

Winter Roots

By Jo-Ann Canning, MG, Vancouver Chapter

Botanical Origins:

- The sunflower Family (*Asteraceae*) = 2 (salsify, scorzonera).
- *Allium* genus = 5 (garlic, leeks, onions, scallions, shallots).
- *Apium* genus = 1 (celeriac).
- *Beta* genus = 1 (beets).
- *Brassica* genus = 2 (rutabaga/swede, turnip).
- *Daucus* genus = 1 (carrots).
- *Pastinaca* genus = 1 (parsnip).

Common names

Beet, carrot, celery root, garlic, leek, onion, parsley root (Hamburg root), parsnip, rutabaga (Swede), salsify, scallion, scorzonera (black salsify, oyster plant), shallot, turnip.

Roots have been our primary source of carbohydrates for over 7,000 years. Because they were easy to gather and store, the soil that was disturbed and thus enriched by Palaeolithic hunter-gatherers engendered the first farming practices in Europe, Africa, and Eurasia.

Roots define the taste of winter: they are roasted, boiled, sautéed. They give 'bottom' and sweetness to soups and stews. Whereas the New World and the tropical climates have given us summer's annuals, like potato, sunchoke, and sweet potato, the winter garden's roots are all biennials, except for scorzonera. Most roots need to be cooked to make their high-energy starch digestible though a few, most notably onions, are nutritious raw.

Every winter root has a fascinating history. Here are a few facts:

- The leaves of the beet root, a plant native to the Mediterranean, have been part of our diet as early as the 2nd millennium BC. The root was used only as medicine until the 18th century when French chefs developed its culinary potential. In 19th century Germany the sugar beet was developed, as was 'mangelwurzel', the fodder beetroot. Beet powder is used as a coloring agent for many foods.
- The wild carrot was – and still is – grown for its medicinal seeds. The domestic carrot originated in Afghanistan before 900 CA, and though the wild carrot is the progenitor, it remains a separate species from the domestic offspring and will not cross breed.
- Traces of onions have been found in archaeological digs dating to circa 5,000 BC. They are a most versatile vegetable: eaten raw, fried, boiled, roasted, steamed, braised, pickled, dried, and can be frozen. Some (like the Walla Walla) are left in the ground all winter, while others are stored in cellars or hung in garlands like herbs. Sailors once ate raw onion (full of vitamin C) to prevent scurvy.
- Wild parsley, domesticated in Sardinia, was a favourite green food of the Greeks and Romans; the root cultivar is not written about until the early 1700s. Popular in European cuisine, all parts of parsley root, also called Hamburg root, are used: the root is shredded raw in salads, or steamed/boiled. The leaves and stems are used in soup and tabouli, the stems chopped and used like celery.
- The nutty, sweet and starchy parsnip grows wild in Western Europe, and was a delicacy for the Roman aristocracy. This long keeper remains central in the winter diet, and is usually boiled or roasted.
- The rutabaga was developed for human food and stock fodder in the 17th century by crossing a turnip with a cabbage. The name is from the Swedish for 'swollen root'. It thrives in colder, marginal conditions, and though it will stand in the coastal garden all winter it is usually harvested and stored.
- Scorzonera (*S. hispanica*) is a rare combination: a perennial root whose leaves and stems are also edible, raw or cooked. It is also (with sunchokes and chicory) a root whose fibre is inulin-based, rather than starch-based. This is a boon to diabetics but can cause digestive upset in some people.

- Turnips have been grown as a root crop and turnip rape has been used for a seed oil since the 13th century in Europe.

Ideal Site & Soil

All roots need relatively fine soil that is free from stones and rich in composted organic matter. Because winter roots are biennials, they grow slowly and depend on rich soil to make their underground storage organs plump and nutritious. Drainage is especially important for all root crops left in the ground for winter – even for a moisture lover like celeriac.

Planting Dates

From June through October

Harvest Dates

From October through June

Cultivation / Plant Care

Although manure is a vegetable gardener's staple, avoid fresh manure for carrots and parsnips, or the roots will bifurcate. A balanced fertilizer (4-4-4) beneath each row at planting will give your young roots a good start, and a compost side dressing in mid-season will help them finish well. Like the squashes, root crops sweeten after a light frost. Most can thrive in low light conditions. They can be planted close together then thinned by harvesting younger roots, leaving the rest to grow larger to harvest all winter and into the next spring.

Problems & Pests:

Cabbage Moth Maggot & Turnip Maggot

These maggots attack turnips and rutabagas. Reemay creates a barrier for the moth which remains active until late September. Inter-planting onion, sage and garlic will help repel the moths.

Carrot Rust Fly

Carrots, parsnips, parsley root, and celery are the only winter foods which suffer from a pest that is active during winter. Carrot rust fly will actively feed on overwintering targets, and can destroy your whole crop. If you plant early (before mid-July) you will avoid predation but your crop will be early, so harvesting and storing in a root cellar would be needed. Late carrots can be protected with Reemay (fabric cloth) which must be left in place until November.

Onion Maggot

The grub needs a bulb to over-winter. If you have it in your garden, remove all summer onions and destroy culls. This starves the last generation of grubs, and they will die. Fortunately, the grub as well as the adult fly has many natural predators among the beneficial insects.

Wireworms

The grub of the click beetle is active March to May, and September through October, so planting in August will avoid the pest. Carrots are a favoured target. Test your soil with slices of potato as traps. These can also be used along the planted row, though are less effective on carrots than on spring crops like lettuce. Deep cultivation several days before planting exposes the grubs for birds and hand picking. Rotate crops, or control with predatory nematodes.