistically with a number of pest management sprays especially **8660 Neem Oil** to significantly improve their efficacy, and it lasts longer on plants than other botanical insecticides. Michael Phillips strongly recommended using karanja in the Holistic Orchard Spray regime. It may be used instead of neem for plants like pear trees that can have a phytotoxic response to neem oil. It’s also safer for bees, containing no azadirachtins. Furthermore, karanja remains a liquid at 40° or colder, making it easier to mix than neem. Very safe to handle and spray. To make a spray, mix 1 oz karanja oil (or 1/2 karanja and 1/2 neem oil) with 2 tsp biodegradable dish soap, and add to 1 gal lukewarm water. **OMRI**

8663 A: quart (3#) for \$35.00
B: gal (10#) for \$120.00

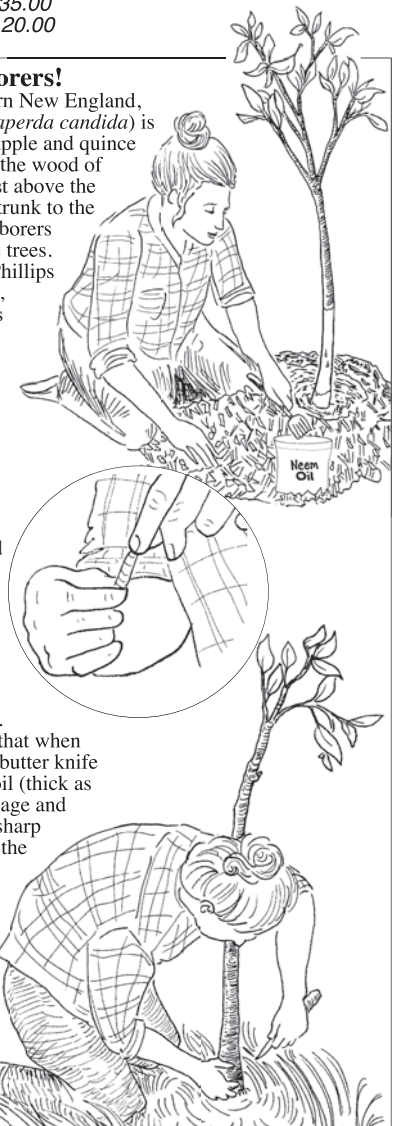
Neem to Treat for Apple Borers!

In many parts of central and northern New England, the roundheaded appletree borer (*Saperda candida*) is the #1 enemy of young apple, crabapple and quince trees. The larvae tunnel throughout the wood of the trunk—usually just below or just above the soil or mulch line—weakening the trunk to the point of breakage. Left unchecked, borers usually mean death for young apple trees. We’re grateful to the late Michael Phillips for identifying an effective, organic, nontoxic, easy defense for plantings large and small: pure neem oil.

All you need is a paintbrush and undiluted neem oil warmed to liquify. Cover young tree trunks from the soil line up 12". We apply one time only around July 1.

Although neem is a powerful tool in the battle against borers, we still recommend getting on your hands and knees to inspect your young apple trees for frass and tunnels at least once a year. If you notice evidence of borer activity, locate the hole or soft spot in the trunk and dig out the larva with a wire. Cut away soft spongy pockets with a sharp knife. Even serious carving is less harmful to the tree than leaving any larvae alive inside.

Michael Phillips recommended that when you’re on borer duty, bring along a butter knife and a container of solidified neem oil (thick as butter at 60°). If you find borer damage and cut away the affected tissue with a sharp knife, slather on the neem oil to fill the cavity. According to Phillips, “bark tissues and pores in the wood will carry azadirachtins to the borer (if indeed missed), and arrest its further development...the fats in the neem will hasten callusing of the wound.” If the site of this surgery is near the soil line, cover it with soil, and “know you’ve done everything possible to deter this curse.”



PLANT PROTECTION & LAST RESORTS

As with so many things, pest management starts in the soil. The fundamental premise of organic agriculture holds that a healthy living soil supports plant health, and healthy plants can best withstand disease and insect pressure. Organic growers also try to mimic and work with natural ecosystems to deflect problems by avoiding monoculture, choosing planting times judiciously, nurturing parasitoidal hedgerows where beneficial insects may flourish, creating strains of tomato impervious to late blight in meticulously designed on-farm breeding programs, and generally making life a living hell for pathogens and pests. If you do all this perfectly, we promise you will never need to touch a pesticide.

Except when you do. Because sometimes, you might. It can take years to build top-quality garden soil, and sometimes, despite all your best-laid plans, some aspect of management falls through the cracks and problems arise that may threaten your pantry or your livelihood. So organic growers do have an arsenal of pesticides at their disposal.

Pesticides approved for organic production differ from most pesticides in that they are derived from natural materials and—perhaps more importantly—they are less persistent (some conventional pesticides have half-lives measured in years) and less toxic (while you should always read and follow label instructions and avoid breathing, ingesting, or bathing in pesticides, you don't need to dress like a beekeeper-alien hybrid to use organic pesticides). If potato beetles are blowing the battle trumpet at your garden's gate, find your answering battle cry below.

Products in this section come with detailed instructions on their labels. Contact us if you don't receive the attached booklet or if the label is illegible. It is illegal to use pesticides for off-label purposes or without following label precautions.

We cannot ship any pesticides to California. Their state government wishes to charge us an ungodly amount of money to do so.

MilStop® SP Broad Spectrum Foliar Fungicide. A potassium bicarbonate formulation to prevent powdery mildew, Alternaria blight, Anthracnose, black spot, Botrytis blight, Cercospora leaf spot, downy mildew, Phomopsis blight and Septoria leaf spot. Effective against sooty blotch and flyspeck on apples. Provides curative control of powdery mildew as well! Apply at 2 1/2#/acre every two weeks as a preventive, 5#/acre weekly to cure an existing infestation of powdery mildew. Garden rate: 2-4 Tbs/2 gal water for 1000 sq ft. Works by desiccating fungal spores and altering pH levels on the leaf surface. Safe for bees.

EPA reg. 70870-1-68539. **OMRI**

8666 A: 5# for \$116.00

Bonide® Liquid Copper Concentrate A copper fungicide for the home gardener. Copper is a very effective fungicide, but regular use may result in problematic concentrations of copper in the soil or plant tissue: as always, we advise regular soil testing! The recommended dosage is 1 1/2-2 oz/gal water. Apply enough to wet the whole plant thoroughly; not systemic, requires direct contact to work. Repeat application every 7-10 days and increase the dosage in prolonged wet periods or if signs of disease increase. EPA reg. 67702-2-70051. **AYC**

8672 A: pint (3#) for \$29.75

Cueva® Copper Concentrate (10% copper octanoate, C₈H₁₆O₂, 1.8% metallic copper equivalent) Formulated for commercial growers. A soluble copper fertilizer combined with a fatty acid that controls most fungal diseases of plants and vegetables. Start treatment with copper before symptoms appear, at least 2 weeks before the usual onset of disease or before a forecasted long rainy spell. Repeat application every 7-10 days. Increase the concentration if disease persists. Reapply after heavy rain. Mix 1/2-2 gal of concentrate with 100 gal of water, apply 50-100 gal/acre. For plants susceptible to powdery mildew spray twice a week for the first two weeks after emergence and once a week after that. EPA reg. 67702-2-70051. **OMRI**

8675 A: 2.5 gal (25#) for \$265.00

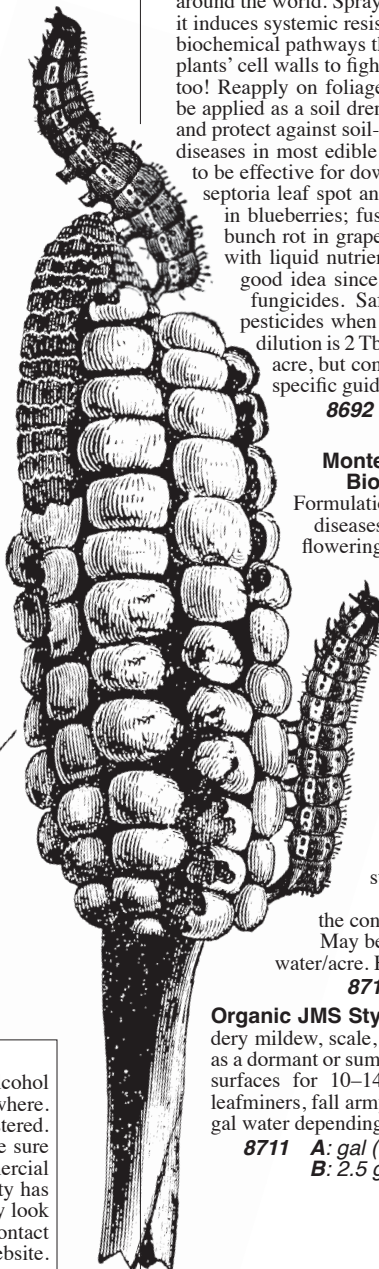
USDA NOP rule concerning disease and pest control

Caution certified-organic growers:

Before using any of these products for pest or disease control, you must have followed the National Organic Program rule 205.206(e). A product being labeled here as allowed is not sufficient to meet standards for organic certification.

Is that pesticide registered in your state?

Each state treats potentially dangerous items differently. Like alcohol and open-carry laws, pesticide registrations are different everywhere. We cannot ship a pesticide to a state where it is not registered. Before buying or using any pest- or disease-control product, be sure it is registered for use in your state and, if you are a commercial grower, registered for commercial production. Purdue University has information for most states at state.ceris.purdue.edu/. You may look up products by name, registration number or active ingredient. Contact information is provided for states that don't participate in the website.



Micronized Sulfur Used to control scab, powdery mildew and leaf spot. Sulfur is not water soluble; the smaller the particle the better it stays in suspension. These particles are less than five microns. To apply, thoroughly mix powder with water and keep the mix agitated constantly or apply as a powder. EPA registration 4-62. **Nat'l List.**

8684 A: 1# (0#) for \$17.50

THAT® Liquid Sulfur (52% S)

Takes the prize for Most Infuriating Product Name—try asking the warehouse crew “Have you seen THAT?” But we keep it around because it is easier to use in sprays and suspensions than micronized sulfur. Two to four well-timed applications can be effective on apple scab when combined with good orchard sanitation practices. Each gallon contains 6# sulfur. EPA reg. 57538-5. **AYC**

8690 A: 2.5 gal (25#) for \$120.00

Regalia® CG Biofungicide

Put invasive plants to good use! Regalia's active ingredient is extract of giant knotweed (*Reynoutria sachalinensis*), an aggressive plant invader in many countries around the world. Sprayed on your crops, it induces systemic resistance, stimulating biochemical pathways that strengthen the plants' cell walls to fight pathogenic fungi. Increases chlorophyll production, too! Reapply on foliage every 7-10 days to protect new growth. May also be applied as a soil drench or through drip irrigation to improve root quality and protect against soil-borne pathogens. Labeled for a broad range of fungal diseases in most edible crops. Various university trials have shown Regalia to be effective for downy and powdery mildew in cucurbits; bacterial spot, septoria leaf spot and powdery mildew in field tomatoes; mummy berry in blueberries; fusarium in lettuce; and powdery mildew and Botrytis bunch rot in grapes. Cannabis growers use it as a drench administered with liquid nutrients to prevent fungal problems, which is probably a good idea since you really don't want to be smoking copper-based fungicides. Safe for bees. Compatible with many other organic pesticides when mixed in the same tank. The average recommended dilution is 2 Tbsp/gal water per 1000 sq. ft. or 2-4 qt/65 gal water per acre, but consult the label (found on our website) for application-specific guidance. Quart and gallon sizes. EPA reg. 84059-3. **OMRI**

8692 A: quart (#3) for \$96.00

B: gal (10#) for \$249.00

Monterey Complete Disease Control Ready-to-Use Biofungicide/Bactericide *Bacillus amyloliquefaciens*

Formulation for broad-spectrum control of bacterial and fungal diseases on vegetables, fruits, nuts, ornamental trees, shrubs, flowering plants, houseplants and tropical plants grown in and around home gardens or home greenhouses. Not for commercial use. Effectively controls anthracnose, alternaria leaf spot, botrytis, cercospora and powdery mildew. Also helpful for downy mildew, early blight, late blight, fire blight and scab, though unlikely to offer a complete cure for these problems. EPA Reg. 70051-114-54705 **OMRI**

8709 A: quart RTU (3#) for \$22.00

Cease® Biological Fungicide We had to nix Serenade because we don't want to give money to Bayer; Companion was great but then the manufacturer went into some endless relabeling process and we couldn't get it. Cease has the same great active ingredient (in this case the QST 713 strain of *Bacillus subtilis*) but packaged as an aqueous suspension. A broad-spectrum preventive product for the control or suppression of many important plant diseases. May be used as a foliar spray or as a drench at 1 gal/100 gal water/acre. EPA Reg. 264-1155-68539. **OMRI**

8710 A: gal (10#) for \$172.00

Organic JMS Stylet-Oil® High-grade mineral oil for control of powdery mildew, scale, mites and other insects on trees and vegetables. Use as a dormant or summer oil. Kills mildew on contact and protects sprayed surfaces for 10-14 days. Controls plant-feeding mites, leafhoppers, leafminers, fall army worms and corn earworms. Spray at 3 qt-2 gal/100 gal water depending on application. EPA reg. 65564-1. **OMRI**

8711 A: gal (10#) for \$62.00

B: 2.5 gal (25#) for \$115.00

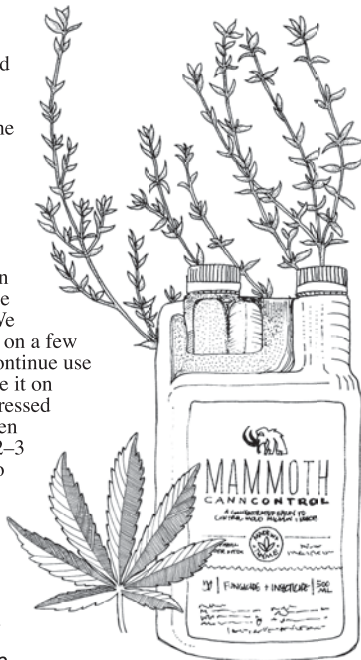


PEST CONTROL

If shipping weight in parentheses is (0#), the item qualifies for free shipping!

Mammoth® CannControl After our mammoth multi-year search for a high-caliber plant-based fungicide and insecticide, the thyme has finally come! For use on cannabis and other annuals; from the makers of **8180** Mammoth P. Lab and greenhouse tests show CannControl to prevent and eliminate powdery mildew, *Botrytis cinerea* (gray mold), mites, aphids, whiteflies, thrips and fungus gnats. The active ingredients—15% thyme oil, 55% corn oil—are safe to handle, and the product can be used weekly through the season as a foliar spray or root drench to keep fungal and insect pests at bay. As a preventive, use 1 fl oz per gal water. To address an active infestation or infection, increase the mix rate to 3 fl oz per gal water. We recommend first testing your solution on a few leaves and observing for 2 days; discontinue use if you see signs of burning. Do not use it on newly planted cuttings or on plants stressed by drought, and avoid application when temp exceeds 90°. Stop applications 2–3 weeks prior to harvesting your crop to ensure all the oil has broken down. As with any horticultural oil, do not apply this product when bees are actively foraging, and avoid applying within 30 days of sulfur-based fungicides. Exempt from EPA registration. **8712B** is a **NEW!** 250ml size for smaller operations. **MOFGA**

8712 A: 500ml (1#) for \$59.00
B: 250ml (1#) for \$32.00



Dodging an un-fun guy

Whether it's *Fusarium* and *Pythium* lurking in your soil, or powdery mildew and late blight blowing in on the wind, pathogenic fungi can cause poor germination, stunted growth, reduced yields, inferior eating quality, cosmetic blemishes, poor storability and melancholy.

Organic growers have a number of strategies for preventing or treating outbreaks of fungal disease. For economy, efficacy and environmental safety, it helps to understand your options.

Cultural Prevention

First try to manage fungal problems without reaching for pesticides:

- Choose improved crop varieties that are resistant to disease.
- Choose high-quality brands of potting soil and compost.
- Do not put diseased plant material in your compost pile.
- Give plants adequate spacing for good airflow through the vegetation. This includes proper weed control. For trees, cannabis and a few horticultural crops (like tomatoes), pruning helps to maintain good airflow.
- Choose drip irrigation instead of overhead irrigation to reduce moisture on the leaves. Or in smaller gardens, hand-water close to the surface and avoid over-watering.
- Clean your tools and greenhouse surfaces. High-quality potting soil very rarely carry pathogens, but even clean potting soil is easily contaminated by dirty tools, trays or workbenches.

Preventive Treatments

If you've been hammered by *Botrytis* a couple years running, or if your extension office is reporting late blight in your area, it may be time for a sharper weapon. Many organic fungicides work best as preventive treatments; timely applications will prevent a problem, but by the time you see the first slimy leaves it's too late. These products are more environmentally friendly than control treatments:

- Biological controls (such as **8710** Cease) have two primary modes of action. They may colonize the leaf surface and outcompete pathogens; or they may produce exudates that are directly harmful to the pathogens.
- Giant knotweed extract (**8692** Regalia) stimulates the plant's immune system.
- Elemental sulfur (**8684** Micronized Sulfur or **8690** THAT Liquid Sulfur) prevents spore germination. (Some plants, including cucurbits, are sensitive to sulfur.)

Control Treatments—the last resort.

The pumpkin leaves are crumpling and the dreaded "water-soaked lesions" of late blight have appeared on the potatoes—quick, do something! (Or throw in the towel and take a vacation.)

- Potassium bicarbonate (**8666** MilStop) kills pathogens and spores by a combination of osmotic pressure, pH and specific carbonate and bicarbonate ion effects. Most effective as a preventive, but may have curative control of powdery mildew.
- Copper products, such as **8672** Bonide, are the only pesticides permitted in organic production that can cure an existing outbreak of most fungal diseases. Copper products should be used only as a last resort: they are mildly toxic to bees and should not be applied to flowering plants, and repeated use of these products can cause an unhealthy buildup of copper in your soil, which is difficult to reverse.

ThermX™ 70 Soil Conditioner Natural Wetting Agent A wetting agent and spreader-sticker, made from a liquid concentrate of 70% yucca solids. Increases the longevity and effectiveness of pesticide applications and forces hydrophobic potting media (like dry peat moss) to more readily absorb water. Use in your foliar feeding program to improve the absorption of nutrients and increase resistance to stress. Mix 8 oz/100 gal. It foams a lot, so add as the last ingredient to a tank mix. Toxic to fish in high concentrations. **OMRI**

8714 A: quart (3#) for \$46.75

Miller® Nu Film® P Spreader/Sticker Spreader-stickers increase the longevity and effectiveness of pesticide applications. Forms a sticky elastic film that holds the application in contact with leaf surfaces. Can withstand heavy rainfall for 7–10 days, reducing the need to reapply. Will not clog or foam. May be applied to all crops and in all spray applications, 4–6 oz/100 gal water. **OMRI**

8717 A: gal (10#) for \$136.00

Concern® Diatomaceous Earth Crawling Insect Killer Prehistoric tiny aquatic creature skeleton powder! The sharp edges cut into insects' bodies and cause death by dehydration. Insects cannot develop resistance to this mode of action. Especially popular for cutworm protection: just sprinkle around the base of your seedlings. Also useful for ants or fleas indoors. EPA reg. 50932-12. **OMRI**

8719 A: 4# for \$34.00

NovaSource Surround® WP Crop Protectant 95% kaolin clay, but this ain't your mama's pottery-grade kaolin. It undergoes a patented process of centrifuging and filtering that delivers a critical particle size of 1.4 microns and a pure white color. Prevents insects from recognizing their targets, and, if they land, inhibits their access to the plant's surface and causes irritation and excessive grooming. Particle sizes larger than 1.4 microns do not form an effective barrier to insects, and impurities in unrefined kaolin may injure plant health. Recommended for controlling European apple sawfly, codling moth, plum curculio, Japanese beetle, leafhopper, Colorado potato beetle, thrips and other maleficent insects on fruit crops and field crops. Effective against cucumber beetles on cucurbits. The white surface also reflects sunlight, preventing sunburn and heat damage. The late Michael Phillips of Lost Nation Orchard estimated that one 25# bag is sufficient to treat 10 fruit trees for one season. Begin application before petal-fall. Apply 2–3 times the first week to build up a good coating and then every 10–14 days or as the film weathers or new growth appears, more frequently in rainy weather. Maintain a good coat until plum curculio season ends, around June 30 in central Maine. Use 25#/50 gal water for concentrated use; 25#/100 gal water for diluted spray, 1/2#/gal water in hand and backpack sprayers. EPA reg. 61842-18. **OMRI**

8720 A: 25# for \$115.00

Deer Stopper® A mixture of rotten eggs and essential oils deters deer by taste and smell. Dries clear and odor free (to human noses) and will not wash off in the rain. Lasts up to 30 days. Also good for marking the perimeter of gardens. May be applied in any climate or weather as long as the sprayer does not freeze and clog. Apply directly to ornamentals; on edible crops, apply as a perimeter spray. Dilute 1:9 with water. Exempt from EPA registration. **MOFGA**

8723 A: quart (3#) for \$46.00 B: gal (10#) for \$165.00

Castor Oil - Organic Widely known to effectively repel burrowing mammals like moles, voles, gophers, rabbits, ground squirrels and armadillos. Local farm advisor Mark Fulford recommends castor oil for keeping deer away from fruit trees. May also be sprayed on young tree trunks to prevent mice and voles from girdling bark.

We bring you this potent oil in its pure form because it is much cheaper and more versatile than granular castor oil products. See sidebar below for application rates. **AYC**

8725 A: quart (4#) for \$16.75
B: gal (10#) for \$45.25



Castor oil for repelling critters

Detering burrowing animals: Best applied after a few fall frosts but can be used year-round.

- For larger areas use a hose-end sprayer. Combine 8 fl oz castor oil with 4 fl oz biodegradable dish soap. Add to the sprayer's container, and turn the dial to the highest setting. Water the problem area thoroughly, allowing the solution to really sink in.

- For smaller areas use a watering can. Combine 2 T castor oil with 1 T biodegradable dish soap. Mix with 1 gal water. Water thoroughly.

Repelling deer: A strong batch must be sprayed directly on the trees every month or at first sign of nibble during the fast-growth period, but avoid spraying during especially warm summer weather. Can also be sprayed on young trunks to prevent girdling by voles or mice.

- Combine 3 cups castor oil, 1 cup **8289** Fish Hydrolysate and 1 cup biodegradable dish soap; mix well to create a creamy emulsion with no oil bubbles at the surface.

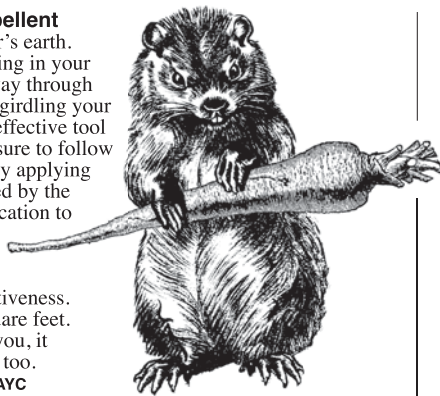
During summer months, mix the emulsion into at least 5 gal lukewarm water, and apply with a backpack sprayer. (When first using the spray, test it on small area to make sure the dilution and sprayer are calibrated correctly and don't burn the foliage!) During months when the trees have no foliage, mix the emulsion into 4 gallons of lukewarm water.

MoleMax® Mole & Vole Repellent

10% castor oil in a base of fuller's earth. Whether you have moles tunneling in your lawn, groundhogs eating their way through your vegetable garden, or voles girdling your apple trees, this is a simple but effective tool against damaging varmints. Be sure to follow the package instructions! Start by applying the granules to an area unaffected by the pests, and then expand the application to push them out of the area you wish to protect. Rodents are stubborn: may require regular applications for continued effectiveness. One bag protects up to 5000 square feet. If armadillos are a problem for you, it supposedly works against them, too.

