

PARSLEY

Varieties

Varieties ¹	
Flat Leaf	These varieties are recommended for DE, MD, NJ, PA, VA, WV
Dark Green Italian (celery leaf) Single (overwinter)	
Curly	These varieties are recommended for DE, MD, NJ, PA, VA, WV
Banquet (overwinter)	
Forest Green Triple Moss Curled	

¹ Varieties listed alphabetically.

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.

Parsley	Pounds N per Acre	Soil Phosphorus Level			Soil Potassium Level		
		Low	Med	Opt.	Low	Med	Opt.
		Pounds P ₂ O ₅ per Acre			Pounds K ₂ O per Acre		
	150-175 ¹	200 ¹	150 ¹	100 ¹	200 ¹	150 ¹	100 ¹
	50-75 ²	200 ²	150 ²	100 ²	200 ²	150 ²	100 ²
	25-50 ³	0	0	0	0	0	0
	25-50 ⁴	0	0	0	0	0	0

¹Total 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%.

²Broadcast and disk-in

³Sidedress after first cutting

⁴Sidedress after each additional cutting

Seeding and Spacing

Seed is sown 1/3 inch deep in a well-prepared seedbed beginning April 5. Later plantings can be seeded through July 10. Spacing between rows is 15 to 18 inches. Usual seeding rate is 20 to 40 pounds per acre. Seed is slow to germinate. If seed is more than 1 year old, have germination checked and adjust seeding rate accordingly.

Weed Control

Section 18 Emergency Label requests may be submitted to supplement weed control recommendations in parsley.

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.

Preplant Incorporated or Preemergence

Bensulide--5-6 lb/A. Apply 5 to 6 quarts per acre Prefar 4E before planting and incorporate 1 to 2 inches deep with power-driven rotary cultivators, or apply preemergence and activate with one-half inch of sprinkler irrigation within 36 hours to control most annual grasses. Use the maximum recommended rate preemergence followed by irrigation to suppress certain annual broadleaf weeds including common lambsquarters, smooth pigweed, and common purslane.

Preemergence

Linuron--0.5-1 lb/A. Apply 1 to 2 pounds per acre Lorox 50DF or 1 to 2 pints Lorox 4L immediately after seeding. Follow with irrigation if rainfall does not occur. Primarily controls broadleaf weeds. Annual grasses may only be suppressed

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 14 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, and 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 15 days and apply no more **than 3 pints per acre in one season**. Labeled for use in Parsley and Cilantro.

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 or OLF 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 or www.Greenbook.org. Also, specific labels can be obtained via web search engines.

Aphids

- acetamiprid (Assail 30SG or OLF)
- clothianidin(soil/foliar – Belay 2.13SC)
- flonicamid (Beleaf 50SG or OLF)
- imidacloprid (soil–Admire PRO; foliar–Nuprid 1.6F, Provado 1.6F or OLF)
- malathion (Malathion 57EC or OLF)
- pymetrozine (Fulfill 50WDG)
- spirotetramat (Movento)

Armyworms

- Bacillus thuringiensis* (Biobit, Dipel, Dipel 2X, Javelin, XenTari or OLF)
- emamectin benzoate (Proclaim 5SG)
- flubendiamide (Synapse)
- flubendiamide + buprofezin (Vetica)
- indoxacarb (Avaunt 30WDG)
- methoxyfenozide (Intrepid 2F)
- spinetoram (Radiant 2SC)
- spinosad (Entrust 80W, SpinTor 2SC or OLF)
- tebufenozide (Confirm 2F)
- thiodicarb (Larvin 3.2F)

Flea Beetles, Leafhoppers, Tarnished Plant Bugs

- imidacloprid (**FB, LH only**) (soil/drip–Admire PRO; foliar–Nuprid 1.6F, Provado 1.6F or OLF)
- beta-cyfluthrin (Baythroid XL)
- clothianidin (**FB, LH only**) (soil/foliar–Belay 2.13SC)
- cyfluthrin (Tombstone, Renounce or OLF)
- permethrin (**LH only**) (Pounce 3.2EC or OLF)

