

Workshop Title: Quality Biennial Seed Production in Northern Climates

Speaker: Will Bonsall

Executive Summary:

Will Bonsall describes the process of obtaining quality biennial seed in Northern climates including short notes on vernalization, harvest, storage and replanting. In addition, a closer look at a few biennials and their unique needs.

Detailed Notes

Biennials are a more advanced seed saving or intermediate strategy between annuals (Tomatoes/Cucumbers) and perennials (mint etc.). Biennial is basically a perennial in denial. Rutabaga is not a natural crop specific but an inter-specific hybrid. True turnips – native central Asia and then west into Europe and cold hardy, great for animal feed. A wild type of turnip crossed with turnips to create rutabaga. All biennials can cross-pollinate and need to be isolated to keep pure. Don't mix species or they will end up being something different.

Vernalization

Rutabaga overwinters and then will seed the next year. Vernalization is needed. *(Side note Vernalization (from Latin vernus, "of the spring") is the artificial exposure of plants (or seeds) to low temperatures in order to stimulate flowering or to enhance seed production.)*

By satisfying the cold requirement of many temperate-zone plants, flowering can be induced to occur earlier than normal to get a plant out of dormancy and to get it to overwinter or store nutrients.

Get ready and Store/Planting after storage

For cabbage: side off one side but leave the core, an ideal way to have your cake and eat it too.

Brussel sprouts: cut off and leave some base of sprout, so can have both the sprout and use for seed.

The added trick with biennials is to get through the winter. Parsnips are easy, just leave in the ground. Carrots have problems with rodents etc. Put in a cellar or create a winter environment, slightly above freezing and a little damp. A basement with furnace won't work but if you partition off an area, insulate it, and keep it damp enough (wet shavings) or make a clamp or above ground root cellar. (Bales of hay made in a square and lay a board and hay bales on top of board or igloo like – rodents can be an issue again when outside. This can work for beets, celaric, carrots etc).

Leeks, Kales etc.: cut off to have just shaft and replant and water the soil (not the plant) in buckets. Pick off all kale leaves, leaving stock in a plastic barrel to store in cold room overwinter.

For beets leave the crown or screen intact and put in woven plastic feed bags. Layer beets, rutabagas, carrots and real turnips with no lid on barrels. If doing radishes, they can be put on top of real turnips.

Onions in net bags or braids to hang – to have air flow.

Daikon radish or Salsify - possible to plant late in July with the idea of a larger root and seed for next season.

Out of storage into the ground

Just before spring arrives, take out a little premature to prevent too much growth and move to the outdoors to get a feeling of what the real world is like. Bring bucket out and have holes in the bottom. Out for a few weeks before planting. They start to get green and harden off.

It is a good idea to steak the rutabaga in second year to hold them as they put on a lot of biomass. Parsnips, parsley, onions, salsify are at the sexual stage when flowering. Beside seeds, the other advantage when flowering is that they attract beneficial bugs to your garden.

Kale and rutabagas will have pods to hold the seeds. Salsify has a problem with gold finches – put gauze over the top to stop finches from stealing the seed. Beet seed or chard aren't actually a seed but a fruit.

You either have for food or seed but not both since in the second year the food part is ruined. They become woody with a few exceptions (i.e. parsnips).

Those that stay in the ground (i.e. parsnips): Dig them up, selecting and giving more space as they will get bigger the next season. Separate types/species by space, at least a hundred meters apart.

Lots of enemies in the spring – aphids/rodents etc. Cover but take off before they need to pollinate.

Don't cross rutabaga with turnips – know the difference and keep the space. True turnips have a green foliage where rutabaga have a purple foliage.

Question: Leeks left in ground and left overwinter and they came up beautifully. Collected seed and next spring planted them and germination was terrible – that can happen, maturing takes time and you may have harvested them too soon. Alliums can be funny like that sometimes.

Question: Any success with non-storage onions? No.

Photo-period makes the difference for onion crops or beets. They need the daylight.