Exempt from EPA registration. **AVC**

8726 A: 10# for \$29.00



General Hydroponics AzaMax® Botanical Insecticide/Miticicide/Nematicide with azadirachtins A & B derived from neem oil. AzaMax is more processed than **8660** Neem Oil, but this liquid mixes more easily and is registered as a pesticide. Broadly labeled for most insects and parasitic nematodes on edible and non-edible crops. Offers rapid knockdown of spider mites and cucumber beetles: same quick effects as **8765**

PyGanic, but with a lower price tag and less toxic to bees. Mix at 1-2 oz/gal water and apply as a foliar spray or a drench. EPA reg. 71908-1-81268. **OMRI**

8735 B: quart (3#) for \$229.00



Safer® Brand Insect Killing Soap Concentrate II Biodegradable contact insecticide effectively controls mites, aphids, earwigs, lace bugs, leafhoppers, mealybugs, scale, spider mites, thrips, tent caterpillars and whiteflies. Fatty acids penetrate insects' soft outer membranes and disrupt normal functions.

Use approx. 2 1/2 oz/gal water. Hard water can reduce soap's effectiveness; if your tap water is hard, use distilled water instead.

EPA reg. 42697-60. **OMRI**

8738 A: pint (3#) for \$23.00



Monterey Sluggo® A blend of iron phosphate, a naturally occurring soil mineral, with snail and slug bait. Many species of snails and slugs are attracted to the bait, leaving their hiding places and plants to feed. When they ingest even small quantities of iron phosphate, they cease feeding and die a few days later.

Damage reduction is almost immediate.

Scatter the granules on the lawn or around plants or in the soil around trees and shrubs. Ground or lawn should be moist when applying. Apply at 1#/1000 sq ft, 1 tsp/sq yd. Reapply as the bait is taken. EPA reg. 67702-

3-54705. **OMRI**

8741 A: 1# (0#) for \$12.50

B: 5# for \$45.00



Monterey Sluggo® Plus Insect, Slug & Snail Pellets. The addition of a small amount of spinosad (0.07%) greatly increases the effectiveness and scope of Sluggo. Apply evenly 1/2-1# per 1000 sq ft to control slugs, snails, earwigs, cutworms, crickets,

sowbugs, pillbugs and some species of ants. Best applied in the evening to catch the late diners.

EPA reg. 67702-24-54705. **OMRI**

8744 A: 1# (0#) for \$17.50

B: 5# for \$59.00



Grandevo® CG Water Dispersible. A dry formulation of the bacterium *Chromobacterium subsugae*. A grand addition to your pest-fighting arsenal. Reduces plant damage from sucking and chewing insects, including tough customers like spotted wing drosophila, plum curculio, apple maggot, codling moth and spider mites. Also effective on Colorado potato beetle in the larval stage, but won't deter the adults. Faster-acting than most biological products: stops feeding activity within one minute of exposure. It is toxic to these insects when ingested; non-toxic doses will reduce reproduction rates. Repels pollinators for up to six days after spraying, but is not acutely harmful to them. Mix 2-4 Tbs in 1 gal water and cover vegetation thoroughly. 1# treats 5000-15000 sq ft. EPA reg. 84059-27. **OMRI**

8750 A: 1# (0#) for \$69.00



Sorry. You Can't Have That.

Each state treats potentially dangerous items differently. Please check the item's description on our website to make sure there are no restrictions that affect you.

Check our website for a chart summarizing the safety of these pesticides for pollinators: fedcoseeds.com/ogs/pollinators.htm

If shipping weight in parentheses is (0#), the item qualifies for free shipping!

DiPel® DF Biological insecticidal dry flowable wettable powder. Commercial strength Bt (*Bacillus thuringiensis* subsp. *kurstaki*), approx 32,000 IU/mg. Labeled for a wide variety of caterpillar and moth pests on practically every agricultural crop there is. Best applied in the afternoon as Bt breaks down in direct sunlight. Apply at 1/4-2# per 100 gal per acre or 1/2-4 tsp per gal per 500 sq ft. EPA reg. 73049-39. **OMRI**

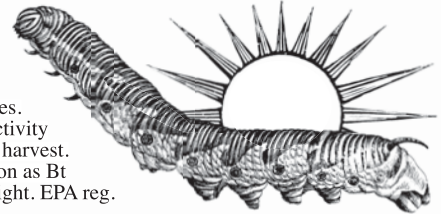
8753 A: 1# (0#) for \$32.00

Safer® Brand Caterpillar Killer for Trees, Shrubs & Vegetables Concentrate II. Liquid concentrate Bt (*Bacillus thuringiensis* subsp. *kurstaki*).

Mix 1-4 tsp/gal of water depending on the intensity of the infestation. Labeled for a variety of caterpillar pests on most vegetables, ornamentals, and shade trees.

Apply at the first sign of activity and repeat as needed up to harvest. Best applied in the afternoon as Bt breaks down in direct sunlight. EPA reg. 70051-106-42697. **OMRI**

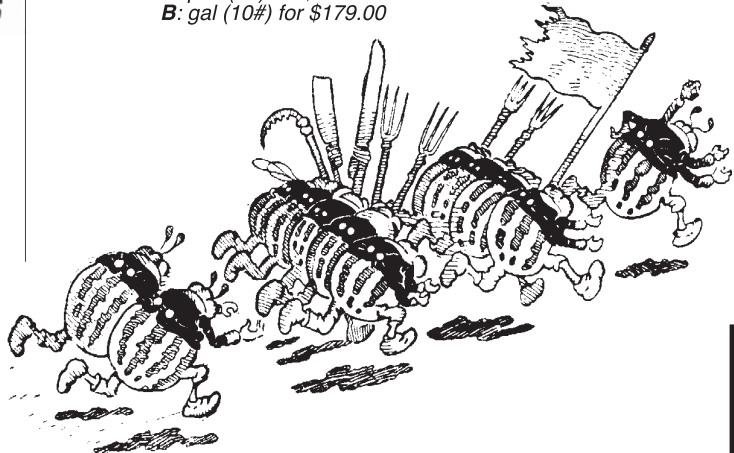
8756 A: pint (3#) for \$25.00



Monterey Garden Insect Spray Spinosad is a mixture of spinosyn A and D metabolites produced during fermentation by *Saccharopolyspora spinosa*, an actinomycete (fungus-like) bacterium discovered in Caribbean soil. The spinosyns demonstrate excellent insect control with very low toxicity for other organisms. Spinosad is selectively active on insects of the orders Lepidoptera (caterpillar pests) and Diptera (flies) as well as some Coleoptera (beetles) and Hymenoptera (sawflies, wasps, ants, and bees). Targeted insects include leafminers, corn borers, leafrollers, cabbage loopers, armyworms, Colorado potato beetles, thrips, apple maggots, codling moths, lesser apple worms, and oriental fruit moths. Effective for a wide range of crops. Because it can be toxic to bees, avoid spraying during flowering and pollination. Apply this 0.5% solution of spinosads at 1-2 oz/gal for all crops. Registered for home garden use only; if you need a commercial product, please visit our website for Entrust. EPA reg. 62719-314-54705. **OMRI**

8762 A: pint (3#) for \$32.50

B: gal (10#) for \$179.00



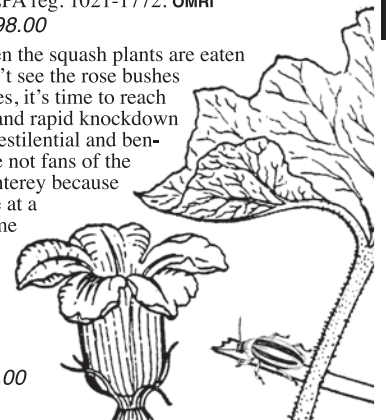
PyGanic® Crop Protection EC 5.0 II Pyrethrin is a botanical insecticide derived from a chrysanthemum, *Tanacetum cinerariifolium*, grown in Kenya and Tasmania, with low toxicity for humans and most other vertebrates, although it's toxic to cats. PyGanic is a 5% pyrethrin formulation with a rapid knockdown and high kill rate. Pyrethrins break down quickly so the toxic effects are short lived. May be used up to 12 hours before harvest. Effective for Colorado potato beetle, leafhopper, cucumber beetle, flea beetle, and others. This is a broad-spectrum insecticide; results are not limited to pests, so use this poison wisely. Application rate is 4 1/2-18 oz/acre depending on pest and severity of infestation. EPA reg. 1021-1772. **OMRI**

8765 A: quart (3#) for \$298.00

Monterey Bug Buster-O When the squash plants are eaten halfway to the ground or you can't see the rose bushes under the layer of Japanese beetles, it's time to reach for the heavy artillery. Effective and rapid knockdown of a broad array of insects both pestilential and beneficial, so exercise caution. We're not fans of the silly name, but we'll forgive Monterey because we needed a pyrethrin insecticide at a price that's affordable for the home gardener. Apply 1-1.4 oz/gal of water/1000 sq ft. Not labeled for commercial use; commercial growers should cough up for

8765 PyGanic, above. EPA Reg. 1021-1771-54705 **OMRI**

8768 A: 8 oz (0#) for \$48.00



PEST CONTROL

SEED STARTING SUPPLIES

Kord® Fiber Grow Garden Paks Made of recycled cardboard fiber, these handy planters breathe much like clay pots. Reusable with care—one customer says he got ten years out of his before he had to order new ones. Interior dimensions 6x4³/₄x2³/₄"; 6 nest in a 1020 tray. Biodegradable, but not allowed by organic certifiers for planting pot-and-all because a synthetic binder is used. MOFGA says they are fine for organic seedlings if you remove the seedlings from the tray before planting; check with your certifier to see if they agree. **AYC**

8781 A: 6 (0#) for \$5.00
B: 100 (10#) for \$56.00



CowPots™ Tired of cleaning up all the brittle plastic after transplanting? Concerned about the effects of peat mining on the environment, and on the climate? Are your seedlings getting root-bound in their pots? CowPots present an innovative alternative for the eco-conscious farmer and gardener. Made in the U.S. from cow manure and a bit of recycled newsprint. Sadly, the presence of colored inks and traces of glossy paper in the newsprint mean these pots are **Not Allowed** for certified-organic production.

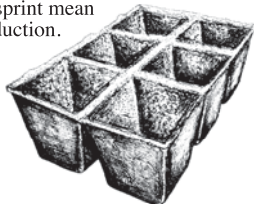
CowPots 4" Square 4³/₈" tall.

8791 A: 20 pots (2#) for \$12.50
B: case of 330 (60#) for \$150.00



CowPots Six-Pack Approx. 9x6" and 3" tall.

8792 A: six 6-packs (2#) for \$9.50
B: case of 120 (60#) for \$152.50



CowPots 3" Square 3" tall.

8800 A: 20 pots (2#) for \$8.00
B: case of 1176 (60#) for \$276.00

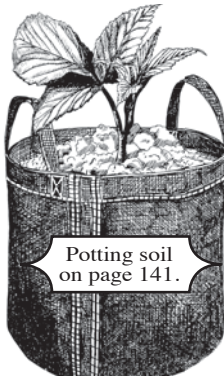


CowPots 3" Round 3¹/₄" tall.

8801 A: 20 pots (2#) for \$8.00
B: case of 840 (60#) for \$245.00

Fabric Pots Non-woven fabric pots provide excellent support to growing plants while allowing air to flow through the pot walls, preventing root circling and helping to aerate the growing medium. Lets water drain thoroughly. Fantastic for indoor growing, or for outdoor growing if you don't want to deal with weeds, compaction, or poor drainage. Choose from 1-gal plain round pots for young plants; 3-gal, 5-gal, 20-gal and 45-gal round pots with built-in handles for easier maneuvering; and 100-gal plain round pots for those monster plants. Other sizes (up to 1000 gal!) available by the case by special order.

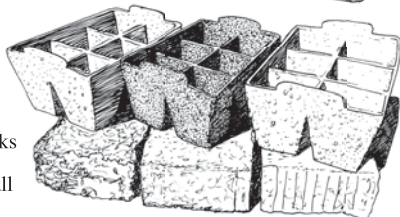
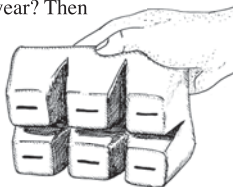
8804 A: 1 gal (0#) for \$4.50
8805 A: 3 gal (0#) for \$6.50
8806 A: 5 gal (0#) for \$8.50
8807 A: 20 gal (0#) for \$16.50
8808 A: 45 gal (2#) for \$19.50
8809 A: 100 gal (2#) for \$28.00



Silicone Six-Pack Trays Tired of cheap plastic six-packs that fade and crack? Concerned about harmful chemicals leaching from poly containers into the root zone of your food crops? Don't want to fix these problems by spending money on biodegradable pots every single year? Then invest in these crush-proof break-proof melt-proof freeze-proof seedling containers made of rugged BPA-free FDA-approved silicone. It's easy to keep track of what you're growing: write on the sides with a permanent marker, and remove with rubbing alcohol at the end of the season. Sterilize with steam or hot water for endless reuse. Each cell has a drainage slit on the bottom. Soil releases easily from the sides

at planting time. Approx. 4x6¹/₄x2³/₄", plus a ³/₈" tab on either end for easy handling. Our sturdier trays (**8831**) will fit one set of eight six-packs. Only seven six-packs will fit into a standard 1020 tray. We buy these from a small family business in Florida.

8810 A: 1 tray (0#) for \$7.50
B: 8 trays (1#) for \$61.00

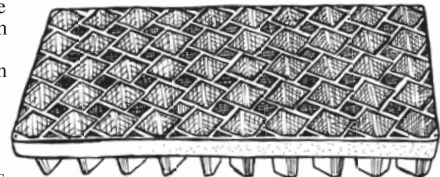


Neversink Farm Tools

Situated in the Catskill Mountains, Neversink Farm has developed systems and tools that have helped them become a model for profitable small-scale farming, and they now teach acclaimed courses to other market gardeners. Neversink's own tool line brings together a select group of implements and supplies that have become mainstays for many a successful veggie farm. Fedco is proud to partner with Neversink in their mission to offer "the best tools for an affordable price for the farming community."

More tools by Neversink on page 154.

Winstrip Air Pruning Trays Have you longed to jettison those flimsy plastic plug flats but hesitated to invest all the extra soil, time and energy into soil blocks? Game-changing injection-molded Winstrip Air Pruning Trays to the rescue! These trays offer the best of both worlds, and then some. See sidebar below to learn how we became Winstrip enthusiasts. Choose from standard 10x20" trays and Mini Wini trays for smaller plantings.



Extremely durable recycled polypropylene is food grade, BPA-free, UV-resistant, and recyclable where #5 plastics are accepted (though we haven't heard of anyone reaching the end of the tray's useful life). Made in the USA.

Winstrip 128-cell Tray Standard 10x20" tray with 128 cells. Cell size 1" wide x 1.9" deep.

8815 A: 1 tray 128-cell (2#) for \$16.00
B: 10 trays 128-cell (20#) for \$129.00

Winstrip 72-cell Tray Standard 10x20" tray with 72 cells. Cell size 1.3" wide x 2.3" deep.

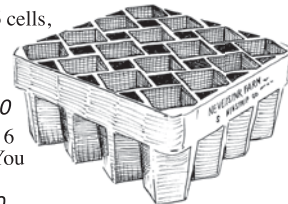
8816 A: 1 tray 72-cell (2#) for \$16.00
B: 10 trays 72-cell (20#) for \$129.00

Winstrip 50-cell Tray Standard 10x20" tray with 50 cells. Cell size 1.6" wide x 2.72" deep.

8817 A: 1 tray 50-cell (2#) for \$16.00
B: 10 trays 50-cell (20#) for \$129.00

Mini Wini Small-cell Tray Each tray has 16 cells, with cell size of 1" wide x 1.9" deep. You can fit 8 of these into one 1020 tray.

8812 A: 1 tray small cell (0#) \$6.50
B: 10 trays small cell (2#) \$45.00

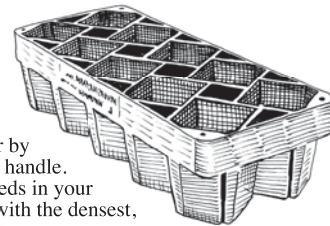


Mini Wini Medium-cell Tray Each tray has 6 cells, with cell size of 1.3" wide x 2.3" deep. You can fit 12 of these into one 1020 tray.

8813 A: 1 tray medium cell (0#) \$5.00
B: 10 trays medium cell (2#) \$32.00

Mini Wini Large-cell Tray Each tray has 10 cells, with cell size of 1.6" wide x 2.72" deep. You can fit 5 of these into one 1020 tray.

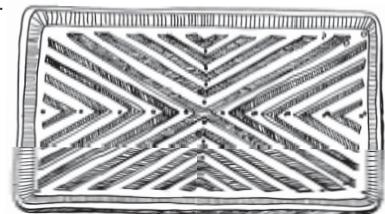
8814 A: 1 tray large cell (0#) \$7.75
B: 10 trays large cell (2#) \$52.00



Indestructible Bottom Trays

Neversink's thick flexible plastic tray can allegedly withstand being run over by a tractor. The rim is sturdy and easy to handle. No drain holes, so great for starting seeds in your house and for bottom watering. Even with the densest, wettest soil, the tray won't cave. Any of our domes will work, but they'll rest unevenly and won't make a good seal. Inner dimensions: 11x21x1¹/₂". BPA-free; made in the USA.

8831 A: 1 tray (1#) for \$14.50
B: 10 trays (10#) for \$87.00



How do we love Winstrip Trays? Let us count the ways:

Extremely durable! One grower reported using the same Winstrip trays for more than 20 years. Sturdy trays don't require bottom trays for support.

Air pruning that rivals soil blocks! Airflow slots on the cells prevent root spiraling and reduce incidence of seedling disease and transplant shock.

Quick and easy to fill! Pour dry potting mix into the tray, scrape off excess, and tap the bottom on the workbench to eliminate air pockets. So much simpler than soil-blocking! No need to push soil down with your fingers, as with plug flats. If your potting soil sifts through, add moisture until it stays put.

Saves potting soil and water! Winstrip trays use far less soil than soil blocks. They absorb water efficiently and stay moist longer.

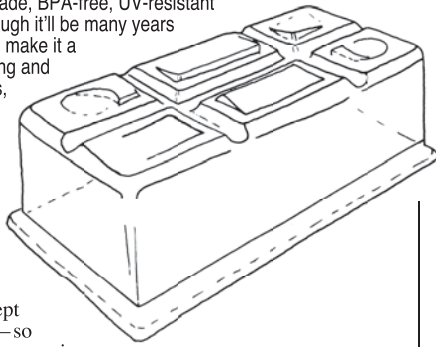
Improves transplanting! You can carry each tray of seedlings one-handed out to the field. Faster to pop out seedlings than with plug flats, and no need to tease apart roots.

SUNPACK® Seed-Starting Supplies - NEW!

These durable products are food-grade, BPA-free, UV-resistant #5 polypropylene. Recyclable, although it'll be many years before they wear out. Vibrant colors make it a cinch to color-code your seed-starting and microgreen operation. Invest in pots, trays and domes that will last!

High Domes with Light Tracks

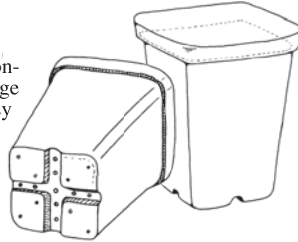
When they go low, we go high! These 7" tall domes offer clear high-level utility and versatility for growers at any scale, accommodating vigorous seedlings and grafted plants. Tops of domes have molded trenches that neatly accept grow lights—both LED and T5—so you don't need a separate light-suspension system. (See next page for Grow Lights.) Two adjustable top vents let you dial in precise humidity control. Sturdier than most domes on the market. Compatible with all standard 10x20" trays. **NEW!**



- 8828 A:** 1 dome (2#) for \$7.75
B: 5 domes (4#) for \$36.00

2 1/2" Heavy-Duty Square Pots Strong injection-molded dishwasher-safe pots have efficient drainage holes, are easy to fill with potting mix, and are easy to extract seedlings from. 32 pots fit neatly into a standard 1020 flat. 2 1/2" square at upper rim, tapering to 1 3/4" at bottom; 3 1/2" tall. **NEW!**

- 8890 A:** 5 black pots (0#) for \$3.00
B: 25 black pots (2#) for \$12.50



Bundle of 5 colorful pots (0#) for \$3.25

- 9891-A:** green **9892-A:** lime
9894-A: magenta **9895-A:** blue

9893-A: orange

Bundle of 25 colorful pots (2#) for \$14.50

- 9891-B:** green **9892-B:** lime
9894-B: magenta **9895-B:** blue

9893-B: orange

- 9896 A:** 150 mixed color pots (7#) for \$69.00

5" Heavy-Duty Microgreen Trays Strong injection-molded dishwasher-safe trays with drain holes for efficient production of high-quality microgreens, wheatgrass or specialty seedlings. Eight fit neatly in a standard 1020 flat. 5" square at upper rim, tapering to 4 1/2" at bottom; 2 1/4" deep. **NEW!**

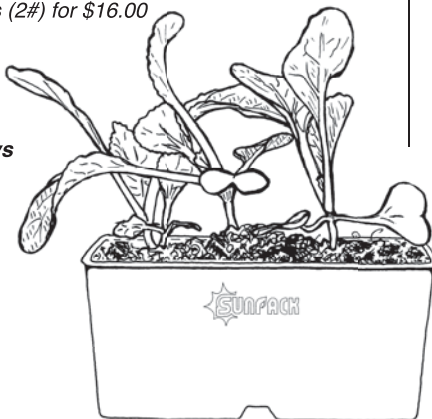
- 9897 A:** 5 black trays (0#) for \$13.25
B: 50 black trays (2#) for \$89.00

Bundle of 5 colorful trays (2#) for \$16.00

- 9898-A:** green
9899-A: lime
9900-A: orange
9901-A: magenta
9902-A: blue

Bundle of 50 colorful trays (8#) for \$105.00

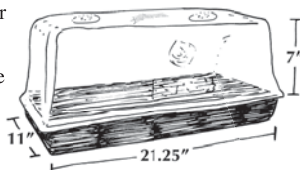
- 9898-B:** green
9899-B: lime
9900-B: orange
9901-B: magenta
9902-B: blue



Other Fine Domes

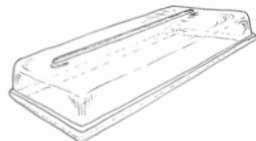
High Domes Regular domes aren't tall enough for vigorous seedlings like cucurbits and tomatoes. To offer extra warmth and protection to taller seedlings, try these 7" domes that fit neatly over standard 1020 trays. If you're grafting nightshades or cucurbits, you can use these high domes as the "healing chamber." Two dial-type vents on the top of the dome allow you to manage the humidity. If you live in a cold drafty farmhouse like many of us do, your young plants will appreciate the extra dome time. 1 1/2x22x7".

- 8830 A:** 5 domes (2#) for \$42.00
B: 50 domes (50#) for \$425.00



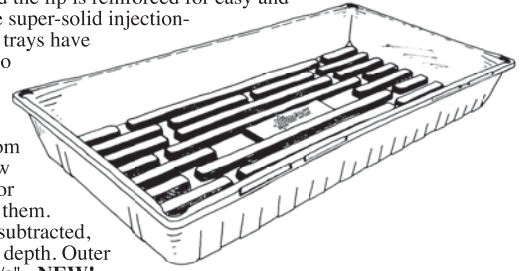
Heavy-Duty Dome Sturdy clear plastic dome with reinforced centerline rib to help prevent crushing and cracking. 3 1/4" tall.

- 8835 A:** one dome (2#) for \$8.00



Mega-Duty Bottom Trays If you're wondering what "mega" really means here, we're talking about a tray that can support 120 lb. Imagine resting a 1020 tray across sawhorses and then plopping two 60-lb bags of concrete onto the tray—that's what these puppies can do. The plastic is very thick yet supple, and the lip is reinforced for easy and safe carrying. These super-solid injection-molded SUNPACK trays have no drainage holes, so they're leak-proof and great for bottom-watering.

