EGGPLANTS

Varieties

Varieties[1]	
Specialty	
Orient Express* (early oriental type)	
Ichiban* (oriental type)	
Machiaw (oriental type)	
Orient Charm (light purple)	
Ghostbuster (white)	These varieties are
Cloud Nine (white)	recommended for DE,
Millionaire* (oriental type)	MD, NJ, PA, VA, WV
Viserba*	
Bharta (Indian type)	
Pushpa (Indian type)	
Rosita (lavender)	
Zebra* (lavender/ purple,white stripes)	
Standard	
Classic*	These varieties are
Nadia*	recommended for DE,
Night Shadow*	MD, NJ, PA, VA, WV
Classy Chassis*	
Santana*	
Local Hibush Selections	

[1] Varieties listed by maturity, earliest first.

*Indicates hybrid varieties

Recommended Nutrients Based on Soil Tests

Before using the table below, refer to important notes in Plant Nutrient Recommendations in Section B, Soil And Nutrient Information. These notes provide additional suggestions to adjust rate, timing and placement of nutrients depending on soil type cation exchange capacity and existing fertility levels.

Eggplants	Nitrogen (N) Pounds per Acre	Soil Phosphorus Level			Soil Potassium Level		
		Low	Med	Opt.	Low	Med	Opt.
		Pounds $P_2 0_5$ per Acre			Pounds $K_2 0$ per Acre		
	125-150[1]	250[1]	150[1]	100[1]	250[1]	150[1]	100[1]
	50-100[2]	250[2]	150[2]	100[2]	250[2]	150[2]	100[2]
	25-50[3]	0	0	0	0	0	0
	25-50[4]	0	0	0	0	0	0

[1] Total amount nutrient recommended

[2] Broadcast and disk-in

[3] Sidedress 3-4 weeks after planting

[4] Sidedress 6-8 weeks after planting

Apply 1 - 2 pounds of boron (B) per acre with broadcast fertilizer. See Table B-10 for more specific boron recommendations.

Note: If crop is to be mulched with plastic but not drip/trickle fertilized, broadcast 225 pounds of nitrogen (N) per acre with recommended $P_2 0_5$ and $K_2 0$ and disk-in or incorporate prior to laying mulch.

Eggplant is a warm-season crop that makes its best growth at temperatures between 70° to 85°F (21.1° to 29.4°C). Temperatures below 65°F (18.3°C) result in poor growth and fruit set.

Drip/Trickle Fertilization: see below for drip/trickle fertilization guides.

Seed Treatment

Soak seed in hot water at 122°F (50°C) for 25 minutes. Dry seed then slurry or dust with thiram 75WP at the rate of 2/3 teaspoon per pound of seed (4 ounces per 100 pounds).

Transplant Production

Sow seed in the greenhouse 8 to 10 weeks before field planting. Three to 4 ounces of seed are necessary to produce plants for 1 acre. Optimum temperatures for germination and growth are 70° to 75°F (21.1° to 23.9°C). Seedlings should be transplanted to 2-inch or larger pots or containers anytime after the first true leaves appear, or seed can be sown directly into the pots and thinned to a single plant per pot. Control aphids on seedlings in greenhouse with a Thionex aerosol bomb before transplanting to field.

Transplanting Dates

Harden plants for a few days at 60° to 65°F (15.6° to 18.3°C) and set in field after danger of frost and when average daily temperatures have reached 65° to 70°F (18.3° to 21.1°C). Usual transplanting dates are May 15 to June 5.

Spacing

Rows: 4 to 5 feet apart; *plants*: 2 to 3 feet apart in the row. Space plants 18 to 30 inches apart in Pennsylvania and for late plantings in other areas.

Drip/Trickle Fertilization

Before mulching, adjust soil pH to around 6.5 and then apply enough farm-grade fertilizer to supply 60 pounds per acre of N, P_2O_5 and K_2O. Then thoroughly incorporate into the soil. If soil tests medium or less in soil potassium, apply a fertilizer with a ratio of 1-1-2 or 1-1-3 carrying 60 pounds of nitrogen per acre.

