



# Cucumber (pickling)

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## Varieties

Calypso, Carolina, County Fair 87, H-19 Little Leaf, Homemade, Little Leaf, National, SMR-58

## Soil Preferences

Will tolerate a wide range of soils but prefers well-drained sandy loams. pH range 6.3 - 7.5, will tolerate acid soils as low as 5.5.

## Optimum Growing Conditions

Hot days (80-90°F) and warm nights (60-70°F). Low humidity and dry conditions are favored, especially under irrigated production.

## Establishment Methods

<b>Planting Method</b>	Direct seeded or transplanted
<b>Optimum Time</b>	Spring - soil seed zone temperature 65-70°F Fall - approximately 70-75 days prior to first frost date
<b>Seeding rate</b>	2.5 lbs/acre precision planted; 5 lbs/acre
<b>Approx seed/oz</b>	1,100
<b>Seeding depth</b>	0.5 - 0.75"
<b>Seedling spacing</b>	Hand harvest - 3-6" in-row on 40" wide raised bed (one line/bed) Machine harvest - 6" in-row, 3 lines 10-12" apart on 80" bed

## Fertility/Fertilization

Rates presented as actual lbs/acre N<sub>2</sub>, P<sub>2</sub>O<sub>5</sub>, and K<sub>2</sub>O (base actual rates applied on soil test results).

Generalized rate: 80 - 80 - 80 lb/acre	
<b>N*</b>	Machine harvest - 60-100 lbs/acre applied pre-plant Hand harvest - 40-60 lbs/acre pre-plant + side-dress 20 lbs/acre at vining (especially when produced on sandy soils)

<b>P</b>	60-80 lbs/acre banded approximately 2" below seed at planting
<b>K</b>	60-80 lbs/acre applied with the pre-plant nitrogen; normally not needed in most areas of Texas

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

### Water/Irrigation

15 - 25" depending upon multi-pick or once over machine harvest. Need uniform moisture supply. Key stress stages are at establishment, vining and fruit development.

### Pest Management

#### Cucumber Diseases and Common Name of Fungicidal Controls

<b>DISEASE</b>	<b>FUNGICIDE*</b>	<b>OMRI LISTED FUNGICIDE**</b>
<b>Anthraco</b> <b>nose</b>	Azoxystrobin, Chlorothalonil, Copper Sulfate, Mancozeb, Maneb, Potassium Phosphite, Pyraclostrobin, Thiophanate-Methyl	<i>Bacillus subtilis</i> , Copper Hydroxide, Cuprous Oxide, Neem Oil, Potassium Bicarbonate
<b>Downy</b> <b>mildew</b>	Acibenzolar-S-Methyl, Azoxystrobin, Chlorothalonil, Copper Sulfate, Cymoxanil, Dimethomorph, Fenamidone, Fluopicolide, Fosetyl-Al, Mancozeb, Mandpropamid, Maneb, Potassium Phosphite, Propamocarb Hydrochloride, Cyazofamid, 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, <i>Streptomyces lydicus</i> , Potassium Bicarbonate
<b>Fruit rot</b>	Mancozeb, Potassium Phosphite,	
<b>Nematode</b>	1,3-Dichloropropene, Chloropicrin, Ethoprop, Metam-Potassium, Metam-Sodium, Sesame Oil	Azadirachtin
<b>Powdery</b> <b>mildew</b>	Acibenzolar-S-Methyl, Azoxystrobin, Copper Sulfate, Kaolin, Kresoxim-Methyl, Myclobutanil, Paraffinic Oil, Potassium Phosphite, Potassium Salts of Fatty Acids, Polyoxin D Zinc Salt, Pyraclostrobin, Sodium Tetraborohydrate Decahydrate, Sulfur, Tebuconazole, Thiophanate-Methyl, 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, <i>Streptomyces lydicus</i> , Potassium Bicarbonate

<b>Viruses</b>	Paraffinic Oil	
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### Cucumber Insect Pests and Common Name of Insecticidal Controls