Ribs along the bottom provide good airflow for whichever pots or cell trays you set in them. With the rib height subtracted, there is 2 1/4" usable depth. Outer dimensions: 11x21 1/8". **NEW!**



- 9903 A:** one black bottom tray (1#) for \$9.00
B: 5 black bottom trays (5#) for \$39.00

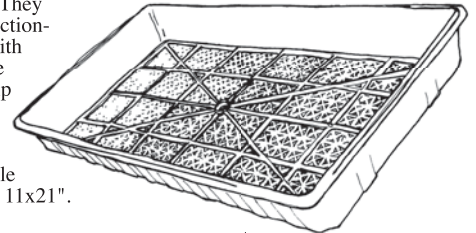
One colorful bottom tray (1#) for \$9.50

- 9904-A:** green **9905-A:** lime **9906-A:** orange
9907-A: magenta **9908-A:** blue

Bundle of 5 colorful bottom trays (5#) for \$44.00

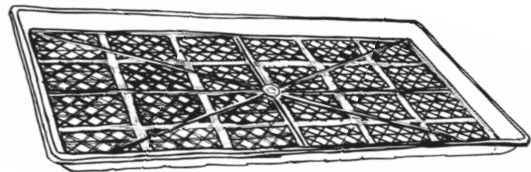
- 9904-B:** green **9905-B:** lime **9906-B:** orange
9907-B: magenta **9908-B:** blue **9909-A:** mixed colors

Deep Heavy-Duty Mesh Trays We've never seen mesh bottom trays as sturdy or as sleek as SUNPACK makes them. These are 2.3 times thicker than our old mesh trays. They provide unsurpassed injection-molded strength along with rapid drainage and ample airflow. The reinforced lip makes for easy and safe carrying. An excellent choice for soil blocks large or small. 2 1/4" usable depth; outer dimensions: 11x21". **Black. NEW!**



- 9910 A:** one black deep mesh tray (1#) for \$8.00
B: 5 black deep mesh trays (5#) for \$36.00

Shallow Heavy-Duty Mesh Trays Same strong mesh as 9910 above, with a shallow 1" profile (3/4" usable depth). Great for growing full flats of microgreens and for soil blocks! Outer dimensions: 10 3/4x21". **NEW!**



One shallow mesh tray (1#) for \$7.50

- 9911-A:** black **9912-A:** green **9913-A:** lime
9914-A: orange **9915-A:** magenta **9916-A:** blue

Bundle of 5 shallow mesh trays (3#) for \$35.00

- 9911-B:** black **9912-B:** green **9913-B:** lime
9914-B: orange **9915-B:** magenta **9916-B:** blue
9917-A: mixed colors

Shallow Heavy-Duty Bottom Trays Sturdy shallow-rimmed injection-molded bottom trays with 1" of usable depth are a must-have for growing microgreens, and great support for pots and plug flats. More rigid structure than mesh-bottom trays. They come with or without drain holes—both styles have ribs to allow drainage beneath pots. Outer dimensions: 10 3/4x21". **NEW!**

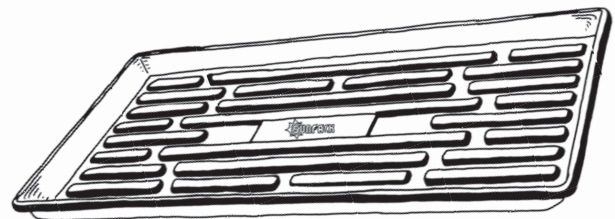
- 9918 A:** one black bottom tray - no drain holes (1#) for \$7.50
B: 5 black bottom trays - no drain holes (3#) for \$35.00

One shallow bottom tray with drain holes (1#) for \$7.50

- 9919-A:** black **9920-A:** green **9921-A:** lime
9922-A: orange **9923-A:** magenta **9924-A:** blue

Bundle of 5 shallow bottom trays with holes (3#) for \$35.00

- 9919-B:** black **9920-B:** green **9921-B:** lime
9922-B: orange **9923-B:** magenta **9924-B:** blue



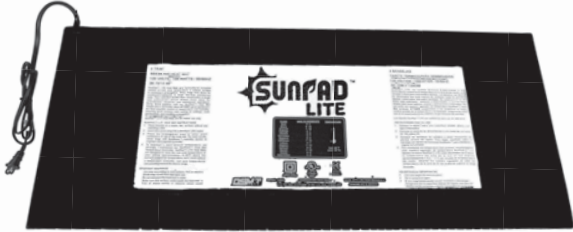
If shipping weight in parentheses is (0#), the item qualifies for free shipping!

HEAT MATS - NEW!

SunPad Heat Mats A good heat mat makes the difference between success and complete failure when starting crops of tropical ancestry, including most Solanums (tomatoes, peppers, eggplants, husk cherries) and Cucurbits (squash, melons, cucumbers). This mat sets the standard for performance and safety (SUNPACK's mats are the only UL-listed mat made in North America with U.S. materials).

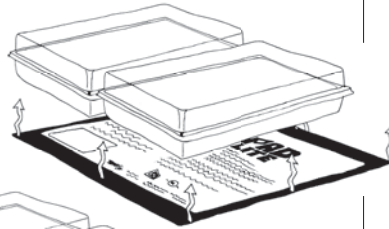
All SunPad mats will warm the root zone to 10° above the ambient temperature without a controller, but for best results, we *highly* recommend using our **9885** Temperature Controller. Also, mats work best if the ambient air temp is at least 68°.

The patented double-layer construction is tough, waterproof and easy to clean. The patented safety fuse cuts power to the mat if any hot spots develop. The power cord contact points are built with extra-thick yet flexible molding, making them resilient to pulling stress. Printed on each mat is helpful info about lighting, watering, and germination. Includes 6' 120V power cord. Covered by a one-year warranty. **NEW!** Available in three sizes.

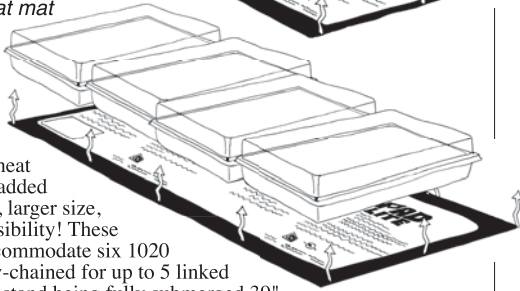


Small Heat Mat Fits one standard 1020 seedling tray. 8 7/8x19 1/2", 17W.
9880 A: small heat mat (1#) for \$25.00

Medium Heat Mat Fits two standard seedlings trays. 20 3/4x20 3/4", 45W.
9881 A: medium heat mat (1#) for \$48.00



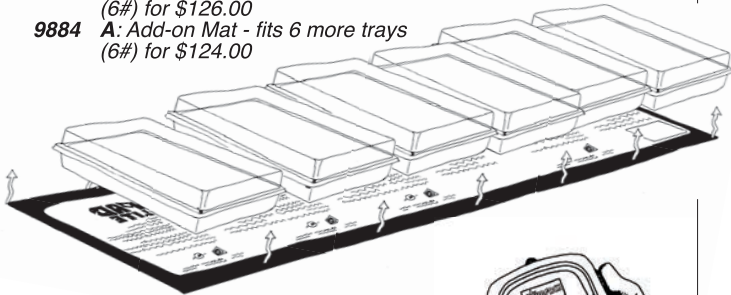
Long Heat Mat Fits four standard seedling trays. 48x20 3/4", 100W.
9882 A: long heat mat (2#) for \$76.00



SunPad Pro
All the performance and safety features as SUNPACK's standard heat mats (above), with the added benefits of more power, larger size, linkability, and submersibility! These 150W Pro mats can accommodate six 1020 trays each, can be daisy-chained for up to 5 linked mats, and they can withstand being fully submerged 39" deep in water for up to 30 minutes! Start with the **9883** Master mat and connect as many **9884** Add-on mats as you want. Linkable connectors are included. Use with **9885** Temperature Controller, which can control up to 5 linked mats. Overall footprint: 60x21". **NEW!**

9883 A: Master Mat - fits 6 trays (6#) for \$126.00

9884 A: Add-on Mat - fits 6 more trays (6#) for \$124.00



Temperature Controller for Heat Mats

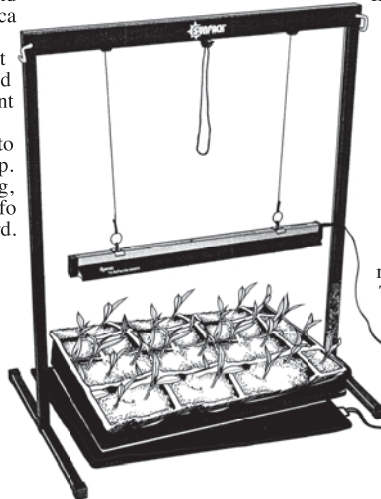
SUNPACK's digital thermostatic device allows growers to select and maintain optimal temperatures (setting range: 68–108°) for germinating seeds or rooting cuttings. Compatible with **9880-9884** SunPad heat mats, along with most other 120V heat mats on the market (including our now-retired Agritape mats). Besides horticultural applications, it is also a great tool for fermentation since it maintains optimum temperature at any time of year. Contains UL-recognized components for safety and reliability. Simple push-button operation with LED indicator probe; your choice of Celsius or Fahrenheit display. Includes temperature probe with 6' cord. Covered by a one-year warranty. **NEW!**

9885 A: temp controller (0#) for \$48.50



GROW LIGHTS - NEW!

Grow Light Stands For a head start on the growing season, you'll need to provide supplemental indoor lighting to your seedlings. These light stands from SUNPACK are lightweight yet strong and super-stable, and user-friendly with nearly effortless assembly with nifty locking pins. A simple drawcord toggle clamp (like on a jacket's waist hem) lets you to adjust the light's height in seconds. The steel frame's powder-coated finish repels moisture and prevents rust. Reinforced top bar can easily support 7 lights if you gang them together (gang-hanger accessory coming fall 2025!). *Lights are not included*—use with LED Strip Lights (**9875-9877** below). Also compatible with T5 grow lights (not available from Fedco), though you might need a clip adapter depending on the fixture. Two sizes:



24" Light Stand is 31 1/4" H x 18 1/4" W x 26 3/8" L. Weight: 2.45 lb.

48" Light Stand is 31 1/4" H x 18 1/4" W x 50" L. Weight: 4.19 lb.

9860 A: 24" light stand (3#) for \$39.00

9861 A: 48" light stand (5#) for \$46.00

LED Strip Grow Lights SUNPACK's high-output full-spectrum lighting ensures your plants receive optimal conditions. Energy-efficient LEDs save loads of electricity and have an estimated lifespan of 50,000 hours. These are complete, ready-to-use lights (integrated fixture and "bulb") with a built-in reflector to direct light at your plants. Lights are easily daisy-chainable; you can link up to 8 together running off just one power cord. Each light comes with a 6' power cord (with on/off rocker switch), a 14" link cord, two eye clips, and two S-clips. Lights can also be connected end-to-end using the **9868** Grow Light Connector. Support with **9860/9861** Grow Light Stands, or with **8828** High Domes with Light Tracks (see page 151). Covered by a one-year warranty. Additional features:

- 120° beam angle
- Color Spectrum 6400K; spectral range 380nm-780nm
- Self-cooling technology; generates minimal warmth
- Silent operation; no buzzing noise
- Zero mercury content
- Intertek ETL-listed

Available in three sizes:

9875 A: 18" grow light - 18W (3#) for \$63.00

9876 A: 24" grow light - 24W (3#) for \$77.50

9877 A: 48" light - 48W (5#) for \$116.00

LED Strip Grow Light Connector A handy doodad that links two LED Strip Grow Lights (above) end-to-end and in-line. For example, it could link two 24" lights to make a 48" light, or two 48" lights to make a 96" light. Choose your own lighting adventure!

9868 A: light connector (0#) for \$5.75

Adjustable Hanger for Grow Lights If you already have a cart, shelf or some other structure to suspend grow lights from, this handy hanger gives you maximum height customization and ease of adjustment. Set of two ratcheting hangers with carabiner hooks. 75-lb load capacity—that's the average weight of a 10-year-old.

9869 A: light hanger (0#) for \$13.75

LADBROOKE SOIL BLOCKERS

The genuine article, made in England by Ladbroke Ltd. The soil block system eliminates annual costs for peat pots or plastic plug flats, allows for easy transplanting, and eliminates root spiraling. **8371** Vermont Compost Fort Vee and **8366** bio365 BIOALL™ are both popular soils to use with soil blockers.

Mini 5 Blocker Makes five 1 1/2" soil blocks in one stroke.

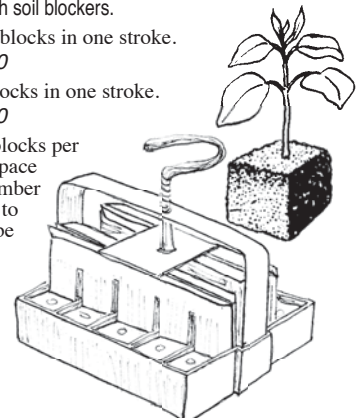
8841 A: blocker (2#) for \$52.00

Mini 4 Blocker Makes four 2" soil blocks in one stroke.

8844 A: blocker (2#) for \$48.00

Micro 20 Blocker Makes 20 micro-blocks per stroke in a 3x4" area. Use when your space is limited or when you want a large number of transplants. Micro-blocks are easier to warm, speeding germination, and can be inserted into 2" soil blocks to continue seedling growth. For micro-blocks, we recommend using **8366** bio365 BIOALL or sifted **8371** Fort Vee.

8847 A: blocker (0#) for \$35.00



FEDCO KITS!

We've put care and thought into creating these kits, which are fun, useful and make good gifts! For other Fedco kits, see our **5G Grow Great Garlic Greener, Guaranteed Kit** (page 139) and our **Irrigation Kits** (page 158-159).



Garden Seed Storage Kit For years, customers and staff have requested a simple seed-storage system like this. Kit contains:

- Lightweight tabbed Fedco lunchbox
- 10 heavyweight tabbed dividers for organizing standard seed packets.
- Waterproof card with quick reference to longevity of vegetable seeds.
- Fedco's handbook on sowing and storing veggie, flower and herb seeds.

The box is perfect for tucking your seeds into the freezer, and then carrying them right out to your potting bench or into the garden; if it starts to drizzle, snap the lunchbox lid shut and your seeds stay dry and organized. **NEW!**

8779 A: one kit (2#) for \$24.00

Seed Starting Success Kit Want to grow your own seedlings but don't know where to start? Save money, learn more about your plants, and become more self-sufficient with this kick-ass kit! Contains

top-notch potting soil, a range of cell trays for different crop needs, domes for maintaining humidity, labels to keep you organized, and extra-thorough instructions to help you succeed from the get-go. Kit contains:

- 3 Bottom Trays
- 3 Humidity Domes
- 72-cell Plug Flat (small cells)
- 50-cell Plug Flat (medium cells)
- Sheet of Six-Packs (large cells; 36-cell sheet tears into 6 Six-packs)

- Fort Vee Potting Soil, 20-quart bag
- 25 Wooden Pot Labels
- Detailed 3-page how-to guide for beginners

*Note: kit does not include grow lights or a heat mat; you will need to arrange a warm spot with adequate sun or lighting. **NEW!***

8780 A: one kit (15#) for \$49.50

Children's Grow Kit Easy starter kit for novice growers includes:

- Growing instructions, chronological and illustrated!
- 8 packets of kid-friendly crop seeds (Bean, Carrot, Cucumber, Sunflower, Lettuce, Snap Pea, Pumpkin, Radish)
- A 5-lb bag of our Vegemighty fertilizer mix (free from animal products)
- 10 untreated garden stakes for marking rows

For the varieties that should be started indoors:

- A 10x20" tray (no holes)
- Biodegradable/plantable CowPots
- 6 quarts of VT Compost Fort Vee potting soil
- 5 wooden pot labels

We've selected varieties that are relatively easy to grow, easy to save seed from, and widely appealing to picky eaters. We may make substitutions based on availability, but we'll try to send varieties that are open-pollinated and organically grown out of respect for our shared future. An excellent basis for a homeschool garden course. *No NH Sales.*

8785 A: one kit (10#) for \$59.00



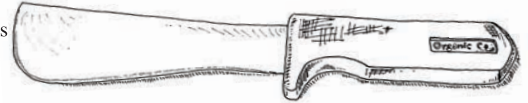
Want just the seeds that come in this kit? See our Children's Garden Collection on page 7.

GARDEN TOOLS

Silicone Bucket Comfort Grip When the hard plastic handles crack or fall off your favorite 5-gallon buckets, you can replace them with these 100% silicone grips! Features finger grooves and a large grip circumference, so the weight is evenly distributed on your hand, allowing you to comfortably carry heavier buckets for longer durations. Easy to put on and take off but doesn't come loose during use. Silicone is more durable and ocean-friendly than plastic knockoffs. Withstands extreme heat and cold. Intact plastic handles must be removed to use these grips; we recommend cutting the plastic lengthwise with a sharp utility knife or using vise grips to break it away. 4x1x1/4". Orange.

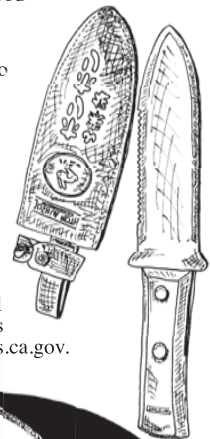
8885 A: one grip (0#) for \$11.50

Broccoli Knife Specialized trapezoidal shape with two cutting edges slices plants off at ground level for clean quick harvesting or nips sideshoots for continued growth. Stainless steel blade has high carbon content for easy sharpening. Blade 7" long, 2" wide at widest point; handle 4 3/4" long in bright yellow plastic for good visibility in the weeds. Made in Taiwan.



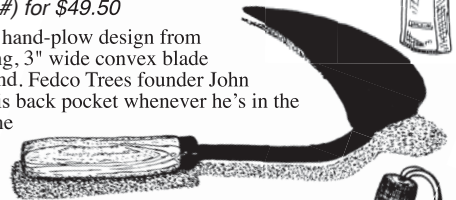
8899 A: knife (0#) for \$10.50

Weeding Knife or Hori-Hori Originally designed to extricate plants for bonsai from Japan's mountains. Good tool for planting bulbs and strawberry crowns, for general cultivating, and for sawing small roots or heavy stems, though not as sharp as a knife or a saw. Thick concave steel blade with beveled edges tapering to a point, one semi-sharp smooth edge and one serrated edge. The 6 1/2" blade extends 2 1/2" into the wooden handle to which it is securely riveted. Susan and David's favorite hand tool, still in good condition after decades of hard use and benign neglect. 11 1/4" long overall. Comes with a black vinyl sheath with a belt loop. *Note: sheath material requires a Proposition 65 warning; for details see p65warnings.ca.gov. Manufactured in Japan.*



8908 A: knife (0#) for \$49.50

EZ-Digger™ Unique hand-plow design from Korea features a 7" long, 3" wide convex blade tapering to a pointed end. Fedco Trees founder John Bunker keeps one in his back pocket whenever he's in the orchard or garden. If the handle comes loose, reinsert blade tang and rap handle forcibly on a hard surface to reset it. See also **8910 Homi Digger** (next page). Handle length 4 7/8". Manufactured in Korea.

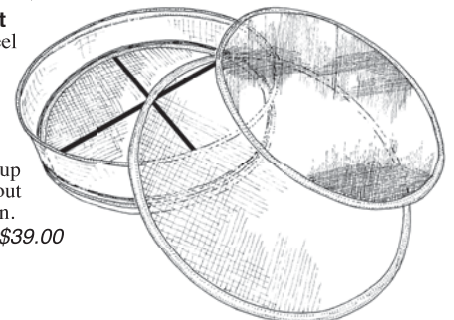


8911 A: digger (0#) for \$29.00

Wilcox All-Pro Heavy-Duty Digging Trowel These strong one-piece tools are nearly indestructible and will not bend, even when digging in hard soil. Forged stainless-steel V-shaped blade is 9" long by 3" wide with a sharp point for piercing sod or soil and an etched depth guide. Comfortable non-slip easy-grip handle with a handy leather thong to loop around your wrist or hang in the shed. 14" overall length. Actual weight is 12.3 oz. Comes with a lifetime replacement guarantee from Wilcox. This is the same trowel we've carried for years in our Bulbs catalog. The Fedco Seeds logo is etched into the blade. Classy! Made in Iowa.

8912 A: trowel (0#) for \$35.00

Soil and Seed Sieve Set A 12" diameter stainless steel frame with 3 interchangeable screens of 4, 5 and 10 mesh/inch. Use to prepare potting mix or for seed cleaning: the screens singly or together can hold up seed while the chaff drops out or vice versa. Made in Japan.



8914 A: set (5#) for \$39.00

NEVERSINK FARM TOOLS

Read about Neversink Farm on page 150.

Mutineer Adapter Head With Handle Join the hoe rebellion with this interchangeable hoe-head system from the tool developers at Neversink. The Mutineer system grants you the freedom to move easily from bed to bed, employing your choice of hoe head to best suit the crop at hand, all from this single convenient adapter handle. The adapter/receiver socket works just like a quick-change chuck/sleeve on an impact driver. For best performance and longevity, clean and oil the socket seasonally to prevent gunk buildup and rust. If soil gets jammed in the socket, spray a jet of water in there, and use a stiff wire to free up the dirt. The Maine hardwood handle is embossed with the Fedco logo so you can display your co-op loyalty. We recommend treating the handle with linseed oil every year, for the life of the tool. This is the adapter and handle only; see head options below (8888-8890) to build out your hoe arsenal and stage a revolt against the weeds! Length of handle with adapter: 62 1/4".

8887 A: adapter head & handle
(17#) for \$62.00

Set of 4 Wire Weeder Heads For use with the 8887 Mutineer. Heavy gauge steel wire. Set includes 2", 4", 6", and 8" weeder heads, plus a carabiner for keeping them all clipped to your belt loop. Wire weeders glide just below the soil surface, slicing and uprooting small weeds with ease and minimal soil disturbance. Make swift nimble passes between your rows without risk of uprooting the crop. Note: to maximize tool life, avoid bending the steel wire.

8888 A: set of 4 weeder heads
(0#) for \$58.00

Set of 2 Collinear Hoe Heads For use with the 8887 Mutineer. Set includes one 6 3/4 x 1" collinear head, one 3 3/4 x 1" collinear head, and a carabiner for keeping them clipped to your belt. Sharp thin collinear blades ride flat and parallel with the top layer of soil, slicing through weeds without tossing soil onto the crop. Especially useful around low-lying leafy crops like lettuce. Stand upright, employ a thumbs-up grip, and enjoy efficient ergonomic weeding!

8889 A: set of 2 hoe heads
(0#) for \$44.00

Large Torsion Weeder Head For use with the 8887 Mutineer. Widely used on tractors, torsion weeders have two wires that straddle the crop, taking out weeds that may be hugging the base of your plants. Don't be surprised if this quickly becomes your favorite cultivation tool. Maximum height clearance above the plant is 6"; maximum clearance around base of plant is 2". The intended orientation is to lay the flat edges of the tips parallel with the soil, but you can experiment and see what works; some like the opposite orientation for raking up lettuce-leaf waste. You can even hook the two tips together to form a contiguous wire weeder that has a pointy center for use between rows.

8890 A: torsion head (0#) for \$32.00

HOMESTEAD IRON TOOLS

Homestead Iron is a small company founded by blacksmith Will Dobkins in Squires, MO, that crafts high-quality garden tools with skill and care. Each blade is hand-forged with C1075 high-carbon steel, welded to a hand-forged shank and securely fixed for life to an ergonomic American hardwood handle to enhance the gardening experience. Note: the blades are carefully ground by hand to a very sharp cutting edge; please keep away from children (except your grandchildren when they're old enough to inherit them).

Homi Digger With its nice sharp edge, this versatile tool cuts through soil and weeds with ease. Makes cultivating a joy—it's no wonder the *homi* design has been used for at least 1000 years in Korea. Designed for right-handers, but many lefties like it, too. Single-piece forging with no welds and a handle that's guaranteed to stay attached for the life of the tool (which could outlive you)! Overall length 13". Actual weight ~11 oz.

8910 A: homi digger (0#) for \$59.00

Trowel The 5 3/4 x 3" blade is tapered to a point, perfect for planting bulbs and transplants or removing taprooted weeds. Another great rendition of a classic by Homestead Tools. Overall length 12 1/4". Actual weight ~9.5 oz.

