emerge. Use with another herbicide. Some varieties may be sensitive to Zidua. REI: 12-hour. HRAC 15.

Rhubarb – Horticulture

Major update by Ben Phillips, Liz Maynard – Oct 2020
Reviewed by Liz Maynard – Aug 2021

Crop Description

Rhubarb is a plant of unknown European origin, but most commercial varieties are hybrids, *Rheum x hybridum*, that will not produce true from seed. Variety names have been lost, confused, and rebranded over the years. There are only a handful of varieties that can be sourced in the United States, and the varieties most grown commercially are Canada Red, MacDonald, Sutton, and Victoria – all red-stalked varieties. There are more productive varieties that produce green stalks, but red-stalked varieties are more popular at market and are more amenable to a process called “forcing”. After two years of unharvested growth, plants can begin to be annually harvested in the field for 3 to 8 productive years. Alternatively, after three years of unharvested growth, plants can be dug in late fall or early winter and stored in dark indoor facilities where they are sprouted early for a lucrative late winter and early spring harvest, after which the roots are exhausted and discarded. Victoria is the most reliable forcing variety, and the most widely available.

Planting and Spacing

Use only young, healthy crowns having preferably 2 or 3 buds. Rows 5 to 6 feet apart. Set crowns 3 feet apart in shallow furrows so crowns will be 2 inches below surface. Break off flower stalks to maintain a strong root system year after year. Infertile soil, extreme heat or cold, drought, or long days that expose plants to too much light may cause bolting, and older plants bolt more. A productive planting can be maintained for 3 to 8 years.

For forcing, crowns are placed in a dark room with about 1 square foot per crown on an open dirt floor, or in apple crates, and a few inches of soil is piled around each crown. Plants can be held dormant with temperatures below 40 degrees.

Fertilizing

*pH:* Maintain a soil pH of 6.2 to 6.8.

**New plantings:** Before planting, apply 50 pounds N per acre, 0 to 150 pounds P₂O₅ per acre, and 0 to 200 pounds K₂O per acre based on soil test results and recommendations from your state. Apply an additional 25 pounds P₂O₅ per acre directly in furrows when setting crowns. Sidedress with 50 pounds N per acre after growth starts in the spring.

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.

Rhubarb is forced by wetting the soils around the crowns and maintaining a temperature between 50° and 65° F. The plants then produce many bright pink stalks for about one month and are usually picked twice a week. After experiencing a forcing process, crowns are generally too weak to produce well again.

Rhubarb – Diseases

Reviewed by Dan Egel – Sept 2021

Recommended Controls

Leaf Spot of Rhubarb - Ascochyta Fungus

Non-Pesticide

Fertilize in the fall for growth in the spring. Improves rapid, strong plant growth and uniform establishment, and enhances competitiveness. Remove older yellowed leaves or leaves with lesions in the fall.

Phytophthora Blight of Multiple Crops - Phytophthora Oomycete

Non-Pesticide

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

Reviewed by Laura Ingwell – Sept 2021

Recommended Controls

Aphids

Pesticide

**Actara (25WDG) (thiamethoxam)** | 1.5-3.0 fl. oz. per acre. Apply as a foliar spray. Do not exceed 11 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 04A.

**Admire Pro (4.6SC) (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. IRAC 04A.

**Assail 30SG (acetamiprid)** | Use 30SG formulations at 2.0-4.0 oz. per acre and do not exceed 20 oz. per acre per season. Use 70WP formulations at 0.8-1.7 oz. per acre and do not exceed 8.5 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 04A.

**Belay (2.13SC) (clothianidin)** | Soil applications: 9-12 fl. oz. per acre of 2.13SC formulation. 4.8-6.4 oz. per acre of 50WDG formulation. Foliar applications: 3-4 fl. oz. per acre of 2.13SC formulation. 1.6-2.1 oz. per acre of 50WDG formulation. Do not exceed 0.2 lb active ingredient clothianidin per acre per year. See bee warning on label. REI: 12-hour. PHI: 7-day. IRAC 04A.

**Beleaf (50SG) (flonicamid)** | 2-2.8 oz. per acre. REI: 12-hour. PHI: 0-day. IRAC 29.

**Brigade 2EC (bifenthrin)** | 2.1-6.4 fl. oz. per acre. Use 2EC formulations at 2.1-6.4 fl. oz. per acre and do not exceed 32 fl. oz. per acre per season. Use 10DF, 10WP, or 10WSB formulations at 5.3-16 oz. per acre and do not exceed 80 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 03A. RUP.

