

Making Sowing & Potting Mixes

If you've ever visited the UC Santa Cruz Farm & Garden, you may have seen the bins of ingredients that go into the various sowing and potting mixes used here. Like cooks tinkering with their favorite recipes, the Farm & Garden staff have refined these mixes over the years to give seeds and seedlings the healthiest start possible.

Seed-starting or potting mixes should provide the appropriate fertility as well as a balance of drainage, aeration and water retention. Well-finished, screened compost is the cornerstone for fertility in the Farm & Garden's blends. Other additions include bone meal to encourage initial root development, kelp meal, which is a good source of micronutrients, and lime for adjusting the pH, in some of our mixes. Ingredients such as coarse sand, coco peat (a commercial product made from shredded coconut husks), leaf mold, garden soil, and vermiculite ensure that the mixes provide good structure and retain moisture without becoming too dense or waterlogged.

Unlike most commercial mixes, the blends used at the Farm & Garden aren't sterilized. Instead, the goal is to create a mix that is alive with beneficial microorganisms and in balance in order to optimize plant health.

Using non-sterilized ingredients requires careful greenhouse management to discourage organisms which may cause diseases, such as the fungi that cause damping off, including root rot fungi such as pythium, and phytophthora, as well as white mold (sclerotinia) and gray mold (botrytis). Keys to good greenhouse management include good air circulation, and close attention to watering practices. Because strong, vigorous plants are not as susceptible to potential diseases, we work to provide optimum environmental conditions for plant growth with regards to light, temperatures, fertility, air and water.

SOWING MIX

"Sowing mix" refers to the blend used in densely seeded planting flats. Fertility is not a major concern in the sowing mix because the seed is living off stored reserves in its cotyledons.

Once the plants develop a set of true leaves, they're "pricked out" (transplanted) into a second flat and spaced farther apart. To boost the fertility in the prick-out mix, additional compost can be added to the sowing mix, or placed in a thin layer at the bottom of the flat. As plants grow and get close to plant-out time, they tap into the compost and that gives them the extra boost they need to carry them into the transplanting stage.

SIX-PACK MIX

Home gardeners often sow seeds in six packs or other small-celled containers for transplanting directly to the garden. In that case, it's important to provide proper aeration and drainage, since the air/water relationship gets more critical in a smaller container.

FARM & GARDEN BASIC SOWING MIX & RATIOS

By volume: 3 parts compost
2 parts garden soil
1/2-1 part coarse sand
(depends on how
sandy your soil is)
1/2 leaf mold
1/2 coco peat

SIX-PACK POTTING MIX

By volume: 1 part compost
1 part vermiculite
1 part peat moss or
coco peat
Add bonemeal, lime (if peat is
used), and kelp meal. For extra
nitrogen, add some blood meal
to the mix, as well as fish emulsion
when watering.

POTTING MIX MADE WITH HOMEMADE INPUTS

By volume: 3 parts compost
2 parts leaf mold
1 to 1-1/2 parts good,
loamy soil

HOMEMADE POTTING MIX

Leaf mold offers a number of benefits—it gives you almost perfect water retention, aeration and drainage properties, and a little bit of fertility. Farm and Garden staff harvest leaf mold from beneath live oak trees (*Quercus agrifolia*). Other sources include deciduous trees such as sycamores, alders, oaks and maples.

To collect leaf mold, rake off the surface layer of undecomposed leaves and gather the partly broken down material beneath, then rake the top layer back over the soil. Don't take too much from any one area—spread your harvest efforts around. Be sensitive to the trees you're harvesting from. Otherwise you can overharvest and interrupt the cycling of nutrients that supports the tree.

Alternatives to home-made compost include composted chicken, steer or horse manure. Glaum Egg Ranch in Aptos sells a bagged product made from composted chicken manure and rice hulls at local nurseries. Bone meal or kelp meal can be added to the above mixes to provide phosphorous and micronutrients.

COMPOST TEA

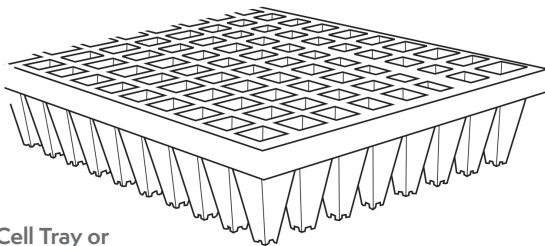
Once your vegetables and flowers are well established, use compost tea to give them a healthy boost.

Fill a 5-gallon bucket with one-third compost (remove the earthworms if you are using your own compost). If you don't have your own compost pile, use commercial compost from your neighborhood garden center.

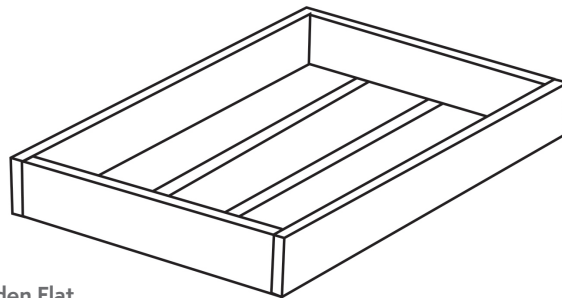
Pour non-chlorinated water over the compost up to an inch or two from the top of the bucket and stir the mixture well. Continue stirring the compost/water mixture every day for about a week in order to disburse the compost's nutrients into the water.

Before using the compost tea, use a fine mesh strainer or old pillowcase to strain large particles, recycling the material back into your garden. Use your compost tea once a week for a thriving garden.

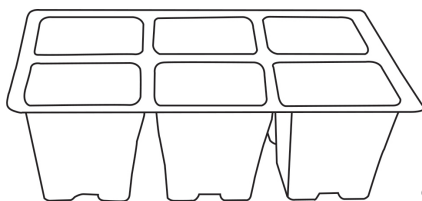
This material was produced by the Center for Agroecology and Sustainable Food Systems (CASFS) at the University of California, Santa Cruz. For more information and additional publications, see casfs.ucsc.edu.



Cell Tray or Plug Tray



Wooden Flat



Six-Pack