<b>INSECT</b>	<b>INSECTICIDE*</b>	<b>OMRI LISTED INSECTICIDE**</b>
<b>Aphid</b>	Acetamiprid, Bifenthrin, Dinotefuran, Endosulfan, Fenpropathrin, Imidacloprid, Lambdacyhalothrin, Malathion, 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
<b>Cutworm</b>	Beta-Cyfluthrin, Bifenthrin, Carbaryl, Cyfluthrin, Deltamethrin, Diazinon, Esfenvalerate, Flubendiamide, Lambdacyhalothrin, Malathion, Permethrin, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i>
<b>Leafminer</b>	Abamectin, Cyromazine, Deltamethrin, Dinotefuran, Lambdacyhalothrin, Malathion, Paraffinic Oil, Permethrin, Petroleum Oil, Soybean Oil, Spinetoram, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Spinosad
<b>Looper</b>	Methomyl	Azadirachtin, <i>Bacillus thuringiensis</i> , Garlic Juice Extracts, Pyrethrins
<b>Melonworm</b>	Acetamiprid, Beta-Cyfluthrin, Bifenthrin, Carbaryl, Chlorantraniliprole, Cryolite, Cyfluthrin, Deltamethrin, Endosulfan, Flubendiamide, Indoxacarb, Lambdacyhalothrin, Methomyl, Methoxyfenozide, Permethrin, Spinetoram, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i> , Spinosad
<b>Mite</b>	Oxydemeton-Methyl, Paraffinic Oil, Petroleum Oil, Sodium Tetraborohydrate Decahydrate, Soybean Oil	Azadirachtin, Garlic Juice Extracts, Neem Oil
<b>Pickleworm</b>	Acetamiprid, Beta-Cyfluthrin, Bifenthrin, Carbaryl, Chlorantraniliprole, Cryolite, Cyfluthrin, Deltamethrin, Endosulfan, Esfenvalerate, Indoxacarb, Lambdacyhalothrin, Malathion, Methomyl, Methoxyfenozide, Permethrin, Spinetoram, Zeta-Cypermethrin	Azadirachtin, <i>Bacillus thuringiensis</i> , Garlic Juice Extracts, Spinosad
<b>Whitefly</b>	Beta-Cyfluthrin, Bifenthrin, Cyfluthrin, Deltamethrin,	Azadirachtin, Garlic

Dinotefuran, Endosulfan, Fosetyl-AI, Imidacloprid, Lambdacyhalothrin, Paraffinic Oil, Petroleum Oil, Potassium Salts of Fatty Acids, Spiromesifen, Thiamethoxam	Juice Extracts, Pyrethrins
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### Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
<b>Preplant incorporated</b>	Clomazone, Ethalfluralin, DCPA, Bensulide, Trifluralin	Corn Gluten Meal
<b>Preemergence</b>	Ethalfluralin, DCPA	
<b>Postemergence</b>	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

<b>Days after planting</b>	45-65
<b>Normal method</b>	Hand or machine
<b>Containers</b>	Fresh market - baskets Processing - bulk wagon
<b>Grades</b>	U.S. No. 1- similar type, free from defects
<b>Packaging/Handling</b>	Bushel baskets, crates, cartons containing 24 1 lb packs/bunches Cartons/wire-bound crates containing 30-35 lbs
<b>Anticipated yield/acre</b>	5-6 tons or 300-400 cartons

## **Transit Conditions**

Non-refrigerated bulk pallet bins

## **Comments/Production Keys**

- Most varieties produce predominately female flowers; therefore, bees are essential (one strong hive/acre containing at least 3-4 lbs of bees in 5 broods of varying stages).
- Place hives in groups around the field at first bloom, preferably on the windward side
- Avoid spraying between 8-11 a.m. (period of greatest bee activity); preferably night spray
- Rainy or windy weather can reduce bee activity and causes yield and quality reductions (5-7 days later)
- Collapsed or knobby fruit is an indication of poor pollination
- Excessive nitrogen or water can delay maturity or cause oversized fruit if applied improperly. Discontinue applications at the onset of bloom. (For multi-pick situations, irrigating every other bed will lessen the reduced irrigation scheduling problems)
- Proper timing is critical to machine harvest success. Delay harvest until first set fruit oversize (> 2" diameter).
- Good weed control is a must for efficient harvest
- Temperatures 95-100°F and other plant stress can cause sex reversion in flowers and a subsequent yield reduction
- Temperature < 60°F can delay maturity as much as 15 days; < 50°F can severely stunt plants and reduce yield