

Pesticide	Use Category ²	Hours to Reentry ³	Days to Harvest ¹							
			Broccoli	Brus. Sprt.	Cabbage	Cab. ⁴ (Chin.)	Cauliflower	Collards	Kale	Kohlrabi
INSECTICIDE										
acephate	G	24	-	14	-	-	14	-	-	-
Admire	G	12	21	21	21	21	21	21	21	21
Ambush	R	24	1	1	1	1	1	-	-	-
Asana XL	R	12	3	-	3	3	3	7	-	-
Assail	G	12	7	7	7	7	7	7	7	7
Avaunt	G	12	3	-	3	-	3	-	-	-
<i>Bacillus thuringiensis</i>	G	4	0	0	0	0	0	0	0	0
Baythroid	R	12	0	0	0	0	0	-	-	0
Capture	R	5 days	7	7	7	7	7	-	-	7
Confirm	G	4	7	7	7	7	7	7	7	7
Danitol	R	24	7	7	7	7	7	--	--	7
Diazinon 4EC, 50WP	R(NJ),G	12,24	5	7	7	-	5	10	10	-
dimethoate	R(NJ),G	48	7	-	3	14	7	14	14	-
Di-Syston	R	48	14	30	42	-	40	-	-	-
Fulfill	G	12	7	7	7	7	7	7	7	7
Fury, Mustang Max	R	12	1	1	1	1	1	1	1	1
Intrepid	G	12	1	1	1	1	1	1	1	1
Lannate	R	48	3	3	1	10	3	10	10	-
Larvin	G	12	7	-	7	-	7	-	-	-
Lorsban 15G	R(NJ),G	12	AP	AP	AP	AP	AP	AP	AP	AP
Lorsban 4EC, 50WP	R(NJ),G	24	21	21	21	21	21	21	21	21
Metasystox-R	R	48	7	3	7	-	7	-	-	-
Mustang Max	R	12	-	-	1	-	-	-	-	-
Pounce	R	24	1	1	1	-	1	-	-	-
Proclaim	R	48	7	7	7	7	7	7	7	7
Provado	G	12	7	7	7	7	7	7	7	7
Sevin/Sevin Bait	G	12	3	3	3	-	3	14	14	3
SpinTor	G	4	1	1	1	1	1	1	1	1
Thionex	R	48	7	14	7	-	14	21	21	-
Warrior	G	24	1	-	1	-	-	-	-	-
FUNGICIDE										
Aliette	G	12,24	3	-	3	3	3	3	3	3
Amistar	G	4	-	-	-	0	-	0	0	-
chlorothalonil	G	12	0	0	0	7	0	-	-	-
maneb	G	24	7	7	7	7	7	-	10	7
Quadris	G	4	-	-	-	0	-	0	0	-
Ridomil Gold Bravo	G	48	7	7	7	7	7	-	-	-

¹ AP = At-planting time only

² G = general, R = restricted

³ Chemicals with multiple designations are based on product and/or formulation differences. CONSULT LABEL.

⁴ Tight-heading varieties of Chinese cabbage

Dash (-) in table indicates pesticide is **not** labeled for that crop

CARROTS

Varieties

Varieties¹

Processing: Dicing

Spartan Bonus 80*

Danvers 126

These varieties are recommended for DE, MD, NJ, PA, VA

Processing: "Coins"

Nantes types

Market

Scarlet Nantes

¹ Varieties listed by maturity, earliest first

* Indicates hybrid variety

Seed Treatment

Use seed treated with Maxim 4FS (0.08-0.16 fl oz/100 lb seed) for Rhizoctonia & Fusarium control and Apron XL LS (0.16-0.64 fl oz/100 lb seed) for Pythium control.

Seeding Dates

For early harvest (July to September), sow March 20 to April 30; for late harvest, sow May 1 to July 5 (May 1 to June 15 in Pennsylvania and northern New Jersey). Practice crop rotation, and plant after a small grain crop for highest yields.

Spacing

Processing: Rows 20 to 30 inches apart; "coins," sow for 16 plants per foot; dicing, sow for 6 plants per foot (8 if soil is on the fine-textured side).