**Fulfill (50WDG) ( pymetrozine)** | 2.75 oz. per acre. Do not exceed 5.5 oz. per acre per season. REI: 12-hour. PHI: 1-day. IRAC 09B.

**Perm-Up 25DF (permethrin)** | 3.2-12.8 oz. per acre. Use 25W, 25WP or 25DF formulations at 6.4-12.8 oz. per acre and do not exceed 64 oz. per acre per season. Use 3.2EC formulations at 2-8 fl. oz. per acre and do not exceed 80 fl. oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 1-day. IRAC 03A. RUP.

**Platinum 2SC (thiamethoxam)** | Use 2SC formulations as a soil treatment at 5-11 fl. oz. per acre and do not exceed 11 fl. oz. per acre per season. Use 75SG formulations as a soil treatment at 1.66-3.67 oz. per acre and do not exceed 3.67 oz. per acre per season. REI: 12-hour. PHI: 30-day. IRAC 04A.

**Pyganic EC 5.0 II (0.41) (pyrethrins)** | 4.5-15.6 fl. oz. per acre foliar application, or 0.375 fl. oz. per 1,000 sq. ft. growing media for soil drench application (in greenhouse). Do not exceed 15.61 fl. oz. per acre. Do not reapply within 3 days except under extreme pest pressure. REI: 12-hour. PHI: PHI: 0-day. IRAC 03A. OMRI-listed.

**Sivanto 200 (1.67SL) (flupyradifurone)** | Use Sivanto 200SL and Sivanto Prime at 7-14 fl. oz. per acre. See label for specific pest rates. Do not exceed 28 fl. oz. per acre per crop season. REI: 4-hour. PHI: 1-day. IRAC 04D.

Caterpillars

There are many minor caterpillar pests of rhubarb, including corn earworm/tomato fruitworm, tomato hornworm, European corn borer, cutworms, loopers, and armyworms. Always check the label for the specific list of caterpillars that the product can be used on.

Non-Pesticide

Remove curly dock weeds from fields and field edges. Curly dock is the normal host for common stalk borer caterpillars that feed on rhubarb.

Pesticide

**Baythroid XL (1EC) ( beta-cyfluthrin)** | 0.8-3.2 fl. oz. per acre. For armyworms, cutworms, loopers, corn earworm, and European corn borer. See label for pest-specific rates. Do not exceed 12.8 fl. oz. per acre per season. REI: 12-hour. PHI: 0-day. IRAC 03A. RUP.

**Brigade 2EC (bifenthrin)** | 2.1-6.4 fl. oz. per acre. Caterpillars include armyworms, cutworms and loopers. Use 2EC formulations at 2.1-6.4 fl. oz. per acre and do not exceed 32 fl. oz. per acre per season. Use 10DF, 10WP, or 10WSB formulations at 5.3-16 oz. per acre and do not exceed 80 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 03A. RUP.

**Coragen (1.67SC) (chlorantraniliprole)** | 3.5-7.5 fl. oz. per acre. For armyworms and loopers. Can be applied through soil or foliar applications. Do not exceed 15.4 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day. IRAC 28.

**Entrust SC (2) ( spinosad)** | For armyworms and loopers. Use 2SC formulations at 3.0-8.0 fl. oz. per acre and do not exceed 29 fl. oz. per acre per season. Use 80WP formulations at 0.5-2.5 oz. per acre and do not exceed 9 oz. per acre per season.
Rhubarb – Insects

season. Allow 4 days between applications. REI: 4-hour. PHI: 1-day. IRAC 05. OMRI-listed.

Exirel (0.83SE) (cyantraniliprole) | 7-17 fl. oz. per acre. For armyworms, corn earworm, and loopers. Allow 7 days between treatments. Do not exceed 61.7 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. IRAC 28.

Intrepid 2F (methoxyfenozide) | 4-10 fl. oz. per acre. For armyworms, and loopers. Do not exceed 64 fl. oz. per acre. REI: 4-hour. PHI: 1-day. IRAC 18.

Mustang Maxx (0.8) (zeta-cypermethrin) | 2.24-4.0 fl. oz. per acre. Caterpillars include armyworm, cutworm, cabbageworm and loopers. Do not make applications less than 7 days apart. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. IRAC 03A.

