

# Rhubarb

## Varieties

McDonald, Sutton, Valentine (produces fewer seed stalks than McDonald) — all red-fleshed varieties.

## Planting and Spacing

**Crowns:** Use only young, healthy crowns having preferably 2 or 3 buds. Rows 5 to 6 feet apart. Set crowns in rows 3 feet apart in shallow furrows so crowns will be 2 inches below surface.

## Age for Harvesting

Harvest no longer than 4 weeks, beginning with the third season of growth. Harvest for about 8 to 10 weeks after the third season. Do not remove more than two-thirds of the developed stalks from any plant at one time.

## Bolting (Seed Stalk Formation)

Infertile soil, extreme heat or cold, drought, or long days that expose plants to too much light may cause bolting. Old plants bolt more. Valentine is more sensitive than McDonald, Ruby, and most green-stalked varieties.

## Fertilizing

**Lime:** To maintain a soil pH of 6.2 to 6.8.

**Preplant:** N: 50 pounds per acre.  $P_2O_5$ : 0 to 150 pounds per acre.  $K_2O$ : 0 to 200 pounds per acre. Adjust according to soil type, previous management, and soil test results for your state. Apply 25 additional pounds of  $P_2O_5$  directly in furrows when setting the rootstalks (divided crowns).

**Yearly:** Only N needed. Broadcast 50 pounds N per acre before beds are worked in the spring. Topdress with 35 pounds N per acre after new growth resumes.

## Pesticide Use in Greenhouses

Before using any pesticide, always read the product label for mention of greenhouse restrictions. See Selected Information About Recommended Fungicides (page 79), Selected Information About Recommended Herbicides (page 69), and Selected Information About Recommended Insecticides (page 54).

## Disease Control

### Recommended Controls

#### ***Crown and Root Rot of Rhubarb - Phytophthora Oomycete***

Use disease-free plants. Plant only on well-drained soil.

**Land selection** Plant only on well-drained soil.

**Sanitation** Use disease-free plants.

#### ***Leaf Spot of Rhubarb - Ascochyta Fungus***

Fertilize in the fall for growth in the spring. Remove older, yellowed leaves or leaves with lesions in the fall.

**Optimize fertilization** Fertilize in the fall for growth in the spring. Improves rapid, strong plant growth and uniform establishment. Enhances competitiveness.

**Sanitation** Remove older yellowed leaves or leaves with lesions in the fall.

## Weed Control

### Recommended Controls

Before spring growth, harrow bed thoroughly but carefully to avoid injuring the crowns. During the growing season, cultivate row-middles and hand hoe to keep the planting clean. Following the first light freeze in fall, mulch with 3-4 inches of straw around plants, but not on crowns. If additional mulch is needed in the spring, apply before hot, dry weather. Add more mulch during summer (if needed) to control weeds and retain moisture.

The herbicides listed below may also be used. Herbicides that control broadleaves must be applied while rhubarb is dormant or with shielded equipment between the row, as stated on the label. Herbicides that kill only emerged grasses may be applied over the top of rhubarb plants.

For specific weeds controlled by each herbicide, check Relative Effectiveness of Herbicides for Vegetable Crops in the printed guide.

Rates provided in the recommendations below are given for overall coverage. For band treatment, reduce amounts according to the portion of acre treated.

**Burndown or Directed/Shielded Application****Broadleaf and Grass Weeds**

**glyphosate formulations (glyphosate)** 0.75-3.75 lb. acid equivalent (ae) per acre. Use formulations containing 3 lb. ae per gal. (4 lb. isopropylamine salt per gal.) at 1-5 qt. per acre, or formulations containing 4.5 lb. ae per gal. (5 lb. potassium salt per gal.) at 0.66-3.3 qt. per acre. Broadcast before plants emerge, or apply between rows with wipers or hooded or shielded sprayers. Use low rate for annuals and higher rates for perennials. See label for suggested application volume and adjuvants. REI: 4-hour. PHI: 14-day.

**paraquat formulations (paraquat)** 2.5-4 pt. per acre of 2 lb. per gal. formulation or 1.7-2.7 pt. per acre of 3 lb. per gal. formulation. Add 1 qt. COC (1% v/v) or 0.5 pt. NIS (0.25%) to 25 gal. of solution. Apply during the dormant season before buds begin to grow. Do not exceed 2 applications per year. Certified applicators must successfully complete an EPA-approved training program before mixing, loading, and/or applying paraquat. REI: 24-hour. RUP.

