



Watermelon

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Varieties

Allsweet, Black Diamond, Bush Sugar Baby, Calhoun Grey, Charleston Gray, Crimson Sweet, Crimson Tide, Dixielee, Golden Crown, Jubilee, Mickylee, Minilee, Mirage, OrangeGlo, Prince Charles, Royal Jubilee, Tendersweet, Yellow Doll

Soil Preferences

Deep, well-drained, light textured soil having a pH range of 5.5 - 8.0 (optimum pH 6.5 - 7.0). Does not tolerate heavy soils.

Optimum Growing Conditions

Bright, hot days (80-95°F) and warm nights (60-70°F). Cooler temperatures and excessive rainfall slows growth and maturity. Overcast and cloudy weather conditions reduce soluble solids (fruit quality).

Establishment Methods

Planting Method	Transplant (preferred) or direct seeded
Optimum Time	When all danger of frost has passed and/or soil seed zone temperature exceeds 70°F
Seeding rate	1-3 lbs/acre
Approx seed/oz	300-600
Seeding depth	0.75 - 1.0"
Seedling spacing	Irrigated - 3' in-row on 80" wide raised beds Dry land - 5' in-row on 8-10' wide raised beds

Fertility/Fertilization

Rates presented as actual lbs/acre N₂, P₂O₅, and K₂O (base actual rates applied on soil test results).

Generalized rate: 80 - 80 - 80 lb/acre	
N*	40-90 lbs 0-50 lbs pre-plant 0-30 lbs side-dressed 3 weeks after emergence Under high rainfall, an additional 20 lbs may be required at vining

P	40-80 lbs applied at planting
K	40-80 lbs (if needed, apply with pre-plant N)
Starter solution (transplants)	Approximately 8 oz of high phosphate starter solution/plant at field setting

* Ammonium nitrate is very stable and least likely to evaporate. Urea and ammonium sulfate evaporate if not incorporated.

Water/Irrigation

10-15"/season. Steady moisture supply (1-2" every 10-14 days) required. Key stages are establishment, blooming, fruit set, and enlargement.

Pest Management

Watermelon Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Alternaria		Clove, Rosemary and Thyme Oil, Hydrogen Dioxide, Neem Oil, <i>Streptomyces lydicus</i>
Downy mildew	Acibenzolar-S-Methyl, Azoxystrobin, Chlorothalonil, Copper Sulfate, Cyazofamid, Cymoxanil, Mancozeb, Dimethomorph, Fenamidone, Fenamidone, Fosetyl-Al, Mandpropamid, Potassium Phosphite, Propamocarb Hydrochloride, Pyraclostrobin, Sodium Tetraborohydrate Decahydrate, Trifloxystrobin, Maneb, Fluopicolide	<i>Bacillus pumilus</i> , Clove, Rosemary and Thyme Oil, Copper Hydroxide, Cuprous Oxide, Extract of <i>Reynoutria sachalinensis</i> , Hydrogen Dioxide, Neem Oil, Potassium Bicarbonate, <i>Bacillus subtilis</i> , <i>Streptomyces lydicus</i>
Fusarium wilt	1,3-Dichloropropene, Chloropicrin, Fludioxonil, Potassium Phosphite	<i>Bacillus subtilis</i> , <i>Gliocladium virens</i> GI-21, <i>Streptomyces lydicus</i>
Gummy stem blight	Azoxystrobin, Chlorothalonil, Copper Sulfate, Kresoxim-Methyl, Mancozeb, Maneb, Paraffinic Oil, Polyoxin D Zinc Salt, Potassium Phosphite, Pyraclostrobin, Tebuconazole, Thiophanate-Methyl	<i>Bacillus subtilis</i> , Copper Hydroxide, Cuprous Oxide, Extract of <i>Reynoutria sachalinensis</i> , Hydrogen Dioxide
Nematode	1,3-Dichloropropene, Chloropicrin, Metam-Potassium, Metam-Potassium, Metam-Sodium, Sesame Oil	Azadirachtin
Powdery	Acibenzolar-S-Methyl, Azoxystrobin,	<i>Bacillus pumilus</i> , <i>Bacillus</i>

mildew	Copper Sulfate, Kaolin, Kresoxim-Methyl, Myclobutanil, Paraffinic Oil, Polyoxin D Zinc Salt, Potassium Salts of Fatty Acids, Pyraclostrobin, Quinoxyfen, Sodium Tetraborohydrate Decahydrate, Tebuconazole, Thiophanate-Methyl, Trifloxystrobin, Triflumizole	<i>subtilis</i> , Clove, Rosemary and Thyme Oil, Copper Hydroxide, Cuprous Oxide, Extract of <i>Reynoutria sachalinensis</i> , Hydrogen Dioxide, Neem Oil, Potassium Bicarbonate, <i>Streptomyces lydicus</i> , Sulfur
Virus	Paraffinic Oil	