After mulching and installing the trickle irrigation system, apply completely soluble fertilizers to supply 40 pounds (10 to 20 pounds in Pennsylvania) of N, P_2O_5 and K_2O per fertilized-mulched acre during each application (a description of a fertilized-mulched acre may be found in the "Irrigation" section of this publication). On soils testing low and low to medium in boron and that have not received any preplant boron fertilizer, include 0.25 pound of actual boron per fertilized-mulched acre in each soluble fertilizer application. For convenience, rates of fertilizer nutrients can be converted from a mulched acre to linear foot basis. See Table C-8.

The first soluble fertilizer application should be applied through the trickle irrigation system within 1 week after field transplanting the eggplants. The same rate of soluble fertilizer should be applied about every 3 weeks during the growing season for a total of six to seven applications. In Pennsylvania, do not exceed 120 pounds of nitrogen per acre per season.

Mulching

Yields of eggplant can be increased up to 300 percent and maturity hastened by using clear plastic as a mulching material. Best results are obtained by fumigating with Vapam HL (45 gallons per acre) and immediately applying plastic (4 feet wide laid on 5 or 6-foot centers) about 30 days before crop is to be transplanted. Fumigation alone may not provide satisfactory weed control under clear plastic. Herbicides labeled and recommended for use on eggplants may not provide satisfactory weed control when used under clear plastic mulch on nonfumigated soil. Consult your county agent for latest recommendations. Container-grown plants are then planted through the plastic. At least 50 percent

of the nitrogen (N) should be in nitrate form (NO_3) when planting in fumigated soil under plastic mulch.

Staking

High intensity eggplant production may benefit from staking. Consider the costs and economic returns. Use a staking system similar to that described in the "Tomatoes" section of this manual. Eggplants require a stake at each plant to support the plant and fruit load.

Weed Control

Identify the weeds in each field and select recommended herbicides that control those weeds. See Tables E-2 and E-3.

Match preplant incorporated and preemergence herbicide rates to soil type and percent organic matter in each field. See "Mulching" section above for further information on weed control under clear plastic mulch.

Apply postemergence herbicides when crop and weeds are within recommended size and/or leaf stage.

For Weed Control Under Plastic Mulch

Black plastic mulch effectively controls most annual weeds by preventing light from reaching the germinated seedling. Herbicides are used under plastic mulch to control weeds around the planting hole, and under the mulch when clear plastic is used. Trickle irrigation tube left on the soil surface may cause weed problems by leaching herbicide away at the emitters. The problem is most serious when clear plastic mulch is used. Bury the trickle tube several inches deep in the bed to reduce this problem.

1. Complete soil tillage, and form raised beds, if desired, prior to applying herbicide(s). Do not apply residual herbicides before forming beds, or herbicide rate and depth of incorporation may be increased, raising the risk of crop injury. When beds are formed and plastic mulch laid in a single pass, the herbicide should be applied after the bed is formed, as a part of the same operation.
2. Apply herbicide(s) recommended for use under plastic mulch in a band as wide as the mulch. Condensation that forms on the underside of the mulch will activate the herbicide. Use the trickle irrigation to provide moisture if the soil is too dry for condensation to form on the underside of the mulch.
3. Complete by laying the plastic mulch and trickle irrigation tubing, if used, immediately after the herbicide application. Delay punching the planting holes until seeding or transplanting.

Napropamide--1-2 lb/A. Apply 2 to 4 pounds per acre Devrinol 50DF preemergence in a band under the plastic, immediately before laying the mulch. Condensation that forms on the underside of the mulch will activate the herbicide. Annual grasses and certain annual broadleaf weeds will be suppressed or controlled under the mulch and around the plant hole. Use lower rate on coarse-textured or sandy soil. Devrinol may reduce stand and yield of fall grains. Moldboard plowing will reduce the risk of injury to a small grain follow crop.For Soil Strips Between Rows of Plastic Mulch

(Directed and Shielded Band Applications)

Use the following land preparation, treatment, planting sequences, and herbicides labeled for the crop to treat **Soil Strips Between Rows of Plastic Mulch**, or crop injury and/or poor weed control may result.