**Burndown or Directed/Shielded Application****Broadleaf and Grass Weeds**

**Aim EC® (carfentrazone)** 0.5-2.0 fl. oz. per acre. Apply a minimum of 1 day prior to transplanting, or apply between crop rows with hooded sprayer. Do not allow spray to contact crop. Add 1 qt. COC (1% v/v) or 0.5 pt. NIS per 25 gal. of spray solution (0.25% v/v). Weeds must be actively growing and less than 4 in. tall. Do not exceed 6.1 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day.

**Preemergence Broadleaf and Grass Weeds**

**Caparol 4L® (prometryn)** 2-4 pt. per acre. Apply to dormant, established rhubarb before leaves emerge in spring. Use low rate on light soils. If weeds are present, add 1 qt. COC (1% v/v) or 0.5 pt. NIS per 25 gal. of spray solution (0.25% v/v). REI: 12-hour. PHI: 40-day.

**Casoron 4G® (dichlobenil)** 50 lb. per acre. Apply before rhubarb emerges in early spring. Broadcast on soil, and thoroughly incorporate granules by watering in. REI: 12-hour.

**Command 3ME® (clomazone)** 2 qt. per acre. Apply to dormant rhubarb prior to leaf emergence. Do not make more than one application per crop per year. REI: 12-hour.

**Dual Magnum® (s-metolachlor)** 0.67-1.33 pt. per acre. Apply in spring before rhubarb and weeds emerge. Do not exceed one application and 1.33 pts. per acre per year. REI: 24-hour. PHI: 62-day.

**Kerb SC® (pronamide)** 2.5-5 pt. per acre. Michigan only: Apply to dormant plants after frost has killed leaves in fall. Suppresses quackgrass. Do not apply to rhubarb the year of planting. Include glyphosate with application for better weed control. REI: 24-hour. PHI: 38-day. RUP.

**Lorox DF® (linuron)** 2-3 lb. per acre. Apply broadcast to dormant rhubarb in the spring before leaves emerge. REI: see label.

**Preemergence Broadleaf Weeds**

**Callisto® (mesotrione)** 6 fl. oz. per acre. Apply to dormant, established rhubarb. Applying after growth begins will cause crop stunting and bleaching. If weeds are emerged, add 1qt. COC (1% v/v) or 0.5 pt. NIS per 25 gal. of spray solution (0.25% v/v). Has residual activity to control weeds that have not emerged. Do not exceed 6 fl. oz. per acre per year, or 1 application per year. REI: 12-hour. PHI: 21-day.

**Sandea® (halosulfuron)** 0.5-1.0 oz. per acre. Apply to dormant rhubarb in the spring. If weeds are present, add 0.5 pt. NIS per 25 gal. of solution (0.25% v/v). May cause crop stunting. Use low rate to determine crop safety under field conditions. Controls yellow nutsedge. Does not control grass. REI: 12-hour. PHI: 60-day.

**Postemergence Broadleaf and Grass Weeds**

**Caparol 4L® (prometryn)** See recommendations in the "Preemergence Broadleaf and Grass Weeds" section of this chapter.

**QuinStar 4L® (quinclorac)** 12.6 fl. oz. per acre. Apply as a foliar spray to control Canada thistle and field bindweed. Can make a second application 30 days after the first. Do not exceed 25.2 fl. oz. per acre per year. REI: 12-hour. PHI: 30-day.

**Sandea® (halosulfuron)** See recommendations in the Preemergence Broadleaf Weeds section of this chapter.

*OMRI-listed indicates that the product is listed by the Organic Materials Review Institute (OMRI.org) and therefore may be acceptable for use in organic production. Check with your certifier before use.*

## Postemergence Grass Weeds

**clethodim formulations (clethodim)** Use 2 lb. per gal. formulations at 6-8 fl. oz. per acre with 1 qt. COC per 25 gals. of spray solution (1% v/v). Do not exceed 32 fl. oz. of 2EC formulations per acre per season. Use 0.97 lb. per gal. formulations at 9-16 fl. oz. per acre with 8 fl. oz. NIS per 25 gals. of spray solution (0.25% v/v). Do not exceed 64 fl. oz. of Select Max per acre per season. Use low rates for annual grasses and high rates for perennial grasses. Spray on actively growing grass. Wait at least 14 days between applications. REI: 24-hour. PHI: 30-day.

