

## Notes on Harvesting and Handling Melons

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Depending on where you are in Virginia, cantaloupe harvest has been ongoing since mid-to late June in the Southeast, and early July in the Piedmont and Southwest. Watermelon harvest is in full swing in the east and just starting for growers in the Southwest. These two types of melons make up the majority of acreage in the state, though there are some honeydew and specialty melons such as casaba, crenshaw and french charentais grown for direct markets.

It almost goes without saying that the most labor intensive aspect of growing melons is harvest. Mechanical harvesters that pick only a ripe melon are not available. Only human eyes can make this judgement. Harvest aids, such as conveyors are available, which greatly speed-up the harvest process. It is important to plan ahead for the labor and time requirements of harvest. With melons the harvest will be multiple, and as often as daily depending on temperatures. Staying with the production is important, and this will be the time that a good marketing plan comes in handy. Nothing is more discouraging than seeing a good harvest go under utilized.

Melon yields vary considerably, depending on the type grown and the production system used. Plasticulture has the potential to double or even triple bare soil yields. Also, as we have shown in the Tidewater area, it is possible to advance melon maturity considerably using floating row covers and zip tunnels to increase accumulated heat units. This year we harvested 79-day watermelons by the fourth week of June from a mid-April planting date.

Good yields for open soil culture of muskmelons are: large (4-6 lbs) - 2500-4000 fruit/acre; small (3-4 lbs) 5000-7000 fruit/acre. For watermelons 1000-2000 fruit/acre is a good average yield, though this number greatly depends on size category. Watermelon yields on plasticulture can be as high as 45-70 tons/acre. Specialty melon yields are generally half of muskmelon yields, this due to less improved genetics, and limited breeding efforts on the part of seed companies. Cultural practices are the primary determining factor for yields, and making an effort to meet crop needs will be rewarded. A good example is meeting pollination requirements, which means setting sufficient hives to get the job done.

For maximum flavor, muskmelons should be picked when at "full-slip" or when the stem easily separates from the fruit. Though shelf life is shorter, full slip may be preferable in direct market situations. For shipping, "half-slip" stage is standard. A slight depression of the stem end indicates this stage. They should be well netted, firm and well formed.

Early in the season, melons should be picked every other day, and daily picking may be necessary as average temperatures increase. Muskmelons attain highest best flavor quality 1-2 days after picking, though sugars do not increase. Sugar levels should be at least 10% at half-slip, and 12-14% for melons picked at full-slip. Keep in mind, quality improves with maturity, but shelf life is reduced. A simple refractometer will measure sugars quickly with just a drop or two of juice. This instruments costs just over \$100.00, and it is a good investment that eliminates guess work in calculating sugar levels.

Pick honeydew melons when the stem end becomes slightly springy and the skin takes on a creamy yellow appearance. Crenshaw melons are picked when the blossom end softens and the skin turns to golden yellow and green. Casabas are ready when the skin turns golden and the flesh white. These melons will not "slip" their stem.

Watermelon ripeness is determined by several indicators. Not all varieties will exhibit each trait, though some will. A change of the background color of the side laying on the ground, from green/white to creamish or a slight or even bright yellow is a fairly consistent indicator. The drying of the tendril nearest the fruit is also an indicator of ripeness for many varieties, as well as a change of the green color tone/shine of the rind. Familiarity as to ideal harvest condition with a given variety will take some practice. Quality of watermelons is determined by high sugar content, deep red color, and crisp texture. Watermelons should be cut off the vine rather than pulled, twisted or broken-off.

It is important to maintain healthy, green foliage up to the last harvest with any melon crop. The foliage is needed to move sugars into the fruit. With muskmelons one half of the final sugars accumulates during the last week of maturation. Spray schedules should not be compromised as long as the planting is productive.

Muskmelons should be stored at 36-41 F and 95% relative humidity. A full-slip melon can be kept about 15 days at this temperature. Honeydews and other non-slip melons should not be stored below 40 F, as chilling injury will result. They can be kept 2-3 weeks at 45-50 F. Commercially, honeydews are often treated with ethylene to promote ripening. Some brokers/buyers are requiring post-harvest chlorinating dips of muskmelons/honeydews. Watermelons should be held at 50-60 F, and 90% humidity, and will keep 2-3 weeks. A week at room temperature will improve color and flavor. Watermelons should be consumed by 2-3 weeks as crispness declines rapidly after this point.

*Originally printed in Virginia Vegetable, Small Fruit and Specialty Crops – July 2002.*