8913 A: trowel (2#) for \$55.00

Cape Cod Weeder The 3 1/4 x 7/8" blade is set at right angles to the shaft with beveled sharpened edges to separate weeds from their roots just below the soil surface. Minimizes soil disturbance to reduce likelihood of allowing more weed seeds to germinate. Fedco's legendary Gene Frey calls it his favorite hand tool! Overall length 12". Actual weight ~10 oz.

8917 A: weeder (0#) for \$49.50

MORE GARDEN TOOLS

Stirrup Hoe Also known as the *scuffle hoe*, this is an essential tool for dealing with weeds small and large. The oscillating head works its way under the soil surface, where it slices through the weeds' roots while you stay comfortably upright, without needing to exert much downward pressure. Excellent for footpaths and in beds where rows are widely spaced. Start on one end of the path or row and scuffle your way backwards, cutting the roots with each pull stroke. This sturdy version combines a head designed and manufactured by a New York farmer with an ergonomic handle made from sustainably sourced Maine ash, oil-finished and embossed with the Fedco logo so you can display your co-op loyalty. Choose either 7" or 5" head width; blades are sharpenable and replaceable. Handle is 1 1/4 x 60" and the overall tool length is 66". We recommend treating the handle with linseed oil every year.

8891 A: 7" stirrup hoe (20#) for \$79.00

8892 A: 5" stirrup hoe (20#) for \$77.00

Wire Weeders Designed and manufactured in Vermont by Two Bad Cats, a father-son team that engineers tools for the serious gardener and small farmer. Like a stirrup hoe, these weeders make quick work of small weeds, breaking the stem from the root just below the soil surface. Unlike a stirrup hoe, they don't have moving parts to wear down, and they are light as a feather (though plenty strong). Not intended for hacking through tough roots or into compacted soil. Both versions have a 5" wide head and an aluminum handle with a comfortable foam grip. The hand weeder has a 10" handle (overall length 14") and the long weeder has a 56" handle (overall length 60").

8893 A: hand weeder (2#) for \$49.00

8894 A: long-handled weeder (20#) for \$82.00

EarthWay Broadcast Spreader Spread seed or granular fertilizer evenly and accurately. This spreader has a zippered nylon bag, a shoulder strap and an enclosed gear box to keep dirt out of the die-cast zinc gears. 25 lb capacity. Note: nickel and chromium in the steel require a Prop 65 warning for this product; see p65warnings.ca.gov. Manufactured in the USA.

9255 A: broadcast spreader
(10#) for \$115.00

Planting Auger Tired of being hunched over with a trowel? Quickly plug in hundreds of flowerbulbs and plants for a naturalized look in your landscape! Also handy in established garden beds. Works with most corded and modern cordless drills. (Manufacturer recommends any corded drill, 3/8" or larger. For cordless, use a 1/2" drill with at least 18 volts of power.) There are lots of garden augers on the market, but we chose this one because it's sturdy, made in the USA, and the end that you insert in the drill chuck is a continuation of the shaft (rather than a separate piece welded on, which tends to break off). Auger diameter 2 3/4"; overall length 24".

8927 A: auger (3#) for \$49.00



How we planted tons of flowerbulbs into the lawn around our warehouse:

- Mow the grass as low as possible.
- With **8927** Planting Auger, drill holes into the sod (appropriate depth depends on plant species), in irregular clusters for a naturalized look.
- Drop in 1-2 Tbsp **8309** Vegemighty per hole.
- Set the bulbs in the holes, upright!
- Backfill holes with **8377** VT Compost Perennial Blend or aged compost.
- Spread a bit more Perennial Blend or compost (up to 1" thick) to cover the remaining grass in the cluster area.
- Cover the area with your preferred mulch (**8397** Buckwheat Hulls or organic straw) and then wait patiently for spring!

ORCHARD TOOLS

Supplies for monitoring orchard pests are on page 145.

Tree Guards Spiral plastic guards protect tree trunks from mice and voles in the winter. Remove them from apple trees during the growing season lest they provide a habitat for roundheaded apple tree borers. 24" high. Can be cut with scissors to customize height on very small trees, or use more than one to wrap wider trees.

8965 A: bundle of 5 (2#) for \$10.50

Limb Spreaders These galvanized metal limb spreaders are more durable than the plastic versions we used to carry. Use them to establish optimal crotch angles on young tree branches. The patented tip style has a sturdy point in the middle and gently curved corners to hold the branch and prevent slipping. Bundle of 12, in assorted sizes between 6" and 16".

8968 A: bundle of 12 (0#) for \$17.50

Tree Staking Kit Stake your claim on a healthy root system! Staking is recommended for dwarf and semi-dwarf fruit trees, trees in windy sites, trees that develop a leaning habit, and trees planted in shallow or loose soil. Too much sway can snap, deform or uproot young trees, but a limited amount of trunk movement promotes the growth of a strong and evenly distributed root system. The commercial-strength rubber support lines in this kit are calibrated to allow just the right amount of gesticulation for trees up to 2" in trunk diameter. Lines are easy to unhook for pruning, weeding, mulching, etc. Kit includes supplies for staking one tree: three 4 1/2" rubber lines (1/4" diameter), three metal hooks, three 11" metal stakes, and installation instructions.

8970 A: staking kit (2#) for \$49.00

Grafting Kits The basics you'll need to graft fruit trees (or any woody plants that can be propagated by grafting). Includes one right-handed grafting knife with single-bevel blade for smooth, flat cuts (plus it's micro-beveled so it will hold its edge through sustained use); one bottle of Treekote Grafting Sealer to prevent the wood from desiccating; and one roll of grafting tape to secure the graft union: 1/2" Parafilm for bench grafting (Kit A) or 1/2" PVC tape for topworking (Kit B). We include a sheet with instructions and illustrations for how to bench graft or how to topwork, based on whether you buy A or B. Check out our Trees catalog for scionwood and rootstock.

8971 A: bench-grafting kit (3#) for \$49.50

8972 A: topworking kit (3#) for \$49.50

Parafilm® Grafting & Budding Tape Very stretchy 1/2" or 1" wide tape holds graft union firmly together. If wrapped just one or two layers thick, it will degrade and fall off on its own with a couple months of outdoor exposure, saving labor; beefier wrapping will likely need to be manually removed to prevent girdling. Parafilm, a low-molecular-weight polyethylene product, is relatively benign in the environment, compared with PVC. 90' roll.

8974 A: 1/2" tape, one roll (0#) for \$5.75

B: 1/2" tape, case of 12 rolls (2#) for \$29.75

8975 A: 1" tape, one roll (0#) for \$6.75

B: 1" tape, case of 6 rolls (2#) for \$29.75

PVC Grafting Tape Some grafters report that Parafilm tape is not strong enough for larger grafts. PVC tape is much stronger than Parafilm and will not break down. This makes it suitable for topworking. Leave it on the tree until the graft is well established, then remove. 1/2"x300'.

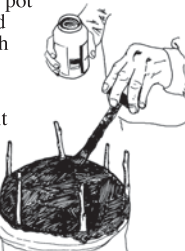
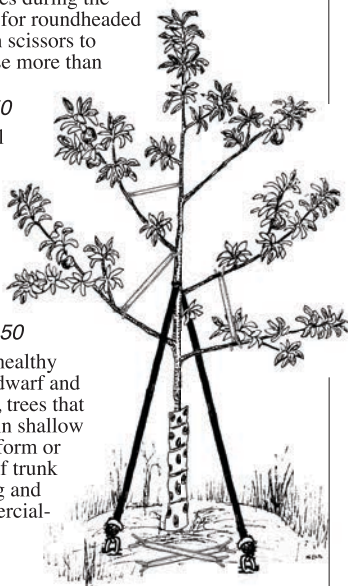
8977 A: one roll (0#) for \$6.00

Grafting Wax Primarily beeswax, with a few proprietary stabilizers added. Use to seal and protect new grafts from the elements. Needs to be warmed to become spreadable: work it in your hands until pliable, or warm to a liquid in a pot you love to scrub, then pour the liquid wax into a dedicated wide-top thermos that you can take around the orchard with you and apply with a brush.

8983 A: 8 oz (0#) for \$12.00

Treekote™ Grafting Sealer Water-soluble black asphalt emulsion for graft dressing. Dries quickly. Used extensively and successfully with any kind of grafting. Screw-on lid and attached brush applicator. Store above freezing temperatures to avoid troublesome changes in consistency.

8986 A: pint (3#) for \$12.50



Grafting Knife To shape a stick of scionwood for grafting, you need a knife that is beveled on only one face so the cut is as flat as possible. We offer "right-handed" and "left-handed" grafting knives—see explanation below to decide which knife will suit your style of grafting. **8989** (right-handed): 2 1/4" stainless steel blade; 3 1/2" alloy-lined nylon handle with satin finish; overall length: 6 1/2"; manufactured in Switzerland. **8990** (left-handed): 2 1/4" carbon steel blade; 4 1/8" fiberglass-reinforced nylon handle with satin finish; overall length: 6.7"; manufactured in Italy. Why is the lefty more expensive than the righty? The righties are manufactured on a much greater scale than lefties. Also, the lefty knife features a precision bark-lifter tab, useful for bud grafting and topworking.

8989 A: right-handed knife (0#) for \$35.00

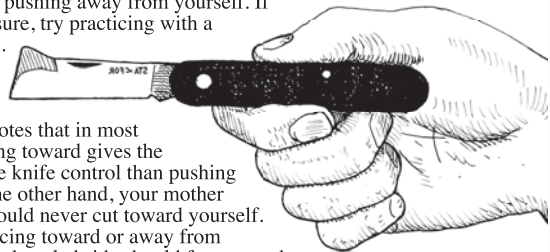
8990 A: left-handed knife (0#) for \$55.00



Choose the right (or left) grafting knife! Deciding between a "right-handed" or "left-handed" grafting knife is more subtle than simply ordering RH if you're a righty and LH if you're a lefty. You must consider which feels like a more natural slicing motion to you: pulling toward yourself, or pushing away from yourself. If you're not sure, try practicing with a utility knife.

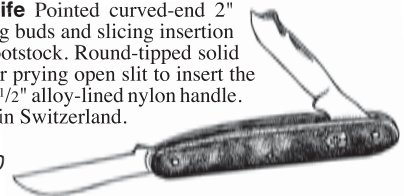
Fedco's resident grafting instructor notes that in most cases, pulling toward gives the grafter more knife control than pushing away. On the other hand, your mother said you should never cut toward yourself. Whether slicing toward or away from yourself, the beveled side should face up and the flat side should face down.

Here's a simple key to help you decide which knife to get:
 Prefer to hold knife in RH and cut toward yourself: 8989-A (RH)
 Prefer to hold knife in RH and cut away from yourself: 8990-A (LH)
 Prefer to hold knife in LH and cut toward yourself: 8990-A (LH)
 Prefer to hold knife in LH and cut away from yourself: 8989-A (RH)



All-purpose Budding Knife Pointed curved-end 2" stainless steel blade for cutting buds and slicing insertion slits in the bark of the host rootstock. Round-tipped solid brass 1" bark-opener blade for prying open slit to insert the bud without slicing the bark. 3 1/2" alloy-lined nylon handle. Right-handed. Manufactured in Switzerland.

8992 A: budding knife (0#) for \$55.00

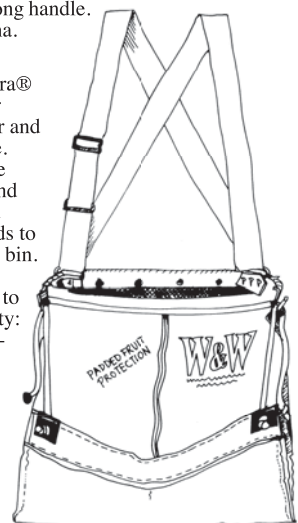


Fiskars® Pole Fruit Picker Finally, a high-quality pole picker that doesn't puncture or damage fruit! We're thrilled to offer this sturdy yet lightweight tool with its well-designed head with patented tabs that gently procure fruit and catch it into a mesh bag. Suitable for practically all shapes and sizes of fruit, from crabapples to papayas. The angle of the head is adjustable, and the mesh bag is machine washable. We also find the telescoping design on the fiberglass handle to be superior to other models; it employs an intuitive double-locking mechanism for a secure setting—no more guessing which way to turn the tightening knob. Endorsed by John Bunker and the crew of Out on a Limb Apple CSA. Extends from 6'8" to 11'8" to pick those pears way up high. Comes with a full lifetime warranty. The 40 lb shipping weight is to account for the extra cost of shipping the long handle. Actual weight is just 3 1/4 lb. Made in China.

8997 A: picker (40#) for \$64.00

Pro Padded Fruit Picking Bag Cordura® nylon bag with a sewn-in padded layer for extra fruit protection. Padded back, leather and foam-padded rim, and a strong steel frame. Comfortable wide cloth straps disburse the weight of your harvest across your back and shoulders. Fill it with as much fruit as you want, then simply unhook the knotted cords to release the fruit into your bushel basket or bin. Lift the knotted cords back into place and you're ready to resume picking! Resistant to water, mildew, mold and abrasion. Capacity: 1 1/3 bushel (1 bushel ≈ 42 lb). Rim is oval-shaped: 18" side to side; 9" front to back. Weight: 3.4 lb. *Note:* the PVC coating on the Cordura fabric requires a Prop65 warning; see p65warnings.ca.gov. Made in the USA. **NEW!**

8998 A: picking bag (5#) for \$92.00



If shipping weight in parentheses is (0#), the item qualifies for free shipping!



FELCO® CUTTING TOOLS

Imported from Jura, Switzerland, Felco tools set the standard for professional quality, precision and durability. Made with high-quality steel and forged metal alloys, they feature extensively researched ergonomic designs so they work well and last a lifetime. Swiss-made, except where noted.

Felco F160 Pruners A very lightweight pruner with composite fiber handles, hardened steel blade and anvil. Angled head and handles are ergonomically designed to reduce the strain of hours of pruning. Two sizes: 160S for smaller hands and 160L for larger hands. May be used in either hand.

9004 A: 160S small (0#) for \$49.00

9005 A: 160L large (0#) for \$49.00

Felco #14 Pruners The most compact and lightweight pruners Felco offers. Classic metal handles. At 6.9 oz, this tool is about 20% lighter than the standard Felco #8 pruners and will give those with small hands full leverage advantage. That said, hands of all sizes will enjoy this tool for detailed work where maneuverability and getting into tighter spaces is up to the essence. Rated to cut up to 0.7" caliper. Right-handed.

9006 A: #14 right-handed (0#) for \$86.00

Felco #6 Pruners Designed for a medium-sized hand, otherwise just like the Felco #8 pruners. Customer Anne Greensfelder, an occupational therapist specializing in hands, explained that most women who use the #8 can't open it all the way so don't get the full leverage advantage. Ideal for pruning grape vines, shrubs and trees. The smaller size allows cuts closer to the stem. 7.6 oz. Rated to cut up to 0.8" caliper. Right-handed.

9007 A: #6 right-handed (0#) for \$92.00

Felco #7 or #10 Pruners Features a rotating handle that allows fingers to move naturally, reducing the fatigue and blistering brought on by a hard day's pruning. Requires less effort than conventional pruners.

9010 A: #7 right-handed (0#) for \$112.00

9011 A: #10 left-handed (0#) for \$128.00

Felco #8 or #9 Pruners The classic Felco hand pruners: heavy-duty, lightweight, comfortable to hold. Excellent cutting action. Blade features a sap groove and soft-wire cutter. Easy to adjust and sharpen. 8.8 oz. Rated to cut up to 1" caliper.

9013 A: #8 right-handed (0#) for \$96.00

9014 A: #9 left-handed (0#) for \$95.00

Felco #300 Flower Shears

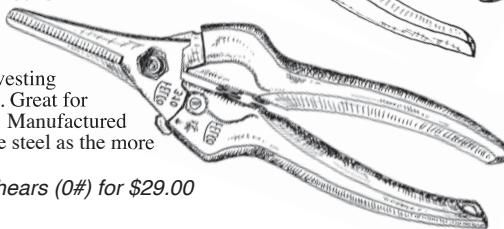
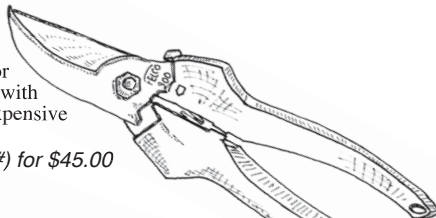
Useful for light pruning, deadheading and cutting stems for arranging. Manufactured in Italy with the same fine steel as the more expensive Felco tools.

9016 A: flower shears (0#) for \$45.00

Felco #310 Harvest Shears

Fruit and vegetable harvesting shear, lightweight with narrow needle-nose head for harvesting grapes and other produce. Great for pruning nightshades, too! Manufactured in Italy with the same fine steel as the more expensive Felco tools.

9019 A: harvest shears (0#) for \$29.00



MORE CUTTING TOOLS

Ratcheting Loppers Lop with ease! These loppers use a simple ratcheting mechanism to increase the pressure from your grip five-fold. One red handle and one black handle: hold the black handle still and move the red handle back and forth several times. The branch will cut cleanly with less strain and fatigue than with traditional loppers.

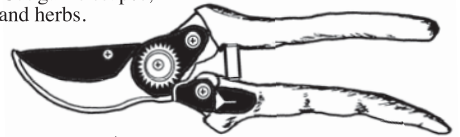
Because these use an anvil-type cutting mechanism that can crush plant tissue, best to limit their use to clearing brush, and opt for bypass-type loppers when pruning fruit trees and woody ornamentals. Accommodates branches up to 1 1/2". Overall length 25". Comfortable rubberized grip. Manufactured in Taiwan.

9023 A: ratcheting loppers (5#) for \$75.00

OTC Bypass Pruners Cut garlic scapes, harvest tomatoes, greens and herbs.

Gets the job done, but inexpensive enough for apprentice crews or careless gardeners. Manufactured in Taiwan.

9025 A: right-handed (0#) for \$12.50



TRIMMING & MAGNIFICATION

Titanium Trimming Scissors Everybody's got their favorite style of scissors for accomplishing those lengthy delicate trimming jobs efficiently and without strain. We like this pair because it features many of the same ergonomic and precision-oriented qualities as the beloved Chikamasa model B500-SLF, without contributing to the "forever chemical" problems of fluorine coatings (Teflon).

Thankfully, these titanium-coated blades also resist sap buildup and corrosion. You'll have to clean them eventually, but you can trim for hours without needing to wash them. Rub them down with isopropyl alcohol or soak them in oil between trimming sessions to remove the gunk that does accumulate. Blade length 1.57" and overall tool length 5.88". Manufactured in Taiwan.

9026 A: trimmers (0#) for \$19.00

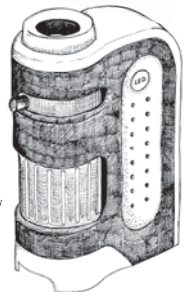
Felco #322 Trim and Pick Snips Slim sharp shears for seriously snappy snips! As OGS coordinator Renee puts it, "this style is indispensable on the farm—it is the go-to pruner for most any garden tending task." The blades are straight with slightly rounded tips, which prevents damage in fruiting and vining crops, herbs and flowers, and anything else you must weave your way into. Blades are carbon steel with chromium coating to stop corrosion. The sap groove mitigates buildup and provide consistently smooth cutting. The stainless steel spring mechanism makes for ergonomic handling, as do the shock absorbers. Don't mess around with cheaper look-alikes—invest in Felco-made tools. Weighs in at a mere 1/4 pound. Overall tool length 7 1/2".

9027 A: snips (0#) for \$39.00



Microbrite Plus Pocket Microscope This ultra-portable user-friendly pocket scope magnifies 60–120x, with a powerful LED light to deliver a bright clear image. Many loupes and pocket scopes require expensive specialty batteries: this one runs on a single AA battery (not included). Essential tool for observing trichome color to determine harvest timing; also useful for identifying miniature pests, detecting the early stages of fungal or bacterial infections, reading the tiny print of this catalog, or admiring slime mold. 59mm x 30mm x 92mm. Made in China.

9002 A: microscope (0#) for \$16.00



Looking for Orchard Ladders?

Sturdy lightweight traditionally shaped wooden orchard ladders have wide bottoms for stability and narrow tops for easy handling and placement.

Contact the manufacturer: Peter Baldwin, 207-722-3654 baldwinappleladders.com



My kids love looking at your catalogs whenever they come in. Each of them enjoys the fruits of their labor—not so much the labor.

— Drake from Brainerd, MN

PRUNING SAWS

Replacement blades for pruning saws are available on our website.

Wheeler Pruning Saw John Bunker says, "Although not well known outside the orchard trade, this is the best all-around pruning saw there is. I never prune a tree without it. Looks like a hacksaw and cuts like a sharp knife through soft butter. The blade can be installed to cut on the pull or push stroke."

We much prefer the pull stroke. Wooden handle, arched metal frame. 10 teeth/inch. Blade length, 14"; total saw length, 16"; weight, 11.5 oz. Manufactured in the USA.

9031 A: saw (0#) for \$57.50

Felco #600 Folding Pruning Saw Japanese-style pull-action pruning saw with a locking blade that folds into the handle. The patented design of the blade, thicker at the bottom and thinner at the top, prevents clogging and binding, since only the teeth come in contact with the wood. Works well in tight places and cuts branches up to 4" in diameter. Overall saw length, 14"; blade length, 6"; weight, 4.9 oz. Manufactured in Korea.

9037 A: saw (0#) for \$44.00

Felco #611 Straight Pruning Saw Larger pruning saw with durable ergonomic non-slip plastic handle. 13" blade features the same patented Japanese design as the Felco #600 model, cuts very smoothly on the pull stroke. Hard chrome plating prevents rust. Easily cuts 5-6" limb. Comes with a plastic blade sheath. Total saw length is 19³/₄"; weight, 13.1 oz. Manufactured in Korea.

9038 A: saw (2#) for \$82.00

SILKY SAWS

Our line of Silky saws comes recommended by Daniel MacPhee of Blackbird Rise Farm in Palermo, ME. According to Daniel, the Japanese Silky saws cut "a million times better" than Felco saws. The blades have more teeth per inch and are thinner and more flexible. The latter attribute improves performance but does make the blade more susceptible to bending, so be gentle with it. Silky saws cut on the pull stroke. Manufactured in Japan.

Silky Pocketboy Folding Saw This compact saw with a 5" blade is nicknamed "Little Giant" due to its colossal cutting capacity. Delivers incredibly smooth clean cutting with remarkable speed, making this the go-to saw for pruning and topworking limbs 4" diameter or less. The clean cuts allow the tree to

heal well. This little fella has found its following among not only orchardists and landscapers, but also woodworkers, arborists, campers and survivalists. Given its handy size, why would you go anywhere without it? Blade, with 8.5 non-set teeth per inch, folds into a black nonslip rubberized handle. Comes with a nifty plastic carrying case you can attach to your belt.

9040 A: saw (0#) for \$81.00

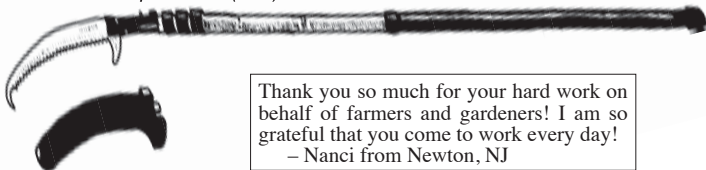
Silky Sugoi Straight Pruning Saw & Scabbard *Sugoi* is Japanese for amazing and awesome! Michael Phillips called this pull saw "the mighty Silky limbing saw" and said that with this integral part of his pruning kit, "substantial scaffold branches can be cut with little effort."

Gently curved chrome-plated 14.5" blade with 5.5 non-set teeth per inch for cleaner cuts. Comes with a bright yellow plastic sheath that can hang from your belt and secure against your leg if desired. The go-to saw for some serious large-limb pruning.

9043 A: saw & scabbard (2#) for \$169.00

Silky Hayauchi Pole Saw *Hayauchi* is Japanese for 'fast beating'—as in drumming or typing. It also makes for fast fluid sawing. 15.4" high-carbon steel blade with 5.5 teeth per inch extends from an aluminum oval pole that telescopes from 8' to an astounding 21'! With this versatile saw, you'll be able to stand safely on the ground while dexterously pruning limbs that would otherwise be impossible to reach without tree-climbing gear or a tall ladder. Fedco board member David Shipman has owned one for many years and he calls it his favorite landscaping tool. Includes a rigid plastic blade cover. 7.7 lb working weight (the 40 lb shipping weight reflects the awkward size).