1. Complete soil preparation, apply herbicide(s) under the mulch (see above), and lay plastic and trickle irrigation (optional) before herbicide application between the rows.
2. Spray preemergence herbicide(s), registered and recommended for use on the crop in bands onto the soil and the shoulders of the plastic mulch before planting and weeds germinate, **OR** apply after planting as a shielded spray combined with a postemergence herbicide to control emerged weeds**. DO NOT broadcast spray over the plastic mulch at any time!**
3. Incorporate preemergence herbicide into the soil with ½ to 1 inch of rainfall or overhead irrigation within 48 hours of application
4. Apply Gramoxone in bands to the soil strips between the plastic mulch before the crop emerges or is transplanted, **AND/OR** as a shielded spray postemergence to control emerged weeds. Use in combination with residual herbicides that are registered for use.

Note. All herbicide rate recommendations are made for spraying a broadcast acre (43,560 ft^2).

Preemergence

Napropamide--1-2 lb/A. Apply 2 to 4 pounds per acre Devrinol 50DF as a banded directed shielded spray and activate with one-half inch of rainfall or sprinkler irrigation within 48 hours of application to control most annual grasses and certain broadleaf weeds. Use lower rate on coarse-textured or sandy soil. Devrinol may reduce stand and yield of fall grains. Moldboard plowing will reduce the risk of injury to a small grain follow crop.

Postemergence

DCPA--6-10.5 lb/A. Apply 8 to 14 pints per acre Dacthal 6F as a banded directed shielded spray 4 to 6 weeks after transplanting for preemergence weed control. Emerged weeds will not be controlled. Dacthal will not injure crop foliage. Spray broadcast when eggplants are grown without plastic mulch, or band between the rows when plastic mulch is used. Controls late season annual grasses, common purslane, and certain other broadleaf weeds.

Halosulfuron--0.023-0.047 lb/A. Apply 0.5 to 1.0 dry ounce Sandea 75WG **as a banded directed shielded spray to the soil strips between rows of plastic mulch ONLY,** to suppress or control yellow nutsedge and broadleaf weeds including common cocklebur, redroot pigweed, smooth pigweed, ragweed species, and galinsoga. Sandea applied postemergence will not control common lambsquarter or eastern black nightshade. Add nonionic surfactant to be 0.25 percent of the spray solution (1 quart per 100 gallons of spray solution). DO NOT use oil concentrate. Susceptible broadleaf weeds usually exhibit injury symptoms within 1 to 2 weeks of treatment. Typical symptoms begin as yellowing in the growing point that spreads to the entire plant and is followed by death of the weed. Injury symptoms are similar when yellow nutsedge is treated but may require 2 to 3 weeks to become evident and up to a month for the weed to die. Sandea is an ALS inhibitor. Herbicides with this mode of action have a single site of activity in susceptible weeds. The risk of the development of resistant weed populations is high when herbicides with this mode of action are used continuously and exclusively to control a weed species for several years or in consecutive crops in a rotation. Integrate mechanical methods of control and use herbicides with a different mode of action to control the target broadleaf weeds when growing other crops in the rotation. DO NOT apply Sandea to crops treated with a soil applied organophosphate (OP) insecticide, or use a foliar applied organophosphate

(OP) insecticide within 21 days before or 7 days after a Sandea application. **DO NOT exceed total of 0.094 pounds per acre, equal to 2.0 dry ounces of Sandea per crop-cycle. DO NOT exceed a total of 0.094 pound per acre, equal to 2 dry ounces of Sandea applied in one year.**

Paraquat--0.6 lb/A. Apply 1.5 pints per acre Gramoxone Max 3SC or 2.4 pints per acre Gramoxone Inteon 2SC **as a banded directed shielded spray between the rows ONLY,** to control emerged grass and broadleaf weed seedlings. DO NOT allow the spray to contact plants as injury or residues may result. Use shields to prevent spray contact with crop plants. DO NOT exceed a spray pressure of 30 psi. Add a wetting agent as per label.

Clethodim--0.094-0.125 lb/A. Apply 6 to 8 fluid ounces per acre Select 2EC with oil concentrate to be 1 percent of the spray solution (1 gallon per 100 gallons of spray solution) or 12 to 16 fluid ounces of Select Max 0.97EC with nonionic surfactant to be 0.25% of the spray solution (1 quart per 100 gallons of spray solution) postemergence to control many annual and certain perennial grasses, including annual bluegrass. Select will not consistently control goosegrass. The use of oil concentrate with Select 2EC may increase the risk of crop injury when hot or humid conditions prevail. To reduce the risk of crop injury, omit additives or switch to nonionic surfactant when grasses are small and soil moisture is adequate. Control may be reduced if grasses are large or if hot, dry weather or drought conditions occur. For best results, treat annual grasses when they are actively growing and before tillers are present. Repeated applications may be needed to control certain perennial grasses. Yellow nutsedge, wild onion, or broadleaf weeds will not be controlled. Do not tank-mix with or apply within 2 to 3 days of any other pesticide unless labeled, as the risk of crop injury may be increased, or reduced control of grasses may result. Observe a minimum preharvest interval of 20 days.