Perm-Up 25DF (permethrin) | 3.2-12.8 oz. per acre. For armyworms, cutworms, corn earworm, and loopers. Use 25W, 25WP or 25DF formulations at 6.4-12.8 oz. per acre and do not exceed 64 oz. per acre per season. Use 3.2EC formulations at 2-8 fl. oz. per acre and do not exceed 80 fl. oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 1-day. IRAC 03A. RUP.

Radiant 1SC (spinetoram) | 5-10 fl. oz. per acre. For armyworms, corn earworm, and loopers. Do not exceed 34 fl. oz. per acre per season. REI: 4-hour. PHI: 1-day. IRAC 05.

Sevin XLR Plus (4SC) (carbaryl) | 1-2 qts. per acre. For armyworms. Do not exceed 6 qts. per acre per season. REI: 12-hour. PHI: 14-day. IRAC 01A.

Flea Beetles

Pesticide

Belv (2.13SC) (clothianidin) | Soil applications: 9-12 fl. oz. per acre of 2.13SC formulation. 4.8-6.4 oz. per acre of 50WDG formulation. Foliar applications: 3-4 fl. oz. per acre of 2.13SC formulation. 1.6-2.1 oz. per acre of 50WDG formulation. Do not exceed 0.2 lb active ingredient clothianidin per acre per year. See bee warning on label. REI: 12-hour. PHI: 7-day. IRAC 04A.

Brigade 2EC (bifenthrin) | 2.1-6.4 fl. oz. per acre. Use 2EC formulations at 2.1-6.4 fl. oz. per acre and do not exceed 32 fl. oz. per acre per season. Use 10DF, 10WP, or 10WSB formulations at 5.3-16 oz. per acre and do not exceed 80 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 03A. RUP.

Mustang Maxx (0.8) (zeta-cypermethrin) | 2.24-4.0 fl. oz. per acre Do not make applications less than 7 days apart. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. IRAC 03A. RUP.

Platinum 2SC (thiamethoxam) | Use 2SC formulations as a soil treatment at 5-11 fl. oz. per acre and do not exceed 11 fl. oz. per acre per season. Use 75SG formulations as a soil treatment at 1.66-3.67 oz. per acre and do not exceed 3.67 oz. per acre per season. REI: 12-hour. PHI: 30-day. IRAC 04A.

Leafhoppers

Pesticide

Actara (25WDG) (thiamethoxam) | 1.5-3.0 fl. oz. per acre. Apply as a foliar spray. Do not exceed 11 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 04A.

Admire Pro (4.6SC) (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. IRAC 04A.

Belay (2.13SC) (clothianidin) | Soil applications: 9-12 fl. oz. per acre of 2.13SC formulation. 4.8-6.4 oz. per acre of 50WDG formulation. Foliar applications: 3-4 fl. oz. per acre of 2.13SC formulation. 1.6-2.1 oz. per acre of 50WDG formulation. Do not exceed 0.2 lb active ingredient clothianidin per acre per year. See bee warning on label. REI: 12-hour. PHI: 7-day. IRAC 04A.

Brigade 2EC (bifenthrin) | 2.1-6.4 fl. oz. per acre. Use 2EC formulations at 2.1-6.4 fl. oz. per acre and do not exceed 32 fl. oz. per acre per season. Use 10DF, 10WP, or 10WSB formulations at 5.3-16 oz. per acre and do not exceed 80 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 03A. RUP.

Mustang Maxx (0.8) (zeta-cypermethrin) | 2.24-4.0 fl. oz. per acre Do not make applications less than 7 days apart. Do not exceed 24 fl. oz. per acre per season. REI: 12-hour. PHI: 1-day. IRAC 03A. RUP.

Platinum 2SC (thiamethoxam) | Use 2SC formulations as a soil treatment at 5-11 fl. oz. per acre and do not exceed 11 fl. oz. per acre per season. Use 75SG formulations as a soil treatment at 1.66-3.67 oz. per acre and do not exceed 3.67 oz. per acre per season. REI: 12-hour. PHI: 30-day. IRAC 04A.

Rhubarb Curculio Beetle

The adult weevils overwinter in margins near the rhubarb planting. They emerge in spring and can be easily picked off of the leaves they are resting on, due to their large size. Weevil populations survive on weed hosts dock, thistle and sunflower. Managing these plants in relation to the rhubarb...
crop is especially important. Eggs laid in rhubarb do not survive, they are crushed by the growing plant tissue.

