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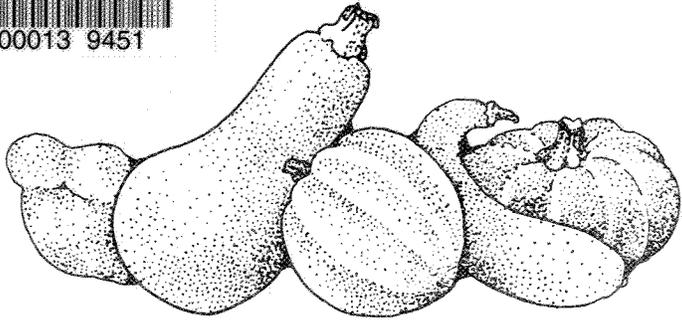
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Cucumbers, pumpkins, squash, muskmelons, watermelons for the home garden

Charles W. Basham and James E. Ells¹



Quick Facts

- Muskmelons, pumpkins, winter squash and watermelons require a long, warm growing season and are most productive at elevations below 5,000 feet (1,524 meters).
- Cucumbers and summer squash, while they need warm weather, produce in a relatively short season.
- Winter squash and pumpkins can be conveniently stored for use through the winter.

Cucumbers, pumpkins, squash, muskmelons and watermelons are warm weather plants. Their growth, yield and quality is greatest when days are warm and sunny and the season is long. Cucumbers and summer squash usually require 50 to 65 days for first production; watermelon and muskmelon, 80 to 95 days.

The gardener should delay planting until a week after the average last spring frost date for the area (if the weather is chilly, delay longer). Ideally, the temperature of the soil at a 2-inch (5.1-centimeter) depth should be 60° F (15.6° C).

In Colorado, temperature and length of growing season are closely related to elevation. At elevations below 5,000 feet (1,524 m), all these vegetables generally are productive. Above 5,000 feet (1,524 m), cucumbers and summer squash are most satisfactory since they mature in a relatively short time.

It is possible to lengthen the growing season by starting seedlings indoors and transplanting

to the garden when the weather warms. None of these plants tolerate disturbance of their root system. The only feasible method for transplanting is to start seedlings in pots and move them without damage to the roots. Pots of compressed peat moss, which the roots penetrate readily, are best. The pot and all may be planted.

Planting

In the garden, these vegetables usually are planted in "hills" or mounds, to allow drainage of excess water away from the seedlings. Five or six seeds are planted together, with the hills 4 to 6 feet (1.2-1.8 m) apart. The seeds are covered with about 1 inch (2.5 cm) of soil. After emergence, each hill should be thinned to the two or three strongest seedlings. Cucumbers can be planted next to fences or trellises to which they will cling.

Fertilizer should be applied before or at planting at a rate of 1 to 2 pounds (.45-.91 kg) of 10-20-0 per 100 square feet (9.3 sq m) (10-20-0 fertilizer contains 10 percent nitrogen, 20 percent phosphate, and no potash). The fertilizer can be broadcast and worked into the soil or about one-third cup (79 ml) fertilizer can be worked into the soil in a ring around the seed hill at planting. Fertilizer should not be worked into the soil of the hill where it will be in direct contact with the seed.

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If organic fertilizers are preferred, 2 bushels (.07 cu m) of manure, or 1 quart (.95 l) of heat-treated activated sewage sludge, or 1 cup (237 ml) of bone meal and 1 cup (237 ml) of dried blood per 100 square feet (9.3 sq m) may be used. These organic fertilizers also can be divided up and worked in around the hills rather than spread over the whole area.

If the seeds are planted in moist soil, no further watering should be needed until after the seedlings emerge. As the plants grow and the weather becomes warmer, more water will be required. When the plants cover the soil surface and in warm weather, the plants may use 1 to 1½ inches (2.5-3.8 cm) of water per week. It is better to irrigate thoroughly every five to seven days than to sprinkle lightly every day. Temporary wilting in the heat of the afternoon is common, but wilted plants in the morning is a distress signal—they should be watered.

Pests

The most common insect pests of these vegetables are cucumber beetles (striped and spotted), flea beetles, aphids, two-spotted mites and squash bugs. Service in Action sheet 5.509, *Insect control in the vegetable garden*, gives control recommendations for these. Angular leaf spot, a bacterial disease, sometimes develops on cucumbers; the disease and control measures are described in 2.912, *Angular leaf spot of cucumber*.

The location of cucumbers in the garden should be changed each year and diseased plants removed from the garden promptly. Plants should not be handled when they are wet. Other diseases rarely are destructive to these plants in Colorado.

For any insect or disease problem, first the pest involved should be identified (the county Cooperative Extension agent can help), then the recommended control measure applied following all directions and precautions on the label of any chemical used.

Pollination

Gardeners often become concerned when these plants begin to flower but no fruits are produced. Most varieties produce several male flowers before female flowers appear and fruits are set. It is easy to differentiate between male and female flowers (see Figure 1).