Sethoxydim--0.2-0.3 lb/A. Apply 1 to 1.5 pints per acre Poast 1.5EC with oil concentrate to be 1 percent of the spray solution (1 gallon per 100 gallons of spray solution) postemergence as a banded directed shielded spray to control annual grasses and certain perennial grasses. **The use of oil concentrate may increase the risk of crop injury when hot or humid conditions prevail**. To reduce the risk of crop injury, omit additives or switch to nonionic surfactant when grasses are small and soil moisture is adequate. Control may be reduced if grasses are large or if hot, dry weather or drought conditions occur. For best results, treat annual grasses when they are actively growing and before tillers are present. Repeated applications may be needed to control certain perennial grasses. Yellow nutsedge, wild onion, or broadleaf weeds will not be controlled. Do not tank-mix with or apply within 2 to 3 days of any other pesticide unless labeled, as the risk of crop injury may be increased, or reduced control of grasses may result. Observe a minimum preharvest interval of 20 days and apply no more than 4.5 pints per acre in one season.

For Transplanting Into Soil Without Plastic Mulch (Broadcast Applications)

Use the following land preparation, treatment, planting sequences, and herbicides labeled for the crop when **planting into soil without plastic mulch**, or crop injury and/or poor weed control may result.

1. Complete soil tillage, apply preplant incorporated herbicide(s), and incorporate. Use a finishing disk or field cultivator that sweeps at least 100% of the soil surface twice, at right angles, operated at a minimum of 7 miles per hour (mph), OR a PTO driven implement once, operated at less than 2 miles per hour (mph).
2. Seed and apply preemergence herbicide(s) immediately after completing soil tillage, and mechanical incorporation of preplant herbicides. Irrigate if rainfall does not occur, to move the herbicide into the soil and improve availability to germinating weed seeds within 2 days of when the field was last tilled, or plan to control escaped weeds by other methods.

Preplant Incorporated

Napropamide--1-2 lb/A. Apply 2 to 4 pounds per acre Devrinol 50DF before planting and incorporate 1 to 2 inches deep with power-driven rotary cultivators, or activate with one-half inch of sprinkler irrigation within 48 hours of application to control most annual grasses and certain broadleaf weeds. Use lower rate on coarse-textured or sandy soil. Devrinol may reduce stand and yield of fall grains. Moldboard plowing will reduce the risk of injury to a small grain follow crop.

Trifluralin--0.5-1 lb/A. **A Special Local-Needs Label 24(c) has been approved for the use of Trilin in Maryland.** Apply 1 to 2 pints per acre Trilin prior to transplanting. Incorporate to a depth of 3 inches. Use the lower rate on coarse-textured soils low in organic matter, and the higher rate on fine-textured soils with high organic matter. Avoid planting during periods of cold, wet weather to reduce the risk of temporary stunting.

Postemergence

DCPA--6-10.5 lb/A. Apply 8 to 14 pints per acre Dacthal 6F 4 to 6 weeks after transplanting for preemergence weed control. Emerged weeds will not be controlled. Dacthal will not injure crop foliage. Spray broadcast when eggplants are grown without plastic mulch, or band between the rows when plastic mulch is used. Controls late season annual grasses, common purslane, and certain other broadleaf weed.

