

# 

# Eggplant

Dr. Joe Masabni Department of Horticulture Texas AgriLife Extension Service

#### Varieties

*American/Classic:* Black Beauty, Black Bell, Black Magic, Classic, Dusky, Florida High Bush, Florida Market *Asian:* Ichiban, Long Tom, Megal, Millionaire, Neon, Pingtung long, Tango, Tycoon

Italian: Blacknite, Early Long Purple, Galine, Rosa Bianca

Sicilian: Fairy Tale, Purple Rain, Zebra

*White and Specialty Varieties:* California White, Dancer, Easter Egg, Louisiana Long Green, Snowy, White Cloud

# **Soil Preferences**

Well drained, fertile, sandy loam soil with pH 5.5 - 7.2. The higher the organic matter content, the better.

# **Optimum Growing Conditions**

Warm season, continuous long warm days (72-86°F) and warm nights (70-75°F). Will tolerate high temperatures, but growth stops below 63°F.

# **Establishment Methods**

Planting Method	Transplanted (preferred) or direct seeded	
Optimum Time Transplants   • Spring - day temperature > 65°F   • Fall - 80-90 days prior to anticipated harvest   Direct Seeded   • Spring - soil seed zones temperature > 65°F   • Fall - soil seed zone temperature > 95°F		
Seeding rate	1.5 - 2 lbs/acre	
Approx seed/oz	6,500	



Seeding depth	1/8 - 1/4"
Seedling spacing	24-36" on 38-40" wide raised beds

# 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: 120 - 90 - 110 lb/acre	
N*	70-135
Р	70-150
К	100-120 (normally only required in East Texas)

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

#### Water/Irrigation

20 - 35" applied uniformly throughout growing season. Critical time during bloom through fruit set.

#### **Pest Management**

# Eggplant Diseases and Common Name of Fungicidal Controls

DISEASE	FUNGICIDE*	OMRI LISTED FUNGICIDE**
Anthracnose	Azoxystrobin, Chlorothalonil, Copper Sulfate, Maneb, Polyoxin D Zinc Salt, Potassium Phosphite, Pyraclostrobin, Trifloxystrobin	Copper Hydroxide, Cuprous Oxide, Neem Oil, Potassium Bicarbonate
Damping off (Pythium)	Fludioxonil, Thiram	
Nematode	1,3-Dichloropropene, Chloropicrin, Fenamidone, Metam-Potassium, Oxamyl, Sesame Oil	Azadirachtin
Phomopsis fruit rot	Copper Sulfate	Copper Hydroxide, Cuprous Oxide
Phytophthora crown rot	Mefenoxam, Metaxyl	



#### Eggplant Insect Pests and Common Name of Insecticidal Controls

INSECT	INSECTICIDE*	OMRI LISTED INSECTICIDE**
Aphid	Acetamiprid, Deltamethrin, Dinotefuran, Gamma- Cyhalothrin, Imidacloprid, Lambdacyhalothrin, Malathion, Naled, Oxamyl, 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, Pyrethrins
Leafminer	Bifenthrin, Cyfluthrin, Deltamethrin, Dinotefuran, Gamma-Cyhalothrin, Imidacloprid, Lambdacyhalothrin, Naled, Oxamyl, Paraffinic Oil, Petroleum Oil, Soybean Oil, Thiamethoxam	Azadirachtin, Garlic Juice Extracts
Spider Mite	Oxamyl, Oxydemeton-Methyl, Paraffinic Oil, Petroleum Oil, Sodium Tetraborohydrate Decahydrate, Soybean Oil	Azadirachtin, Garlic Juice Extracts, Neem Oil
Whitefly	Beta-Cyfluthrin, Bifenthrin, Cyfluthrin, Deltamethrin, Dinotefuran, Endosulfan, Fenpyroximate, Gamma- Cyhalothrin, Imidacloprid, Lambdacyhalothrin, Paraffinic Oil, Petroleum Oil, Potassium Salts of Fatty Acids, Soybean Oil, Spirotetramat, Thiamethoxam, Zeta-Cypermethrin	Azadirachtin, Garlic Juice Extracts, Neem Oil, Pyrethrins

# Weeds and Common Name of Herbicidal Controls

WEED	HERBICIDE*	OMRI LISTED HERBICIDE**
Preplant incorporated	DCPA, Napropamide, Bensulide, Trifluralin	Corn Gluten Meal
Preemergence	DCPA, Napropamide	
Postemergence	Carfentrazone, 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	Transplants - 70-90 Direct seeded - 112-146	
Normal method	Hand (easily bruised so care should be exercised to prevent bruising)	
Containers	Bushel baskets	
Grades	Fancy, #1, #2 depending upon size, uniformity and presence of defects	
Packaging/Handling	33 lb 1 1/9 bushel cartons holding 18 or 24 count Italian eggplant: 10 lb bulk cartons of 4/6 oz packages	
Anticipated yield/acre	13,000-15,000 lbs	

# **Transit Conditions**

45-50°F at 90-95% RH for 1 week. Experience chilling injury at or below 45°F.

# **Comments/Production Keys**

- As fruit matures flesh softens; harvest when a slight indentation remains when fruits are pressed slightly with finger or thumb
- Reaches peak harvest maturity when 5-8" long (1/3 2/3 mature size), true to color for variety type and prior to seed color change
- Calyx or cap should be allowed to remain attached to fruit when harvested
- Responds well to plastic mulch drip irrigation and row covers due to long growing season requirements and sensitivity to cold conditions
- Good drainage a must, very sensitive to root rots
- Cultivars with very long type fruits are more resistant to extremely high temperatures; small egg-shaped and oval types are not
- Flowering begins after the sixth leaf has opened in early cultivars; late varieties require 14 leaves prior to flowering
- Not sensitive to day length as far as flowering is concerned
- oriental cultivars bear long slender fruits and are more prolific than the standard types