If female flowers are being produced, there are two common reasons for failure to set fruit: 1) If there are growing fruits already on the plant, they will inhibit further fruit set until they mature or are harvested. 2) These plants depend upon insects, mainly honeybees, for pollination. If insect activity is very low, fruits may not set due to lack of pollination. Insufficient pollination sometimes results in deformed fruits.

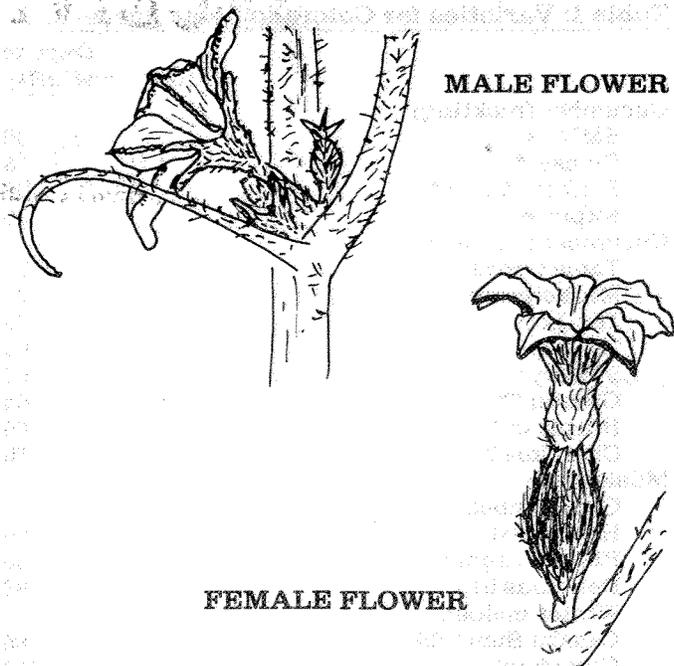


Figure 1: Male and female flowers. Note the enlarged base of the female flower that will develop into a fruit.

Harvesting

Cucumbers and summer squash are harvested and used as immature fruit. Time of harvesting depends on fruit size. For summer squash, fruits about 6 inches (15.2 cm) long are of prime quality. Cucumbers for slicing usually are harvested at about 6 to 8 inches (15.2-20.3 cm). For pickling it is wise to select the size best for the kind of pickles desired. Harvest should be frequent and thorough: fruits left on the plants will inhibit further fruit set until they mature.

Winter squash and pumpkins are harvested when mature. The skin will harden so it can't be penetrated easily by a thumbnail. These mature fruits can be stored most of the winter if protected from freezing. For more information see 7.601, *Storage of homegrown vegetables*.

The winter melons (casaba, crenshaw, honeydew) also can be stored for several weeks if harvested before they begin to soften.

Watermelons and cantaloupes are harvested when fully ripe. They don't store well. Watermelon ripeness can be judged by thumping—a dull sound indicates ripe, a ringing sound, not ripe—or by a buttery yellow color of the soil spot where the fruit rests on the ground.

Ripe cantaloupes will slip easily from the vine when picked up; unripe ones require more force to pull them away from the vine. The background color of cantaloupes also changes from grayish green to yellowish as they ripen and the characteristic musky odor develops.

Table 1: Varieties for Colorado home gardens.

	Days to maturity		Days to maturity
Cucumber (pickling)		TAM-Dew Honeydew	100
SMR 58	56	Pumpkin	
Pioneer*	53	Connecticut Field	100
Perfecto Verde*	54	Early Sugar Pie	90
Explorer*	56	Big Max ²	120
Cucumber (slicing)		Squash (Summer)	
Table Green	73	Zucchini hybrids*	60
Marketmore	70	Yellow Straightneck	50
Tex-Long	68	Butter Bar or Golden Bar*	50
Triumph*	63	Yellow Crookneck	50
Victory*	62	White Bush Scallop	58
Gemini 7*	64	Squash (Winter)	
Burpless ¹	60	Butternut	110
Cherokee 7*	65	Acorn or Table Queen	80
Muskmelon		Buttercup	100
Cantaloupes		Hubbard ³	115
Hales Best	86	Golden Delicious ³	100
Planters Jumbo	86	Watermelon	
Delicious 51	83	Sugar Baby ⁴	73
Winter melons		Petite Sweet ⁴	75
Casaba SunGold	85	Crimson Sweet	85
Crenshaw	110	Seedless Hybrid ⁵	90

*These are F₁ hybrid varieties that usually are more vigorous and productive than standard varieties.

¹Long slender fruit usually harvested at about 10-inch (25.4 cm) length; may be sliced and eaten without peeling.

²Fruits may exceed 100 pounds (45.5 kg), usually grown as a novelty for exhibition.

³Large fruits, usually 8 to 12 pounds (3.6-5.5 kg) each.

⁴Small fruits, 5 to 10 pounds (2.3-4.5 kg).

⁵Seedless fruits, seed expensive and do not germinate well, should be started indoors in peat pots. Requires interplanting with a pollinator, such as Sugar Baby.