

leaf spots appear), tank-mix or rotate the following every 7 days. Early season infections (ie. prior to first cutting) will severely reduce subsequent harvests.

**Rotate the following every 7 days prior to the onset of the disease**

Tilt--3.0--4.0 fl oz 3.6F/A plus fixed copper at labeled rates (do not apply Tilt within 14 days of harvest), or

**with one of the following FRAC code 11 fungicides:**

Quadris--6.0--15.5 fl oz 2.08SC/A plus fixed copper at labeled rates, or

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

**Note:** Do not make more than 2 applications of Tilt, Cabrio, or Quadris per growing season.

Tank-mixing Tilt, Cabrio or Quadris with a fixed copper may also help reduce bacterial infections.

## PARSNIPS

### Varieties

Varieties <sup>1</sup>	
All America	These varieties
Javelin*	are recommended for DE,
Harris Model	MD, NJ, PA, VA, WV

<sup>1</sup> Varieties listed alphabetically \* Denotes hybrid variety

### 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.

Parsnips	Pounds N per Acre	Soil Phosphorus Level			Soil Potassium Level		
		Low	Med	Opt.	Low	Med	Opt.
		Pounds P <sub>2</sub> O <sub>5</sub> per Acre			Pounds K <sub>2</sub> O per Acre		
50-75 <sup>1</sup>	150 <sup>1</sup>	100 <sup>1</sup>	50 <sup>1</sup>	150 <sup>1</sup>	100 <sup>1</sup>	50 <sup>1</sup>	
25-50 <sup>2</sup>	150 <sup>2</sup>	100 <sup>2</sup>	50 <sup>2</sup>	150 <sup>2</sup>	100 <sup>2</sup>	50 <sup>2</sup>	
25-50 <sup>3</sup>	0	0	0	0	0	0	

<sup>1</sup>Total amount nutrient recommended; growers producing vegetables on soils with high clay contents should reduce the recommended nitrogen and potassium rates by 20% and increase the phosphorus rate by 25%.

<sup>2</sup> Broadcast and disk-in

<sup>3</sup> Sidedress 4-5 weeks after planting

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

### Harvesting and Storage

Parsnips may be dug, topped, and stored at 32°F (0°C) at 90 to 95 percent relative humidity. Storage can be up to 6 months. Parsnips left in the ground over winter should be removed before growth starts in the spring.

### 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.

Find the herbicides you plan to use in the Herbicide Resistance Action Committee's (HRAC) **Herbicide Site of Action Table E-7** and follow the recommended good management practices to minimize the risk of herbicide resistance development by weeds in your fields.

### Preemergence

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 of Lorox 4L right after seeding. Plant seed at least 1/2 inch deep.

### Postemergence

Clethodim--0.094-0.125 lb/A. Apply 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. 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 Inteon 2SC or OLF 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. See the label for additional information and warnings.

### Insect Control

**NOTE:** Copies of specific insecticide product labels can be downloaded by visiting websites [www.CDMS.net](http://www.CDMS.net) or [www.Greenbook.org](http://www.Greenbook.org). Also, specific labels can be obtained via web search engines.

**Aphids**

imidacloprid (soil-Admire PRO; foliar-Nuprid 1.6F, Provado 1.6F or OLF)PARSNIPS/ PEAS  
malathion (Malathion 57EC or OLF)

**Leafhoppers**

beta-cyfluthrin (Baythroid XL)  
carbaryl (Sevin 80S or OLF)  
cyfluthrin (Tombstone, Renounce, or OLF)  
imidacloprid (soil, drip-Admire PRO; foliar-Nuprid 1.6F, Provado 1.6F or OLF)

Pesticide	Use Category <sup>1</sup>	Hours to Reentry <sup>2</sup>	Days to Harvest
<b>INSECTICIDE</b>			
beta-cyfluthrin	R	12	0
carbaryl	G	12	7
cyfluthrin	R	12	0
imidacloprid (soil, drip/foliar)	G	12	21/7
malathion	G	12	7
<b>FUNGICIDE (FRAC code)</b>			
Cabrio (Group 11)	G	12	0
chlorothalonil (Group M5)	G	12	10
Quadris (Group 11)	G	4	0
Ridomil Gold (Group 4)	G	48	0

See Table D-6.

