Melons

Watermelons (*Citrullus lanatus*), muskmelons (*Cucumis melo reticulous*), and honeydew melons (*Cucumis melo inodorus*) all produce sprawling vines that take up considerable space in the garden. Melons and other vine crops, including cucumbers, pumpkins, squash, and gourds, are collectively known as cucurbits. They belong to the same plant family (*Cucurbitaceae*) and are characterized by 5-angled stems, coiled tendrils, and alternate leaves. Cucurbits are usually monoecious—meaning they produce separate male and female flowers on the same plant. The female flowers develop into fruit after bees transfer pollen from the male flowers. Many cucurbits are susceptible to the same pests and also share similar cultural needs.

Cultivars

The following cultivars are suggested for planting in Iowa.

Watermelon

Fruits are round to oblong with solid light green, gray-green, dark green or contrasting stripes; flesh color is red, yellow, orange, or white. Most watermelon varieties produce mature fruit 75 to 95 days after seeding and 42 to 45 days after pollination.

Cultivar	Season	Description	Size in pounds
Crimson Sweet	Mid to late	Light green/dark green stripes, round and blocky, seeded	20 to 30
Millennium	Early	Dark green, no stripes, oval fruit, red flesh, seedless	18 to 20
Millionaire	Late	Light green striped, oblong, seedless	13 to 20
Revolution	Early to mid	Dark and light green stripes, long and blocky, red flesh, seedless	20 to 26
Royal Sweet	Mid to late	Light green, striped, blocky oval	20 to 25
Sangria	Mid to late	Dark green striped, long blocky oval, seeded	20 to 26
Sugar Baby	Early	Dark green, round, red flesh	8
Yellow Baby	Early	Light green striped, round, yellow flesh	9 to 12

Muskmelon

Often called cantaloupes, fruits are round to oval with orange to salmon flesh and distinctive musky flavor and fragrance. Fruits mature 75 to 100 days after seeding and 42 to 46 days after pollination.

Cultivar	Season	Description	Size in pounds
Starship	Mid	Oval	4 to 6
Superstar	Mid	Round	8
Earlisweet	Early	Small, round	2 to 3
Eclipse	Mid	Oval	5 to 7
Saticoy	Late	Small elongated oval	3 to 4

Honeydew

Fruits are round to slightly elongated with light green flesh. Honeydews mature 80 to 100 days after seeding.

Cultivar	Season	Description	Size in pounds
Earlidew	Early	Round to oval, lime green flesh	2 to 3
Passport	Early (75 days)	Round, light green flesh	4 to 6
Venus	Early	Round, yellowish flesh	3 to 4

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Planting

Melons are warm-season crops and should be planted after the danger of frost is past and soil temperatures have warmed to 60 to 70°F. In central Iowa, melons may be planted in mid-May. Gardeners in southern Iowa can plant the first week of May, while northern gardeners should wait until the third or fourth week of May. All melons require full sun and well-drained soil. Plant in raised beds if soil is poorly drained. The seedbed should as fine as possible. Rototilling the soil is preferred.

Melons are normally planted in hills. (Hill planting is the grouping of plants in small groups or clusters. The method is commonly used when planting vine crops, such as watermelon, muskmelon, cucumber, and squash.) Sow 4 or 5 seeds in a 6- to 12-inch diameter circle. Seeds should be planted 1 inch deep. When the seedlings have 1 or 2 true leaves, remove all but 2 or 3 healthy, well-spaced plants per hill.

Earliness techniques

For an earlier crop, melon transplants can be started indoors 2 to 3 weeks before the anticipated outdoor planting date. Peat pellets, soil blocks, or other plantable containers work best and reduce possible damage to the plant's root system. Sow 2 or 3 seeds per container. Transplant outdoors when plants have 1 or 2 true leaves. Harden the plants outdoors for a few days in an area protected location from wind and direct sunlight prior to planting to lessen transplant stress.

