Storing your crops for fall and winter sales

Different handling for different vegetables - here are recommendations for a few vegetables for those of you who are new to it...

Harvest timing and handling can be a critical first step to preserve future salability. Here’s a survey of best practices.

Garlic and Onion

While it’s long past time to harvest, handle and store garlic and onions, here’s a chance to adjust storage conditions before fall officially begins. But going back to the field, onion necks should be relatively dry and tops fallen over (See side note), but with a few remaining green leaves. This prevents excessive loss of skins after harvest. During “curing”, bulbs should be kept warm (75 to 80°F), dry and well ventilated for 2 weeks. Excess skins can then be removed. Onions can then be boxed and in an ideal world, their temperature lowered gradually to nearly freezing. Immediate lowering can cause condensation, which can promote rotting. Speaking of rotting, if you had a serious thrips infestation during the summer, they can continue to live in the bulb necks, and fresh feeding damage can promote rot. Keeping bulbs cold slows the insects’ feeding and also reduces pathogen growth rate.

Garlic tops should be between 1/3 and 2/3 brown, at which point they can be undercut or pulled. If the heat is not extreme and conditions are dry, bulbs can be left for a day in the field to lighten the load and allow for easy excess soil removal in the field. Bulbs can be bundled by their tops and hung up or else spread out on screens to dry in a well-ventilated area for a few weeks. Tops and roots can then be trimmed, and excess soil rubbed off. For seed storage (be VERY selective about what you save), 50°F is fine; for longer storage, again, close to freezing is best.

Onions that won’t die

If tops remain green into September, there’s research evidence suggesting that you may have too much available nitrogen in your soil. This may be the case in soils very heavily amended with compost, which continues to release N as long as the soil is warm.
Winter Squash and Pumpkin

Pumpkins for Jack-O-Lanterns belong to a world of their own... not covering them here specifically. But the question of ripeness often comes up, and in this warm year with relatively low disease incidence, vines may have continued to thrive and set late fruits. Will they make it, and how can you tell? That varies by type.

The shortest season squashes, Delicata, Sweet Dumpling and Acorn, have the best chances of making it. All (including pumpkin and spaghetti) are classified as *Cucurbita pepo*. Two things to look for: dulling of the sheen of the fruit surface and development of a deep orange spot where the fruit is in contact with the ground. On the first two, the orange takes the form of stripes, and the normally yellow skin can also take on orange color. Spaghetti takes longer to mature—there’s no good orange spot on these, look for dull yellow skin, with no green. All of these types are edible right at harvest and for up to 3 months with proper curing and storage.

Later maturing and longer storing types are often *Cucurbita maxima*, which includes Hubbards, Buttercup, Banana, and smaller Kuri and Kabochas. All of these are marked by their fat stems and large seeds. The last two are edible immediately and can last up to 4 months. Fully dry stem, dull sheen and hard skin are all signs of ripeness.

All the aforementioned varieties do not need “curing”, assuming they fully ripened in the field. Buttercup, Hubbards, and large Kabocha varieties need an approximately 10 day period of 80 to 85°F. Not only does this harden skins and heal wounds, it begins the process of starch conversion to sugar. These larger types may require more than a month for this conversion process. Flavor (mainly sugar content) is best after 1.5 months and can remain excellent for as much as 5 months. Butternut, *Cucurbita moschata*, is also treated in this way and becomes most palatable at over two months past harvest. Following curing, upper 50s to lower 60s F is the right range. Sudden temperature fluctuations can cause condensation, which improves conditions for fruit rots.

Field conditions should influence your decisions. Foliage die-back can expose fruits to strong sun and result in sun scald,

Unripe Golden Hubbard- note fruit sheen and green stem

Courtesy High Mowing Seeds

Upcoming Events:

Tuesday November 13, 8-11 AM: Planning for Postharvest Facilities- Washing, Packing and Storage, presented by Chris Callahan, UVM- SAVE THE DATE!
which can create conditions for fruit rots. So getting fruits under cover may be necessary sooner than you might have planned. Both Cornell and UMass recommend avoidance of chilling injury, which Butternut is particularly susceptible to. This begins at extended periods of temperature below 50°F. It can cause physiological changes in cells on the surface of fruits, causing sunken pits which are more susceptible to storage rots. If you are planning to store squash for an extended period of time, this issue should be managed. Otherwise, it is not uncommon for growers to leave fruits in the field as the temperature gets downright chilly.

Of course, gentle handling during harvest is absolutely essential! The sound of fruit dropping into boxes or bins should never be heard...

**Sweet Potato**

Whole volumes that address every aspect of sweet potato production have been published. The following is more brief than that.

Roots can be left in the ground until soil temperature drops below 65°F, at which point they stop growing. They can also be left until frost kills the vines, but in Rhode Island, that is usually well after soil temperature has dropped.

Gentle handling during harvest, of course, is essential for sweet potatoes. Skins can easily be scratched, which allows entry of pathogens. Digging should be done carefully, digging widely around plant crowns. Unless there’s excessive soil clinging to roots, they should not be washed until they’ve gone through the curing process. Bins should not be filled to the top so there is no injury when they are stacked. Roots should be removed from the field immediately to avoid sun scald (30 minutes of exposure can be bad, so says NC State). Recommendations for curing: 80 to 85°F for 10 in high relative humidity or if temperatures can’t be held that high, then 65 to 75°F for 2 to 3 weeks will work. It is during the curing period that wounds heal and some of the starch is converted to sugar. Sweet potatoes should not be eaten until about 3 weeks after harvest to allow for sugar content to develop. The best temperature for long term storage is 55 to 60°F.

**Potato**

If you sell your potatoes as you dig them, they are probably safer below ground than above, unless you have wireworm or if the soil remains saturated for long periods. If you are planning to store them, the vines should be dead for a few weeks before loading them into bins so that the skins can “suberize.” If they actually have mud caked onto them, this needs to be removed. They should not be washed, however. Ventilated, stackable bins are best. After a few weeks of 55°F “conditioning”, refrigeration at 38 to 40°F and high relative humidity, if possible, is ideal. Ideal, of course, is not something everyone has access to...