Sweet Potatoes

Recommended Varieties

Variety[1]	Skin	Flesh	SB[2]	SR[2]	RK[2]	FW[2]	RZ[2]	BSR[2]	FRR[2]
Averre	Light Rose	Orange	I	I	S	R			
Bayou Belle	Red/Purple	Orange		R	S	R	I		R
Beauregard B-14 (compact)	Light Rose	Orange	I	I	S	R	R	S	R
Beauregard B-63 (extended vine)	Light Rose	Orange	I	I	S	R	R	S	R
Bellevue	Copper	Orange		I	R	R	R	S	
Bonita	Light Tan	White		I	R	I	S		S
Burgundy	Red	Orange		I	R	R	S	I	
Covington	Rose	Orange		R	R				R
Evangeline	Light Rose	Orange	R	I	R	R	R		R
Jewel	Copper	Orange	I	S	R	R	I	I	I
O'Henry	Cream	White	I	I	S	R	R	S	R
Orleans	Light Rose	Orange		I	S	R	R	S	R
Purple Splendor	Dark Purple	Purple		R	R	R			

[1]**Listed alphabetically**.
[2]S Susceptible, I Intermediate Resistant; R Resistant; SB = Sclerotinia Blight; SR = Soil Rot (Pox); RK = Root Knot Nematode; FW = *Fusarium* Wilt; RZ = *Rhizopus* Rot; BSR = Bacterial Soft Rot; FRR = *Fusarium* Root Rot.

Recommended Nutrients Based on Soil Tests

In addition to using the table below, check the suggestions on rate, timing, and placement of nutrients in your soil test report and chapter B Soil and Nutrient Management. Your state's soil test report recommendations and/or your farm's nutrient management plan supersede recommendations found below.

		Soil Phosphorus Level				Soil Potassium Level				
		Low	Med	High (Opt)	Very High	Low	Med	High (Opt)	Very High	
Sweet Potatoes[1]	**N (lb/A)**	**P_2O_5 (lb/A)**				**K_2O (lb/A)**				**Nutrient Timing and Method**
	50-75	200	100	50	0[2]	300	200	100	0[2]	Total nutrient recommended.
	25	200	100	50	0[2]	300	200	100	0[2]	Broadcast and disk-in
	25-50	0	0	0	0	0	0	0	0	Sidedress when vines start to run.

[1]Apply 20-30 lb/A of sulfur (S) for most soils. [2]In VA, crop replacement values of 25 lb/A of P_2O_5 and 50 lb/A of K_2O are recommended on soils testing Very High.

Variety Selection

Select variety according to market preferences, local adaptation, and specific soil problems. Current varieties require 100 to 140 days to achieve maximum yield, depending on cultural practices, irrigation, and environmental conditions. Use certified G1 or G2 (generations), virus tested, disease-free "seed" (storage root used for transplant/slip production) or cuttings (sprouts or slips for field planting) to maximize yield and quality.

Site Selection, Soil and Fertilization

Well-drained sandy to sandy loam soils are best for sweet potato, either bedding or production. Avoid heavy soils and soils that will stand water for more than 24 hr. Avoid excessive amounts of organic matter (such as fields just broken from hay or pastures). Soils with high levels of organic matter may promote scurf, and fields previously in hay/pasture/turf may be infested with high populations of Asian beetle larvae. Use long rotations with grains and soybeans to decrease the incidence of soil-borne diseases. Avoid fields with high nematode populations and those that had sweet potato in the past two years. Test the soil for nematodes and fertility. Optimum soil pH is 5.8-6.2. If lime is needed, apply it several months before planting. All P and K can be applied before planting. Apply half of the recommended N before planting (broadcast or band) and apply the rest at layby when vines start to run.

Irrigation

Although sweet potatoes are traditionally known as drought tolerant, they still require adequate moisture to produce good quality roots. Plant available soil water fluctuations can cause small, cracked, and misshaped roots. Sweet

potatoes can be irrigated using overhead or drip irrigation. The total amount of water applied to the crop should be equal to its requirement plus the volume lost through evaporation and runoff. Soil moisture and irrigation management are key for the success of the crop (see Chapter C Irrigation Management).

