Bell Pepper

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Varieties
Admiral, Aladdin, Aristotle, Bell Tower, Big Bertha, Blushing Beauty, Calwonder, Camelot, Emerald Giant, Golden Summer, Gypsy, Jackpot, Jupiter, Keystone Giant, Lilac, Summer Sweet, Yolo Wonder

Soil Preferences
Well drained, fine sandy loam soil with a pH 6.0 - 7.5; will tolerate heavier soils.

Optimum Growing Conditions
Warm season crop, hot days (80-90°F) with cool nights (65-70°F). Bloom drop can occur above 95°F. Excessively high temperatures will reduce fruit size.

Establishment Methods

Planting Method	Direct seeded - Open pollinated varieties Transplanted - Hybrid varieties
Optimum Time	Spring - direct seed when soil temperature exceeds 60-65°F or transplant after last average frost date Fall - direct seed approximately 120 days prior to average first frost date or transplant approximately 90-100 days prior to first frost date
Seeding rate	2-4 lbs/acre (precision planting = 0.25-0.5 lbs/acre)
Approx seed/oz	4,500
Seeding depth	0.25 - 0.5"
Seedling spacing	1-2 rows on 30-40" raised beds with in-row spacing of 6-12" If needed, thin seedlings to stand, approximately 30,000 plants/acre, 35-40 days after emergence

Fertility/Fertilization

Rates presented as actual lbs/acre N_2, P_2O_5, and K_2O (base actual rates applied on soil test results).

Generalized rate: 140 - 60 - 100 lb/acre	
N*	60-70 lbs pre-plant 30-50 lbs at thinning or transplanting 20-30 lbs after second harvest On light soils 200-250 lbs/N may be required (calcium nitrate induces quicker plant response than most other N forms)
P**	50-80 lbs banded 2" below seed at planting
K	80-100 lbs applied with N where indicated by soil analysis

* Ammonium nitrate is very stable and least likely to evaporate. Urea and ammonium sulfate evaporate if not incorporated. ** Apply high phosphate starter solution to transplants (ex. 2 parts liquid 10-34-0 / 50 gallons water (8 oz/plant).

Water/Irrigation

High water demand: 25 - 35". Apply uniform amounts throughout growing season. Critical stages are during establishment and bloom set.

Pest Management

Bell Pepper Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Alternaria or anthracnose		Clove, Rosemary and Thyme Oil, Neem Oil, *Streptomyces lydicus*
Bacterial Leaf Spot		Clove, Rosemary and Thyme Oil, Cuprous Oxide, Neem Oil, Sulfur
Nematode	1,3-Dichloropropene, Metam-Potassium, Chloropicrin, Sesame Oil, Metam-Sodium	Azadirachtin
Phytophthora blight	1,3-Dichloropropene, Chloropicrin, Fluopicolide, Metam-Sodium, Metam-Sodium, Potassium Phosphite	*Bacillus subtilis*, Copper Hydroxide, Hydrogen Dioxide, *Streptomyces lydicus*
Southern blight	Fluoxastrobin, PCNB	
Virus	Imidacloprid, Paraffinic Oil	