There are no registered insecticides that will give adequate control.

Non-Pesticide

Remove weed hosts (dock, thistle, and sunflower) from fields and field edges.

Stink Bugs

Pesticide

**Brigade 2EC (bifenthrin)** | 2.1-6.4 fl. oz. per acre. Use 2EC formulations at 2.1-6.4 fl. oz. per acre and do not exceed 32 fl. oz. per acre per season. Use 10DF, 10WP, or 10WSB formulations at 5.3-16 oz. per acre and do not exceed 80 oz. per acre per season. Allow 7 days between applications. REI: 12-hour. PHI: 7-day. IRAC 03A. *RUP.*

**Pyganic EC 5.0 II (0.41) (pyrethrins)** | 4.5-15.6 fl. oz. per acre foliar application, or 0.375 fl. oz. per 1,000 sq. ft. growing media for soil drench application (in greenhouse). Do not exceed 15.61 fl. oz. per acre. Do not reapply within 3 days except under extreme pest pressure. REI: 12-hour. PHI: PHI: 0-day. IRAC 03A. OMRI-listed.

**Platinum 2SC (thiamethoxam)** | Use 2SC formulations as a soil treatment at 5-11 fl. oz. per acre and do not exceed 11 fl. oz. per acre per season. Use 75SG formulations as a soil treatment at 1.66-3.67 oz. per acre and do not exceed 3.67 oz. per acre per season. REI: 12-hour. PHI: 30-day. IRAC 04A.

**Sivanto 200 (1.67SL) (flupyradifurone)** | Use Sivanto 200SL and Sivanto Prime at 7-14 fl. oz. per acre. See label for specific pest rates. Do not exceed 28 fl. oz. per acre per crop season. REI: 4-hour. PHI: 1-day. IRAC 04D.

Rhubarb – Weeds

Reviewed by Stephan Meyers, Ben Phillips – Sept 2021

**Recommended Controls**

All Weeds

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 the Relative Effectiveness of Herbicides for Vegetable Crops table.

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

Non-Pesticide

Good weed control in the planting year is especially important. Multivators, tines, rolling cultivators, flame weeder work well before emergence of rhubarb, but it is important to avoid damaging crowns when cultivating. Cultivate row-middles and hand-hoe after emergence. Once established and 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.

Pesticide

Aim EC (2) (carfentrazone) [POST] [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: 14.

Callisto (40SC) (mesotrione) [PRE] [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 1 qt. 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. HRAC 27.

Caparol 4L (prometryn) [POST, PRE] [2-4 pts. 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.
HRAC 05.

Lorox DF (50) (linuron) [POST, PRE] [2-3 lbs. per acre. Apply broadcast to dormant rhubarb in the spring
before leaves emerge. REI: 24-hour to 8-day. HRAC 05.

Poast (1.5EC) (sethoxydim) [POST] [1-1.5 pts. 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
make more than one application per crop per year. REI: 12-
hour. HRAC 13.

Dual Magnum (7.62EC) (s-metolachlor) [PRE] 0.67-1.33 pts. 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. HRAC 15.

Fusilade DX (2EC) (fluazifop-P) [POST] [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. HRAC 01.

glyphosate products (glyphosate) [POST] [0.75-
3.75 lbs. acid equivalent (ae) per acre. Use formulations
containing 3 lbs. ae per gal. (4 lbs. isopropylamine salt per
gal.) at 1-5 pt. 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 to
12-hour. PHI: 14-day. HRAC 0.

Kerb SC (3.3) (pronamide) [POST, PRE] [2.5-5 pt. per acre. Michigan only (MI 24c exp. 04/06/22): 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. HRAC 03. RUP.

Lorox DF (50) (linuron) [POST, PRE] [2-3 lbs.
per acre. Apply broadcast to dormant rhubarb in the spring
before leaves emerge. REI: 24-hour to 8-day. HRAC 05.

paraquat products (paraquat) [POST] [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: 12 to 24-hour.
HRAC 22. RUP.
Rhubarb – Weeds

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per growing season. REI: 12-hour. PHI: 15-day in Illinois, Indiana, Michigan, and Minnesota; 30-day in other states. HRAC 01.

QuinStar 4L (3.8) (quinclorac) [POST  | 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. HRAC 04.

Sandea (75) (halosulfuron) [POST | PRE  | 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. HRAC 02.
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