Plant Production

Sweet potato is propagated vegetatively by sprouts or slips from storage roots ("seed"). Select good quality, certified G1 or G2 "seeds" that are uniform and free from insects and diseases. Before bedding, "seed roots" should be pre-sprouted at 85°F (29°C) and 90% relative humidity for 3-4 weeks until the sprouts are 1-1½ inch long. Make sure "seed roots" are well ventilated because the process requires oxygen. For bedding, avoid sites that had sweet potato in the past 3 years to reduce the risk of diseases. Fertilize with 4-5 lb/100 sq ft bed area of 8-8-8 or its equivalent. Bed "seed root" stock the first week of April and use black or clear plastic mulch to warm up the soil. The minimum soil temperature for sweet potato to grow is 60°F (16°C). Treat "seed roots" with appropriate fungicides to reduce decay. Spread "seed roots" (one layer) in beds 2-3 ft wide, cover with 2-3 inches of soil or sand and cover with plastic mulch. After 5-7 days, punch holes every 4 ft on each side of the bed to prevent accumulation of carbon dioxide. When clear plastic mulch is used, apply an herbicide (see the Weed Control section). Remove plastic mulch when sprouts begin to emerge and cover with floating row cover to promote growth and protect against cold temperatures. Remove row covers 5-7 days prior to planting to harden the slips. The warmer conditions in greenhouses and high tunnels (hoop houses) promote sprouting and growth for an early production of slips. For optimal growing conditions keep beds moist and temperature between 75-85°F (24-29°C); however, greenhouse or high tunnel slips are less sturdy than slips from field beds for field planting. One 50-lb bushel of "seed" roots produces 500 to 1,000 sprouts in 10-15 sq ft of bed area. For field planting, the best slips are 10-12 inches long and they should be cut (not pulled) from the beds at 1 inch above the soil line to minimize transmission of pests and diseases.

Field Planting

Sweet potato is cold sensitive and should be planted after all danger of frost is over and the soil temperature at 4 inch-deep is >65°F (>18°C). The optimum growth temperature is between 70-85°F (21-29°C), although plants can tolerate temperatures between 65-95°F (18-35°C). Plant slips in the field between May 5 and June 15 in warmer, southern areas and between May 20 and June 5 in cooler areas. Plant slips on moist ridged rows 8 to 10" high. Within-row spacing depends on variety selection and runs between 10 to 18" between individual plants (note: larger spacing between plants can promote larger than normal storage roots). Row spacing can range between 36 to 42" (14,500 to 12,500 slips per acre at 12" within row spacing). Optimal spacing is contingent on soil fertility and soil water. In cooler climates, black plastic mulch can be used supplied with drip irrigation with rows spaced between 48 to 60" (8,712 to 10,890 slips per acre at 12" within row spacing). Water or starter fertilizer solution (1 oz/gal of 15-30-15 or equivalent) at 4 to 5 oz/slip applied at planting will benefit establishment. If irrigation is available, water field immediately after planting and then as needed (see also **Irrigation** above).

Harvest and Post-Harvest Considerations

Prior to harvest, scout the field to determine storage root size and appropriate proportion of desired market grade. Pre-harvest conditioning and appropriate harvest handling is critical to reduce bruising of the delicate skin. Bruising, wounding, and skinning roots during harvest increase the incidence of diseases. Even if the injury heals, large scars render unappealing storage roots with no fresh market value. Kill vines mechanically (devining) with a flail mower of appropriate design 5-10 d before harvest to improve skin set and facilitate harvest.

Various methods can be used to harvest sweet potatoes. Growers with a small area may harvest by hand using a garden fork. Intermediate sized commercial growers can use a 1 or 2-row modified mold board or disc plow, or middle buster with a notched coulter adjusted just left of the main stems to turn the rows and expose the storage roots. Remove roots from the vines by hand and place them into smooth baskets. Use gloves to keep bruises and abrasions to a minimum. Mechanical diggers patterned after a low flat-bed type potato digger or digger-windrower can facilitate harvest in larger areas. These are 1 or 2-row diggers that incorporate a short separating chain behind a wide blade to dig both soil and roots onto the chain. Soil falls through the chain as the storage roots move up with the chain and drop off to the ground in the back of the digger. Care must be taken to bring enough soil up with the chain to minimize bruises. Storage roots are then picked up by hand and placed in smooth sided baskets. With more advanced harvesters, the storage roots continue on the chain through a platform where they are picked up by hand and placed directly into bins. After the roots are harvested, they should be cured in the storage house at 85°F (29°C)

and 85-90% relative humidity for 5-7 days to promote wound healing, reduce disease incidence, and improve sweetness. After curing, the temperature should be lowered to 55°F (13°C), but relative humidity should be maintained at 85% for long term storage.