Bell Pepper Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Acetamiprid, Deltamethrin, Dimethoate, Dinotefuran, Imidacloprid, Lambdacyhalothrin, Malathion, Naled, Oxydemeton-Methyl, Petroleum Oil, Potassium Salts of Fatty Acids, Pyriproxyfen, Sodium Tetraborohydrate Decahydrate, Soybean Oil, Spirotetramat, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Neem Oil, Peppermint and Rosemary Oil, Pyrethrins
Armyworm	Bifenthrin, Cryolite, Deltamethrin, Endosulfan, Flubendiamide, Methomyl, Spinetoram	Azadirachtin, *Bacillus thuringiensis*, Pyrethrins, Spinosad
Corn Earworm	Beta-Cyfluthrin, Bifenthrin, Cyfluthrin, Deltamethrin, Esfenvalerate, Permethrin, Zeta-Cypermethrin	Azadirachtin, *Bacillus thuringiensis*
Cutworm	Bifenthrin, Carbaryl, Deltamethrin, Diazinon, Flubendiamide, Gamma-Cyhalothrin, Lambdacyhalothrin, Permethrin, Zeta-Cypermethrin	Azadirachtin, *Bacillus thuringiensis*
Flea Beetle	Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cryolite, Cyfluthrin, Deltamethrin, Dinotefuran Endosulfan, Esfenvalerate, Gamma-Cyhalothrin, Imidacloprid, Kaolin, Lambdacyhalothrin, Naled, Permethrin, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Pyrethrins
Leafminer	Chlorantraniliprole, Deltamethrin, Bifenthrin, Petroleum Oil, Naled, Dimethoate, Soybean Oil, Lambdacyhalothrin, Paraffinic Oil, Imidacloprid, Thiamethoxam, Gamma-Cyhalothrin, Cyfluthrin, Dinotefuran, Cyromazine	Azadirachtin, Garlic Juice Extracts
Pepper Weevil	Acetamiprid, Beta-Cyfluthrin, Bifenthrin, Cryolite, Cyfluthrin, Deltamethrin, Diflubenzuron, Esfenvalerate, Gamma-Cyhalothrin, Imidacloprid, Lambdacyhalothrin, Oxamyl, Permethrin, Spinetoram, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin

Spider Mite	Abamectin, Gamma-Cyhalothrin, Lambdacyhalothrin, Naled, Potassium Salts of Fatty Acids	Neem Oil
Thrips	Acetamiprid, Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Deltamethrin, Dinotefuran, Gamma-Cyhalothrin, Imidacloprid, Kaolin, Lambdacyhalothrin, Oxamyl, Petroleum Oil, Potassium Salts of Fatty Acids, Soybean Oil, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Neem Oil, Peppermint and Rosemary Oil, Pyrethrins

Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	Clomazone, DCPA, Napropamide, S-Metolachlor, Bensulide, Pendimethalin, Trifluralin	Corn Gluten Meal
Preemergence	DCPA, Napropamide, S-Metolachlor	
Postemergence	Carfentrazone, Oxyfluorfen, Paraquat, Halosulfuron, Sethoxydim, Pendimethalin, 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 - 110-120 days Transplants - 75-85 days
Normal method	Hand harvested
Optimum Stage	Fully mature green Firm solid pods 3 - 3.5" in diameter 3.5 - 4" in length
Containers	Burlap bags

Grades	U.S. Fancy > 3" diameter U.S. #1 2.5-3" diameter U.S. #2 < 2" diameter
Packaging/Handling	Packed in 20 lb cardboard cartons
Anticipated yield/acre	400-450 cartons

Transit Conditions
45-55°F at 90-95% RH; shelf-life 2-3 weeks. Peppers are shipped refrigerated and kept above 45°F to avoid chilling injury.

Comments/Production Keys

- Harvest every 7-10 days, after first fruit set are dark green and firm walled
- Moisture stressing seedlings 25-30 days after establishment may enhance root development and yield (practice may not be successful in drier areas)
- When cultivating be careful not to root prune. Most roots run north and south and can root to depths of 36-48". Deep cultivate bottom of water furrows only.
- Avoid moisture stress during bloom and fruit swell. Deficits after fruit load can result in sun scalding.
- Peak ET (evapotranspiration) for peppers is 0.2"/day
- Peppers respond well to windbreaks, plastic mulch, drip irrigation and fertigation
- Weevil control dictates starting spray applications at fruit bud initiation
- Tobacco etch, Pepper mottle, Tobacco ringspot, Cucumber mosaic and spotted wilt viruses have been reported to act alone or in a complex to cause significant pepper losses. Use resistant varieties whenever possible, however, no one variety at present has resistance to all viruses.