Watermelon Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Acetamiprid, Bifenthrin, Diazinon, Dimethoate, Endosulfan, Fenpropathrin, Imidacloprid, Lambdacyhalothrin, Malathion, Oxamyl, Oxydemeton-Methyl, Permethrin, Petroleum Oil, Potassium Salts of Fatty Acids, Sodium Tetraborohydrate Decahydrate, Soybean Oil, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Neem Oil, Pyrethrins
Armyworm	Beta-Cyfluthrin, Bifenthrin, Cyfluthrin, Deltamethrin, Flubendiamide, Lambdacyhalothrin, Spinetoram	Azadirachtin, <i>Bacillus thuringiensis</i> , Pyrethrins
Cabbage Looper	Methomyl	Azadirachtin, <i>Bacillus thuringiensis</i> , Garlic Juice Extracts, Pyrethrins
Cutworm	Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Deltamethrin, Diazinon, Esfenvalerate, Flubendiamide, Lambdacyhalothrin, Permethrin, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i>
Leafminer	Abamectin, Deltamethrin, Dimethoate, Dinotefuran, Lambdacyhalothrin, Paraffinic Oil, Permethrin, Petroleum Oil, Soybean Oil, Spinetoram, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Spinosad
Mite	Oxydemeton-Methyl, Paraffinic Oil, Petroleum Oil, Sodium Tetraborohydrate Decahydrate, Soybean Oil	Azadirachtin, Garlic Juice Extracts, Neem Oil
Thrips	Diazinon, Dimethoate, Dinotefuran, Fenpropathrin, Imidacloprid, Lambdacyhalothrin, Oxamyl, Petroleum Oil, Potassium Salts of Fatty Acids,	Azadirachtin, Garlic Juice Extracts, Neem Oil, Pyrethrins,

	Soybean Oil, Spinetoram, Thiamethoxam	Spinosad
Webworm	Lambdacyhalothrin, Soybean Oil	Pyrethrins
Whitefly	Beta-Cyfluthrin, Bifenthrin, Cyfluthrin, Deltamethrin, Dinotefuran, Endosulfan, Fenpyroximate, Fosetyl-AI, Imidacloprid, Lambdacyhalothrin, Paraffinic Oil, Petroleum Oil, Potassium Salts of Fatty Acids, Sodium Tetraborohydrate Decahydrate, Soybean Oil, Spiromesifen, Thiamethoxam	Azadirachtin, Garlic Juice Extracts, Neem Oil, Pyrethrins

Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	Clomazone, Ethalfluralin, DCPA, Bensulide, Trifluralin	Corn Gluten Meal
Preemergence	Ethalfluralin, DCPA, Terbacil	
Postemergence	Carfentrazone, Oxyfluorfen, Paraquat, Halosulfuron, Sethoxydim, Glyphosate, Pelargonic Acid, Clethodim, Terbacil	D-Limonene, Clove Oil, Cinnamon and Clove Oil

* The above is a partial listing of controls intended as examples. Some labels may have been revoked since the publication of this guide. Refer to product labels for specifics and use accordingly. Ensure that products with one of the listed active ingredients are registered for the crop it is to be used on. Failure to do the above may result in crop injury, death and/or citation for law violation. Humans, animals and the environment may also be adversely affected by misuse.

** As stated in §205.206 of the National Organic Standards, pest management decisions should follow a hierarchical approach, which should be defined in a farm's organic systems plan. Please ensure that you have followed the appropriate steps and any product to be used in certified organic production systems has been approved by your certifying agent.

Harvest

Days after planting	Direct seeded - 85-95 days Transplanted - 65-75 days
Normal method	Hand
Containers	Bulk wagons or pallet boxes
Grades	Normally field graded during loading; based on diameter size and freedom from blemishes
Packaging/Handling	4-5 watermelon/fiberboard carton depending upon size Shipped in pallet boxes or bulk lots

	Straw between melon layers suggested for bulk loads
Anticipated yield/acre	5-15 tons

Transit Conditions

50-60°F at 80-85% RH (chilling injury at 40°F); Shelf-life 3-4 weeks.

Comments/Production Keys

- Can be produced under low input dry land systems
- Open pollinated varieties better suited to dry land conditions
- Transplant establishment may or may not be economically feasible with open pollinated varieties or with hybrids. If used, best suited to plastic mulch (6' width) and drip irrigation.
- Responds well to high levels of inputs and management; transplant establishment + plastic mulch + drip irrigation
- In areas with high winds, wind breaks planted every 4 - 6 beds is advisable. Windbreaks should be established in the fall in order to provide protection to spring planted crop.
- Excessive nitrogen fertilization and irrigation delays maturity and reduces fruit quality
- Requires the addition of bees to obtain maximum yield and quality (one strong hive/acre)
- Maintain good foliage coverage of fruit to avoid sunburn
- Straw layers should be placed between melon layers to reduce fruit injury during bulk shipment
- Palletizable bin boxes becoming popular for bulk shipment