

Tips for Growing Warm Season Crops

By Nate O'Meara



I love this time of year, especially in the vegetable garden, since there is so much planting to be done! Late May is the traditional time to plant your warm season crops in Flagstaff. Warm season crops include basil, beans, corn, cucumber, eggplant, gourds, melon, nasturtium, okra, peppers, tomatillos, tomatoes, watermelon, winter (pumpkins) and summer squash. As you can see from the list, I left out crops such as kale, spinach, chard and broccoli which are considered cool season crops. Why the difference between the two? Let's dive into how they differ and tips for success with the warm season ones.

Cool season crops should be planted early in spring for summer harvests. They can also be planted late summer for fall and winter harvests (using an unheated greenhouse or cold frame).

This is because cool season crops have varying degrees of frost hardiness with optimum growth occurring when air temperatures are 75 degrees and below. Their seeds can germinate when soil temperatures are as low as 45 degrees allowing for planting in April and early May. Warm season crops, on the other hand, need to be planted late May and June for a fall harvest. This is because warm season crops are frost sensitive with optimum growth occurring when air temperatures are 75 degrees and above. Seeds need soil temperatures at least 60-70 degrees so this is why they cannot be planted outside until Memorial Day weekend. How do you know when soil temps have reached the right degree? A soil thermometer comes in handy!

Since frost can occur throughout our growing season-- especially in May and early June- warm season crops may not survive after planting. This is why it can be very challenging to grow warm season crops in Flagstaff. If crops aren't killed in the first part of the season, then early fall frosts, which on average can occur by mid-to-late September, or a deep freeze in early October, prevent warm season crops from producing. To add to the situation, the drastic changes between daytime and nighttime temperatures that occur in Flagstaff can slow fruit ripening especially for crops like melons, tomatoes, and cucumbers.

But there is hope! In order to increase your success with warm season crops, variety selection, using transplants and providing frost protection and/or season extension is key. In terms of the later, cloches, walls-of-water, row covers, cold frames and greenhouses all can be used to provide protection in early summer and fall. For variety selection, focus on plants that (1) produces fruit from seed or transplant in about 85 days or less, (2) has been known to tolerant cold, heat, drought, or infertile soils and/or (3) are heirlooms grown by traditional farmers in the Southwest or varieties from similar short season climates around the world. There are hundreds of heirloom varieties to choose

from! Heirlooms differ from hybrids by being *open pollinated* meaning pollination occurs by insect, bird, wind, humans, or other natural mechanisms. This contrasts with hybrids, which result from controlled human pollination and produce plants with traits that cannot be reliably reproduced without those same techniques.

Unlike direct seeding in the ground, using transplants can shorten the days to harvest. If you want to grow your own transplants, then they should be started indoors using a heat and light source six to ten weeks before Memorial Day. Or you can purchase starts from a nursery late May and plant them out directly.

Here are a few more tips to succeed with warm season crops. For tomatoes, choose cherry, pear, or medium sized fruit types. Grow plants from transplants and use a trellis and/or grow in pots for larger yields. Cucumbers, winter squash, and melons require consistent watering, ample space, and plenty of heat, so they grow best in full sun—ideally in a greenhouse—and can be trained up trellises when space is limited.

For small gardens, grow green beans instead of dry “soup” beans. This way, you get fresh produce for all your efforts. As beans mature, pick them often to encourage more production. Finally, keep in mind that corn is wind pollinated meaning that enough pollen has to be blown from the “tassels” on to the “silks” emerging from the ears, so it is best to plant corn in clumps or dense rows to ensure full cob development. Corn should also be planted by late May so that plants are about 18”-24” high by July 4th to have enough time to produce edible corn cobs in fall before the cold returns.

Happy planting!

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