Clethodim--0.094-0.125 lb/A. Apply 6 to 8 fluid ounces per acre Select 2EC with oil concentrate to be 1 percent of the spray solution (1 gallon per 100 gallons of spray solution) or 12 to 16 fluid ounces of Select Max 0.97EC with nonionic surfactant to be 0.25% of the spray solution (1 quart per 100 gallons of spray solution) postemergence to control many annual and certain perennial grasses, including annual bluegrass. Select will not consistently control goosegrass. The use of oil concentrate with Select 2EC may increase the risk of crop injury when hot orhumid conditions prevail. To reduce the risk of crop injury, omit additives or switch to nonionic surfactant when grasses are small and soil moisture is adequate. Control may be reduced if grasses are large or if hot, dry weather or drought conditions occur. For best results, treat annual grasses when they are actively growing and before tillers are present. Repeated applications may be needed to control certain perennial grasses. Yellow nutsedge, wild onion, or broadleaf weeds will not be controlled. Do not tank-mix with or apply within 2 to 3 days of any other pesticide unless labeled, as the risk of crop injury may be increased, or reduced control of grasses may result. Observe a minimum preharvest interval of 20 days.

Sethoxydim--0.2-0.3 lb/A. Apply 1 to 1.5 pints per acre Poast 1.5EC with oil concentrate to be 1 percent of the spray solution (1 gallon per 100 gallons of spray solution) postemergence to control annual grasses and certain perennial grasses. **The use of oil concentrate may increase the risk of crop injury when hot or humid conditions prevail**. To reduce the risk of crop injury, omit additives or switch to nonionic surfactant when grasses are small and soil

moisture is adequate. Control may be reduced if grasses are large or if hot, dry weather or drought conditions occur. For best results, treat annual grasses when they are actively growing and before tillers are present. Repeated applications may be needed to control certain perennial grasses. Yellow nutsedge, wild onion, or broadleaf weeds will not be controlled. Do not tank-mix with or apply within 2 to 3 days of any other pesticide unless labeled, as the risk of crop injury may be increased, or reduced control of grasses may result. Observe a minimum preharvest interval of 20 days and apply no more than 4.5 pints per acre in one season.

Postharvest
With or Without Plastic Mulch

Paraquat--0.6 lb/A. **A Special Local-Needs 24(c) label has been approved for the use of Gramoxone Inteon 2SC for postharvest desiccation of the crop in Delaware, New Jersey and Virginia.** Apply 2.4 pints per acre Gramoxone Inteon 2SC as a broadcast spray after the last harvest. Add nonionic surfactant according to the labeled instructions. Use to prepare plastic mulch for replanting, or to aid in the removal of the mulch. See the label for additional information and warnings.

Note. All herbicide rate recommendations are made for spraying a broadcast acre (43,560 ft^2).

Insect Control

NOTE: Copies of specific insecticide product labels can be downloaded by visiting the websites www.CDMS.org or www.Greenbook.org. Also, specific labels can be obtained via web search engines.

Aphids

acetamiprid (Assail 30SG or OLF)
dinotefuran (soil/foliar-Venom 70SG or OLF)
endosulfan (Thionex 3EC or OLF)
flonicamid (Beleaf 50 SG)
imidacloprid (soil–Admire 2F, Admire PRO; foliar–Nuprid 1.6F, Provado 1.6F or OLF)
malathion (Malathion 57EC or OLF)
methomyl (Lannate LV or OLF) (**green peach aphid only**)
oxamyl (Vydate 2L)
oxydemeton (Metasystox-R 2SC)
pymetrozine (Fulfill 50WDG)
pyriproxyfen (Knack 0.86E) (**use only in combination with acephate**)
thiamethoxam (soil- Platinum 2SG; foliar- Actara 25WDG)

Colorado Potato Beetle (CPB)

CPB has the ability to rapidly develop resistance to insecticides; thus, see the section on "How to Improve Pest Control" for information on resistance management practices. The use of the egg parasitoid, *Edovum puttleri*, has been shown to control CPB effectively in eggplant.
hours after application.
acetamiprid (Assail 30SG or OLF)
Bacillus thuringiensis tenebrionis (**small CPB larvae only**) (Novodor, Raven)

Note. Larval reduction may not be noticeable for 48 to 72 hours after application.

