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Why Locally Grown Produce is “Seasonal”

To say that the northern Gulf Coast occupies a unique climatic zone is an understatement. This special environment even requires that market vegetable growers make adjustments in planting times for several crops.

The term “timing is everything” certainly applies to field vegetable production. In fact, with some crops there is only a brief period of time for planting that allows for optimum conditions and yields. If planted too early or too late, a crop failure or low yield is almost sure to result. Depending upon the specific vegetable, growth and development is often dependent upon temperature, day length or both.

Some of the most time sensitive vegetable crops include tomato, strawberry, lettuce, okra and bulbing onions. Since the tomato is one of the most popular vegetables, the special planting time that it requires is worth exploring.

Transplants for the field grown summer tomato crop are usually established during March or early April as soon as the danger of the last spring frost has passed. This allows enough time for the production of a sizeable plant before fruit set begins.

Though flowering starts to occur only a few weeks after transplanting, pollination is controlled by night temperatures. The best night temperature for optimum fruit set is in the mid 60s and low 70s F. When temperatures are lower or higher poor fruit set occurs because the pollen becomes sterile or pollen tubes cannot develop properly.

Tomatoes are so sensitive that most spring planted tomatoes set fruit in late spring when night temperatures are ideal, and most fruit is then mature and harvested in June, July and early August. After summer night temperatures creep into the mid-70s, fruit set ceases or declines and what fruit is present is usually small and misshapen.

Occasionally a grower attempts a fall field grown tomato crop. Considering the timing necessary for flowering when night temperatures are right, plants are established from mid-July to early August. This allows enough time for growth, development and flowering as night temperatures drop into the low 70s. Fall tomato production is more challenging than spring production due to increased disease and insect pressure.

Strawberries are grown as annuals and planted in the fall in this region. Day neutral varieties are transplanted to the field during October or November. These varieties make vegetative growth, form a



Photo caption: "Fruit set like this requires night temperatures in the mid-60s to low 70s F."
Photo by Dan Mullins. Taken August 3, 2001 at the Farmer's Opry garden, Chumuckla, FL.

sizeable plant and bear fruit the following March, April and May. The spring planting of strawberries, as is done in other regions, is not recommended in this area.

Bulbing onions provide another example of our unique set of planting dates. Short day onion varieties such as the Granex types are started from seed in September or plants are set later in the fall. With proper varieties and timing it is possible to grow beautiful large onions. Onions started after December result in very small bulbs, or plants with no bulbs at all.

Okra, a relative of Hibiscus and cotton, is a tropical plant and is therefore very sensitive to cool soil and air temperatures. If planted too early, before soil temperatures warm into the 70s, germination and seedling growth is poor.

Even when the timing is right and the vegetable crop is up and growing, the rate of growth and development is controlled by accumulated temperatures or “heat units”. This is the number of hours above a certain temperature threshold, which is different for different vegetables. In tomatoes the threshold is 51 degrees F. and peppers have a 55 degree threshold.

The seasonal availability of local field grown fresh vegetables will continue to be dictated by weather conditions. Protected agriculture (greenhouse, shade house and high tunnel vegetable production) has begun in our area and is starting to fill the gap between traditionally grown crops.

For more information or if you have a question, call Dan Mullins, Extension Commercial Horticulture Agent, The University of Florida/IFAS-Santa Rosa County Extension, at 850-623-3868, between the hours of 8:00 am and 4:30 pm weekdays. Hearing impaired individuals may call Santa Rosa County Emergency Management Service at 983-5373 (TDD).

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