<sup>1</sup> G = general, R = restricted

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

**Disease Control**

**Damping-Off**

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

Ridomil Gold--1.0-2.0 pt 4SL/A

**Leaf Spots, Canker and 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 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--1.5-2.0 pt 6F/A or OLF

**With one of the following FRAC code 11 fungicides:**

Quadris--9.0-15.5 fl oz 2.08SC/A, or

Cabrio--8.0-12.0 oz 20EG/A

Do not make more than one consecutive application of Quadris or Cabrio.

**PEAS**

Peas thrive in cool weather and tolerate frost. Planting for processing is based on the heat-unit theory. First plantings can be made as soon as soil can be tilled in the spring. Do not attempt plantings after April 30. Inoculation of seed enhances early nodule formation.

**Varieties**

Varieties <sup>1</sup>	DE	MD	NJ	PA	VA	WV
<b>Processing</b>						
Early Freezer 680	D	M	N	P		
Bolero	D	M	N	P		
Use varieties recommended by processors. Local adaptation and quality needs of processors must be considered. Consult the Delaware Extension Program website <a href="http://ag.udel.edu/extension/vegprogram/index.htm">http://ag.udel.edu/extension/vegprogram/index.htm</a> for results from recent processing pea variety trials.						
<b>Market</b>						
Progress No. 9	D	M	N		V	WV
Knight		M	N	P	V	WV
Lincoln						WV
Green Arrow		M		P	V	WV
Mr. Big				P		WV
<b>Edible Pod: Flat</b>						
Dwarf Gray Sugar (FR)				P		WV
Oregon Sugar Pod #2		M		P	V	WV
<b>Edible Pod: Round</b>						
Sugar Ann	D			P	V	WV
Sugar Snap (trellis type)(FR)	D	M	N	P		WV
Super Sugar Snap (trellis type)	D	M	N	P		WV

<sup>1</sup> Varieties listed by maturity within types, earliest first.

Letters in parentheses indicate disease resistance possessed by varieties. See the "Abbreviations" section in front portion of this publication.

**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.

Peas	Soil Phosphorus			Soil Potassium		
	Pounds N per Acre	Level		Level		
		Low	Med	Opt.	Low	Med
		Pounds P <sub>2</sub> O <sub>5</sub> per Acre	Pounds P <sub>2</sub> O <sub>5</sub> per Acre	Pounds K <sub>2</sub> O per Acre	Pounds K <sub>2</sub> O per Acre	Pounds K <sub>2</sub> O per Acre
	40-80 <sup>1</sup>	120 <sup>1</sup>	80 <sup>1</sup>	40 <sup>1</sup>	120 <sup>1</sup>	80 <sup>1</sup>

<sup>1</sup> Broadcast and disk-in before seeding.

**NOTE:** Growers producing vegetables on soils with high clay contents should reduce the recommended nitrogen and potassium rates by 20% and increase the phosphorus rate by 25%

**Seed Treatment**

Use seed already treated with an approved seed treatment, or treat seed with a slurry or dust that contains an approved commercial fungicide-insecticide mixture. See the Disease Control section for more information.

**Seeding and Spacing**

Peas can be planted between February 25 and April 30 when soil conditions are favorable. For processing peas, drill 250 to 275 pounds of seed per acre in rows 6 to 8 inches apart. For market peas, seed 80 to 120 pounds per acre in 30-inch rows. Seed at a depth of no more than 1 inch unless soil is dry. Use press wheel drill or seeder to firm seed into soil.