Sweet potato is marketed based on the U.S. Standards for Grades of Sweet Potatoes. U.S. No.1 (roots of 1¾ to 3½ inches in diameter and 3 to 9 inches long) is the preferred grade for fresh market and has the highest price. U.S. No.2 includes smaller roots (canner) and larger roots (jumbo) and are accepted by the processing industry. Petite sweet potato (well-shaped small storage roots) free of blemishes have been sold also as fingerling or nuggets in specialty markets.

Weed Control

THE LABEL IS THE LAW-see the Pesticide Use Disclaimer on the first page of Chapter F.

Recommended Herbicides

1. Identify the weeds in each field and select recommended herbicides. More information is available in the "Herbicide Effectiveness on Common Weeds in Vegetables" (Table E-3) in Chapter E Pest Management.

2. Minimize herbicide resistance development. Identify the herbicide mode of action group number and follow recommended good management practices; **bolded group numbers in tables below are herbicides at higher risk for selecting resistant weed populations.** Include non-chemical weed control whenever possible.

1.a. Soil-Applied: Pretransplant

Group	Product Name (*=Restricted Use)	Product Rate	Active Ingredient	Active Ingredient Rate	PHI (d)	REI (h)
14	Valor SX 51WDG Valor EZ 4 SC	3 oz/A 3 fl oz/A	**flumioxazin**	0.096 lb/A	--	12

-Apply 2 to 5 day pre-transplant after all tillage has been completed. Limit disturbance of treated soil with transplant equipment. Tillage or cultivation after applying Valor SX reduces or eliminates weed control. Valor controls many broadleaf weeds, but only suppresses annual grasses. Tank mix with Command pretransplant or follow with a residual grass product to improve control of annual grasses.
-**Do not** apply postemergence to sweet potatoes.
-**Do not** use on any variety other than 'Beauregard' unless user has tested Valor and found tolerance to be acceptable.
-**Do not** use on greenhouse grown transplants or transplants that have been harvested more than 2 days prior to transplanting.
-Flumioxazin can be difficult to clean out of spray tank and hoses. Follow tank cleaning recommendations on the label.
-Maximum for Valor SX 51WDG: 3 oz/A per growing season; maximum for Valor EZ is 3 fl oz/A per year.

1.b. Soil-Applied: After Transplanting

Group	Product Name (*=Restricted Use)	Product Rate	Active Ingredient	Active Ingredient Rate	PHI (d)	REI (h)
13	Command 3ME	1.33 to 2.66 pt/A	**clomazone**	0.5 to 1.0 lb/A	95	12

-Apply after transplanting and prior to weed emergence. Use lower rates on coarse-textured soils low in organic matter and higher rates on fine-textured soils and soils with high organic matter. Use the lower rate when used on coarse-textured soils low in organic matter, when weed pressure is light, or to minimize herbicide carryover that could affect subsequent crops.
-Controls annual grasses and many broadleaf weeds depending on use rate, except pigweed sp., carpetweed, morningglory sp., and yellow nutsedge. Some temporary crop injury (partial whitening of leaf or stem tissue) may occur. Complete recovery will occur from minor early injury without affecting yield or delaying maturity.
-**WARNINGS**: Command spray *or* vapor drift may injure sensitive crops and other vegetation up to several hundred yards from the point of application. **Do not** apply adjacent to sensitive crops (see label) or vegetation, or under unfavorable wind or weather conditions. Command may limit subsequent cropping options, see the label.
-Maximum number of applications per season is 1.

15	Devrinol 2-XT 2EC Devrinol DF-XT 50DF	2.0 to 4.0 qt/A 2.0 to 4.0 lb/A	**napropamide**	1.0 to 2.0 lb/A	--	24

-Apply immediately after transplanting and prior to weed emergence. Rainfall or irrigation within 24 h after application improves performance (½ inch sprinkler irrigation). Annual grasses and certain annual broadleaf weeds will be suppressed or controlled. 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. Maximum Devrinol application per season: 4 qt/A (2-XT) or 4 lb/A (DF-XT).