**Fusilade DX® (fluazifop-P)** 10-16 fl. oz. per acre. Add 1 qt. COC (1% v/v) or 0.5 NIS per 25 gal. of spray solution (0.25% v/v). Apply to small actively growing grass. Do not exceed 32 fl. oz. per acre per year. REI: 12-hour. PHI: 14-day.

**Poast® (sethoxydim)** 1-1.5 pt. per acre. Add 1 qt. COC per 25 gal. of spray solution (1% v/v). Spray on actively growing grass. Do not exceed 3 pt. per acre per growing season. REI: 12-hour. PHI: 15-day in Illinois, Indiana, Michigan, and Minnesota; 30-day in other states.

## Insect Control

### Recommended Controls

#### Aphids

**Actara® (thiamethoxam)** 1.5-3.0 fl. oz. per acre. Do not exceed 11 oz. per acre per season. REI: 12-hour. PHI: 7-day.

**Admire Pro® (imidacloprid)** 4.4-10.5 fl. oz. per acre Applied at soil. Do not exceed 10.5 fl. oz. per acre per season. REI: 12-hour. PHI: 45-day.

**Assail 30SG® (acetamiprid)** 2-4 oz. per acre. Do not exceed 5 applications per season. REI: 12-hour. PHI: 7-day.

**Belay® (clothianidin)** 3-4 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

**Beleaf 50SG® (flonicamid)** 2-2.8 oz. per acre. REI: 12-hour. PHI: 0-day.

**Brigade 2EC® (bifenthrin)** 2.1-6.4 fl. oz. per acre. Do not exceed 32 fl. oz. per acre per season. REI: 12-hour. PHI: 7-day. *RUP*.

**Fulfill® (pymetrozine)** 2.75 oz. per acre. Do not exceed 5.5 oz. per acre per season. REI: 12-hour. PHI: 1-day.

**Mustang Maxx® (zeta-cypermethrin)** 2.24-4.0 fl. oz. per acre Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP*.

**Platinum 2SC® (thiamethoxam)** 5-11 fl. oz. per acre. Do not exceed 11 fl. oz. per acre per season. REI: 12-hour. PHI: 30-day.

**Sivanto 200SL® (flupyradifurone)** 7-14 fl. oz. per acre. REI: 4-hour. PHI: 1-day.

#### Armyworm Caterpillars

**Exirel® (cyantraniliprole)** 7.0-13.5 fl. oz. per acre. Observe resistance management restrictions for diamondback moth. Allow 5 days between treatments. Do not exceed 61.7 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day.

#### Caterpillars

**Ambush® (permethrin)** 6.4-12.8 fl. oz. per acre. Check label for specific caterpillars. Do not exceed 12.8 fl. oz. per acre. REI: 12-hour. PHI: 1-day. *RUP*.

**Baythroid XL® (beta-cyfluthrin)** 0.8-3.2 fl. oz. per acre. Check label for specific caterpillars. Do not exceed 12.8 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. *RUP*.

**Brigade 2EC® (bifenthrin)** 2.1-6.4 fl. oz. per acre. Check label for specific caterpillars. Do not exceed 32 fl. oz. per acre. REI: 12-hour. PHI: 7-day. *RUP*.

**Coragen® (chlorantraniliprole)** 3.5-5.0 fl. oz. per acre. Check label for specific caterpillars. Do not exceed 15.4 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day.

**Entrust® (spinosad)** 3-8 fl. oz. per acre. For loopers and armyworms. Do not exceed 29 fl. oz. per acre per season. Observe resistance management restrictions. REI: 4-hour. PHI: 1-day. *OMRI-listed*.

**Exirel® (cyantraniliprole)** 7-17 fl. oz. per acre. Check label for specific caterpillars. Observe resistance management restrictions for diamondback moth. Allow 5 days between treatments. Do not exceed 61.7 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day.

**Intrepid 2F® (methoxyfenozide)** 4-10 fl. oz. per acre. For loopers and armyworms. Do not exceed 64 fl. oz. per acre. REI: 4-hour. PHI: 1-day.

**Mustang Maxx® (zeta-cypermethrin)** 2.24-4.0 fl. oz. per acre. For earworms, cutworms, loopers, and armyworms. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP*.