9049 A: pole saw (40#) for \$455.00



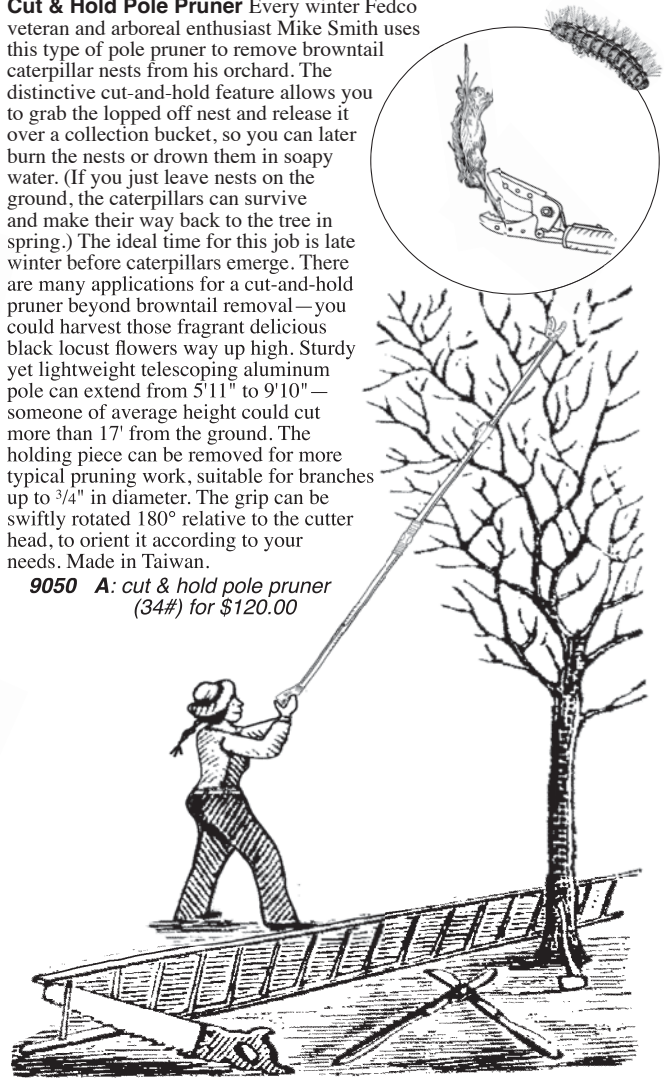
Thank you so much for your hard work on behalf of farmers and gardeners! I am so grateful that you come to work every day!
— Nanci from Newton, NJ

If shipping weight in parentheses is (0#), the item qualifies for free shipping!

POLE PRUNERS

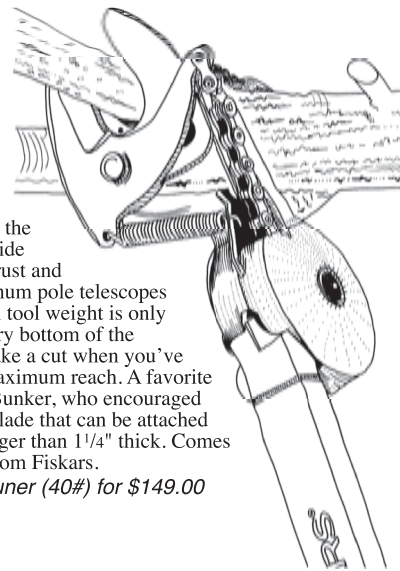
Cut & Hold Pole Pruner Every winter Fedco veteran and arboreal enthusiast Mike Smith uses this type of pole pruner to remove browntail caterpillar nests from his orchard. The distinctive cut-and-hold feature allows you to grab the lopped off nest and release it over a collection bucket, so you can later burn the nests or drown them in soapy water. (If you just leave nests on the ground, the caterpillars can survive and make their way back to the tree in spring.) The ideal time for this job is late winter before caterpillars emerge. There are many applications for a cut-and-hold pruner beyond browntail removal—you could harvest those fragrant delicious black locust flowers way up high. Sturdy yet lightweight telescoping aluminum pole can extend from 5'11" to 9'10"—someone of average height could cut more than 17' from the ground. The holding piece can be removed for more typical pruning work, suitable for branches up to 3/4" in diameter. The grip can be swiftly rotated 180° relative to the cutter head, to orient it according to your needs. Made in Taiwan.

9050 A: cut & hold pole pruner (34#) for \$120.00



Fiskars® Ergo Power Pole Pruner with Saw Blade We polled the pruning professionals on our staff, and they ranked this as a cut above all the rest on the market. What sets this pole pruner apart is its innovative ergonomic ropeless design. While other pole pruners involve a free-dangling rope you pull to make cuts, this model has a strap that lays lightly flat against the pole, so the user pulls a sleeve along the shaft to make the cut with a natural and efficient arm motion. This pull-action transfers to chain-drive gearing at the cutterhead, generating impressive power with minimal effort. You can nimbly direct the head from limb to limb for rapid-fire cutting. The cutterhead has a 230° adjustment range for pruning at tough angles. Rated to slice through 1 1/4" diameter wood, the fully hardened precision-ground blade stays sharp for ages, and the low-friction coating helps it glide through wood while resisting rust and sap buildup. The sturdy aluminum pole telescopes from 7.9' to 12', yet the overall tool weight is only 4.3 lb! A handy knob at the very bottom of the pole can be pulled down to make a cut when you've extended your arms to their maximum reach. A favorite of Fedco Trees founder John Bunker, who encouraged us to carry it. Includes a saw blade that can be attached when you're pruning limbs larger than 1 1/4" thick. Comes with a full lifetime warranty from Fiskars.

9051 A: power pole pruner (40#) for \$149.00



MORE TOOLS

D R I P I R R I G A T I O N

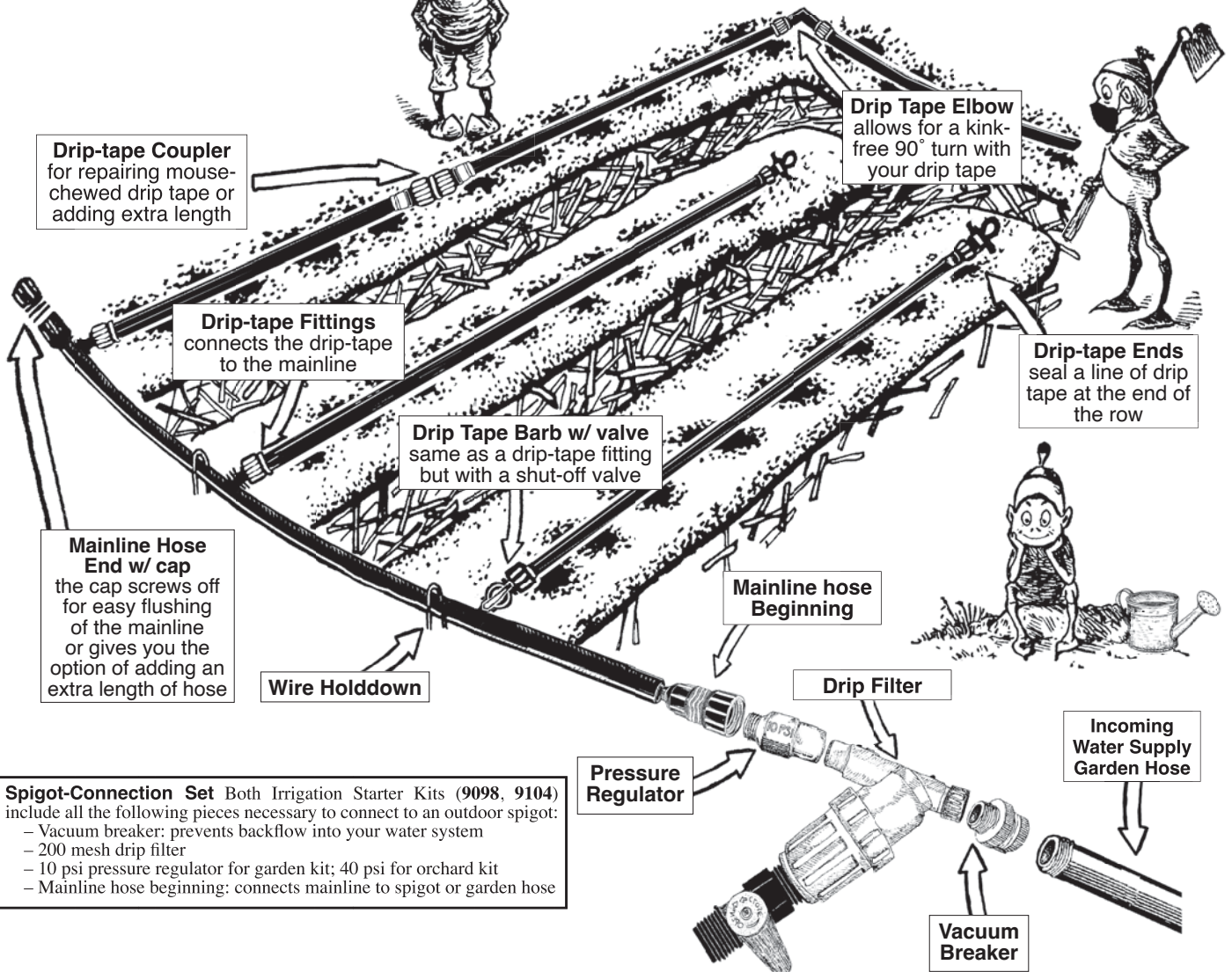
Drip irrigation applies moisture where it is needed, at the plants' roots, so it conserves water and does not cause mold problems. The drip method helps crops get over transplant shock and get established, and ensures adequate water supply until the rain comes. Also useful in greenhouses.

We recommend sketching your garden and proposed irrigation system before you order to ensure that you get all the pieces you need. For help in designing your own system see: fedcoseeds.com/ogs/drip.htm



All components shown in this diagram can be found individually on our website. Please note that our irrigation kits do NOT include all of these components, but only the components listed in the kit description. If you don't like the interweb, write to us or call for a price list of irrigation parts.

IRRIGATION



STARTER & EXPANSION KITS

We offer two kinds of kits: garden row-crop kits equipped with low-flow drip tape for a uniform distribution of moisture along the tapes, and an orchard-crop kit with emitter tubing (see next page).

Garden Irrigation Starter Kit For 200' of irrigation. Kit contains:

- Setup instructions
 - Spigot Connection Set (see below)
 - 200' of low-flow drip tape (3/8" diameter)
 - 100' of 1/2" polyethylene mainline tubing
 - 2 mainline ends with screw caps - removable for flushing line
 - Coupler (1/2") - joins two pieces of mainline tubing
 - 10 drip-tape fittings which plug into the mainline
 - 10 drip-tape sleeve ends to seal the end of a line of drip tape
 - 2 tape couplers to repair breaks or tears in the drip-tape line
 - 20 wire holddowns
 - Manual punch - makes 1/4" holes to install drip tape
 - 10 two-way plugs - fill holes in mainline if you relocate drip-tape fittings
- 9098 A: kit (10#) for \$145.00**

Garden Irrigation Expansion Kit Gives you another 200' of irrigation. Contains

- 200' of low-flow drip tape
 - 10 drip-tape fittings which plug into the mainline
 - 10 drip-tape sleeve ends to seal the end of a line of drip tape
 - 2 couplers to repair breaks or tears in the drip-tape line
- 9101 A: kit (5#) for \$49.00**

Spigot-Connection Set Both Irrigation Starter Kits (9098, 9104) include all the following pieces necessary to connect to an outdoor spigot:

- Vacuum breaker: prevents backflow into your water system
- 200 mesh drip filter
- 10 psi pressure regulator for garden kit; 40 psi for orchard kit
- Mainline hose beginning: connects mainline to spigot or garden hose

Orchard Irrigation Kit So you've planted (or are about to plant) a carefully spaced and fertilized new orchard. Make sure the plants get the water they need! Most fruit trees, shrubs and canes require the equivalent of 0.6–1.2 gallons of water per square foot every week throughout the growing season. For an apple tree, this means about 5 gallons a week. We designed this kit to make it more effective at delivering water where your plants need it most, and to make assembly and disassembly easier. The star of the show is **9125 Emitter Tubing**, which we learned about from landscaping gurus Robert Kourik and Lee Reich. This tubing makes it a cinch to supply each plant with two or more emitters, and it minimizes leaking and clogging. Kit will irrigate up to 10 trees spaced every 25'. If you're irrigating bushes, shrubs or canes with closer spacing, you'll want additional fittings to match the number of plants. Kit contains:

- Setup instructions
- Spigot Connection Set (see bottom opposite)
- Mainline Hose Beginning Tee
- 225' of 1/2" polyethylene mainline tubing
- 50' Emitter tubing, 18" spacing
- Hose Y with valves
- 4 L-couplers
- 9 T-couplers
- 10 Figure-8 ends
- 50 Earth Staples

Email ogs@fedcoseeds.com for help.

9104 A: kit (22#) for \$195.00

IRRIGATION EXTRAS

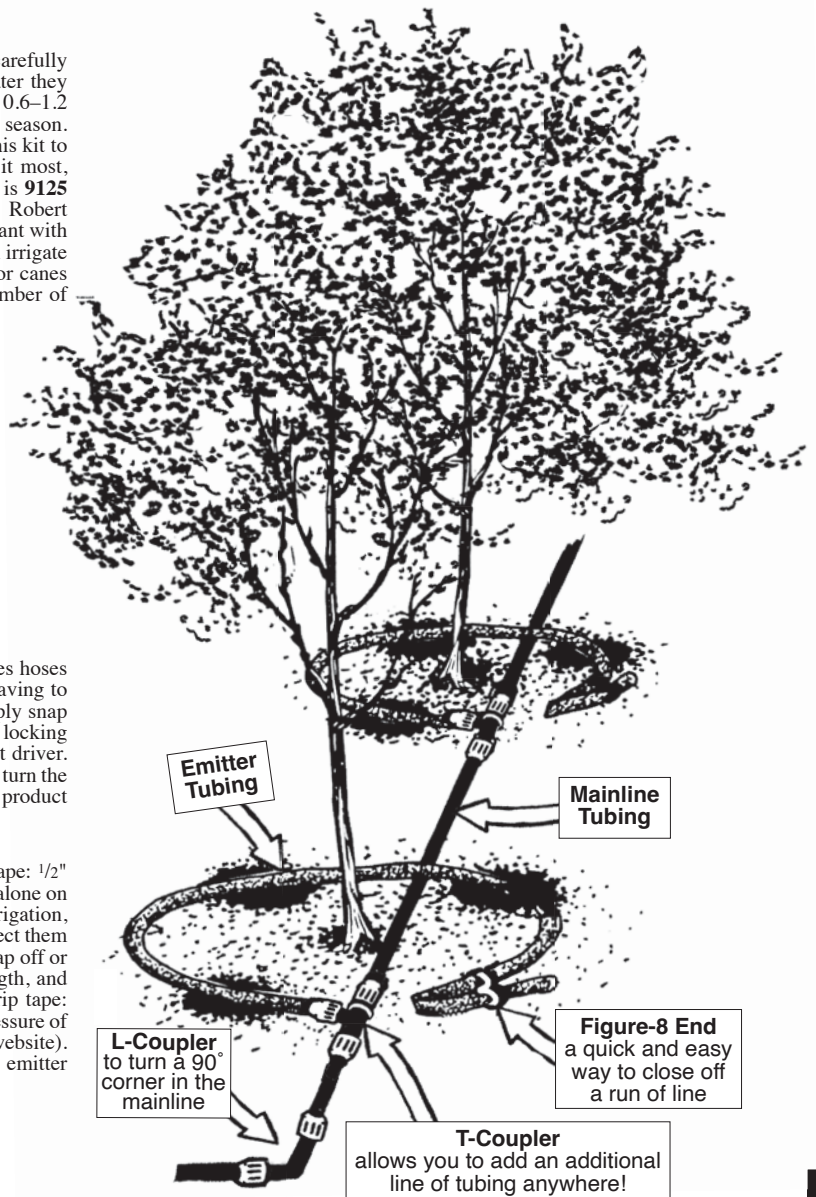
All components of our kits are available individually on our website.

Quick Connect Hose Fittings For anyone who changes or moves hoses on a regular basis, this nifty attachment is a lifesaver! Rather than having to screw and unscrew your hose to the water source, these fittings simply snap together for a watertight seal. To release, just depress the collar—the locking mechanism works much like a quick-release bit holder on an impact driver. Unlike cheaper aluminum versions, with these you don't even have to turn the water off—water flows only while fittings are connected! *Note:* This product requires a Prop 65 warning. See p65warnings.ca.gov.

9108 A: 2-piece set (0#) for \$18.50

Emitter Tubing Like a hybrid between mainline tubing and drip tape: 1/2" hose with pre-installed 1 gph emitters every 18" or 36". May be used alone on crops like squash, tomatoes or highbush blueberries. For orchard irrigation, run circles or semicircles of emitter tubing around each tree and connect them with mainline tubing from your water source. No external parts to snap off or leak, provides consistent water flow regardless of slope or hose length, and does not clog as easily as soaker hose. Much more durable than drip tape: with proper care, tubing will last 10 years or more. Requires water pressure of 10–50 psi. We recommend **9114** 40 psi Pressure Regulator (on our website). 18" emitter tubing has a maximum single row length of 350'. 36" emitter tubing has a maximum single row length of 550'.

- 9122 A: 100' with 36" spacing (5#) for \$90.00**
B: 500' with 36" spacing (30#) for \$325.00
9125 A: 100' with 18" spacing (5#) for \$92.75
B: 500' with 18" spacing (30#) for \$345.00



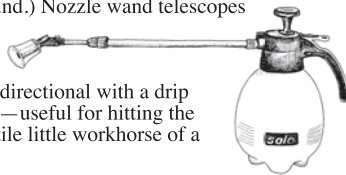
SPRAYERS

SOLO® 420 2-L Hand Sprayer Reliable Solo quality for the home gardener, or for use in the greenhouse or grow room. Polyethylene tank has a 2-liter capacity. Piston pump with Viton seals for chemical resistance. (Don't use with gritty materials like Surround.) Nozzle wand telescopes from 12" for close-up work to 23" for ground-level spraying without stooping. Wand is not removable. Nozzle adjusts from fine mist to coarse spray and is multi-directional with a drip guard, so you can spray from any direction—useful for hitting the undersides of leaves! A compact and versatile little workhorse of a sprayer. Manufactured in Taiwan.

9223 A: sprayer (5#) for \$29.75

SOLO® 475-Professional Backpack Sprayer This tried-and-true 4-gallon model offers an adjustable pressure regulator, a chemical-resistant stainless steel wand with brass nozzle, excellent parts availability, and a solid reputation. Compared to the economy versions of this sprayer, the 475-Professional boasts a deluxe ergonomic shoulder-saver harness, along with top-quality gaskets for lasting connections throughout the sprayer. Horizontal spray distance 25'; vertical spray distance 20'. Diaphragm pump is suitable for spraying wettable powders like Surround, which will quickly destroy piston pumps. Please join us in eschewing cheap sprayers! Also, please do your part to extend your sprayer's life by assembling properly and cleaning thoroughly after each use. We have learned that the black plastic piece that connects to the hose from the pump handle can be a bit tender: make sure the two white bolted plastic pieces are firmly tightened, and don't pump the sprayer roughly. However, SOLO offers a limited lifetime warranty on this sprayer and will send you free replacement parts within that timeframe if necessary: just call them at 1-800-765-6462. Manufactured in the USA.

9231 A: sprayer (30#) for \$199.25



HAND WATERING

RainSelect 30" Rain Wand This wand offers the durability, versatility and ease of use you've always wanted for watering your plants. Fedco Seeds purchaser Robin praises its plant-friendly water patterns, the clever ergonomic thumb-control valve for precisely dialing in the flow rate, and the 30" reach, which for her makes this wand "the best for hand watering I have used."

The head has 9 spray patterns: Stream, Shower, Rain, Center, Cone, Angle, Mist, Flat and Fan. At 40 PSI, the flow rate ranges from 1–4 gal per minute, depending on pattern. For seed-starting and watering delicate plants, you can swap out the 9-pattern head for the gentle **9208** Fogg-It Nozzle. Made with "Spacecraft Grade" aluminum alloy, brass, impact-resistant plastic and thermoplastic rubber on the grip. Green finish. Made in the USA.

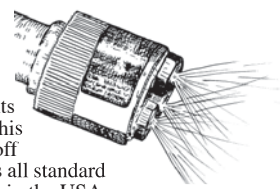
9201 A: rain wand (4#) for \$46.00

Rubber Washers for Garden Hose Fitting Leaky hose connections are no good, but often all that's needed to fix them is a new rubber washer. Pop out old ones with your pinky or a screwdriver, and push in the new one. It's all about those small victories. Water-relief! Washer outer diameter is 1"; fits all standard 3/4" female garden hose thread (FGHT) fittings. **NEW!**

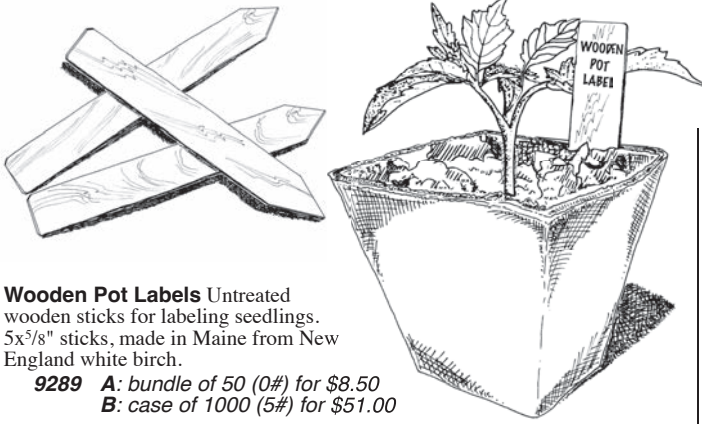
9107 A: 10 washers (0#) for \$3.00

Fogg-It Nozzle 1/2 GPM If you're tired of watering heads that spray too hard and wash out your seeds, you can now fogg-it-about-it! This solid brass head puts out a "superfine" (0.5 gal per minute) mist that is suitable for seed-starting or delicate plants of all kinds. If you want to fine-tune your watering, this head is not to be mist! Does not have its own on/off valve; we suggest attaching it to **9201** Rain Wand. Fits all standard 3/4" female garden hose thread (FGHT) fittings. Made in the USA.

9208 A: fogg-it nozzle (0#) for \$16.00



GARDEN MARKERS, STAKES & TAGS

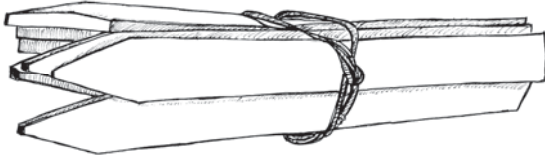


Wooden Pot Labels Untreated wooden sticks for labeling seedlings. 5x5/8" sticks, made in Maine from New England white birch.

- 9289 A:** bundle of 50 (0#) for \$8.50
B: case of 1000 (5#) for \$51.00

Treated Wooden Garden Stakes Treated with non-toxic white paint, these are the official stakes in Fedco trials. At the end of the summer, names stand out clearly and the stakes show little deterioration, even where they have been in contact with the soil. 12x1 1/8". Compliant with USDA National Organic Program guidelines. Made in Maine.

- 9292 A:** bundle of 25 (0#) for \$12.50
B: case of 250 (10#) for \$79.00



Field Stakes You won't lose these variety markers in the undergrowth. Longer and thicker than the garden stakes, these untreated field markers are easy to spot in the thickest bean bushes. 18 x 1 1/8 x 1/4". Made in Maine.

- 9298 A:** bundle of 25 (2#) for \$18.50
B: case of 100 (10#) for \$69.00

Cap Style Plant Markers Zinc-coated nameplates on galvanized steel legs provide permanent outdoor labeling. 10 1/2" tall with a 7/8x2 1/2" horizontal nameplate. Comes with marking pencil.