Seeding rate: Dicers, 12 to 14 ounces per acre using 2-inch scatter shoe; "coins," sow 2 to 4 pounds per acre using 4-inch scatter shoe. Depth of seeding should be no deeper than one-fourth inch.

Cultivation

Hill with 2 inches of soil to cover shoulders to minimize greening.

Storage

Topped: 4 to 5 months at 32°F (0°C) and 90 to 95 percent relative humidity.

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.

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

Preplant Incorporated

Trifluralin--0.5-0.75 lb/A. Apply 1 to 1.5 pints per acre Treflan 4EC. Preferably, use two diskings to incorporate treatment into the top 3 inches of soil within 8 hours after application. Plant carrots immediately. Trifluralin is particularly effective on barnyardgrass, foxtail, crabgrass, all panicum, and other annual grasses. It will not control ragweed or jimsonweed.

Preemergence

Linuron--0.5-1.5 lb/A. **A Special Local-Needs 24(c) label has been approved for the use of Linex 4L preemergence in New Jersey.** Apply 1 to 3 pints per acre Linex 4L after seeding, but before crop emergence. Sow seed at least one-half inch deep. Use lower rate on lighter coarse-textured sandy soils and the higher rate on heavier fine-textured soils. Follow with overhead irrigation if rainfall does not occur. Primarily controls annual broadleaf weeds. Annual grasses may only be suppressed. Do NOT exceed a total of 2 pounds of active ingredient linuron per acre per season.

Postemergence

Sethoxydim--0.2-0.5 lb/A. Apply 1 to 2.5 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 30 days and apply no more than 5 pints per acre in one season.

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) postemergence to control many annual and certain perennial grasses, including annual bluegrass. Select 2EC will not consistently control goosegrass. 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 30 days.

Fluazifop--0.125-0.188 lb/A. Apply 0.5 to 0.75 pints per acre Fusilade DX 2E with oil concentrate to be 1 percent of the spray solution (1 gallon per 100 gallons of spray solution) or a nonionic surfactant to be 0.25 percent of the spray solution (1 quart per 100 gallons of spray solution) to control annual grasses and certain perennial grasses. 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. It will not control yellow nutsedge, wild onion, or any broadleaf weed. Do not tank-mix with 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 45 days and apply no more than 6 pints per acre in one season. Do not plant corn, sorghum, cereals, or any other grass crop within 60 days of the last application.

Linuron--0.75-1.5 lb/A. Apply 1.5 to 3 pounds per acre Lorox 50DF or 1.5 to 3 pints per acre Lorox 4L. Apply when carrots are approximately 3 to 6 inches tall. Avoid postemergence applications when daily temperatures are 90°F (32.2°C) or above or during a period of cloudy weather or just after rain or irrigation. Linuron is effective on most weeds including ragweed. Do not plant treated area to crops not on the label within a 4-month period after treatment.

Metribuzin--0.25 lb/A. Apply 0.33 pound per acre Sencor 75DF postemergence to carrots with a minimum of six true leaves to control many broadleaf weeds, including tropic croton, spotted spurge, and horseweed. Do not use to control triazine-resistant weeds. Do not apply within 3 days after periods of cool, wet, cloudy weather. Do not tank-mix with any other pesticide or apply within 3 days, or excessive crop injury may result. Do not apply to carrots with less than six true leaves or excessive crop injury may result. Varietal differences exist in carrot tolerance to Sencor. Use caution when treating new varieties.

Postharvest

Paraquat--0.6 lb/A. **A Special Local-Needs 24(c) label has been approved for the use of Gramoxone Max 3SC for postharvest desiccation of the crop in Maryland and Virginia.** Apply 1.5 pints per acre Gramoxone Max 3SC as

a broadcast spray after the last harvest. Add nonionic surfactant according to the labeled instructions. See the label for additional information and warnings.

Insect Control

Leafhoppers, Aphids

Begin spraying when true leaves first appear. Repeat every 14 days or as needed.

Leafhoppers transmit aster yellows. Seedling protection from leafhoppers is important.

