Improving soil will help root crops

Pe

NEWARK, Del.- -Disappointed in the way your carrots did this year?

If you get nothing but hairy, misshapen nubbins from your garden, take steps to see that it doesn't happen again next summer. The answer probably lies in improving your soil.

Root crops like turnips, beets, and carrots have a hard time growing properly in some of the finely textured silt loams of upper Kent and New Castle counties. Welldrained soils are an absolute essential for these crops. Spindly or deformed carrots may be a sign the soil's too dense for proper development. (Excessive root hairs means they didn't get epough water.)

he key to improving heavy soil is the addition of organic matter, says University of Delaware extension soil specialist Leo Cotnoir. There are several ways to do this.

He recommends working ın fallen leaves, plant debris, or vegetable wastes from the kitchen. These work best if composted first. But if you don't have the time or the inclination to start a compost pile, you can add them- working them into the directly to the soil.

If at all possible, shred leaves and other materials before doing this though. Large amounts of bulky organic matter will decompose quite slowly and you may have trouble working the ground later on if you don't break them up first.

Take care not to use any diseased plant materials. Destroy or dispose of these so that they don't contribute to disease problems next year.

Another excellent way to improve your garden soil is to grow a winter cover crop. Annual ryegrass and vetch are best for this area. These are normally seeded between September 1 and October 1. The likelihood of a good stand is somewhat reduced after that date.

On a small plot the seed you'll use won't cost much. Because it's a legume, hairy vetch has the extra advantage of providing some nitrogen, as well as organic matter.

The main problem with cover crops in the home garden is the difficulty of

ground the following spring either by hand or with a small rototiller. Because of the quantity of plant material produced, it can involve some work. But gardeners who follow this practice usually feel wellrewarded for their effort.

For a small garden, adding sand to a dense, finely textured-soil can also be very beneficial. A layer of sand 3-4 inches thick worked into the top of three to four inches of soil will make a very good growing medium. It will cost more to do this, so the idea probably won't appeal to any but the most devoted gardeners. But you can reduce the labor and expense by modifying only those areas where you intend to grow root crops. The medium grain sand which is sold tor use in making concrete is best. Avoid masonry sand, which is too fine.

Besides improving the soil, you can avoid a lot of problems simply by not trying to work the ground when it's not fit to be worked. When you try to dig fine-textured silt loams

when they're either too wet or too dry, you're likely to end up with rock-like clods and generally unworkable soil

The above improvements may be all that's needed to grow better root crops in your garden. But if you suspect that soil fertility may also be a problem, extension vegetable specialist Dr. Mike Orzolek has some advice on this topic.

He says the biggest problem with carrots is to get them up and growing as fast as possible. Since this crop is very slow growing, it shouldn't be started too early. He recommends planting carrots in mid or late April after the ground has warmed up some. Feed them lightly at

planting and then sidedress them once a month over the growing season, starting the first of June. Use one-quarter cup of 5-

10-10 per 10 feet of row with each application. A similar fertility

program will benefit most other root vegetables. Though a tuber, potatoes have similar growing needs.

Sidedress them May 1, June and tubers sticking up out of 1, and July 1 with 1/2 cup of 5-10-10 per 10 feet of row.

If your garden soil has a pH between 5.6 and 6.2, your plants should have no trouble getting all the nutrients they need. But below 5.6 you should add lime. Have your soil tested now so that you know whether this is needed. A fall application is best.

It wouldn't hurt to use some well-rotted manure (cow, horse, chicken or hog) when you're growing root crops, says Orzolek. Put this down in the spring about a month before planting. The manure will give the soil better tilth and help hold moisture. Apply it in a band a foot wide and six to eight inches over the row.

If some of your carrots, potatoes or other root crops protruded from the ground and tops turned green, this may mean the seed was sown too shallow, or that the root hit a hard spot in the ground.

By opening up the soil with organic matter or sand, you should be able to prevent this from happening in the future. But if you see roots

the ground during the growing season, just hill them up with soil.

Besides soil texture and fertility, insect control is another factor which affects quality. If your radishes or turnips were riddled with holes when you harvested them, you may want to apply a soil insecticide next spring before planting.

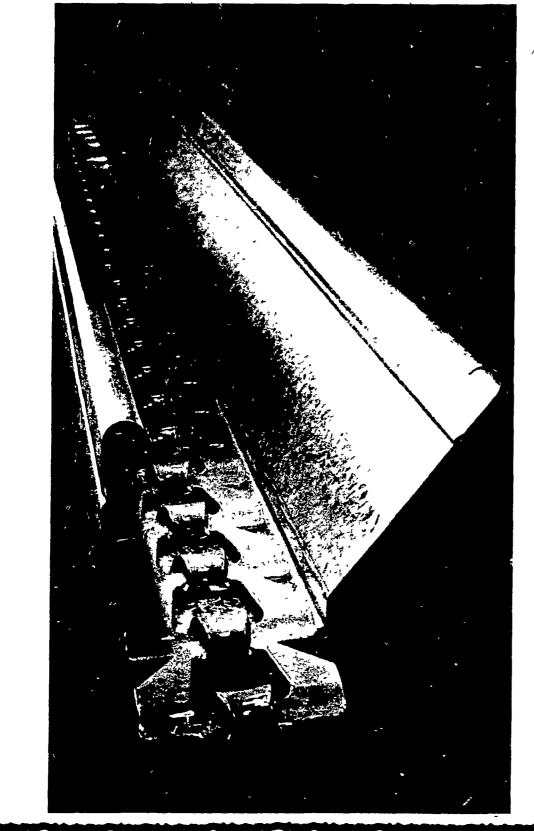
Delaware extension entomologist Frank Boys says diazinon applied according to label directions and worked in after you've prepared the ground will help control cutworms, wire worms, grubs, and other soil insects that feed on vegetable roots.

Finally, here's an idea on how to store any of this year's root crops you still haven't harvested. Since most home gardeners don't have a root cellar, Orzolek suggests leaving turnips, beets, carrots and parsnips in the ground.

Mulched with a good eight to 12 inch layer of straw to keep the ground from freezing, you should be able to dig them as needed right up to January, possibly longer. The straw should go down right now, before the ground gets any colder.

You may actually find the flavor of vegetables im-proved with this type of 'cold storage.''





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