27	Optogen 1.67	2.6 to 3.5 fl oz/A	**bicyclopyrone**	0.034 to 0.046 lb/A	60	24

-Do not apply to sweet potatoes when grown on sand or loamy sand soils with less than 1% organic matter.
-Apply prior to transplanting and avoid moving treated soil during transplanting. Exposed sweet potato roots could result in unacceptable injury if irrigation or rainfall moves the herbicide into the root zone.
-Limited local experience with Optogen as a soil-applied herbicide. -Do not make more than one application per year.

2. Postemergence

Group	Product Name (*=Restricted Use)	Product Rate	Active Ingredient	Active Ingredient Rate	PHI (d)	REI (h)
1	Shadow 3EC Select 2EC Select Max 0.97EC	4 to 10.67 fl oz/A 6 to 8 fl oz/A 9 to 16 fl oz/A	**clethodim**	0.07 to 0.24 lb/A	30	24
	Poast 1.5EC	1 to 1.5 pt/A	**sethoxydim**	0.2 to 0.3 lb/A	30	12
	Fusilade DX 2EC	8 to 12 fl oz/A	**fluazifop**	0.125 to 0.188 lb/A	14	12
-**Select 2EC**: use crop oil concentrate (COC) at 1% v/v (1 gal/100 gal of spray solution). **Select Max 0.97EC**: use nonionic surfactant (NIS) at 0.25% v/v (1 qt/100 gal of spray solution). **Shadow 3EC**: use crop oil concentrate (COC) at 1% v/v (1 gal/100 gal of spray solution) for large or stressed grasses; use nonionic surfactant (NIS) at 0.25% v/v (1 qt/100 gal of spray solution) when crop safety is a concern. **Poast 1.5EC**: use COC at 1.0% v/v. **Fusilade DX 2EC:** use COC at 1.0% v/v or NIS at 0.25% v/v. -**General comments:** -The use of COC may increase the risk of crop injury when hot or humid conditions prevail. To reduce the risk of crop injury, switch to NIS when grasses are small and soil moisture is adequate. -Use lower labeled rates for annual grass control and higher labeled rates for perennial grass control. For best results, treat annual grasses when they are actively growing and before tillers are present. -Yellow nutsedge, wild onion, wild garlic, and broadleaf weeds will **not** be controlled with these herbicides. -These herbicides control many annual and certain perennial grasses. Clethodim is best on annual bluegrass; while Poast is preferred for goosegrass control. -Repeated applications may be necessary to control certain perennial grasses. If repeat applications are necessary, allow 14 days between applications. -Rainfastness is 1 h. -Do not tank mix with or apply within 2 to 3 days of any other pesticide, unless labeled, as this may increase the risk of crop injury or reduce the control of grasses. Do not apply more than 8 fl oz/A of Select 2EC in a single application and do not exceed 2 pt/A for the season; do not apply more than 16 fl oz/A of Select Max in a single application and do not exceed 4 pt/A for the season. -Do not apply more than 5.33 fl oz/A of Shadow 3EC in a single application and do not exceed 21.33 fl oz/A for the season. -Do not apply more than 1.5 pt/A Poast in a single application and do not exceed 4.5 pt/A for the season. -Do not apply more than 12 fl oz/A of Fusilade DX in a single application and do not exceed 3 pt/A per season.						
27	Optogen 1.67	3.5 fl oz/A	**bicyclopyrone**	0.046 lb/A	45	24
-Row middle application only. -Use nonionic surfactant (NIS) at 0.25% v/v (1qt/100 gal of spray solution) or crop oil concentrate (COC) at 1% v/v (1 gal/100 gal of spray solution). Ammonium sulfate (AMS) at 8.5 to 17 lb/100 gal spray solution may be added for improved control of emerged weeds. -Apply after transplanting as either row middle treatment or as a directed spray. Hooded or shielded sprayers will reduce the risk of injury for row middle or directed sprays. -**Contact with foliage will cause injury.** -Apply to small weeds (less than 2" tall). Optogen provides control for only a few weed species, should be used in combination with other herbicides. -Rainfastness is not specified on the label. -Do not make more than one application per year.						