Black, clear, or colored plastic mulch film can be used to promote early melon production. Plastic promotes spring growth by allowing sunlight to more efficiently warm the soil. The plastic mulch also helps to conserve soil moisture and control weeds.

Lay the plastic over moist soil on a calm day. If the plastic is laid over dry soil, it will actually delay subsequent plant growth. Anchor the edges of the plastic mulch by making furrows 2 or 3 inches deep. Place the edges of the plastic in the furrows, then fill the furrows with soil. To plant, simply cut holes in the plastic with a sharp knife or bulb planter. The holes should be in the center of the plastic film and just large enough to plant the seeds or transplants.

Winds can damage the young plants, delay maturity, and reduce yields. For these reasons, early plantings are often covered with hot tents or clear plastic tunnels (supported by wire hoops) for 2 to 3 weeks after transplanting outdoors. The tents or tunnels also provide a small amount of frost protection.

Spacing

Watermelon hills should be 2 to 3 feet apart in rows that are 6 to 8 feet apart. Hills of muskmelon and honeydew should be spaced 1½ to 2 feet apart with 5 to 6 feet between rows. Closer plant spacing results in more fruit per area, but fruit size and sweetness will decrease. If space is limited, bush-type watermelon and muskmelon cultivars can be planted.

Fertilizing

Apply 1 to 2 pounds of 10-10-10 or a similar analysis fertilizer per 100 square feet of garden area prior to planting. Use the lower rate on sandy loam soils and the higher rate on upland soils. When using plastic mulch, use the lower rate. Incorporate the fertilizer into the soil before laying down the plastic. For specific recommendations, conduct a soil test. A soil pH of 5.5–7.0 is preferred for cucurbits.

When setting out transplants, apply a starter fertilizer solution at the rate of 1 pint (2 cups) per transplant. For the starter solution, follow the label directions on a water-soluble fertilizer or dissolve 2 tablespoons of an all-purpose garden fertilizer, such as 10-10-10, in one gallon of water.

Estimated yield

Average yield with good management practices should be about 4 to 10 watermelons per 10-foot row or 2 to 3 muskmelons per plant.

Irrigation

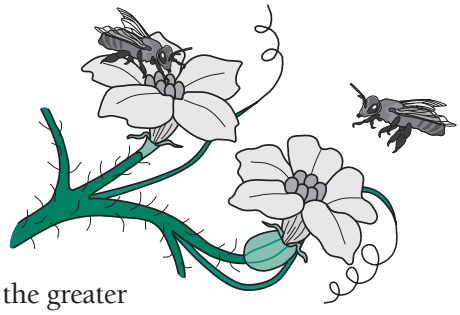
Dry conditions during germination result in poor and uneven seed emergence. A shortage of moisture at bloom results in poor fruit set and misshapen fruit. Moisture stress close to harvest greatly reduces melon size and results in rapid vine decline. Therefore, a consistent supply of soil moisture should be maintained from germination through harvest. Drip irrigation under black plastic mulch produces higher yields and discourages foliar diseases.

During dry weather, irrigate by applying 1 to 2 inches of water every 7 to 10 days. Soil type does not affect the amount of total water needed, but it does affect the frequency of watering. Sandy soils need to be watered more frequently but require less water per application. Irrigate in early morning to reduce foliage diseases. As the fruit approaches maturity, apply half as much water per application.

Poorly drained soils, heavy rainfall, or too much irrigation for a week or two before harvest can cause poor flavor, lower sugar content, and bursting of the fruit.

Excessive moisture and too much nitrogen during fruit ripening may cause white heart of watermelons.

Pollination

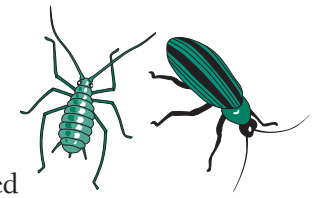


Each female flower is open and receptive to pollination for only one day. The more bee visits per flower, the greater the number of seeds per fruit, the larger the size of the fruit, and the fewer number of misshapen fruit. Cool, rainy, or windy weather limits bee activity and pollination. Low temperatures can prevent the development and release of pollen.

