

Disease Control

The table below contains recommendations for the control of some common fungal and bacterial diseases.

Disease	Product	Application Rate	Pre-Harvest Interval
Late Blight (fungal)	Ridomil	15 grams in 4.5 L of water	14 days
Fusarium Wilt (fungal)	Banrot	12 grams in 4.5 L of water	4 - 7 days
Southern Blight, Damping-Off (fungal)	Rizolex	36 grams in 4.5 L of water	7 days
Anthracnose (fungal)	Bellis	6 - 10 grams in 4.5 L of water	7 days
Bacterial Wilt, Bacterial Soft Rot	Mankocide	36 - 54 grams in 4.5 L of water	7 - 10 days
	Coback	15 - 30 grams in 4.5 L of water	7 - 10 days

1 gallon is equivalent to 4.5 L

Harvesting & Post-Harvest Care

Harvesting is done when fruits are fully matured, so as to ensure that good quality fruits are delivered to the market. Watermelons do not develop internal color or increase in sugar content after being removed from the vine. Non-destructive maturity indicators can be used to determine harvest, these include; fruit size, skin color, the amount of surface shine or waxiness, the color of the ground spot, the sound of the fruit when tapped and the condition of the tendril at the first node above the fruit. It is advised to use at least 3 or more of these indicators to determine the harvest maturity state.

Harvesting & Post-Harvest Care

To determine the right stage of harvesting, growers should become familiar with the changes in the varietal external appearance of the fruit as it reaches maturity. Watermelons are manually harvested when they have reached maturity.

The fruit should be carefully clipped off the vine, leaving about a 2.5 cm (1 inch) stem attached to the fruit. A sharp pruning shears should be used to sever the stem and create an attractive, smooth, clean cut. Watermelons should not be picked up by the stem, as it may separate from the fruit and provide an easy access for decay organisms.

When harvesting watermelons, every effort should be made not to bruise or puncture the rind during harvesting, handling, and field transport. Also, harvested watermelons should not be exposed to direct sunlight or rainfall. Keep the fruit dry at all times and never store on moist bare ground. If the watermelons must be stacked for transport, the pile should be no more than 1 meter (3 ft.) deep. Watermelons, not intended for immediate sale, should be held in a cool, dry, well-ventilated area. The optimum temperature for watermelon storage is 12°C (54°F). Sound fruit can be stored for up to six to eight weeks at this temperature without a significant loss in quality.



Estimated Yields

With good care and favourable weather, farmers can obtain yields of mature watermelons, at the rate of 18,000 to 30,000 pounds per acre every crop.



Promotion of Regional Opportunities for Produce through Enterprises and Linkages (PROPEL)



Growing Watermelons in Guyana



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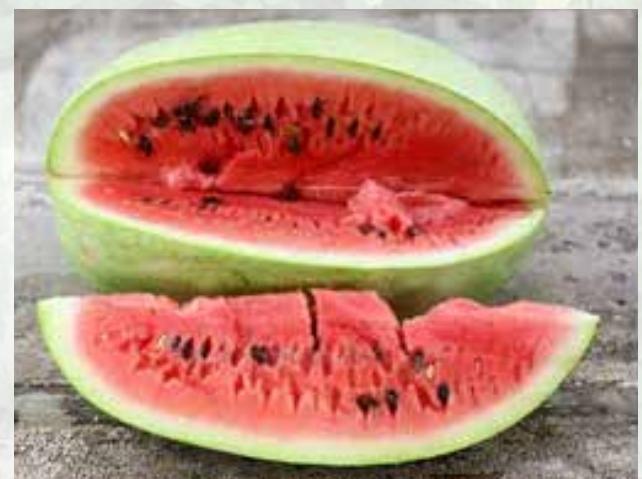
Introduction

Watermelon (*Citrullus lanatus*) belongs to the family Cucurbitaceae. It is a popular dessert, with year round availability. Watermelons vary in shape from globular to oblong. External rind colour varies from light to dark green and may be solid, striped or marbled. The pulp colour of most commercial varieties is red. The fruit is generally eaten raw, since it has very high water content. Watermelons are resistant to dry conditions and are well adapted to temperatures in the range 25 - 30°C. Excessive rainfall and high humidity reduce flowering and promote leaf diseases. The leading variety grown in Guyana is the MickyLee, which has a round shape, solid, light green skin colour, and typically weighs between 2.3 and 3.6 kg (5 - 8 lbs.). Lesser amounts of the large, elongated light green-skinned Charleston grey and Sugar baby are grown.



