

**Thrips**

methomyl (Lannate LV Or OLF)  
 spinetoram (Radiant 2SC)  
 spinosad (Entrust 80W, SpinTor 2SC or OLF)

Pesticide	Use Category <sup>1</sup>	Hours to Reentry	Days to Harvest
<b>INSECTICIDE</b>			
<i>Bacillus thuringiensis</i>	G	4	0
carbaryl/carbaryl bait	G	12	7
imidacloprid (soil/foliar)	G	12	21/7
malathion	G	12	7
methomyl (Lannate or OLF)	R	48	65
spinetoram	G	4	3
<b>FUNGICIDE (FRAC code)</b>			
Cabrio (Group 11)	G	12	0
Quadris (Group 11)	G	4	0
Ridomil Gold (Group 4)	G	12	0

See Table D-6.

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

**Disease Control**

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

Apply one of the following in a 7" wide band at planting:

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

**Bacterial Leaf Spot**

Rotate to allow 2 years between horseradish plantings. Avoid cultivation or other activity when foliage is wet to minimize spread of the disease.

**Cercospora Leafspot, Downy Mildew, Ramularia Leafspot, and White Rust**

Practice good crop rotation with crops other than crucifers. When conditions favor disease development, apply the following and repeat every 7 to 14 days. Do not make more than two applications:

Quadris--6.2-15.5 fl oz 2.08SC/A, or Cabrio--8.0-16.0 oz 20EG/A

**LEEKS**

**Varieties**

**Varieties<sup>1</sup>**

Arkansas	
Carina	These varieties are recommended in areas of DE, MD, NJ, PA, VA, WV where climatic conditions are favorable for leek production.
Leafall	
Leekool	
Leekwik	
Otina	
Winora	

<sup>1</sup> 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.

Leeks	Nitrogen (N) Pounds per Acre	Soil Phosphorus Level			Soil Potassium Level		
		Low Pounds P <sub>2</sub> O <sub>5</sub> per Acre	Med Opt.	Opt.	Low Pounds K <sub>2</sub> O per Acre	Med Opt.	Opt.
	100-125 <sup>1</sup>	200 <sup>1</sup>	150 <sup>1</sup>	100 <sup>1</sup>	200 <sup>1</sup>	150 <sup>1</sup>	100 <sup>1</sup>
	50-75 <sup>2</sup>	200 <sup>2</sup>	150 <sup>2</sup>	100 <sup>2</sup>	200 <sup>2</sup>	150 <sup>2</sup>	100 <sup>2</sup>
	25-50 <sup>3</sup>	0	0	0	0	0	0

<sup>1</sup> Total amount nutrient recommended

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

<sup>3</sup> Sidedress 3-4 weeks after planting if needed

Apply 3 - 4 pounds of boron (B) per acre with broadcast fertilizer. See Table B-10 for more specific boron recommendations.

**Transplants**

Southern transplants are used for early spring plantings. For summer planting, sow in seedbeds from early April to mid-May. About 2 pounds of seed are required to provide enough plants to set an acre. Seed should be planted 1/3 to 1/2 inch deep 12 to 16 weeks before field setting. Plants will be ready to set in early August.

**Field Spacing**

Rows: 20 to 30 inches apart; plants: 4 to 6 inches apart in the row. Set plants in trenches 3 to 4 inches deep using celery-type planter.

**Culture**

Leeks grow slowly for the first 2 or 3 months. To develop a long white stem, start to gradually fill in trenches and then hill soil around stems to 3 or 4 inches.

**Harvesting and Storage**

Spring-transplanted leeks are ready for harvest in July. August-planted leeks are ready for harvest by November or can be wintered over. Half-mature leeks of the hardy varieties will stand winter freezing with some protection such as salt hay or straw. They will be ready early 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 recommended size and/or leaf stage.

**Postemergence**

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, 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 3 pints per acre in one season.

### Postharvest

Paraquat--0.6 lb/A. **A Special Local-Needs 24(c) label has been approved for the use of Gramoxone Inteon 2SC 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

### Onion Maggot

malathion (Malathion 57EC) (**flies only**)  
zeta-cypermethrin (Mustang MAX, Respect or OLF) (**flies only**)

### Thrips, Aphids

acetamiprid (Assail 30WDG or OLF)  
malathion (Malathion 57EC or OLF)  
spinetoram (Radiant 2SC)  
zeta-cypermethrin (Mustang MAX, Respect, or OLF)

### Armyworms (AW), Cutworms (CW), Cabbage Loopers (CL)

*Bacillus thuringiensis* (Biobit, Dipel, Dipel 2X, Javelin, XenTari or OLF)  
spinosad (Entrust 80W, SpinTor 2SC or OLF) (**AW and CL only**)  
spinetoram (Radiant 2SC) (**AW and CL only**)  
zeta-cypermethrin (Mustang MAX, Respect, or OLF)

## Disease Control

### Purple Blotch and Downy Mildew

Begin in fall as soon as transplants are set out. Rotate the following at 10-day intervals as long as night temperatures remain warm.

#### Alternate:

Forum--6.0 fl oz 4.18SC/A (for downy mildew only; must be tank mixed with another fungicide effective for downy mildew), or

chlorothalonil--1.5-3.0 pt 6F/A or OLF; (do not apply chlorothalonil more than three times per season)

#### With one of the following fungicides:

Quadris--6.0-12.0 fl oz 2.08SC/A for purple blotch, or  
Quadris--9.0-15.5 fl oz 2.08SC/A for downy mildew, or  
Cabrio--8.0-12.0 oz 20EG/A (use 12 oz/A for downy mildew), or  
Pristine--10.5-18.5 oz 38WP/A (for purple blotch) or 18.5 oz 38WP/A for downy mildew suppression, or  
Endura--6.8 oz 70WG/A (for purple blotch only)

Materials with different modes of action (FRAC code) should always be alternated.

### White Rot

This disease is severe only on overwintered leeks. Practice crop rotation and use preplant soil fumigation with one of the materials listed in the "Soil Fumigation" section.

Pesticide	Use Category <sup>1</sup>	Hours to Reentry <sup>2</sup>	Days to Harvest
<b>INSECTICIDE</b>			
acetamiprid	G	12	7
<i>Bacillus thuringiensis</i>	G	4	0
malathion	G	12	3
spinetoram	G	4	1
spinosad	G	4	1
zeta-cypermethrin	R	12	7
<b>FUNGICIDE (FRAC code)</b>			
Cabrio (Group 11)	G	12	7
chlorothalonil (Group M5)	G	12	14
Endura (Group 7)	G	12	7
Forum (Group 40)	G	12	0
Pristine (Groups 11 + 7)	G	12	7
Quadris (Group 11)	G	4	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.