

Cabrio--12.0 to 16.0 oz 20WG/A fixed copper at labeled rates

*Resistance to FRAC code 11 fungicides are present in areas of southern New Jersey where FRAC code 11 fungicides have been used extensively to control Septoria leaf spot.

Tank-mixing Fontelis or Merivon with a fixed copper may also help suppress bacterial infections.

PARSNIPS

Varieties

Andover
Harris Model
Javelin*

Varieties listed alphabetically. * Denotes hybrid variety

Recommended Nutrients Based on Soil Tests

Before using the table below, refer to important notes in the Soil and Nutrient Management chapter in Section B and your soil test report. These notes and soil test reports provide additional suggestions to adjust rate, timing, and placement of nutrients. Your state's soil test report recommendations and/or your farm's nutrient management plan supercede recommendations found below.

Parsnips	Pounds N per Acre	Soil Phosphorus Level				Soil Potassium Level				Nutrient Timing and Method
		Low	Med	High		Low	Med	High		
				(Opt.)	Very High			(Opt.)	Very High	
		Pounds P ₂ O ₅ per Acre				Pounds K ₂ O per Acre				
50-75	150	100	50	0	150	100	50	0	Total nutrient recommended.	
25-50	150	100	50	0	150	100	50	0	Broadcast and disk-in.	
25-50	0	0	0	0	0	0	0	0	Sidedress 4-5 weeks after planting.	

Apply 1.0 to 2.0 pounds of boron (B) per acre with broadcast fertilizer. See Table B-9 for more specific boron recommendations.

Seeding and Spacing

Seed in March and April. The seeds germinate slowly. Never use seed that is more than 1 year old.

Seed 3 to 5 pounds per acre at a depth of 1/4 to 3/8 inch in rows 18 to 30 inches apart. Adjust seeder to give 8 to 10 plants per foot of row. Thin seedlings to 2 to 4 inches in the row.

Harvest and Postharvest Considerations

Parsnips may be dug, topped, and stored at 32°F and 90 to 95% relative humidity. They can be stored for up to 6 months. Storage conditions for parsnips are similar to those for carrots. Good market quality is the result of starch changing to sugar which occurs after 2 to 3 weeks in storage below 35°F. It is not necessary to leave parsnips out over winter or to freeze them to achieve acceptable quality. Because parsnips are susceptible to wilting, storage humidity must be kept high. Ventilated plastic crate liners help to prevent moisture loss. Parsnips left in the ground over winter should be removed before growth starts in the spring and flower stalk formation begins.

Weed Control

Identify the weeds in each field and select recommended herbicides that control those weeds. See Tables E-3 and E-4.

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.

Determine the preharvest interval (PHI) for the crop. See Table E-4 and consult the herbicide label.

Find the herbicides you plan to use in the Herbicide Resistance Action Committee's (HRAC) **Herbicide Site of Action Table E-8** and follow the recommended good management practices to minimize the risk of herbicide resistance development by weeds in your fields.

Preemergence

Linuron--0.75 to 1.5 lb/A. Apply 1.5 to 3.0 pounds per acre Lorox 50DF or 1.5 to 3.0 pints per acre of Lorox 4L right after seeding. Plant seed at least 1/2 inch deep.

Postemergence

Clethodim--0.094 to 0.125 lb/A. Apply 12.0 to 16.0 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. 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.

Postharvest

Paraquat--0.6 lb/A. **A Special Local-Needs 24(c) label has been approved for the use of Gramoxone SL 2.0 or OLF for postharvest desiccation of the crop in Delaware, New Jersey and Virginia.** Apply 2.4 pints per acre Gramoxone SL 2.0 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

THE LABEL IS THE LAW. PLEASE REFER TO THE LABEL FOR UP TO DATE RATES AND RESTRICTIONS.

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

Aphids

Apply one of the following formulations:

azadirachtin--15.0 to 30.0 oz/A Ecozin Plus (or OLF)

OMRI-listed

flonicamid--2.0-2.8 fl oz/A Beleaf 50SG

flupyradifurone--7 to 10.5 fl oz/A Sivanto 200SL

imidacloprid--**soil** 4.4 to 10.5 fl oz/A Admire Pro (or OLF),

foliar 1.2 fl oz/A Admire PRO (or OLF)

malathion--1.0 to 2.0 pts/A Malathion 57EC (or OLF)

thiamethoxam--**soil** 1.7 to 4.0 oz/A Platinum 75SG; **foliar** 1.5 to 3.0 oz/A Actara 25WDG

Leafhoppers

Apply one of the following formulations:

carbaryl--0.5 to 1.0 qt/A Sevin Plus XLR (or OLF)

imidacloprid--**soil** 4.4 to 10.5 fl oz/A Admire Pro (or OLF),

foliar 1.2 fl oz/A Admire PRO (or OLF)

thiamethoxam--**soil** 1.7 to 4.0 oz/A Platinum 75SG; **foliar** 1.5 to 3.0 oz/A Actara 25WDG

Whiteflies

Apply one of the following formulations:

flonicamid--2.8 fl oz/A Beleaf 50SG (GH whiteflies)

flupyradifurone--10.5 to 14 fl oz/A Sivanto 200SL

imidacloprid--**soil** 4.4 to 10.5 fl oz/A Admire Pro (or OLF),

foliar 1.2 fl oz/A Admire PRO (or OLF)

thiamethoxam--**soil** 1.7 to 4.0 oz/A Platinum 75SG; **foliar** 1.5 to 3.0 oz/A Actara 25WDG

Pesticide	Use Category ¹	Hours to Reentry ²	Days to Harvest ³
INSECTICIDE			
azadirachtin	G	4	0
carbaryl	G	12	7
flonicamid	G	12	3
flupyradifurone	G	4	7
imidacloprid (soil/foliar)	G	12	21/7
malathion	G	24	7
thiamethoxam (soil/foliar)	G	12	7

(table continued)

Pesticide	Use Category ¹	Hours to Reentry ²	Days to Harvest ³
FUNGICIDE (FRAC code)			
azoxystrobin (Group 11)	G	12	0
Cabrio (Group 11)	G	12	0
chlorothalonil (Group M5)	G	12	10
Gem (Group 11)	G	12	7
Merivon (Groups 7 +11)	G	12	7
Ridomil Gold (Group 4)	G	48	0
Ultra Flourish (Group 4)	G	48	AP

See Table D-6.

¹ G = general, R = restricted

² Chemicals with multiple designations are based on product and/or formulation differences. CONSULT LABEL.

³ AP – At Planting

Disease Control

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

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

mefenoxam--(Ridomil Gold--1.0 to 2.0 pt 4SL/A or Ultra Flourish 2.0 to 4.0 pt 2E/A)

Leaf Spots (*Alternaria* and *Cercospora*), *Rhizoctonia* Stem Canker and Powdery Mildew

Rotate fields to allow at least 2 years between parsnip plantings. Always plant in well-drained soils with a pH of 7.0. Ridge soil over shoulders to prevent pathogen infection. Begin sprays at the first sign of disease and repeat no more than three times at 10-day intervals.

Rotate or tank-mix:

chlorothalonil--1.5 to 2.0 pt 6F/A or OLF

With one of the following FRAC code 11 fungicides:

azoxystrobin--9.0 to 15.5 fl oz 2.08F/A or OLF

Cabrio--8.0 to 12.0 oz 20EG/A

Gem--1.9 to 2.9 oz 500SC/A

Merivon--4.4 to 5.5 fl oz 2.09SC/A (use highest rate for *Cercospora* leaf spot)

Do not make more than one consecutive application of the FRAC code 11 fungicides.