Make first application when eggs begin to hatch and repeat applications at 5- to 7-day intervals if small larvae are present. NOT effective against medium larvae and adults. If rainfall occurs within 24 hours post-treatment, reapplication may be necessary.

chlorantraniliprole (Coregan 1.67SC)
cryolite (Kryocide 96WP, Prokil cryolite 96)
dinotefuran (soil, foliar) (Venom 70SG or OLF)
endosulfan (Thionex 3EC)
imidacloprid (soil-Admire 2F, Admire PRO; foliar-Nuprid 1.6F, Provado 1.6F or OLF)
oxamyl (Vydate L)
spinetoram (Radiant SC)
spinosad (Entrust 80W, SpinTor 2SC or OLF)
thiamethoxam (soil- Platinum 2SG; foliar- Actara 25WDG)

Flea Beetles (FB)

beta-cyfluthrin (Baythroid XL)
cryolite (Kryocide 96W, Prokil cryolite 96)
dinotefuran (soil/foliar-Venom 70SG OLF)
endosulfan (Thionex 3EC or OLF)
gamma-cyhalothrin (Proaxis)
imidacloprid (soil–Admire 2F, Admire PRO; foliar–Nuprid 1.6F, Provado 1.6F or OLF)
lambda-cyhalothrin (Lambda-Cy, LambdaT, Silencer, Warrior, Warrior II, OLF)
oxamyl (Vydate L)
thiamethoxam (soil- Platinum 2SG; foliar- Actara 25WDG)
zeta-cypermethrin (Mustang MAX, Respect)

Leafminers (LM), Eggplant Lacebug (ELB)

dinotefuran (soil/foliar-Venom70 SG or OLF) (**LM only**)
malathion (Malathion 57EC or OLF) (**ELB only**)
oxamyl (Vydate L)
spinetoram (Radiant SC) (**LM only**)
spinosad (Entrust 80WP, SpinTor 2SC or OLF) (**LM only**)

Mites

bifenthrin (Brigade EC, Sniper, or OLF
bifenzate (Acramite 50WS)
hexakis (Vendex 50WP or OLF)
oxamyl (Vydate L)
oxydemeton (Metasystox-R 2SC)
spiromesifen (Oberon 2SC)

Thrips

spinosad (Entrust 80W, SpinTor 2SC or OLF)

Pesticide	Use Category[1]	Hours to Reentry	Days to Harvest
INSECTICIDE			
acetamiprid	G	12	7
Bacillus thuringiensis	G	4	0
beta-cyfluthrin	R	12	7
bifenthrin	R	12	7
bifenzate	G	12	12
chlorantraniliprole	G	4	1
cryolite	G	12	0
dinotefuran (soil/foliar)	G	12	21/1
endosulfan	R	24	1
flonicamid	G	12	0
gamma-cyhalothrin	R	24	5
hexakis	R	48	3
imidacloprid (soil/foliar)	G	12	21/7
lambda-cyhalothrin	R	24	5
malathion	G	12	3
methomyl	R	48	5
oxamyl (soil/foliar)	R	48	7/1
oxydemeton	R	24	7
pymetrozine	G	12	0
pyriproxyfen	G	12	14
spinetoram	G	4	1

(table continued next page)

Pesticide	Use Category[1]	Hours to Reentry	Days to Harvest

INSECTICIDE *(continued)*			
spinosad	G	4	1
spiromesifen	G	12	7
thiamethoxam (soil/foliar)	G	12	30/0
zeta-cypermethrin	R	12	1
FUNGICIDE (FRAC code)			
Cabrio (Group 11)	G	12	0
copper, fixed (Group M1)	G	24	0
Flint (Group 11)	G	12	0
Forum (Group 40)	G	12	0
maneb (Group M3)	G	12	5
Quadris (Group 11)	G	4	0
Ridomil Gold (Group 4)	G	12	7
Ultra Flourish (Group 4)	G	12	7

See Table D-6.

1 G = general, R = restricted

Nematode Control

See Chapter E, "Nematodes" section of "Soil Pests-Their Detection and Control". Use fumigants listed in the "Soil Fumigation" section.

Disease Control

Damping-Off

Control is obtained by using the seed treatment and seeding into a sterile mix. Consideration should be given to using soilless mixes containing microorganisms that suppress damping-off fungi.

SoilGard 12G--1.0-1.5 lb/cu yd of soilless mix.

SoilGard is a naturally occurring soil fungus which is an antagonist to plant pathogenic fungi. Uniformly add Soil-Gard 12G when soilless mixes are being blended by mechanical devices. After one day of incubation, seed or transplants can be added to the treated mix.