Land Preparation and Crop Establishment

Watermelons grow and produce fruits ideally during dry, sunny periods. Watermelons are adapted to soils that are well drained, high in organic matter, and have a good moisture retaining capacity. Crops are also frequently grown in low rainfall areas on soils which are relatively low in fertility. Well drained sandy loams are considered ideal for watermelon. Watermelons can tolerate some degree of soil acidity. However, the pH of the soil should not be below 5.5 - 6.5 for good yields to be obtained. Seeds should be sown in groups of 1 - 3 and at a depth of 2 - 4 cm on mounds or prepared planting holes at 1.2 - 2.0 cm in each way, seedlings are later thinned to 1 per station. Seedlings may be raised in containers and transplanted when they are 10 - 14 cm in height. Pruning should take place at an early stage to encourage branching. Regular watering at the beginning of the growing cycle should be sufficient to promote early growth and subsequent irrigation may be required during dry periods, particularly with sandy soils. Seed required per hectare is 2.5 - 4 kg for a density of 5000 - 10000 plants/ha. (2.2 - 3.5 lbs. /ac for a density of 2000 - 4000 plants per/ac).



Fertilizing

Watermelons are heavy-feeding plants and require good nutrition for their short growing cycle. The application of fertilizers should be based on the recommendations of a soil test, but if this is not available the following can be used:

A dressing of a blended fertilizer (15:15:15 or 12:12:17:2) should be applied to mounds at the time of transplanting and again at flowering this should be lightly incorporated into the soil. At the interval of transplanting and flowering, an application of a nitrogenous fertilizer is recommended. Every two weeks, the plants can be sprayed with a light solution of a foliar fertilizer such as Miracle-Grow.

Weed Control

Weeds are best controlled at the pre-emergent stage, prior to transplanting of the seedlings, or if they emerge as the crop grows, they should be rouged out. If herbicides are to be used, the following is recommended:

- Apply Paraquat (*Gramoxone*) at the rate of 28 ml in 4.5 litres of water, on growing weeds, using a shield to prevent spray making contact with watermelon vines.
- Apply Carzone (*Metribuzin*) as an over-crop spray at the rate of 10 ml in 4.5 litres of water.

Insect Pest Control

Watermelons are affected by several insect pests, the most common of which include root-knot nematodes, aphids, whiteflies, thrips, leaf miners and cucumber beetles. In the table below are a list of products that may be used to control of these pests, their application rates and the pre-harvest intervals that should be observed.

Pest	Insecticide	Application Rate	Pre-Harvest Interval
Root-Knot nematodes	Vydate L 40% EC	10 ml in 4.5 L of water	7 - 10 days
	Diazinon	10 ml in 4.5 L of water	7 - 10 days
Aphids, Thrips& Whiteflies	Admiral	5 - 10 ml in 4.5 L of water	14 days
	Caprid	2.5 - 5.0 ml in 4.5 L of water	7 - 10 days
	Fastac	1.0 ml in 10 L of water	4 - 5 days
Leafminer	Leaf Guard(IGR 75%)	1.75 grams in 4.5 L of water	7 - 10 days
	Padan 50 WSP	15 grams in 4.5 L of water	10 days
	Trigard 75% WP	2.5 grams in 4.5 L of water	7 - 10 days
Cucumber beetles	Malathion, Fastac, Karate	6 ml in 4.5 L of water	4 - 5 days

1 gallon is equivalent to 4.5 L

Insecticides for control of the same pest should be rotated to avoid resistance build-up.

Disease Control

Watermelons are susceptible to several fungal and bacterial diseases. Farmers have reported Bacterial Blotch to be significant threat to watermelons.

Postharvest diseases are also imposing a significant threat in the production of watermelons in Guyana. The prevalence of diseases directly related to the cultural practices used during production and the local climatic conditions at harvest. Disease incidence level is greater in areas where the rainfall and humidity are high during the stages of production and harvest.