- 9304 A:** bundle of 25 (0#) for \$36.00
B: bundle of 100 (5#) for \$65.75

36" Tall Tree ID Plates Fedco exclusive! A superb solution to the perennial problem of ID tags that fall off, fade or strangle the tree or shrub. An important step in preserving rare varieties is labeling them well. Although we'll always love making ID tags out of old vinyl siding, these 36" tall galvanized metal wire stakes with upward-tilted heavy-duty zinc nameplates (3 1/2 x 1 1/4") offer a more fail-proof system because they can be securely staked into the ground, they're tall enough to show above an overgrown understory, and you can use a ballpoint pen to emboss the plant name into the zinc plate. For better visibility in the short-term, we recommend you write over that embossing with the included marking pencil. Light assembly required: slide the nameplate up the double wire, just past the bend, and press gently on the center of the nameplate to secure it.

- 9305 A:** bundle of 10 (4#) for \$15.50
B: bundle of 50 (8#) for \$86.00

Aluminum Label Tags Permanent all-weather tags with wires, especially for labeling trees. Can write on both sides.

- 9310 A:** 25 tags (0#) for \$10.50



PACK UP THE HARVEST

Harvest Baskets Old-time wooden lath and wire baskets in bushel, half-bushel and peck sizes. (Half-pecks available on our website.) Classic and effective. We sell hundreds every year at the Common Ground Fair. Bushels and half-bushels have a wire loop on each side for handles, pecks have a wire bail with a wood handle. Made in Pennsylvania.

- 9336 A:** 3 peck baskets (5#) for \$28.00
9337 A: 3 half-bushel baskets (10#) for \$32.00
9338 A: 3 bushel baskets (10#) for \$34.00

Sun Sugar Boxes Recyclable compostable cardboard alternative to those plastic clamshells! They are lidded and stackable so they do a better job of protecting your produce. Labels will affix to them more easily than to molded berry boxes. They ship flat. The larger boxes assemble in five easy steps (the manufacturer says that with a little practice you can fold 180 boxes an hour). The half-pints have an ingenious auto-folding design and assemble in one motion.

Half-pints, assembled, are 4 x 4 1/8 x 1 1/2".

- 9354 A:** 25 half-pints (0#) for \$23.25
B: case of 300 half-pints (10#) for \$135.00

Low-profile pints are 7 x 4 1/2 x 1 1/4".

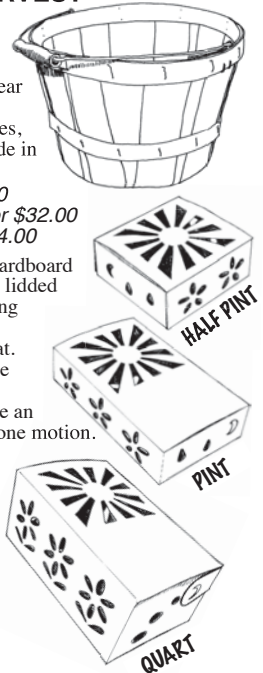
- 9355 A:** 25 pints (0#) for \$18.00
B: case of 300 pints (28#) for \$135.00

Quarts are 7 x 4 1/4 x 3".

- 9356 A:** 25 quarts (0#) for \$24.25
B: case of 200 quarts (22#) for \$125.00

Two-quarts, great for tomatoes, are 6 5/8 x 7 1/2 x 3".

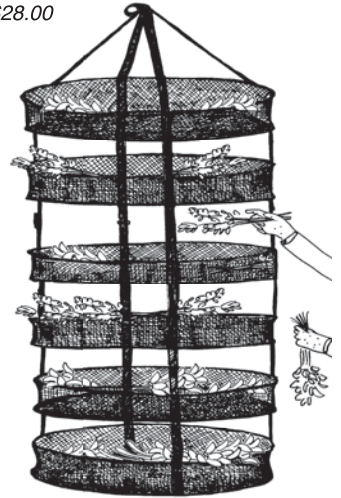
- 9357 A:** 25 2-qt boxes (0#) for \$28.00
B: case of 300 2-qt boxes (37#) for \$198.00



Collapsible Drying Racks

36" diameter round shelves of durable polyester netting in a metal frame. Center strap for improved weight support. Perfect for drying flowers and herbs of all types. Rack has 6 tiers that snap together so you can reconfigure them to suit your needs. A total of 42 sq ft of surface area!

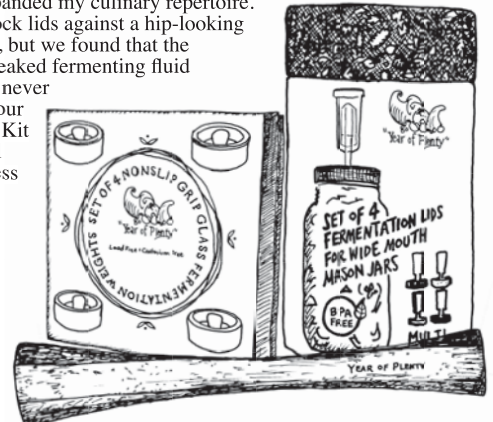
- 9358 A:** drying rack (10#) for \$105.00



Airlock Fermentation Kit for Mason Jars

Once you try lacto-fermenting in mason jars with these airlock lids, you may never go back to ceramic crocks, even for large batches! This simple efficient system works with wide-mouth jars (3 3/8" outer diameter) to produce delicious and nutritious probiotic foods. You provide the wide-mouth jars, and this kit provides 4 easy-to-use BPA-free airlock lids with silicone gaskets, 4 sure-grip glass weights, and one 12" bamboo tamper. Fedco Seeds coordinator Bernice Nadler has been singing the praises of this kit since 2019: "Other fermentation methods, such as in crocks, often develop surface mold that has to be scraped off. This has never been an issue with my airlock kit. It has expanded my culinary repertoire." We trialed these airlock lids against a hip-looking waterless competitor, but we found that the waterless lids often leaked fermenting fluid onto the counter. We never should've doubted your suggestion, Bernice! Kit developed by a small family-owned business in Pennsylvania.

- 9360 A:** one kit (4#) for \$45.00



On the web: go to fedcoseeds.com and click on Organic Growers Supply for:

- online ordering
- downloading paper order forms
- manufacturer information and contacts
- out-of-stock and backorder information
- items not listed in paper catalog
- pricing updates

GARDEN GARB

Waterproof Insulated Gloves The all-around best winter chore glove: no more wet cold fingers! The flocked acrylic lining is soft and warm, and the triple-dipped PVC coating remains flexible even at single-digit temperatures. They extend loosely over the wrists to cover your jacket cuffs. Generously sized: there's room to wear liner gloves in very cold weather.

9388 A: one pair (0#) for \$18.50



The Vermont Work Glove You can't possibly work harder than these top-notch leather work gloves. The 100% goatskin body is rugged yet soft and dexterous, with a 2" goatskin cuff and heavy-duty double nylon stitching. (We used to carry the version with a 4" cuff.) Seams on the outside for superior comfort and a vein protector for longevity. The patented thumb design offers improved comfort and durability. Absolutely worth the investment: will outlast other leather work gloves three or four times over. They have been popular holiday gifts among our customers. A family business founded in 1920 in Randolph, VT, Green Mountain Gloves started out making silk dress gloves but soon developed a specialty in heavy-duty leather work gloves. Two customers contacted us in 2017 after

NPR ran a story about the company's struggle to survive in an era of cheap imported competition: they were down to one sewing machine and four employees producing twenty dozen gloves a month, with no promise of a successor for the aging owner. Great news: the company found a young successor, who shares his predecessors' values but has revamped the company's online presence and branding. The company's

Luddite quirkiness and devotion to quality in a world that cuts corners, ignores human costs, and demands uniformity fits in with Fedco's values like hand and glove. And, like Fedco, Vermont Glove runs on solar energy! Use with **9387 Wool Liners** for extra warmth. Size is based on measurement around knuckles; Vermont Gloves tend to run larger than other brands, so measure up! Made in VT.

9389 A: small 8-9" (0#) for \$124.00
B: medium 9-10" (0#) for \$124.00
C: large 10-11" (0#) for \$124.00
D: x-large 11-12" (0#) for \$124.00



Vermont Glove Wool Liners What could possibly improve user experience of the well-loved **9389 Vermont Work Gloves?**

These seamless-knit liners magically transform summer gloves into winter gloves! Merino wool keeps you warm even when wet. A few things you should know about Vermont Glove merino liners:

- The proper glove liner size will feel slightly big on your hands. This allows them to stay in the glove when you remove your hand.
- The wool liners fit best if your glove is worn by itself to break in before using the glove liner.
- If using your wool liners with a new pair of work gloves, the work gloves may feel tight at first. Don't worry: the leather gloves will relax to your hands and wool liners over the first few uses. This makes them versatile, allowing you to wear your gloves with and without wool insulation.
- You can keep a fresh pair of wool liners (or a few) on hand to swap out with the stinky sweaty ones. Or, y'know, just wash them now and again.

Liner content: 79% Merino wool, 19% nylon, 2% elastic. Made in VT. NEW!

9387 A: small 8-9" (0#) for \$25.00
B: medium 9-10" (0#) for \$25.00
C: large 10-11" (0#) for \$25.00
D: x-large 11-12" (0#) for \$25.00

The Bamboo Gardener Rubber Palm Gloves Comfy, flexible, breathable gloves to suit for all kinds of weather. They wick away sweat in warm conditions, and are also great paired with merino liners for working in frigid temps. Textured natural rubber-latex palm offers a solid grip, wet or dry. They last longer than your typical cotton or synthetic garden gloves, so it makes sense that they are machine washable! Elastic wrist closure keeps out dirt and debris. Made in China.

9394 A: small 7-8" (0#) for \$18.00
B: medium 8-9" (0#) for \$18.00
C: large 9-10" (0#) for \$18.00



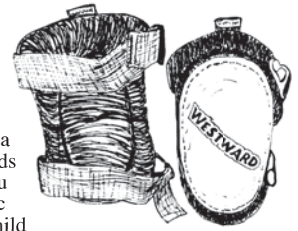
The Bamboo Gardener Nitrile Palm Gloves These supremely dextrous and comfortable gloves made with a seamless bamboo knit are our favorite, hands down! Whether it's gardening, home improvement or warehouse work, these are the go-to gloves for getting the job done when precision matters. Grippy, durable, breathable, moisture-wicking and habit-forming. You'll want pairs stationed wherever you're likely to put your hands to work. We recommend using them with merino liners when it's cold out. Nitrile coating resists puncture and abrasions. Elastic wrist closure keeps out dirt and debris. Machine washable. Made in Sri Lanka.

9396 A: small 7-8" (0#) for \$18.00
B: medium 8-9" (0#) for \$18.00
C: large 9-10" (0#) for \$18.00
D: x-large 10-11" (0#) for \$18.00



Knee Pads Garden in comfort, with no more rocks denting your kneecaps! Unlike most knee pads, which buckle around the back of the knee, these pads feature two heavy-duty adjustable elastic straps with buckles: one at the lower thigh, one at the upper calf. This improves your comfort in a kneeling position and helps prevent the pads from falling down to your ankles when you walk. Made of thick foam with hard plastic polypropylene cap. Hand-washable with mild soap and warm water. Fits most people.

9398 A: one pair (3#) for \$39.00



Lymeez 3D Mesh Tick Gaiters Here in New England, we need all the tick protection we can get. These innovative breathable leg gaiters help us stay safe in all our outdoor endeavors. The patented mesh-fabric design features 3D hills and valleys that ticks instinctively explore, which slows their climb up your leg by 400-800% (according to lab tests) while exposing them to microencapsulated permethrin to repel them. The UV-protected microcapsules work by gradual release of fresh permethrin upon the friction of use; this treatment is on the inside and outside of the fabric, and will remain effective through 50 warm washes. For the seasonal or recreational wearer, expect a pair to last 3+ years; folks who work outside for a living may need a new pair every year. (Compare against other permethrin treatments that outgas and breakdown with UV light, degrading within 40 days.) For optimal protection, treat your socks with permethrin, tuck your pantlegs into the socks, and wrap these gaiters tightly around your ankles and calves over your clothes. *Note:* permethrin is a synthetic insecticide that resembles

the pyrethrin found in chrysanthemums. Small/medium size fits calves 18" around; large/x-large fits up to 20". Both sizes are 12" tall. Wheat color.

9440 A: small/medium (0#) for \$38.00
B: large/x-large (0#) for \$38.00



Arm Guards Slipped over your forearms and gloves, the heavy close-woven canvas protects you from the unkind cuts of rose thorns, thistle spines and other prickly peril. Staffer Carol Doyle successfully pruned the nastiest portion of her blackberry patch without getting her shirt snagged or her arms scratched. She praised the Arm Guards for not restricting arm motion "and they are loose enough so they don't feel as if the circulation is being cut off by something too tight around the wrist and elbow." One size. One pair.

9401 A: one pair (0#) for \$12.75

Bug Baffler Headnet What is the one sure sign that spring is really here and it's time to set out the transplants? Black flies. Slip on this headnet and work in comfort, smug in the knowledge that there will be no flies biting your face today. Lightweight fine-mesh black nylon lets breezes in and makes the outdoors liveable again with chemical-free insect protection. Patented hood design allows plenty of room for a hat, and seamless construction permits unobstructed vision. Elastic bands slip under arms to hold the hood securely in place. Perfect for bee observation. One size.

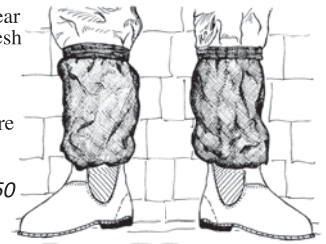
9441 A: headnet (0#) for \$10.50



Bug Baffler Ankle Guards

A spray-free and affordable layer of protection against mosquitoes, blackflies and deer flies. No need to wear your pants tucked into your socks—mesh ankle guards have stretch knit band at the ankle and elastic band at the calf to keep flying insects from biting you. Pull these guards over your socks before putting shoes on, then pull the guards over your pantlegs. One size.

9442 A: one pair (0#) for \$10.50



FEDCO FASHIONS

More styles may be available on our website.

Organic Fedco Cap Nothing says style like a Fedco cap, better than ever since we've switched to organic cotton! Classic low-profile ball caps: different from our 9405 Trucker Hat. Our organic hats have a larger crown than what we used to carry, so the hat will feel more secure and will sit a bit lower on your head. Adjustable headband and our classic sunray logo with the slogan "Garden - Farm - Orchard." The grey cap has a black and white logo, while the rest have color logos. One size fits most.



9404: organic Fedco cap (0#) for \$26.00

- A: grey with black & white logo
- B: black
- C: blue
- D: brown
- E: green
- F: purple

Organic Fedco Hearty Beans Hat

The moment we've all been waiting for: a stylish Fedco trucker hat! We know you'll love it. For starters, the black front panel and semi-curved bill are organic cotton, and the white mesh in the rear is recycled polyester. The embroidered design is "Fedco Seeds" outlined by heirloom dry beans arranged into a heart. Perfect for all the charming farming fashionistas in your life. Plastic adjustable snap closure. One size fits most.



9405 A: trucker hat (0#) for \$32.00



Taters Gonna Tate Tee This design was featured on some staff-only apparel recently, and it was so well-loved that we decided to release it to the wider world on these 100% certified-organic cotton shirts. If anyone says you're nerdy or goofy for wearing a pile of potatoes on your shirt, just smile and refer them to the text on the front. Fedco logo printed on upper back. Choose between a fitted blue-sage tee with black lettering; and a straight-cut brown tee with white lettering. *Note:* many find that the fitted shirt runs small; please consider ordering one size up.

9412: blue-sage fitted tee (0#) for \$29.50

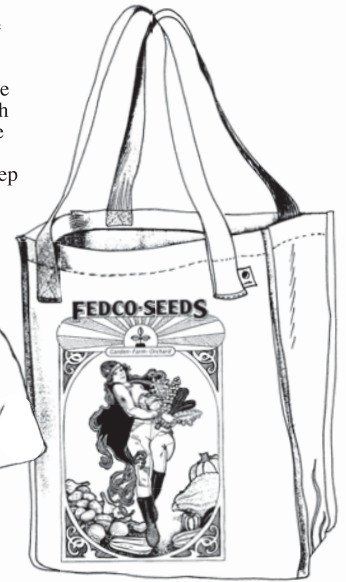
- A: small
- B: medium
- C: large
- D: x-large

9413: brown straight-cut tee (0#) for \$29.50

- A: small
- B: medium
- C: large
- D: x-large

Fedco Canvas Tote Bag Celebrate Maine's plastic bag ban in style with this beautiful beige 100% certified-organic cotton canvas bag featuring the amazing artwork of Fedco's own Sarah Oliver. For the story on the design, see 9414/9415 Autumn Harvest Tee. Tote bag is 12 1/2" wide x 14 1/2" tall x 7" deep (square bottom), with 24" handles.

9450 A: tote bag (0#) for \$29.00



Fedco Autumn Harvest Tee So many customers loved this design on our tote bag (9450) that we had to put it on a 100% certified-organic cotton shirt! The art is by Fedco's own Sarah Oliver, who explains the story behind her work: "This autumn-harvest drawing is one of a series inspired by Alphonse Mucha's 1897 Four Seasons. I love Mucha's graceful swirls and impeccable lines, and I enjoyed taking these ladies in their bedsheets and swoony poses and

putting them into the well-worn rugged clothing of farmers and gardeners, surrounded by seasonal bounty. This one has an autumnal armload of brassicas, and is surrounded by squash, potatoes, onions and garlic. She might have bags under her eyes, but she can rest easier now that the harvest is in." Choose between a fitted light green tee and a straight-cut forest-green tee. *Note:* many find that the fitted shirt runs small; please consider ordering one size up.

9414: light green fitted tee (0#) for \$26.00

- A: small
- B: medium
- C: large
- D: x-large

9415: forest-green straight-cut tee (0#) for \$26.00

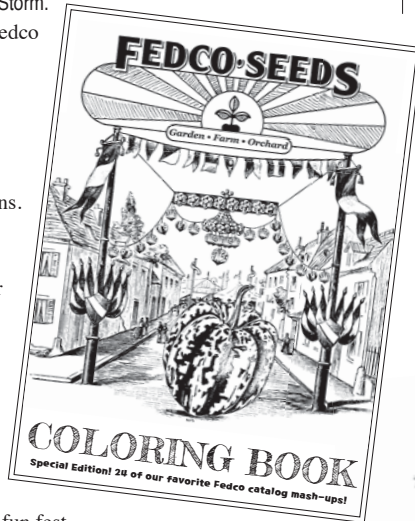
- A: small
- B: medium
- C: large
- D: x-large



BOOKS

Looking for a title listed recently but not this year? Check our website for clearance titles. Reviews written by Aktan Askin, Roberta Bailey, Elisabeth Benjamin, John Bunker, Laura Childs, Noah Dillard, Jaye dos Santos, Scott Ferguson, Khri Hogg, Nikos Kavanya, CR Lawn, Renee Manly, Jacob Mentlik, Emily Pence, Mary Powell, Jen Ries, John Paul Rietz and Robin Storm.

Fedco Coloring Book by the Fedco catalog crew, 48 pages, 10³/₄x8¹/₄, newsprint (printed one-sided so no bleed-through). Fedco catalogs are famous for black-and-white illustrations selected from ancient public domain engravings we find in old seed catalogs, horticultural books, and from Dover Publications. For decades our staff artists have combined these old images with original contemporary artwork to create fantastical mash-ups for our catalogs. Customer Amanda from Nacogdoches, TX, wrote to us, "Sounds silly, but I want to color the b&w drawings." Not silly at all, Amanda! With 26 full-page illustrations (including front and back covers), our exclusive coloring book features some mash-ups you might recall from past catalogs, and some brand-new ones, for an all-ages coloring fun fest.



9461A: Fedco Coloring Book (0#) for \$9.00

Apples and the Art of Detection: Tracking Down, Identifying and Preserving Rare Apples by John Bunker, 407 pages, 8¹/₂x11, softcover. I've been listening to John Bunker talk about apples for as long as I can remember. The old varieties and why we should rescue them, the Johnny Applesseeds of America, and the shocking truth that you can't plant an apple seed and expect to get the same apple. This book, brilliantly framed as a Sherlock Holmes detective story, belongs not only on the shelf of anyone interested in apples; it is also for those who want to learn about the old-timey salt-of-the-earth apple experts: John's mentors. As a layperson, I especially enjoyed those sections, but I was also impressed with the precision with which the science is presented. Photographs and artwork galore, it is beautifully illustrated by the author himself. -Emily Bunker



9470A: Apples and the Art of Detection (0#) for \$40.00

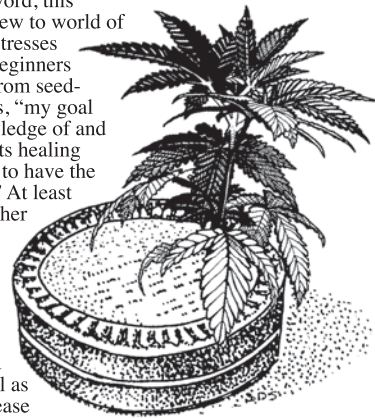
The Apple Grower: A Guide for the Organic Orchardist 2nd edition, by Michael Phillips, 320 pages, 8x10, softcover. The book you need to grow apples organically. Research aimed at reducing the use of synthetic poisons in the orchard has produced heartening results in recent years. Since *The Apple Grower* first appeared, two important products for organic orchardists, Surround (8720) and Entrust, make it possible to grow very decent apples organically. This second version includes apple-growing basics from A to Z, and more research and strategies for successful organic orcharding. Michael read the studies, did the interviews, tested the products and found an effective way to organize the information and communicate it to the rest of us. -JB

9471A: The Apple Grower (0#) for \$40.00



The Beginner's Guide to Growing Cannabis and Making Your Own Healing Remedies

by Tammi Sweet, 144 pages, 7x9, softcover. Practical, clear and wasting not a word, this guide is a perfect tool for anyone new to world of cannabis. Herbalist Tammi Sweet stresses quality over quantity and teaches beginners how to nurture big healthy plants from seed-starting through harvest. She writes, "my goal is to help people gain greater knowledge of and respect for the cannabis plant and its healing properties, and to empower people to have the confidence to work with the plant." At least with this reader, she accomplished her goal. She demystifies topics like cultivar selection, seed sourcing, sexing plants, knowing when to harvest, and decarboxylation for making tinctures and infused oils. For more advanced growers, she offers guidance on seed-saving and creating your own cultivars, as well as holistic approaches to pest and disease controls. For those of us just getting started, the beginner's guide has all we'll need. -EB



9490A: The Beginner's Guide to Growing Cannabis (0#) for \$19.99

A Beginner's Guide to Recognizing Trees of the Northeast

by Mark Mikolas, 208 pages, 6x9, softcover. If you've ever felt stumped by tree ID, Mikolas wants you to know it's not your fault and he's here to make it easier. His book challenges the standard pedagogy on the subject, arguing that recognition, not identification, is the proper starting point for aspiring dendrophiles. His alternative is concise but effective, forgoing a full taxonomy of each species in favor of highlighting a few unique traits that single out each one. The cues are accentuated with color photos of each detail, taken from multiple trees, at multiple times of year, in different conditions, supplemented by standard info like geographic range and trivia.