**Pounce 25WP® (permethrin)** 3.2-12.8 oz. per acre.

For earworms, corn borers, cutworms, loopers, and armyworms. Do not exceed 4 lbs. per acre per season. REI: 12-hour. PHI: 1-day. *RUP*.

**Radiant 1SC® (spinetoram)** 5-10 fl. oz. per acre. For earworms, loopers, and armyworms. Do not exceed 34 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day.

**Sevin XLR Plus® (carbaryl)** 1-2 qts. per acre. For earworms, cutworms, loopers, and armyworms. Do not exceed 6 qts. per acre per season. REI: 12-hour. PHI: 14-day.

### **Common Stalk Borer Caterpillar**

There are no registered insecticides that will give adequate control.

Control by cultivating field and margins. Remove curly dock, the normal host for rhubarb curculios.

### **Cultivate field and margins**

**Remove curly dock** Curly dock is the normal host for rhubarb curculios.

### **Corn Earworm/Fruitworm Caterpillar**

**Exirel® (cyantraniliprole)** 7.0-13.5 fl. oz. per acre.

Observe resistance management restrictions for diamondback moth. Allow 5 days between treatments. Do not exceed 61.7 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day.

### **Diamondback Moth Caterpillar**

**Exirel® (cyantraniliprole)** 7.0-13.5 fl. oz. per acre.

Observe resistance management restrictions for diamondback moth. Allow 5 days between treatments. Do not exceed 61.7 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day.

### **Leafhoppers**

**Actara® (thiamethoxam)** 1.5-3.0 fl. oz. per acre. Do not exceed 11 oz. per acre per season. REI: 12-hour. PHI: 7-day.

**Admire Pro® (imidacloprid)** 4.4-10.5 fl. oz. per acre  
Applied at soil. Do not exceed 10.5 fl. oz. per acre per season. REI: 12-hour. PHI: 45-day.

**Assail 30SG® (acetamiprid)** 2-4 oz. per acre. Do not exceed 5 applications per season. REI: 12-hour. PHI: 7-day.

**Belay® (clothianidin)** 3-4 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

**Brigade 2EC® (bifenthrin)** 2.1-6.4 fl. oz. per acre. Do not exceed 32 fl. oz. per acre per season. REI: 12-hour. PHI: 7-day. *RUP*.

**Mustang Maxx® (zeta-cypermethrin)** 2.24-4.0 fl. oz. per acre Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP*.

**Platinum 2SC® (thiamethoxam)** 5-11 fl. oz. per acre. Do not exceed 11 fl. oz. per acre per season. REI: 12-hour. PHI: 30-day.

**Sivanto 200SL (flupyradifurone)** 7-14 fl. oz. per acre. REI: 4-hour. PHI: 1-day.

### **Whiteflies**

**Actara® (thiamethoxam)** 3.0-5.5 oz. per acre. Do not exceed 11 oz. per acre. per season. REI: 12-hour. PHI: 7-day.

**Admire Pro® (imidacloprid)** 4.4-10.5 fl. oz. per acre  
Applied at soil. Do not exceed 10.5 fl. oz. per acre per season. REI: 12-hour. PHI: 45-day.

**Assail 30SG® (acetamiprid)** 2-4 oz. per acre. Do not exceed 5 applications per season. REI: 12-hour. PHI: 7-day.

**Belay® (clothianidin)** 3-4 fl. oz. per acre. REI: 12-hour. PHI: 7-day.

**Brigade 2EC® (bifenthrin)** 2.1-6.4 fl. oz. per acre. Do not exceed 32 fl. oz. per acre per season. REI: 12-hour. PHI: 7-day. *RUP*.

**Fulfil® (pymetrozine)** 2.75 oz. per acre. Do not exceed 5.5 oz. per acre per season. REI: 12-hour. PHI: 1-day.

**Mustang Maxx® (zeta-cypermethrin)** 2.24-4.0 fl. oz. per acre Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. *RUP*.

**Platinum 2SC® (thiamethoxam)** 5-11 fl. oz. per acre. Do not exceed 11 fl. oz. per acre per season. REI: 12-hour. PHI: 30-day.

**Sivanto 200SL® (flupyradifurone)** 7-14 fl. oz. per acre. REI: 4-hour. PHI: 1-day.