

Watermelons

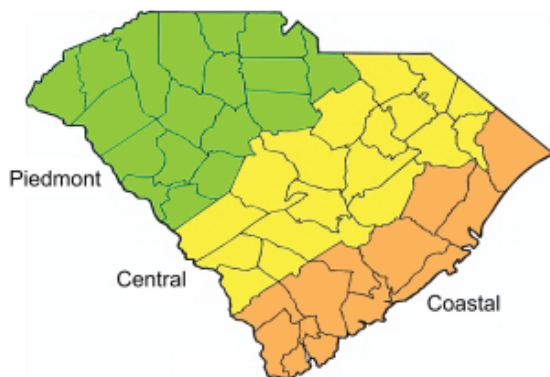
Planting

Watermelons (*Citrullus lanatus*) are warm-season crops that grow best at average air temperatures between 70 and 85 °F. Melon seed do not germinate well in cold soil. The soil temperature at the 4-inch depth should be 60 to 65 °F before this crop is planted. In the spring, do not plant this crop until after the last chance of frost.

Planting Dates

Area	Spring	Summer
Piedmont	Apr. 20-June 30	
Central	Apr. 1-30	June 15-30
Coastal	Mar. 25-Apr. 20	

South Carolina Gardening Regions



Piedmont: Abbeville, Anderson, Cherokee, Chester, Edgefield, Fairfield, Greenville, Greenwood, Lancaster, Laurens, McCormick, Newberry, Oconee, Pickens, Saluda, Spartanburg, Union and York counties.

Central: Aiken, Allendale, Bamberg, Barnwell, Calhoun, Chesterfield, Clarendon, Darlington, Dillon, Florence, Kershaw, Lee, Lexington, Marion, Marlboro, Orangeburg, Richland and Sumter counties.

Coastal: Beaufort, Berkeley, Charleston, Colleton, Dorchester, Georgetown, Hampton, Horry, Jasper and Williamsburg counties.

Watermelon seed can be planted directly in the garden or transplants can be grown to get an early start. Watermelons need a lot of room. Seeds or transplants should be planted in rows spaced 6 to 8 feet apart. Plants should be spaced 5 to 6 feet apart within the row.

Under normal conditions watermelons grown from transplants can be harvested as much as two weeks earlier than melons grown directly from seed.



Watermelon growing on black plastic in field.

Gilbert Miller, Area Vegetable Specialist, Clemson Edisto REC

Another way to get an early start on your watermelon crop is to use black plastic mulch. The black plastic absorbs the sun's warmth, allowing the soil to warm quickly. To plant, punch a small hole in the plastic and plant the seed or transplant. The

black plastic will warm the soil faster in the spring and will also conserve moisture throughout the season. Other advantages of this type of mulch are weed control and a reduction of fruit rot.

If a second crop or fall crop is going to be planted on the black plastic mulch, spray paint the black mulch white. The hotter soils created by a black mulch become too hot during the summer and early fall. Spraying the mulch white reduces the amount of heat absorbed. One part inexpensive white latex paint to seven parts water works well. Be sure to clean out the sprayer thoroughly.

It is best to use drip irrigation in conjunction with the plastic mulch. Using drip irrigation instead of overhead irrigation keeps the foliage dry and reduces disease problems. It is also possible with the appropriate equipment to inject the needed nutrients through the drip line and spoon-feed your plants.

If earlier melons are desired, a row cover can be used alone or in combination with black plastic mulch. The row cover can be either clear polyethylene sheeting supported by wire hoops placed every 5 feet across the row or a lightweight "floating" type material. The clear plastic row covers will need to be vented by cutting slits in the side. Temperatures under these materials can get hot enough to inhibit plant growth and will need to be removed so pollination can occur.



Seedless watermelon.

Gilbert Miller, Area Vegetable Specialist, Clemson Edisto REC

Watermelons need a lot of room. Plant them in rows 6 to 8 feet apart. Transplants or seed in 6 foot row spacing should be 4 feet apart and 3 feet apart in 8 foot row spacing. A rule of thumb is to allow 24 square feet per plant. If starting from seed, plant the

seed about 1 inch deep. Seedless varieties germinate best in very warm conditions with not too much water. It is best to start seedless transplants in an area where the air temperature can be kept around 92 – 95 °F for around 48 hours. After 48 hours move the plants to cooler (70 °F), conditions and full sun.

Recommended Varieties

Standard Seeded Varieties:

- Crimson Sweet
- Royal Sweet
- Top Gun
- Sentinel
- Sangria

Seedless Varieties:

- Liberty
- 7197
- 7187
- Majestic
- Obsession
- Fascination

Fertilizing

It is best to base fertilizer application on the results of a soil test. If a soil test has not been taken, apply 5-10-10 at 30 pounds per 1,000 square feet before planting. Melons should be sidedressed before the vines start to "run." Sidedress with 34-0-0 at 1 pound per 100 feet of row or calcium nitrate at 2 pounds per 100 feet of row. Sidedress a second time after bloom when fruit is developing on the vine. Too much nitrogen fertilizer can encourage excess vine growth and reduce fruit growth.

Watering

Watermelons need a lot of water. In fact, water comprises 92 percent of the watermelon fruit. Surprisingly, the bulk of watermelon roots are found in the top 12 inches of soil. Consequently when watering try and apply only as much water as the root zone (top 12") can hold. Going beyond this depth not only wastes water, but the nutrients in the soil solution as well. Proper watering may require several short duration water cycles during the day.

The use of drip irrigation is very beneficial in that no water is applied to the foliage but is applied to the plant root zone instead. An inexpensive timer

attached to your water source and applying water to your drip system allows automation of multiple short irrigation cycles. Although watermelon plants should not suffer from lack of water during any growth stage, it is extremely important to maintain consistent irrigation cycles during fruit set and development. If using overhead irrigation, water in the morning so the foliage has time to dry before dark. Wet foliage encourages foliar diseases.

Harvest

Make sure you know the approximate number of days to maturity for your variety. For example, most of the varieties listed take between 85 to 90 days from transplant to first ripe fruit. From day one of fruit set to ripe fruit takes approximately 35 days. A few rules of thumb to use to help determine if your watermelon is ready for harvest: the fruit looks to be expected size; the tendril closest to the fruit turns brown; the skin color loses its gloss and becomes dull in color; the bottom of the fruit has a large white to cream color oval spot.

Problems

Poorly formed fruit can be due to several problems, the lack of pollination by bees is the most common cause. Blossom-end rot is primarily due to inadequate calcium in the plant. Too little calcium can be due to several problems which include low soil pH, low calcium and irregularly available water. To reduce blossom-end rot, maintain consistent amounts of available water in the plant root zone. All vines and little fruit are usually due to over-fertilizing with nitrogen fertilizer or planting too close. For more information please see

Insect problems are usually critical only in the seedling or early growth stage. Cucumber beetles, squash bugs and aphids are the most noticeable problem insects. For more information please see [HGIC 2207 Cucumber, Squash, Melon & Other Cucurbit Insect Pests](#).

One of the least expensive and most effective disease control measures is crop rotation. Do not plant after watermelon or similar crops such as cantaloupe, cucumber, squash and pumpkins for at least three years. Overhead watering encourages many plant diseases. Diseases that may be a problem include anthracnose, gummy stem blight, powdery mildew and nematodes. For more information please see [HGIC 2206 Cucumber, Squash, Melon & Other Cucurbit Diseases](#).

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