3. Other Labeled Herbicides These products are labeled but limited local data are available; and/or are labeled but not recommended in our region due to potential crop injury concerns.

Group	Product Name (*=Restricted Use)	Active Ingredient
14	Aim (hooded or directed application only)	**carfentrazone**

Insect Control

THE LABEL IS THE LAW-see the Pesticide Use Disclaimer on the first page of Chapter F.

Note: For **premixes**, the group number (representing the mode of action) and active ingredient that contributes the most to control is generally listed first. In some cases, only one ingredient in a premix provides control.

Recommended Insecticides

In the Mid-Atlantic U.S., the primary insect pest concerns for sweet potatoes are a complex of soil-inhabiting beetle larvae including white grubs, wireworms, flea beetles, and southern corn rootworms. In general, very little economic damage occurs to this crop from above-ground insect pests. Pest control mostly occurs at planting.

Soil Insects: Wireworms, Flea Beetle Larvae, White Grubs, and Rootworms

Apply one of the following formulations:

Group	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
1B	Mocap EC*	5.1 to 6.9 fl oz/1000 row ft	ethoprop - **preplant application in a 12-15-inch band on the row 2-3 w before planting.**	see label	48	H
3A	Brigade 2EC*, Brigade eVo	19.2 fl oz/A	bifenthrin **- at-planting in-furrow (wireworms)**	21	12	H

Soil Insects: Wireworms, Flea Beetle Larvae, White Grubs, and Rootworms - continued next page

Soil Insects: Wireworms, Flea Beetle Larvae, White Grubs, and Rootworms *- continued*

3A	Brigade 2EC*, Brigade eVo	3.2 to 9.6 fl oz/A	bifenthrin **- apply to soil prior to lay-by or first cultivation**	21	12	H
3A	Capture LFR*	12.75 to 25.5 fl oz/A	bifenthrin **- at-planting in-furrow or to soil prior to lay-by or first cultivation**	21	12	H
4A	Admire Pro 4.6 SC	10.5 fl oz/A	imidacloprid	125	72	H
4A	Belay 2.13SL	12 fl oz/A	clothianidin	21	12	H
30	Nurizma	0.08 to 0.16 fl oz/ 1000 row ft	broflanilide	AP	12	H

[Insecticides with Suppression Only on the label: Movento, Boxadon 360]

Cutworms See also section E 3.1. Soil Pests - Detection and Control.

Various species can cause direct damage to sweet potatoes as well as sever plant stems.

Apply one of the following formulations:						
Group	**Product Name (*=Restricted Use)**	**Product Rate**	**Active Ingredient(s)**	**PHI (d)**	**REI (h)**	**Bee TR**
1A	Sevin XLR Plus	1.0 to 2.0 qt/A	carbaryl	7	12	H
3A	Baythroid XL*	0.8 to 1.6 fl oz/A	beta-cyfluthrin	0	12	H
3A	Declare*	0.77 to 1.28 fl oz/A	gamma-cyhalothrin	7	24	H
3A	Fastac CS*	1.3 to 3.8 fl oz/A	alpha-cypermethrin	1	12	H
3A	Hero*	2.6 to 6.1 fl oz/A	zeta-cypermethrin + bifenthrin	21	12	H
3A	Lambda-Cy 1EC*, others	1.92 to 3.2 fl oz/A	lambda-cyhalothrin	7	24	H
3A	Mustang Maxx*	1.28 to 4.00 fl oz/A	zeta-cypermethrin	1	12	H
3A	Tombstone*	0.8 to 1.6 fl oz/A	cyfluthrin	0	12	H
3A	Warrior II*	0.96 to 1.6 fl oz/A	lambda-cyhalothrin	7	24	H
3A + 4A	Leverage 360*	2.4 to 2.8 fl oz/A	beta-cyfluthrin + imidacloprid	7	12	H
3A + 28	Besiege*	5.0 to 8.0 fl oz/A	lambda-cyhalothrin + chlorantraniliprole	14	24	H
3A + 28	Elevest*	5.6 to 9.6 fl oz/A	bifenthrin + chlorantraniliprole	21	12	H

Cucumber Beetles, Flea Beetles, Click Beetles, and Tortoise Beetle Adults

Well timed foliar applications during the summer months targeting beetle adults can help reduce the number of eggs deposited in fields, which may reduce the amount of larval damage to roots.