Carrot Weevil

azinphos-methyl (Guthion 50WP or OLF)--**A Special Local-Needs Label 24(c) is in effect in New Jersey.**

Pesticide	Use Category ¹	Hours to Reentry	Days to Harvest
INSECTICIDE			
acetamiprid	G	12	7
azinphos-methyl	R	5 days	21
<i>Bacillus thuringiensis</i>	G	4	0
beta-cyfluthrin	R	12	0
carbaryl	G	12	14
clothianidin(soil/foliar)	G	12	AP/21
cyfluthrin	R	12	0
dinotefuran (soil/foliar)	G	12	21/7
emamectin benzoate	R	48	7
flonicamid	G	12	0
flubendiamide	G	12	1
flubendiamide+buprofezin	G	12	7
imidacloprid (soil, drip/foliar)	G	12	21
indoxacarb	G	12	3
malathion	G	12	21
methoxyfenozide	G	4	1
permethrin	R	12	1
pymetrozine	G	12	7

(table continued in next column)

Pesticide	Use Category ¹	Hours to Reentry	Days to Harvest
INSECTICIDE (continued)			
spinetoram	G	4	1
spinosad	G	4	1
spirotetromat	G	24	3
tebufenozide	G	4	7
thiodicarb	G	12	14
zeta-cypermethrin	R	24	1
FUNGICIDE (FRAC code)			
Cabrio (Group 11)	G	12	0
copper, fixed (Group M1)	G	24	0
MetaStar (Group 4)	G	48	45
Quadris (Group 11)	G	4	0
Ridomil Gold (Group 4)	G	48	21
Tilt (Group3)	G	12	14
Ultra Flourish (Group 4)	G	48	--

See Table D-6.

¹ G = general, R - restricted

Nematode Control

Nematode control is essential for satisfactory parsley production. See "Nematodes" section of Soil Pests-Their Detection and Control. Before planting, soil should be fumigated with metam-sodium (Busan or Vapam HL) according to directions in the "Soil Fumigation" section.

Disease Control

Seed Treatment

See Table E-13 for seed treatment options.

Damping-off

Apply the following as a soil surface spray immediately after seeding:

- mefenoxam (Ridomil Gold 4SL/A--1.0-2.0 pt or 2.0-4.0 pt Ultra Flourish 2E/A), or
- metalaxyl (MetaStar)--4.0-8.0 pt 2E/A

Bacterial leaf blight and Septoria leaf spot

To help reduce disease pressure from bacterial and fungal diseases, do not plant parsley continually in the same field. Rotate with non-related crops for at least 2 years. Space successive plantings in the same year as far apart as possible. Heavy winds and rain may damage leaves and predispose leaves to bacterial infections.

Bacterial leaf blight: Prevention is key to reducing spread of the pathogen. Avoid working in the fields while the foliage is wet to help reduce spread. Scout fields on a regular basis for early symptoms, apply the following and repeat every 7 days:

fixed copper at labeled rates.

Tank-mixing a fixed copper with Quadris will also help control Septoria leaf spot.

Septoria leaf spot: The disease has caused serious problems in past years. Severe losses will occur if not controlled properly, especially if field or farm has a history of the disease. Grow parsley in areas of farm without history of disease. Plant blocks as far part as possible. **Early detection and prevention is key to controlling septoria leaf spot.** Scout daily, and apply fungicides preventatively, (before first

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 ¹	
All America	These varieties
Javelin*	are recommended for DE,
Harris Model	MD, NJ, PA, VA, WV

¹ 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 ₂ O ₅ per Acre			Pounds K ₂ O per Acre		
50-75 ¹	150 ¹	100 ¹	50 ¹	150 ¹	100 ¹	50 ¹	
25-50 ²	150 ²	100 ²	50 ²	150 ²	100 ²	50 ²	
25-50 ³	0	0	0	0	0	0	

¹Total 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%.

² Broadcast and disk-in

³ 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 or www.Greenbook.org. Also, specific labels can be obtained via web search engines.