Admire--10-24 fl oz 2F/A, or
 Asana XL--5.8-9.6 fl oz 0.66EC/A (leaf-hoppers only), or
 Baythroid--1.6-2.8 fl oz 2E/A (leaf-hoppers only), or
 Lannate--1.5-3 pt LV/A or OLF, or
 malathion--2 pt 57EC/A, or
 methoxychlor--2-4 lb 50WP/A (leafhoppers only), or
 Provado--3.5 fl oz 1.6 FA

Cutworms

Asana XL--5.8-9.6 fl oz 0.66EC/A, or
 Baythroid--1.6 fl oz 2E/A, or
 Lannate--1.5-3 pt LV/A or OLF, or
 Sevin Bait--20-40 lb 5% bait/A

Carrot Weevil

Begin treatment when weevils become active.

Asana XL--9.6 fl oz 0.66EC/A, or
 Baythroid--2.8 fl oz 2E/A, or
 Vydate L--2-4 pt 2L/A (directed spray)

Pesticide	Use Category ¹	Hours to Reentry	Days to Harvest
INSECTICIDE			
Admire	G	12	21
Asana XL	R	12	7
Baythroid	R	12	0
Lannate	R	48	1
malathion	G	12	7
methoxychlor	G	12	14
Provado	G	12	7
Sevin Bait	G	12	0
Vydate L	R	48	14
FUNGICIDE			
Amistar	G	4	0
Cabrio	G	12	0
chlorothalonil	G	12	0
Quadris	G	4	0
Rovral	G	24	0

See Table D-6.

¹ G = general, R = restricted

Nematode Control

Nematode control is essential for successful production. See "Nematodes" section of Soil Pests-Their Detection and Control. Use fumigants listed in the "Soil Fumigation" section or use Vydate L. Heavy rainfall following application and prior to emergence can result in less effective control with Vydate L. Consult label before use

Disease Control

Damping-Off (*Pythium* and *Phytophthora*)

Apply the following preplant incorporated or as a soil-surface spray after planting.

Ridomil Gold--1-2 pt 4E/A

Aster Yellows

Use insecticides to control leafhoppers, and keep weed populations down on periphery of field early in the season to prevent transmission by leafhoppers from the weeds into the crop.

Leaf Blights (*Alternaria* and *Cercospora*)

Several varieties such as Bolero, Calgary, Carson, Cheyenne, and Choctaw exhibit tolerance to leaf blight and should be grown where adapted. For susceptible varieties, begin applications when disease threatens or early July and continue every 7 to 10 days until frost. Do not make more than three sequential applications of Cabrio or Quadris before alternating with chlorothalonil. Under severe defoliation, add urea (10 pounds per acre) to encourage new leaf growth.

azoxystrobin (Amistar, Quadris)--3-5 oz 80WDG/A or OLF, or
 Cabrio--8-12 oz 20EG/A, or
 chlorothalonil (Bravo, Echo, Equus)--1.5-2 pt 6F/A or OLF, or
 Endura--4.5 oz 70W/A or
 Rovral (*Alternaria* only)--1-2 lb 50WP/A or OLF

White Mold

The following biological fungicide has been tested in some states; however, limited information is available on effectiveness in the Mid-Atlantic region. Apply 3 to 4 months prior to the onset of disease to allow the active agent to reduce inoculum levels of sclerotia in the soil. Following application, incorporate to a depth of 1 to 2 inches but **do not plow** before seeding cole crops to avoid untreated sclerotia in lower soil layers from infesting the upper soil layer.

Contans 2-4 lb 5.3G/A

Storage Rots (*Botrytis*, *Sclerotinia*)

Remove all damaged roots before placing in storage. Remove roots from field and place in storage at 32°F (0°C) and 90 to 95 percent relative humidity immediately after digging. As carrots are going into storage, dip into the following fungicide solution for 10 seconds.

Mertect 340F--41 fl oz/100 gal

CELERY

Celery is a cool-season crop with a high moisture requirement. Muck soils or well-drained, medium-textured mineral soils with irrigation are best suited. The crop will withstand light freezes, but it is damaged by several moderate freezes. Seedstalk development, rather than normal growth, will occur if young plants are exposed to temperatures below 55°F (12.8°C) for 10 days or more.