Apply one of the following formulations:						
Group	**Product Name (*=Restricted Use)**	**Product Rate**	**Active Ingredient(s)**	**PHI (d)**	**REI (h)**	**Bee TR**
1A	Sevin XLR Plus	0.5 to 1.0 qt/A	carbaryl	7	12	H
3A	Baythroid XL*	1.6 to 2.8 fl oz/A	beta-cyfluthrin	0	12	H
3A	Brigade 2EC*, Brigade eVo	2.1 to 6.4 fl oz/A	bifenthrin	21	12	H
3A	Declare*	0.77 to 1.28 fl oz/A	gamma-cyhalothrin	7	24	H
3A	Fastac CS*	1.8 to 3.8 fl oz/A	alpha-cypermethrin	1	12	H
3A	Hero*	4.0 to 10.3 fl oz/A	zeta-cypermethrin + bifenthrin	21	12	H
3A	Lambda-Cy 1EC*, others	2.56 to 3.84 fl oz/A	lambda-cyhalothrin	7	24	H
3A	Mustang Maxx*	1.76 to 4.00 fl oz/A	zeta-cypermethrin	1	12	H
3A	Tombstone*	1.6 to 2.8 fl oz/A	cyfluthrin	0	12	H
3A	Warrior II*	1.28 to 1.92 fl oz/A	lambda-cyhalothrin	7	24	H
3A + 4A	Brigadier*	5.1 to 7.7 fl oz/A	bifenthrin + imidacloprid **- foliar**	21	12	H
3A + 4A	Endigo ZC*	3.5 to 4.5 fl oz/A	lambda-cyhalothrin + thiamethoxam	14	24	H
3A + 4A	Endigo ZCX*	3.0 to 3.5 fl oz/A	lambda-cyhalothrin + thiamethoxam	14	24	H
3A + 4A	Leverage 360*	2.4 to 2.8 fl oz/A	beta-cyfluthrin + imidacloprid	7	12	H
3A + 4A	Savoy EC*	3.6 to 6.1 fl oz/A	bifenthrin + acetamiprid	21	12	H
3A + 28	Besiege*	6.0 to 9.0 fl oz/A	lambda-cyhalothrin + chlorantraniliprole	14	24	H
3A + 28	Elevest*	5.6 to 9.6 fl oz/A	bifenthrin + chlorantraniliprole	21	12	H
4A	Actara 25WDG	1.5 to 3.0 oz/A	thiamethoxam	14	12	H
4A	Admire Pro	1.2 fl oz/A	imidacloprid **- foliar**	7	12	H
4A	Assail 30SG	1.5 to 4.0 oz/A	acetamiprid	7	12	M
4A	Assail 30SC	1.3 to 3.4 fl oz/A	acetamiprid	7	12	M
4A	Belay 2.13SC	2.0 to 3.0 fl oz/A	clothianidin **- foliar**	14	12	H
4A	Platinum	1.66 to 2.67 fl oz/A	thiamethoxam **- soil**	AP	12	H
4A + 15	Cormoran	6.0 to 12.0 fl oz/A	acetamiprid + novaluron	14	12	M
30	Zivalgo 4SC	1.1 to 2.0	isocycloseram **- flea beetle only**	14	12	H

Disease Control

THE LABEL IS THE LAW-see the Pesticide Use Disclaimer on the first page of Chapter F.

Recommended Fungicides

Nematodes

See also sections E 1.5. Soil Fumigation and E 1.6. Nematode Control. Use fumigants listed in section E.1.5 or below. Consult the label.

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
1A	Vydate L*	1 to 2 gal/A in at least 20 gal/A pre-plant in furrow treatment. See label.	oxamyl	AP	48	H
1B	Mocap 15G*	1.6 to 2.1 lb per 1,000 ft row in a band 12 to 15-inches wide on the row 2 to 3 weeks before planting. See label.	ethoprop	AP	48	H
7	Velum Prime 4.16SC	6.0 to 6.84 fl oz/A	fluopyram	7	12	--
--	Nimitz 4EC	3.5 to 7.0 pints/treated A	fluensulfone	AP	12	--

Damping-off (*Pythium and Phytophthora* spp.)

