

Squash

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Varieties

Scallop: Bennings Green Tint, Earl's White Bush, Early White Bush, Patty Pan, Peter Pan, St. Patrick, Sunburst

Yellow Crookneck: Dixie, Early Summer, Early Yellow, Horn of Plenty, Pavo

Yellow Straightneck: Burpee's Butterstick, Butterbar, Conqueror III, Early Prolific, Goldbar, Hyrific, Multipik, Onyx, Saffron, Smoothie, Sunray, Superset

Zucchini: Ambassador, Aristocrat, Blondie, Cashflow, Costata Romanesca, Eight Ball Tigress, El Dorado, Goldfinger, Gold Rush, Hyzini, Madga, President, Senator, Zucchini Elite

Soil Preferences

Fertile, well-drained with pH range 6.0 - 7.5. Will not tolerate wet, poorly aerated conditions.

Optimum Growing Conditions

Warm to moderate air temperatures (60-80°F), with low humidity. Very cold sensitive.

Establishment Methods

Planting Method	Direct seeded (transplants well)
Optimum Time	Soil temperature in seed zone exceeds 60°F after all danger of frost has passed
Seeding rate	Bush types - 2-3 lbs/acre Vining types - 1-2 lbs/acre
Approx seed/oz	120-400
Seeding depth	0.5 - 1.0"
Seedling spacing	Bush types - 12-36" in-row on 34-40" wide beds Vining types - 72-120"

Fertility/Fertilization

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

Generalized rate: 70 - 70 - 80 lb/acre	
N*	60-70 lbs 40-50 lbs applied pre-plant 20 lbs side dress if needed at bloom
P	70-120 lbs banded approximately 2" below seed at planting
K	80-100 lbs applied pre-plant (not normally needed in most areas of the state)

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

Water/Irrigation

7-10" applied uniformly throughout cropping season. Squash are relatively shallow rooted, so light frequent applications best (3-5 per crop life).

Pest Management

Squash Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Choanephora fruit rot	Mancozeb, Potassium Phosphite	Potassium Bicarbonate
Downy mildew	Acibenzolar-S-Methyl, Azoxystrobin, Chlorothalonil, Copper Sulfate, Cyazofamid, Fenamidone, Cymoxanil, Dimethomorph, Fluopicolide, Fosetyl-Al, Mancozeb, Mandpropamid, Maneb, Potassium Phosphite, Propamocarb Hydrochloride, Pyraclostrobin, Sodium Tetraborohydrate Decahydrate, Trifloxystrobin	<i>Bacillus pumilus</i> , <i>Bacillus 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>
Gummy stem blight	Azoxystrobin, Chlorothalonil, Copper Sulfate, Kresoxim-Methyl, 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-Sodium, Sesame Oil	Azadirachtin

Powdery mildew	Acibenzolar-S-Methyl, Azoxystrobin, Kaolin, Kresoxim-Methyl, Myclobutanil, Potassium Phosphite, Potassium Salts of Fatty Acids, Pyraclostrobin, Tebuconazole, Thiophanate-Methyl, Triflumizole	<i>Bacillus pumilus</i> , <i>Bacillus subtilis</i> , Clove, Rosemary and Thyme Oil, Copper Hydroxide, Extract of <i>Reynoutria Sachalinensis</i> , Neem Oil, Potassium Bicarbonate, <i>Streptomyces Lydicus</i> , Sulfur
Viruses	Paraffinic Oil	

Squash Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Acetamiprid, Bifenthrin, Dinotefuran, Endosulfan, Fenpropathrin, Imidacloprid, Lambdacyhalothrin, Malathion, Naled, 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
Leafminer	Abamectin, Cyromazine, Deltamethrin, Dinotefuran, Lambdacyhalothrin, Malathion, Naled, Paraffinic Oil, Permethrin, Petroleum Oil, Soybean Oil, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Spinosad
Looper	Methomyl, Naled	Azadirachtin, <i>Bacillus thuringiensis</i> , Garlic Juice Extracts, Pyrethrins
Melonworm	Acetamiprid, Beta-Cyfluthrin, Bifenthrin, Carbaryl, Chlorantraniliprole, Cryolite, Cyfluthrin, Deltamethrin, Endosulfan, Flubendiamide, Indoxacarb, Lambdacyhalothrin, Methomyl, Permethrin, Spinetoram, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i> , Spinosad
Spider Mite	Abamectin, Fenpropathrin, Lambdacyhalothrin, Malathion, Naled, Potassium Salts of Fatty Acids	Neem Oil
Squash Vine Borer	Acetamiprid, Bifenthrin, Endosulfan, Esfenvalerate, Flubendiamide, Lambdacyhalothrin, Malathion, Permethrin, Zeta-Cypermethrin	Azadirachtin
Sweet Potato	Bifenthrin, Cyfluthrin, Deltamethrin, Dinotefuran, Endosulfan, Fosetyl-AI, Imidacloprid,	Azadirachtin, Garlic Juice Extracts, Neem

Whitefly	Lambdacyhalothrin, Paraffinic Oil, Petroleum Oil, Potassium Salts of Fatty Acids, Sodium Tetraborohydrate Decahydrate, Soybean Oil, Spiromesifen, Thiamethoxam	Oil, Pyrethrins
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Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	Clomazone, Ethalfluralin, Bensulide, Trifluralin	Corn Gluten Meal
Preemergence	Ethalfluralin	
Postemergence	Carfentrazone, Oxyfluorfen, Paraquat, Halosulfuron, Sethoxydim, Glyphosate, Pelargonic Acid, Clethodim	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 - 40-45 days Transplanted - 30-35 days
Normal method	Hand Harvest anytime after fruit has obtained desired size and seeds still tender
Containers	Field baskets
Grades	Grades based on defects and size U.S. #1 & U.S. #2
Packaging/Handling	1/2 bushel baskets (20-24 lbs) Fiberboard cartons (20-24 lbs or 40 lbs)
Anticipated yield/acre	12,000 lbs/acre

Transit Conditions

50-55°F at 95% RH; shelf-life of 5-7 days.

Comments/Production Keys

- Shallow rooted crop (most roots in upper 6-8" of soil), so frequent light applications of irrigation water required
- Are well adapted to drip irrigation-plastic mulch culture
- Uniform moisture supply required for maximum yields
- As with all cucurbits, squash have male and female flowers. Adding bees to the field will maximize pollination and subsequent yield.
- Warm temperatures and high humidity increase disease incidence
- Viruses are the limiting factor to successful production. Plant early to avoid build up of insects (aphids) which transmit these organisms.
- Reflective mulches and row covers have been shown to offer some reduction in virus incidence
- Fruit bruise easily, so take extreme caution during harvesting, handling and packaging
- Squash is a very prolific crop, demanding a lot of labor to harvest every other day for maximum yield and fruit quality (fruit harvested in immature state)