Verticillium Wilt

Best control can be accomplished by a 4- to 5-year rotation with crops other than tomato, potato, pepper, strawberry, or any of the brambles. Varieties which appear to maintain yield in infested fields include Classic, Epic, Vernal, and Viserba.

Soil fumigation will provide some control by delaying symptom expression. Refer to the "Soil Fumigation" section for details on application. Use metam-sodium (Vapam HL at 56 to 75 gallons per acre) with a plastic seal. Broadcast treatments are superior to row treatments.

Grafting Verticillium resistant tomato rootstocks to susceptible eggplant varieties is a viable strategy to reduce the impact of disease.

Before grafting: 1) expose the scion and rootstock to sunshine for two to three days, 2) withhold water from the plants to avoid spindly growth and 3) make sure that the scions and rootstock have stems of a similar diameter. Grafted plants are usually healed and acclimated in a plastic tunnel. The healing and acclimatization are very important for grafted plants to survive. The tunnel is covered with materials that provide shade and maintain a high relative humidity inside the tunnel.

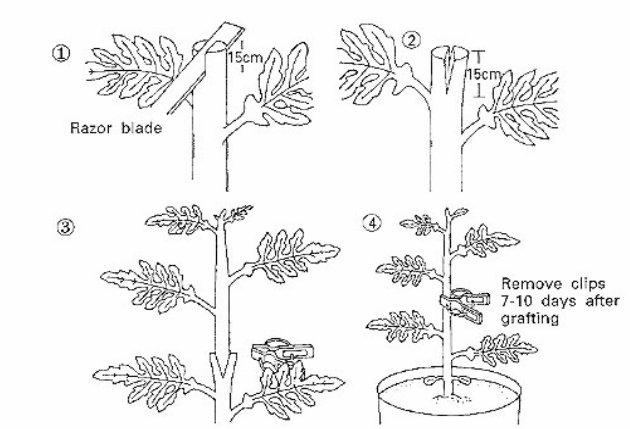

Figure F-1 Schematic Diagram of Cleft Grafting

Leaf Spots and Fruit Rots

Scout on a regular basis. Begin preventative sprays when weather conditions favor disease development or when symptoms of disease first appears and repeat every 7 to 10 days.

Rotate one of the following FRAC code 11 fungicides:
Quadris--6.0 to 15.5 fl oz 2.08SC/A, or
Cabrio--8.0-12.0 oz 20EG/A (leaf spots only), or
Flint--2.0-4.0 oz 50 WDG/A

With:

maneb--1.5-2.0 lb 75DF/A or OLF

Do not make more than 4 total applications of fungicides from the FRAC code 11 group in a single year.

Tomato Spotted Wilt Virus (TSWV)

TSWV is spread by thrips from flowering ornamental plants to eggplant. Do not grow any ornamental bedding plants in the same greenhouse as eggplant transplants. Monitor and scout greenhouses for thrips and begin an insecticide control program once observed.

Phytophthora Blight (Phytophthora capsici)

The pathogen causes collar rot, fruit rot, and stem cankers. To minimize the occurrence of the disease, rotate away from susceptible crops (cucurbits, peppers, eggplants, and tomatoes) for as many years as possible. For control of collar rot, plant onto raised beds and use the following:

mefenoxam---1.0 pt (Ridomil Gold) 4EC/A or 1.0 qt (Ultra Flourish) 2E/A. Apply broadcast prior to planting or in a 12 to 16-inch band over the row before or after transplanting. Make two supplemental post-directed applications at 1.0 pt/A Ridomil Gold or 1.0 qt/A Ultra Flourish to 6 to 10 inches of soil on either side of the plants at 30-day intervals. Use formula in the "Calibration for Changing from Broadcast to Band Application" section of Calibrating Granular Application Equipment to determine amount of Ridomil Gold or Ultra Flourish needed per acre when band applications are made.

For suppression of the stem and fruit rot phase of Phytophthora blight, apply the following on a 7 to 10 day schedule. When environmental conditions are condusive for disease development shorten the interval to 5-7 days:

Forum--6.0 fl oz 4.18SC/A *plus* fixed copper at labeled rates

Harvesting

Fruits should be harvested when the outside color is still a glossy purple and the seed and pulp are white. Soft fruit and dark seed indicate overmaturity. Fruits must be harvested as

they reach maturity to ensure continued fruit set.