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
21	Ranman 400SC	6.1 fl oz/A (on 36" row spacing). Apply at planting. See label.	cyazofamid	AP	12	L
22	Elumin 4SC	8.0 fl oz/A	ethaboxam	--	12	--
43	Presidio 4SC	3.0 to 4.0 fl oz/A	fluopicolide	7	12	L
4	Ridomil Gold 4SL	1.0 to 2.0 pt/A	mefenoxam	AP	48	N
4 + 49	Orondis Gold	27.8 fl oz/A	mefenoxam + oxathiapiprolin	14	48	--
4	MetaStar 2 E	4.0 to 8.0 pt/treated acre preplant incorporated or soil surface spray. See label.	metalaxyl	7	48	N

Damping-off (*Pythium and Rhizoctonia*)

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
4 + 11	Uniform 3.72SC	0.34 fl oz/1,000 ft row	mefenoxam + azoxystrobin	AP	0	N
11	azoxystrobin 2.08F	0.4 to 0.8 fl oz/1,000 ft row	azoxystrobin	AP	4	N

Bacterial and Fungal Diseases

Bacterial Stem and Root Rot (*Dickeya dadantii*)

Management should be based on sanitation and handling to prevent wounds and contamination. Select disease-free "seed" roots and cut slips 1 inch above ground. Make holes in the plastic mulch to avoid anaerobic conditions. Use field with good drainage to avoid waterlogging. Maintain dry roots before packing.

Black Rot (*Ceratosistis fimbriata*), Scurf (*Monilochaetes infuscans*), and Foot Rot (*Plenodomus destruens*)

Sanitation, "seed" root free of diseases, cut slips 1-inch above soil, field rotation, and curing immediately after harvest (see Harvest and Post-Harvest Considerations) help reduce the incidence of these diseases.

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
1	Mertect 340-F	107 fl oz/100 gal, dip "seed" roots before bedding, see label	thiabendazole	0.5	12	N

Sclerotinia Blight and Circular Spot (*Sclerotium rolfsii*)

Also known as Southern Blight. Plant in fields without a history of the problem. Dip roots in registered fungicides. Remove bed mulch as soon as sprouts start to emerge.

Streptomyces Soil Rot (Pox)

Use resistant varieties. Maintain a pH between 4.8-5.2 to assist in control. Use crop rotation, clean seed, and clean beds. Fumigation prior to planting may also help.

Post-Harvest

Post-Harvest Black Rot (*Ceratosistis fimbriata*)

Sanitation, "seed" root free of diseases, cut slips 1-inch above soil, field rotation, and curing immediately after harvest (see Harvest and Post-Harvest Considerations) help reduce the incidence of these diseases.

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
1	Mertect 340-F	0.42 fl oz in a minimum 0.5 gallons water per 2,000 lb of roots See label.	thiabendazole	--	--	N
11 + 12	Archive (only labeled in PA)	0.6 fl oz/2000 lb tubers (only labeled in PA)	fludioxonil + azoxystrobin	--	--	--

Post-Harvest Fusarium Rot andSilver Scurf

Care handling to reduce wounding. Cure immediately after harvest (see Harvest and Post-Harvest Considerations).

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
11 + 12 + 3	Stadium 34.78SC (only labeled in PA)	1 fl oz per 2,000 lb of roots (only labeled in PA)	azoxystrobin + fludioxonil + difenoconazole	--	--	L
11 + 12	Archive (only labeled in PA)	0.6 fl oz/2000 lb tubers (only labeled in PA)	fludioxonil + azoxystrobin	--	--	--

Post-Harvest Soft Rot (*Rhizopus*)

Care handling to reduce wounding. Cure immediately after harvest (see Harvest and Post-Harvest Considerations).

Code	Product Name (*=Restricted Use)	Product Rate	Active Ingredient(s)	PHI (d)	REI (h)	Bee TR
12	Scholar 1.9SC	8 to 16 fl oz/100 gal, see label	fludioxonil	--	--	L
11 + 12	Archive (only labeled in PA)	0.6 fl oz/2000 lb tubers (only labeled in PA)	fludioxonil + azoxystrobin	--	--	--