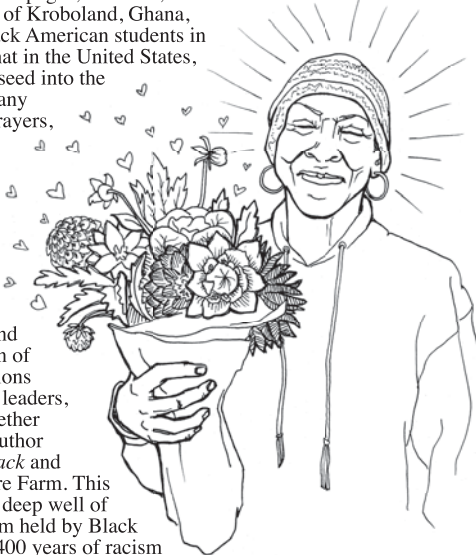


The method presumes you're walking in the woods with the book in hand, about to look closely at a tree for the first time in your life, with a goal of better connecting with your environment, not earning an advanced degree. If you're tired of feeling stranded in the wilderness, this guide offers a gateway to further exploration that will help you see the trees in the forest and the forest for the trees. -KH

9500A: A Beginner's Guide to Recognizing Trees (0#) for \$19.95

Black Earth Wisdom: Soulful Conversations with Black Environmentalists

by Leah Penniman, 352 pages, 6¹/₃x9¹/₂, hardcover. "The Queen Mothers of Kroboland, Ghana, admonished their Black American students in disbelief, 'Is it true that in the United States, a farmer will put the seed into the ground and not pour any libations, offer any prayers, sing, or dance, and expect that seed to grow?' Met with ashamed silence, they continued, 'That is why you are all sick! Because you see the earth as a thing and not a being.'" A poignant and galvanizing collection of essays and conversations with respected Black leaders, brilliantly woven together by Leah Penniman, author of *Farming While Black* and cofounder of Soul Fire Farm. This collection honors the deep well of environmental wisdom held by Black people, despite over 400 years of racism and oppression. With cultivated skills of listening and connecting with the Earth, these leaders share the lessons and teachings they have learned. In these times of climate chaos and political instability, Penniman asserts that the fight for racial and environmental justice demands that we put our planet first and defer to nature as our ultimate teacher. -EP



9507A: Black Earth Wisdom (0#) for \$26.99

Botany in a Day: The Patterns Method of Plant Identification 6th edition, by Thomas J Elpel, 235 pages, 8 1/2x11, softcover. I love this book, from a small press out of Pony, MT. Besides the dictionary and Ovid's *Metamorphoses*, it is the book I most often flip through while drinking coffee in the morning—I find it beautiful, comforting and stimulating all at once. Colorful illustrations on nearly every page, it's an approachable botany textbook and an herbal field guide to North American plants, regularly updated by the author since its release in 1996. Although Elpel asserts that "in a day" you can learn everything you need to know to ID unfamiliar plants, I've been poring over this book for years, opening at random to a plant family and studying patterns of characteristics that link plants to their relatives. The patterns method engages the scientific mind and also sparks a mystic appreciation for the interconnectedness of things in our world. For the studious, the curious, the herbalist, the teacher—plant-lovers of all persuasions will be happy to have this on the shelf. -EB



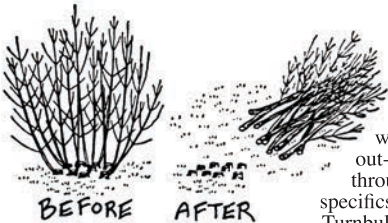
9510A: Botany in a Day (0#) for \$36.00

Breed Your Own Vegetable Varieties: The Gardener's and Farmer's Guide to Plant Breeding and Seed Saving 2nd edition by Carol Deppe, 384 pages, 8 1/2x11, softcover. "Why Save Seeds? Saving seeds is fun. Cleaning the seed, holding the clean seed in your hands, is magical. Gaze at the seed, run your fingers through it, play with it, and you can feel the connections... Unquenchable joy arises. It is so intense it puzzles you initially. Then you recognize it. It is the joy that comes from being who you are supposed to be and doing what you are meant to do." Molecular geneticist turned seed breeder Carol Deppe knows seeds and shares information available nowhere else. Want to know how to design variety trials, or how to understand and appreciate the subtleties of selection? Want to reclaim the lost lore of our ancestors and relearn the traditions of seed saving and seed breeding? Let Deppe be your guide as you chart your own path with seeds one experiment at a time. -CR



9515A: Breed Your Own Vegetable Varieties (0#) for \$29.95

Cass Turnbull's Guide to Pruning: What, When, Where & How to Prune for a More Beautiful Garden by Cass Turnbull, 365 pages, 7 1/4x9, softcover. I'm the kind of tree gardener who feels that one pruning book is not enough. Each one has something different to offer. Most sit on my shelf for quick reference. This is the first pruning guide I've wanted to read from cover to cover! Cass Turnbull sheds a bright—even glaring—light on pruning and what she has coined "mal-pruning." Fleshing out the details with clear how-to and how-not-to instructions along with useful illustrations and laugh-out-loud humor, she walks the reader through the basics and delves into the specifics for more than 150 plant species. Turnbull urges us to look more closely at how plants grow in order to make sense of why and how we should prune them. Chapters are grouped by plant habit (mounding, cane-growing, tree-like, vines and groundcover) so even if your favorite plants are not listed here, you can adapt the methods to meet your specific needs. -JR



9522A: Cass Turnbull's Guide to Pruning (0#) for \$24.95

The Complete Guide to Restoring Your Soil by Dale Strickler, 352 pages, 8x10, softcover. It's hard to find books that cover soil science and stewardship in a way that engages laypeople. We offer this one because it is both engrossing and practical for anyone who works with soil. Written by a farmer and soil-lover, this book is an ode to the revolutionary power of tending healthy and productive soils. Strickler begins by explaining how bad agricultural practices have created widespread soil degradation. From there, he explores the fundamentals of healthy soil in terms of oxygen, water, micro- and macroorganisms, minerals, and the carbon cycle. He describes the practices that build better soil (including reduced tillage, crop rotation, cover crops, and agroforestry). All along the way, Strickler keeps things interesting with farmer anecdotes, insightful reference charts, and illustrations. His passion for soil health shines through, as does his optimism that wiser agricultural practices could reroute us onto a more sustainable path. -JPR



9529A: The Complete Guide to Restoring Your Soil (0#) for \$24.99

Crop Planning for Organic Vegetable Growers by Frédéric Theriault and Daniel Brisebois, 136 pages, 7 1/2x9, softcover. If I'd had this book when I started farming, I would have avoided many mistakes. Published by Canadian Organic Growers, it's full of tools to plan for success before your first seed hits the soil. Charts, calculations and records—all the dry bones of keeping information handy, farming profitable and certification inspections smooth. Succinct chapters move from setting financial goals to developing a marketing plan, projecting planting schedules, compiling a seed order, analyzing before planning another year. For farmers, next year always holds the promise of being better; this book could make it so. -NK



9537A: Crop Planning For OG Vegetable Growers (0#) for \$30.00

The Cut Flower Handbook: Select, Plant, Grow, and Harvest Gorgeous Blooms by Lisa Mason Ziegler, 240 pages, 8x10, hardcover. This book is for anyone who wants to grow cutflowers, whether your arrangements are for pleasure, for profit, or both. With decades of experience as a flower farmer and teacher, Ziegler is as efficient with words as she is with her farm tasks. Her book establishes key principles in simple terms and provides quick references for starting seeds, transplanting, maintenance and harvest. You'll find profiles of more than 50 types of cutflowers, with specific tips from variety selection to conditioning after harvest, and photos showing each flower at ideal harvest stage. Though based in Virginia, Ziegler's concepts will translate to other growing conditions. In her own words, "My strongest gifts are teaching and encouraging others, particularly those who think they can't do it or that it is out of their reach." At least two flower farmers on the Fedco staff have learned from her online courses. -RS NEW!



9540A: Cut Flower Handbook (0#) for \$30.00

The Ecological Farm: A Minimalist No-Till, No-Spray, Selective-Weeding, Grow-Your-Own-Fertilizer System for Organic Agriculture by Helen Atthowe, 384 pages, 8x10, softcover. If you've been following the various threads in "ecological" or "holistic" growing that have emerged in recent years and either want to join the party, learn what the fuss is about, or synthesize your current understanding of experimental concepts into a single deft, state-of-the-art summary that can propel you forward, this book is the one-stop shop for you. Organic farmer, orchardist and consultant Helen Atthowe has spent decades trialing and researching low-intervention approaches to agriculture. Giving equal love to the veggie garden and the orchard, her approach attempts to merge components of the cultivated landscape often treated separately, while reframing attitudes toward the most common vexing tasks. "Weeding" becomes "Working With Plant Competition," and "Pest Control" becomes "Strengthening the Immune System of Your Farm or Garden." At the same time, her book is full of good ol' fashioned horse sense on soil health, pests and diseases, including super-handly diagnostic tools for identifying challenges for specific crops, and suggestions for intervening with your entire system in mind. Expect avant-garde concepts tested and grounded in experience, digested into a guide that can get a beginner started or update an experienced grower's perspective on familiar topics. -KH



9542A: The Ecological Farm (0#) for \$44.95

The Elderberry Book: Forage, Cultivate, Prepare, Preserve by John Moody, 114 pages, 7 1/2x9, softcover. The elderberry and humans have been together for a long time. Moody writes, "If the dog is humanity's best friend, then the elderberry may be its best plant friend." For generations, elder was the go-to household treatment for just about everything: dropsy, toothaches, or to remedy the effects of strangulation (apparently). For survival, people had to know their plants, and the elder was key. Everyone should have a few in their landscape, especially during a plague. Appreciation for elderberry is making a comeback, and we're all for it. (We're offering 12 elderberry varieties in the 2025 Fedco Trees catalog!) They offer beauty, forage and sanctuary. Moody's book works because it's simple and highlights reasons to plant an elderberry bush and how to do it. He walks us through a history of the plant, its cultivation and propagation, and its many uses in food, tools and toys. -JR



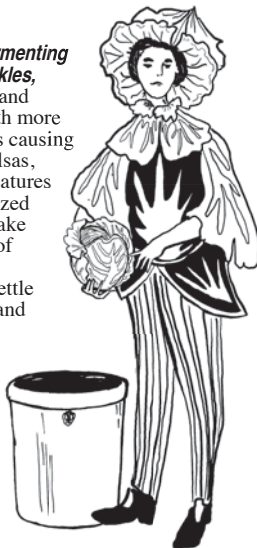
9549A: The Elderberry Book (0#) for \$24.99

Farmers of Forty Centuries: Organic Farming in China, Korea, and Japan by FH King, 441 pages, 5 1/2x8 1/2, softcover. In the early 1900s, former USDA official FH King traveled through China, Korea, and Japan to document how people sustained an agriculture for 4000 years without synthetic fertilizer. This book is as much an anthropological artifact as a point-by-point account of local agricultural methods and agricultural economy. The focus on rural smallholders and their ability to produce large diverse yields of marketable and household products using locally available inputs while generating little to no waste offers an inspiring case study that should resonate with contemporary homesteaders and small farmers, even if most of us don't aspire to build four different versions of water wheel or replicate the 1906 Japanese rice crop. Chapters are organized as a travelog, following King from place to place, but also by specific themes that make skipping around easy if the detail on a particular topic is overwhelming. If the reader is able to look past some dated language and bias, this book has a ton of perspective and practical skills to offer, along with irrefutable evidence of an agriculture dependent on small-scale earth care, free of fossil fuels. An oft-cited classic previously hard to find in print in its entirety. -KH

9557A: Farmers of Forty Centuries (0#) for \$17.95

Fermented Vegetables: Creative Recipes For Fermenting 64 Vegetables & Herbs in Krauts, Kimchis, Brined Pickles, Chutneys, Relishes & Pastes by Kirsten K. Shockey and Christopher Shockey, 376 pages, 8x9, softcover. With more than 140 recipes that excite and intrigue, this book is causing a stir among fermentation enthusiasts. Fermented salsas, herb pastes, chutneys, krauts and more—the book features recipes based on garden vegetables and herbs organized from A to Z. Tired of pesto getting funky so fast? Make a basil paste that lasts in the fridge for a year. Tired of squash? Ferment it with chipotle. Wondering how to preserve all those nettles by the compost pile? Try nettle kraut. The book covers history and science, vessels and equipment, fermenting fundamentals and advanced techniques, troubleshooting, and recipes for foraged foods. It closes with recipes to turn your fermented creations into snacks, entrées, desserts and “cocktails.” Profiles of fermentistas interspersed throughout include tips that add depth of knowledge, technique and history. -RB

9567A: Fermented Vegetables (0#) for \$27.99



Growing Garden Seeds: A Manual for Gardeners and Small Farmers by Robert Johnston, Jr., 32 pages, 5 1/2x8 1/2, softcover. If you are new to seed saving, this little manual by the founder of Johnny's covers all the basics and is the best place to start. First published in 1976, it is a classic.

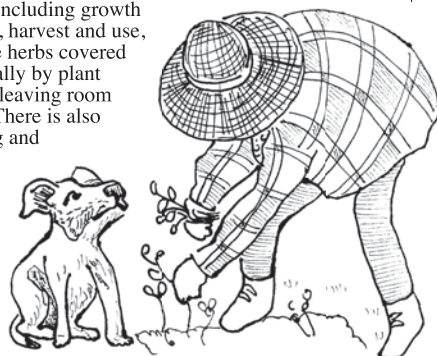
9600A: Growing Garden Seeds (0#) for \$3.95

Growing Great Garlic by Ron L. Engeland, 213 pages, 6x9, softcover. Varietal descriptions, history, and in-depth cultural information on growing, harvesting, storing and marketing garlic. The chapter on pests and diseases has practical suggestions for minimizing and containing the damage.

9608A: Growing Great Garlic (0#) for \$22.95

Growing Plant Medicine, Volume One by Richo Cech, illustrated by Sena Cech, 354 pages, 8x10, softcover. Every spring, for inspiration and practical reminders for the new growing season, I've reread Richo Cech's older *The Medicinal Herb Grower*, which covers principles of natural gardening techniques, infused with wisdom and stories from his decades of direct experience growing wild-type plants for medicine and for seed. This new volume is the long-awaited expanded version, combining the earlier book with a new section covering specifics on more than 150 individual herbs, including growth considerations, seed germination, harvest and use, native distribution and more. The herbs covered in this book are listed alphabetically by plant family, from Acanthus to Hemp, leaving room for a forthcoming Volume Two. There is also a new section on garden planning and design, with sample designs included. For anyone growing medicinals and wild-type plants, this is a must-have. -RS

9611A: Growing Plant Medicine, Vol. One (0#) for \$29.95

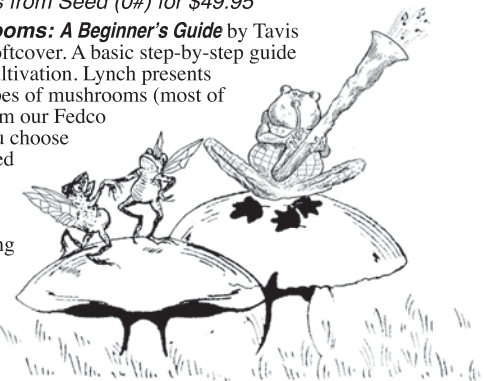


Growing Trees from Seed: A Practical Guide to Growing Native Trees, Vines and Shrubs by Henry Kock, et al., 288 pages, 8 1/2x11, hardcover. While there are countless volumes on growing annual vegetables and flowers, guides to growing woody plants from seed are few and far between. Whether you start with a tiny speck of a birch seed or a plump acorn beginning to sprout, “there is much satisfaction to be gained in gathering and propagating seeds” and watching them grow into tall trees that can outlive you. With this book you will learn how and when to collect seeds from your favorite native trees and shrubs, how to process them, store them and sow them to grow your own legacy of trees. Leaning on a lifetime of experience, the authors provide an in-depth look at each species and include helpful sidebar “alerts” for exotic and invasive plants that can be confused with natives. Based on plants of the Great Lakes region, which overlap with many we have here in Maine, and many that are likely to thrive here in our warming future. -JM

9612A: Growing Trees from Seed (0#) for \$49.95

Grow Your Own Mushrooms: A Beginner's Guide by Tavis Lynch, 112 pages, 7 1/2x9, softcover. A basic step-by-step guide to home-scale mushroom cultivation. Lynch presents methods for growing six types of mushrooms (most of them available as spawn from our Fedco Trees catalog) and helps you choose your mushroom project based on materials at hand, your climate, and how much space you have. Includes recipes and tips on preserving the harvest. Well illustrated and easy to understand, this book should give you confidence to embark on your mushroom-growing adventure. -MP NEW!

9587A: Grow Your Own Mushrooms (0#) for \$14.99



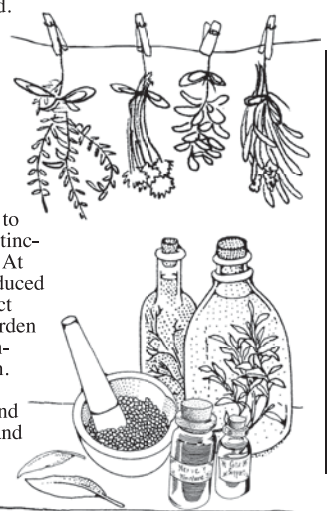
Happy Pigs Taste Better: A Complete Guide to Organic and Humane-Based Pork Production by Alice Percy, 272 pages, 7 1/2x9 1/2, softcover. Make no mistake. The correlation in the title is not a romantic one. And it could have been chosen only by an ex-vegetarian with an excellent palate. This book is about quality of life, both for pig and farmer. Speaking from ten years experience as an organic hog farmer, Fedco's own Alice presents the ins and outs of everything from feed sources, housing/bedding options and fencing styles, to marketing, record keeping and staying sane. Comprehensive with all necessary details of humane and organic swine life on the farm, also full of useful and sometimes surprising scientific information. (Want to know the optimal micron size of ground feed to prevent gastric ulcers? It's in here!) In *Happy Pigs*, you will read about macro issues like maintaining soil quality and the importance of financial literacy, while learning specific skills such as recognizing ancestral pig behavior, devising appropriate and holistic rations, diagnosing mysterious health conditions, humane and low-stress slaughter at home, and more. Comes with charts and templates for those who do their homework. A must for all beginners in the world of swine. -AA

9613A: Happy Pigs Taste Better (0#) for \$29.95

The Healing Garden: Herbs for Health and Wellness by Deb Soule, 223 pages, 7 1/2x9, softcover. Maine herbalist Deb Soule has always been a favorite of Fedco customers. Thirty years ago, we were so excited by the promise of her first book *The Roots of Healing* that we listed it in our catalog for two years before it was finally published.

We're pleased to offer this book, a distillation of her many years of herbal relationship and service. Documented throughout with pictures by Molly Haley, this straightforward book arrives at a timely juncture for those new to working with herbs. It begins with the considerations for gathering the plants, then quite extensively covers all aspects of drying before outlining ways to make simple household medicine: teas, tinctures, tonics, flower essences and more. At the finish, 18 medicinal plants are introduced in concise vignettes. Grounded in respect for the plants, the other beings in the garden and the land, Deb has packed a lot of understanding into a beautiful presentation. Her loving intent shines through in her closing words: “May herbal remedies find their rightful place in every household and community clinic, not as commodities but as beloved friends.” -NK

9614A: The Healing Garden (0#) for \$25.95



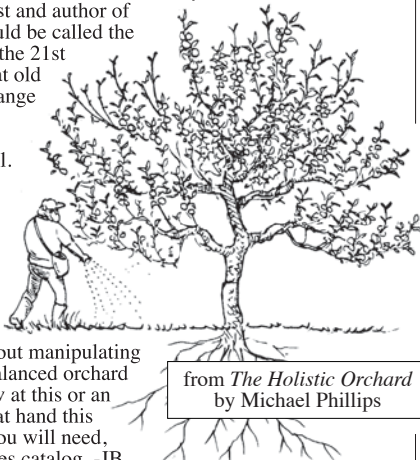
Free shipping on all books!



Herbal Revolution: 65+ Recipes for Teas, Elixirs, Tinctures, Syrups, Foods + Body Products That Heal by Kathi Langelier, 192 pages, 7³/₄x9, softcover. From award-winning Maine herbalist and farmer Kathi Langelier comes this must-read for anyone interested in incorporating medicinal herbs into daily life. She offers a foundational approach to herbal preparations and medicine making, then presents a rousing assembly of spunky and delicious recipes designed to build the immune system through digestive health, and revitalize cardiovascular, musculoskeletal, nervous and reproductive systems. Intriguing recipes make you want to eat your weeds: Dandelion & Burdock Fries, Elderberry Syrup with Reishi & Roots, Medicinal Mushroom Soup Stock, Nettle & Roasted Cauliflower Leek Soup, Herbal Cacao Bark with Roasted Seeds & Nuts, Maca & Ashwaganda Energy Bites. Chock-full of mouth-watering photos, this book has earned a spot on my kitchen counter, and may never even make it to the bookshelf! -LMC

9616A: Herbal Revolution (0#) for \$22.99

The Holistic Orchard: Tree Fruits and Berries the Biological Way by Michael Phillips, 414 pages, 8x10, softcover. Written by the late renowned New Hampshire-based orchardist and author of *The Apple Grower*, this book could be called the Encyclopedia of Orcharding for the 21st Century. Reminiscent of the great old Rodale books, it covers a wide range of fruit crops, while addressing orchard design, dynamics and horticulture in unparalleled detail. It's all here: pruning, planting, companion planting, spraying, not spraying. (See our **8657 Holistic Orchard Spray Kit**, page 146.) Phillips brought his extensive background in organic orcharding, along with wisdom: "A holistic grower knows that producing healthy fruit is not about manipulating nature, but about supporting a balanced orchard ecosystem." Whether you're new at this or an old-timer, you will want a copy at hand this winter. The only other reading you will need, of course, is the latest Fedco Trees catalog. -JB



from *The Holistic Orchard*
by Michael Phillips

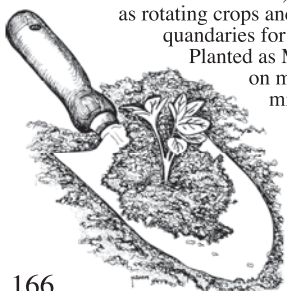
9624A: The Holistic Orchard (0#) for \$39.95

Lawns into Meadows: Growing a Regenerative Landscape 2nd edition, by Owen Wormser, 185 pages, 7x9, softcover. Written by a landscape designer with deep Maine roots and Northeast know-how, *Lawns into Meadows* offers easily accessible information for those who wish to ditch the grass and create more natural and regenerative spaces. Whether you are driven by a desire to provide a pollinator paradise, looking for ways to manage empty fields, or have an utter disdain for gas-powered lawn tools ruining your Saturday morning coffee, Wormser presents possibilities for the urban home gardener as well as the curator of expansive meadows. The book is broken down into sections that help you through the whole process. He digs into site preparation and plant selection, through to upkeep and even community building, offering even novice gardeners the keys to creating the regenerative spaces of their dreams. A great accompaniment to our Northeast Wildflower Mix or Flowering Lawn Mix (on page 7). Beautiful color photos offer examples of every step in the process. -SF

9645A: Lawns into Meadows (0#) for \$24.95

The Living Soil Handbook: The No-Till Grower's Guide to Ecological Market Gardening by Jesse Frost, 304 pages, 7x10, softcover. There are now many books about no-till vegetable culture, but Frost's stands out by going deeper into the living nature of soil while broadening our practical understanding of how to grow crops in a regenerative way. With his experiences as farmer, journalist, podcast host, and cofounder of the No-Till Growers website, he synthesizes the perspectives of growers who are thriving in the revival of this ancient agricultural model. In part one ("Disturb as Little as Possible"), he lays out the science of living soil and how to start new beds or transition established beds away from tillage. In part two ("Keep It Covered as Much as Possible"), he addresses compost and mulch, as well as rotating crops and managing paths, the two biggest potential quandaries for those new to no-till. In part three ("Keep It Planted as Much as Possible"), he shares fresh insights on managing fertility and interplanting to maximize a bed's potential, and he concludes with a 50-page chapter, "Seven No-Till Crops From Start to Finish." Wherever you are in your journey as a steward of plant and soil life, Frost's passionate compilation will reinvigorate your efforts to grow more beautifully and bountifully. -JPR

9650A: The Living Soil Handbook (0#) for \$29.95



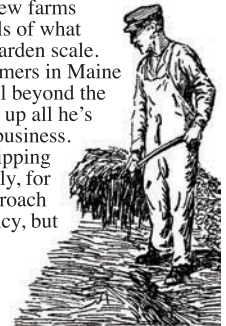
Moving Heavy Things by Jan Adkins, 48 pages, 10¹/₄x6³/₄, softcover. Years ago, I received a copy of this little book as a gift from my dear friend Carol Bryan, who inscribed it: "May your back be forever young." I often turn to it for instruction and for amusement. Written the year I was born, the book becomes increasingly relevant as I find myself looking for smarter ways to lug the rocks, soil, wood and water that life demands be moved from here to there. Adkins writes, "As you begin this business of moving heavy things you should know that you have a disadvantage: your body." With humorous line drawings and simple precepts and instructions, Adkins finds ways to move any heavy thing by employing ingenuity, simple tools (i.e. wedges, jacks, levers, line) and often a friend. The lessons are practical, grounded in historical wisdom and physics, and the sentiments and illustrations will please readers of all ages. -EB