Avoid using insecticides that are injurious to bees. When insecticides are needed, apply early in the morning or late in the evening when bees are less active.

Potential problems

Insects



Insect pests are usually most critical in the seedling or early growth stage. Row covers applied at planting and removed at first bloom can be used to exclude insect pests. Organic and synthetic insecticide applications are more effective when made early in the season when insect pests are small and easier to kill. Cucumber beetles, squash bugs, mites, and aphids are the most common insect pests of melons. Insecticide applications should be made only when necessary as determined by field observations and correct identification of the insect pest. Insect populations often fluctuate greatly from year to year.

Diseases

Some foliar diseases appear where air circulation is reduced and leaves remain wet, such as in low areas and along borders sheltered by trees. Foliar diseases typically appear first on leaves close to the base of the main stem. Root diseases tend to appear where soil remains wettest, such as in low areas and in soils with a higher clay content. For control of diseases, fungicides are most effective when applied at the onset of visible symptoms of disease.

After harvest is complete, remove vines and other residue from the garden. Diseases and squash bugs overwinter in crop residues. Crop rotation can reduce some disease problems for subsequent plantings.

For specific pesticide recommendations, refer to FG 600 Midwest Vegetable Production Guide for Commercial Growers.

Wildlife

Wildlife can damage melons, especially when they are planted near wooded areas. Raccoons, coyotes, and deer are attracted to ripe melons.

Possible control measures include removing animals by live-trapping or hunting, excluding the animals by fencing or screening, and deterring the animals by using frightening devices, repellents, or dogs. Exclusion is the best method of coping with damage caused by wildlife.

Harvest and storage

Watermelon

Harvest watermelons when the underside of the melon ("belly" or "ground spot") turns from a greenish white to buttery yellow or cream. This color change is most obvious on cultivars with dark green skin. It is often less noticeable on lighter-skinned watermelons. In addition, the fruit tends to lose its glossy appearance on top and becomes dull when ripe.

Thumping or tapping the melon is generally not a good indicator of ripeness. The sounds produced by thumping mature and immature melons are quite similar. The browning of the light green, curly tendril attached to the vine near the melon is another poor indicator of ripeness.

When harvesting watermelons, leave 2 inches of the stem on the fruit. Watermelons can be stored at room temperature for about 1 week. The storage period can be extended to 2 to 3 weeks at 50–60°F.

Muskmelon

The fruit of muskmelon are mature when the stem pulls (slips) easily from the melon. The melon is not ripe if the stem has to be forcibly separated from the fruit. Other indicators of maturity are based on touch, appearance, and aroma. The flower end (the end opposite the stem) of the melon should be slightly soft. The skin between the netting turns from green to yellow at maturity. Finally, a ripe melon produces a strong "muskmelon" aroma.

Muskmelons can be stored in the refrigerator for 5 to 7 days. Before refrigerating, place the melons in a plastic bag to prevent the muskmelon aroma from flavoring other stored foods.

Honeydew

Harvest honeydew melons when the flower end of the fruit slightly softens. There also may be a slight change in the fruit's color. Store honeydew melons at a temperature of 45° to 50°F.

For more information

Additional information about vegetable gardening and other horticultural topics is available from local extension offices and from these Web sites:

ISU Extension Distribution Center
www.extension.iastate.edu/store

ISU Extension Food Preservation Resources—
www.extension.iastate.edu/healthnutrition/food/preservation/resources.htm

ISU Extension Horticulture—
www.yardandgarden.extension.iastate.edu

Questions also may be directed to ISU Extension Hortline by calling 515-294-3108 during business hours (10 a.m.–12 noon, 1 p.m.–4:30 p.m. Monday–Friday).

If you want to learn more about horticulture through training and volunteer work, ask your ISU Extension office for information about the ISU Extension Master Gardener program.

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