9669A: Moving Heavy Things (0#) for \$13.95



from *Moving Heavy Things*
by Jan Adkins

The No-Till Organic Vegetable Farm: How to Start and Run a Profitable Market Garden That Builds Health in Soil, Crops and Communities by Daniel Mays, 240 pages, 8x10, softcover. As more gardeners and farmers warm up to the idea of reducing or eliminating tillage, a few farms in New England have risen to prominence as models of what can be achieved with applying no-till to a market-garden scale. Daniel Mays' Frith Farm has inspired vegetable farmers in Maine and beyond. In his thoughtful book, Mays goes well beyond the why and how of growing without tilling, and offers up all he's learned about starting and running a thriving farm business. From acquiring capital and searching for land, to flipping beds and handling harvests, Mays covers it all wisely, for the benefit of farmers new and old. His holistic approach emphasizes not only efficiency and financial solvency, but also quality of life and working at a human scale. His labor-planning and record-keeping strategies are worth emulating as much as his soil-stewarding practices. This book will breathe life into your growing endeavors and help make your market garden a more joyful place for all involved. -JPR



9689A: The No-Till Organic Vegetable Farm (0#) for \$24.95

The Northeast Native Plant Primer: 235 Plants for an Earth-Friendly Garden by Uli Lorimer, 252 pages, 8x9, softcover. Who better to teach us about gardening with natives than the director of horticulture at Native Plant Trust, the nation's oldest plant conservation organization? In this inspiring and practical guide, Lorimer profiles 235 native plants, describing their growing needs and habits, wildlife value and native habitat, with gorgeous color photos to emphasize the unique beauty of each species. Beyond a practical resource, Lorimer invites us to rethink our use of exotics and cultivars in our gardens and lawns. Whether you're growing in a small yard or an acreage, this book will inspire you to consider the critters and the native plants they feed on. Lorimer guides us through understanding our site and goals, gives us a palette of plants to work with, and opens the door wide for us to create our gardens for beauty, wildlife and resiliency. -RS

9699A: The Northeast Native Plant Primer (0#) for \$24.99

Plant Partners: Science-Based Companion Planting Strategies for the Vegetable Garden by Jessica Wallister, 224 pages, 8x9, softcover. The book begins with an introduction to evidence-based companion planting and what it can do for your garden, then quickly gets down to business laying out one idea after another. These strategies fall into several categories: living mulches to combat weeds and add fertility; plants that act as trellises for a second crop; duos to minimize pests; suppressing diseases; supporting pest-eating beneficial insects; and feeding pollinators. Each idea is tied to research, so these plant pairings are more than just sweet nothings. I love that you can open to an entry, read a page, and get on with applying the method! Full-color photos demonstrate plant pairings alongside each succinct entry for additional inspiration. -RM

9721A: Plant Partners (0#) for \$24.99

Putting Food By 5th edition, by Janet Greene, Ruth Hertzberg and Beatrice Vaughn, 464 pages, 5¹/₃x8, softcover. The pandemic inspired scores of new gardeners, and canning jars flew off the shelves. What's more deadly than Covid?—botulism! We figured we should offer you the food-preservation bible. First published in 1973, this comprehensive guide to canning, freezing and drying the garden's bounty has been updated and offers recipes and trustworthy food-safety protocols. -EB

9725A: Putting Food By (0#) for \$20.00

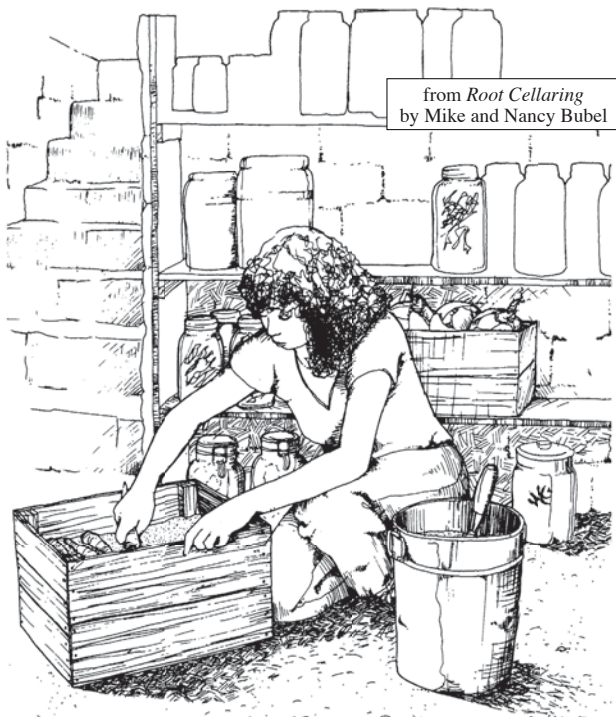


The Regenerative Grower's Guide to Garden Amendments: Using Locally Sourced Materials to Make Mineral and Biological Extracts and Ferments by Nigel Palmer, 208 pages, 6x9, softcover. Science nerds, rejoice: this book dives deep into the chemical and biological workings of your garden soil! With an introduction to the relationship between plant, soil, and the various minerals and microorganisms in the soil, Palmer discusses how growers can use local materials to improve pest and disease resistance, yields and nutrient density. He details the concepts, strategies and tools for nourishing the soil and provides about a dozen step-by-step recipes—complete with pictures—for creating amendments yourself. There's lots of chemistry, some math too, but the recipes are simple enough for a layperson to follow. -jds

9731A: The Regenerative Grower's Guide (0#) for \$24.95

The Resilient Gardener: Food Production and Self-Reliance in Uncertain Times by Carol Deppe, 384 pages, 7 1/2x9 1/2, softcover. First published thirteen years ago, the book's subtitle was prescient. We all now know that climate change is making our growing seasons more unpredictable, and we'd be wise to reflect on the practical wisdom gained from Carol Deppe's experience and heed at least some of her advice. Placing emphasis on those with special health and dietary needs, Deppe grounds us with her 33 Golden Rules of Gardening, then examines in depth five essential crops we will need to survive and thrive: potatoes, corn, beans, squash and eggs. Learn how to maintain your own potato seed stock, how to dry squash (*spoiler alert*: she recommends both **1457** Costata Romanesca and **1635** Sunshine), and how to cook with traditional open-pollinated flint corns (we offer two of Deppe's corn varieties on page 25). I've enjoyed a serving of her skillet bread, and in this book she shares both her recipe and her secret for caring for her skillets. If you care about either gardening or eating, there's a lot to be learned here. -CR, NK

9732A: The Resilient Gardener (0#) for \$35.00



from *Root Cellaring*
by Mike and Nancy Bubel

Root Cellaring 2nd edition by Mike and Nancy Bubel, 297 pages, 6x9, softcover. A good root cellar provides a “direct, earthy and deeply satisfying connection between our summer efforts in the garden and our winter need for fresh wholesome food.” Let the Bubels take you on a well-illustrated tour of root cellar designs. They can also help with varietal selection, best storage conditions and recipes. -CR

9735A: Root Cellaring (0#) for \$16.99

Sam Thayer's Field Guide to Edible Wild Plants of Eastern and Central North America by Samuel Thayer, 736 pages, 6 1/3x9 3/4, softcover. My wife and I do a lot of wild foraging, and Thayer's three previous compendiums have always come with us, even though it's like bringing a library every time we go wandering. Not any more. This new field guide, written for the lay forager, describes more than 600 species of wild edible plants with precise identification keys. It contains all the species from his other books, plus hundreds more, many not found in other foraging guides. Complete with color photos and range maps, optimal harvest windows, visual keys to harvestable parts and their uses, as well as clear descriptions of any similar-looking plants to avoid, this is an excellent plant ID book in its own right. The format is that of a true field guide, with condensed half- to full-page write-ups instead of the in-depth multi-page treatises you may be familiar with from his other books. This guide will now be the one we confidently take when we're on the move, leaving all other plant ID books at home to reference at a more leisurely pace. -ND

9743A: Sam Thayer's Field Guide (0#) for \$32.95



The Secret Lives of Backyard Bugs: Discover Amazing Butterflies, Moths, Spiders, Dragonflies and Other Insects! by Judy Burris and Wayne Richards, 144 pages, 8x10, softcover. We picked out this book for our younger readers and were pleasantly surprised to find it quite useful for practical application in the garden. If you are a fan of the *Eyewitness* educational books from the '90s, this one is for you. The authors do a tremendous job including enough tantalizing information to get you hooked. With 45 insect and spider species covered, it's easy to forgive a lack of depth. My favorite thing about this book is that it shows photos of every life stage! I can't count the number of times I've found eggs or a caterpillar that I was previously unable to identify in the garden. The book includes an easy comparison guide with each life stage for quick ID—even if you can't find the exact species, you might find a look-alike to help you hone in. -RM

9748A: The Secret Lives of Backyard Bugs (0#) for \$16.99

Seed to Seed 2nd edition by Suzanne Ashworth, 240 pages, 8 1/2x11, softcover. Considered the classic reference with detailed instructions on seed saving techniques and spectacular photographs. This is the book our seed growers use. -CR

9756A: Seed to Seed (0#) for \$24.95

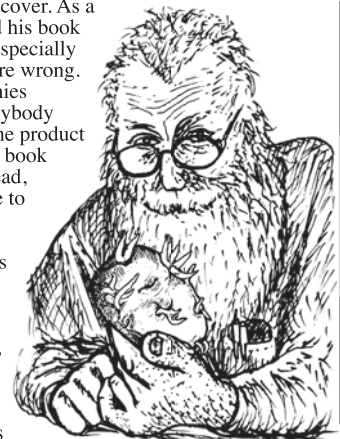
Stella★Natura: 2025 Biodynamic Planting Calendar edited by Spikenard Farm Honeybee Sanctuary, 40 pages, 9x12, softcover. “Inspiration and practical advice for gardeners and professional growers.” Contains lunar and astronomical charts correlated with planting data that many of our customers find valuable, along with interesting articles and essays each year. Edited by Sherry Wildfleuer since she created it in 1978, the calendar is now in the hands of new stewards at Spikenard Farm Honeybee Sanctuary, whose director Alex Tuchman has worked closely with Sherry for several years. This marks a new era for the beloved calendar, as the practice and study of biodynamics enters its second century.

9771A: Stella★Natura (0#) for \$19.95

Will Bonsall's Essential Guide to Radical, Self-Reliant Gardening: Innovative Techniques for Growing Vegetables, Grains and Perennial Food Crops with Minimal Fossil Fuel and Animal Inputs

by Will Bonsall, 400 pages, 8x10, softcover. As a former apprentice of Will's, I assumed his book would be a nostalgic journey but not especially enlightening. I couldn't have been more wrong. There are enough gardening philosophies and techniques in this book to keep anybody learning for many seasons to come. The product of more than 40 years experience, this book doesn't waste time on the basics. Instead, Will focuses on the approaches unique to his subsistence farm, and I bet you'll want to try more than a few of these innovations. Will has taken the process of composting and “turned it” into an art form. Based on his idea of “eco-efficiency,” Will shares wisdom about seed propagation, farm system design, growing staple crops like grains and oilseeds, and food processing. Plus, his incurable wit makes this one of the most entertaining agricultural texts you'll ever read. -JPR

9819A: Will Bonsall's Essential Guide (0#) for \$39.95



BOOKS

Order online at fedcoseeds.com

| Division | Products | Find on pages | Schedule | Shipping Charges | Pickups |
|--|---|------------------------------------|---|---|--|
| Seeds items 200-5999 | vegetable, herb and flower seed | pages 6-112 order form pg 169 | Daily shipping begins mid-Dec. 2024. Twice-a-week shipping begins in May. No shipping Nov. 1 to early Dec. We will ship backorders at our discretion; however, crops needing an early start are shipped ASAP. | Free for all orders \$50 and over. Under \$50, pay \$6 shipping charge. To Canada: online orders only; additional shipping charges apply. | Order online; we send a confirmation email when order is ready. Pick up at OGS warehouse. (Hours listed below.) Seeds warehouse is closed for browsing. |
| Potatoes, Onions & Exotics items 7000-7199 | seed potatoes, onion sets & plants, ginger & turmeric, sweet potato slips | pages 116-122 order form pg 171 | Order ginger and turmeric by Feb 21. Potato orders placed by Feb. 21 will ship according to growing zone. Orders placed after Feb. 21 will ship in the order we receive them. We will take potato orders until we run out in late spring. | See chart on order form, page 171. For lower prices, consider depot shipping, details pg 174. | Pickup orders must be placed online. We send a reminder email in the spring. |
| Organic Growers Supply (OGS) items 8000-9999 | cover crops, soil amendments, tools, supplies, books | pages 126-167 order form pg 173 | We ship year-round! | See chart on order form, page 173. Items with (0#) weight ship for free. For lower prices, consider depot shipping, details pg 174. | Pickup orders must be placed online. Warehouse is open for pickups and shopping (hours below). Order in advance for best service. |

Directions for all three paper order forms:

- **Please use a current catalog.**

Prices, item numbers and availability change!

Need a current catalog? Request one at (207) 426-0090.

- **Please use the correct order form.**

- You can mail the different order forms together in the same envelope, but please write **separate checks** for each division's form.

- If you pay by **card**, we will charge you when we receive your order. We will send you a bill or a refund for any adjustments as each order is completed.

- **Please subtotal each column** and total your order. That helps us check our order-entry accuracy.

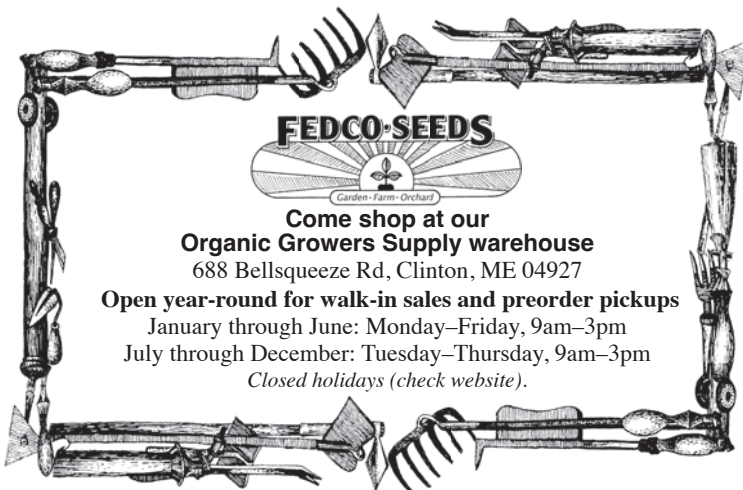
- **Sales Tax:** Orders shipped to Maine addresses and all pickup customers pay 5.5% sales tax on all products. We must collect local taxes in states that require us to do so. States affected are listed on the order form. *Farms and retailers:* please send us a copy of your state resale certificate or farm exemption. Otherwise we must charge sales tax.

- **Shipping:** We ship by FedEx or USPS, our choice, based on weight. Orders over 300 lb, consider a truck shipment, details on p. 174. Shipping to Alaska & Hawaii is all by USPS.

Fedco's Substitution Policy: Seeds (and potatoes) are subject to crop limitations, and we will run out of some varieties. We strive to provide accurate information regarding stock levels, but availability may change due to factors beyond our control. If a specific product becomes unavailable, we may substitute it with a similar variety of the same or greater value, at no additional cost.

For more details on potato subs, please see page 115.

For information on Seeds backorders and out-of-stocks, see page 3.



Ways to Save at Fedco!

Bulk Pricing: Orders \$1,200 and more receive a **10% discount**.

Fedco-wide Rolling Discounts - NEW this year!

Once you have ordered at least \$1,200 in products from Fedco, you will receive bulk pricing for a 12-month rolling cycle. Orders of any size from any Fedco division (Seeds, Trees, Bulbs, Potatoes, Supplies) will count toward this total.



5% Member Discount Learn about joining our co-op on page 6.

Group Ordering:

Team up with friends and neighbors to save on shipping and to reach the bulk pricing threshold.

We will pull, package and label each group member's order separately and ship all to one address.

We accept group orders online. Group coordinators can find details at our website. Go to "About Ordering" and click on "Group Ordering."

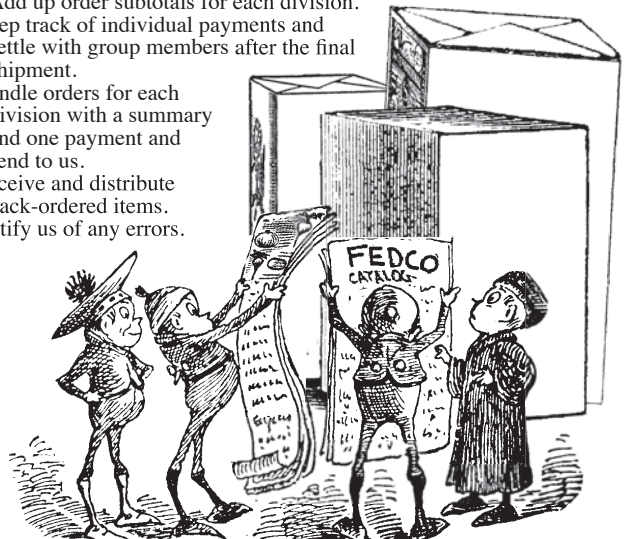
Or use the mail and bundle individual orders with a summary form for each division with address info and totals. Please keep copies.

To prepare a summary form for paper orders:

- Attach a separate summary page for each division (Seeds, Potatoes, OGS). Use an order form with no items on it to supply name and shipping address, and totals information.
- A summary form without individual totals is acceptable.
- Please use one method of payment for each division order.
- We treat all add-ons as additional orders.

Group coordinators' responsibilities:

- Collect individual orders and payments from group members.
- Make sure each item of each individual order is on the proper form. Add up order subtotals for each division.
- Keep track of individual payments and settle with group members after the final shipment.
- Bundle orders for each division with a summary and one payment and send to us.
- Receive and distribute back-ordered items.
- Notify us of any errors.



Organic Growers Supply 2025

PO Box 520
Clinton, ME 04927

This form is for **items 8000-9999, pages 126-167** only.
Other items may not be combined on this order form.



SUPPLIES & BOOKS ORDER FORM

(From mailing label) CC- _____
 Farm or Group Name _____
 Name _____
 Shipping Address _____
 Town _____ St _____ Zip _____
 Billing Address (if different) _____
 Town _____ St _____ Zip _____
 Phone _____
 Email _____

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|---------------------------------------|--|
| Final order deadline: None! | Check up-to-date product availability, view photos and order online at fedcoseeds.com |
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Delivery:

FedEx/USPS

To **PICK UP** your supplies at our warehouse or at a depot, please order online.

Payment Options:

We accept payment by card, check, gift certificate and money order (payable to Fedco).

| | | |
|--|---|--|
| Subtotal (from reverse) | = | |
| Bulk Pricing , orders \$1,200+ take 10% off | - | |
| Fedco Member? 5% Discount from Subtotal | - | |
| Adjusted Total | = | |
| Shipping (if no weight, no charge, otherwise use chart below) | + | |
| Sales Tax | + | |
| Donate to MOFGA (see p. 115) | + | |
| Optional \$2 to defray catalog mailing cost | + | |
| Grand Total | = | |

| Sales Tax: | |
|--|---|
| ME addresses | - Pay 5.5% sales tax on Adjusted Total |
| CO, IL, MA, MD, MI, UT, VA | - Pay your local tax rate on Adj Total |
| AK, CT, GA, IN, KY, MN, NC, NJ, NY, OH, PA, RI, VT, WA, WI, WV | - Shipping is taxable. Pay your local tax rate on Adj Total + Shipping . |

Total Wt (from reverse) =

| Order weight: → ZIP code begins with: | more than 0 up to 2 lb | up to 5 lb | up to 15 lb | up to 25 lb | up to 35 lb | up to 45 lb | up to 300 lb | orders over 300 lb |
|--|---------------------------|---------------|----------------|----------------|----------------|----------------|-----------------|---|
| 004-298 | 12.00 | 20.00 | 23.00 | 29.00 | 34.00 | 39.00 | 87¢/lb | Consider delivery by freight truck. Go to: fedcoseeds.com/ogs/shipping, or email/call us. |
| 299-687 | 12.00 | 20.00 | 26.00 | 36.00 | 43.00 | 45.00 | \$1.00/lb | |
| 688-994 | 12.00 | 20.00 | 32.00 | 45.00 | 50.00 | 55.00 | \$1.22/lb | |

For shipping weights over 300 lb or delivery to AK or HI, email ogs@fedcoseeds.com for a quote.

We accept Visa, MasterCard, American Express and Discover Card. Exp. Date

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Organic Growers Supply 2025: items 8000 and up, pages 126-167 only

| Item # | Size | Qty | Item Name | Weight Each | Total Weight | Price Each | Total Price |
|--------|------|-----|-----------|-----------------|--------------|-----------------|-------------|
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Save on Shipping with Depot Pickup!

Above a certain weight, it's cheaper to send a pallet of goods than lots of individual FedEx packages, but most customers don't order enough at one time on their own to cross that threshold. To make freight savings available to more folks, we offer the Depot Shipping Program for Organic Growers Supply items, including potatoes and sets. By selecting "Ship to Depot" at checkout, your order will be grouped with other depot customers in your area, sent via freight to the farm or storefront you selected, and save you up to 80% on shipping.

- We accept depot orders all winter, online only; depot shipping season runs from mid-February to May. Some depots have multiple shipments throughout that time; a few depots accept shipments only in April, when potato orders ship. Our most popular depots also receive a shipment in October.
- Our goal is to have orders available within two weeks after the order deadline. We will send a notification e-mail with pickup instructions when your order is ready. We expect customers to pick up their orders within a week of this notification. If you place a depot order and don't hear from us within two weeks of the order deadline, please check the inbox and spam folder of the email address you used to place your order before contacting us.

| Depot Shipping | |
|-------------------------|--------|
| state | per lb |
| ME | \$0.17 |
| MA, NH, RI, CT, VT | \$0.18 |
| NY, NJ | \$0.29 |
| minimum shipping \$3.00 | |

At press time, we had depots in these locations:

- Maine** (Whitefield, Edmunds, Camden, and South Berwick);
- New Hampshire** (Canaan, Contoocook);
- Massachusetts** (Buzzards Bay);
- Rhode Island** (Cranston and Little Compton);
- Vermont** (Dummerston and Manchester);
- Connecticut** (West Granby and Woodbridge);
- New York** (Delmar, Norwich and Nedrow);
- New Jersey** (Asbury and Pennington);

Check the current list of depot sites and ordering deadlines at:

fedcoseeds.com/ogs/depot_shipping.htm, or email logistics@fedcoseeds.com

Changes to Potatoes and OGS Shipping

No matter how much Fedco has evolved over the years, we remain primarily a mail-order business. This puts us at the mercy of the shipping industry, as costs climb ever-upward. We are continually striving for the right mix of shipping strategies that serve our customers well, while not putting us in the hole. OGS / Potatoes have made a few recent changes that bear explanation:

- **45 lb bags/boxes instead of 50 lb:** We noticed FedEx was charging us thousands of dollars in handling fees for all our packages 50 lb or more. To avoid these fees and to keep our prices as low as possible, we reduced our largest bag/box size to 45 lb for any potatoes or amendments we repack.
- **A higher weight threshold for freight orders:** In previous years, we've recommended any order over 200 lb ship via freight if possible, in order to receive the best price on shipping. However, we've found that for orders up to 300 lb, FedEx is often the better deal, so we've increased that recommended threshold.
- **No more freight-shipping option on paper order form:** If your order is more than 300 lb, delivery by freight can save you oodles of dough. If you are interested in this shipping option, you'll need to order online. Additional fees charged by freight companies—for services like liftgates, residential delivery and freeze protection for potato orders—are too complicated to calculate on the paper form. Our nifty online ordering system will walk you through these options, preventing unexpected charges later on.

For quotes or questions about freight shipping, go to: fedcoseeds.com/ogs/shipping, or email us: logistics@fedcoseeds.com

