

Beets

Culture

Beets are a cool-season crop, tolerating frost or even light freezes. Highest quality is obtained when temperatures are between 55-70°F. Hot weather produces white bands in the root.

Seeding begins in early April and continues until late July. Seeds will germinate at temperatures between 40-80°F. Beets will go to seed, or bolt, if exposed to 2-3 weeks of temperatures below 50°F.

Varieties

Detroit Dark Red strains
Warrior
Red Ace
Ruby Queen
Redpack
Pacemaker III

Lime and Fertilizer

Maintain soil pH at 6.0-6.8.

After plowing, but prior to planting, broadcast and disk in all fertilizer. Apply at the rates of 90-120 lb N, 75-150 lb P₂O₅ and 75-150 lb K₂O. Apply additional nitrogen as needed.

Boron: Apply 1 lb/A of actual boron on mineral soils over the row at planting or with the fertilizer.

Spacing and Seeding

Rows: 12-16 inches between rows. Thin plants to 2-3 inches apart.

Seeding rate: 10-12 lb of seed/A (85% germination or better).

Disease Control

Damping Off

Buy seed commercially treated with Apron Maxx or Thiram. Rotate to allow 2-3 years between beet plantings. Plow under residue at end of season. If Rhizoctonia has been a problem, seed may be treated with **Maxim 4 FS** at 0.08-0.16 fl oz/100 lb of seed. **Ridomil Gold EC** may be applied preplant incorporated or on the surface to control damping off by Pythium spp. (see label instructions).

Cercospora Leaf Spot

Allow 2-3 years between beet plantings. Plow under residue at end of crop. When conditions are favorable for disease, apply fungicide according to label instructions:

Quadris 9.0-15.4 oz/A, 7-14 day intervals (0 days-PHI).

Cabrio EG 8-12 oz/A, 7-14 day intervals, maximum three applications per season (0 days-PHI).

Kocide 3000, 2000, 101, 4.5 LF or DF (see label for instructions).

Nu-Cop 50 DF 2-5 lb/A, depending on disease severity. Make 4-5 applications at 10-14 day intervals.

Cuprofix 20DF 2.5-6.5 lb/A.

Tilt 3.0-4.0 fl oz/A (14 days-PHI).

Cyst Nematode

Nemacur 3 5 fl oz/1000 ft row. This is a restricted use pesticide due to high acute toxicity and toxicity to wildlife.

InLine (see label for application rates). This is a restricted use pesticide.

Insect Control

See the table below for overview of insecticides used to control beet pests.

Insecticides for Control of Beet Pests (✓ = labeled; - = not labeled)					
	Pre-harvest interval (days)	Cabbage maggot	Flea beetles	Aphids	Leafminers
carbaryl (Sevin)	7	-	✓	-	-
deltamethrin (Delta Gold)	3	-	✓	-	-
diazinon	14	-	-	✓	✓
imidacloprid (Admire)	21	-	✓	✓	-
imidacloprid (Provado)	7	-	✓	✓	-
imidacloprid + cyfluthrin (Leverage)	7	-	✓	✓	-
malathion	7	-	-	✓	-
methoxyfenozide	14	-	-	-	-
spinetoram (Radiant)	7	-	✓	-	✓
spinosad (SpinTor)	3	-	-	-	✓
thiamethoxam (Actara)	7	-	✓	✓	-
thiamethoxam (Platinum)	-	-	✓	✓	-
zeta-cypermethrin (Mustang)	1	✓	✓	-	-

• Preplant broadcast soil treatment

Diazinon

For cutworms, wireworms.

Diazinon 50WP: 4-8 lb/A.

Diazinon AG500 (4EC): 2-4 qt/A.

Diazinon 14G: 14-28 lb/A for cutworms; 21-28 lb/A for wireworms.

• At-planting treatment

Imidacloprid (21 days-PHI)

For aphids, flea beetles, leafhoppers.

Admire 2F, Alias 2F: 0.7-1.7 fl oz/1,000 ft or 10-24 fl oz/A.

Admire Pro (4.6F): 4.4-10.5 fl oz/A.

Thiamethoxam

For aphids, flea beetles, leafhoppers, whiteflies.

Platinum 2SC: 5-8 fl oz/A. Do not use more than 8 fl oz/A or less than 5 fl oz/A per season.

Platinum 75SG: 1.7-4.01 oz/A. Limit 4.01 oz/A per year.

• Foliar treatment

Carbaryl (7 days-PHI)

For flea beetles.

Carbaryl 4L; Sevin 4F; Sevin XLR Plus (4EC): 0.5-1 qt/A.

Sevin 50WP: 1-2 lb/A.

Sevin 80S: 0.62-1.25 lb/A.

Deltamethrin (3 days-PHI)

Delta Gold 1.5EC: 1.0-2.4 fl oz/A for cutworms, loopers. 1.5-2.4 fl oz/A for flea beetles, leafhoppers, tarnished plant bug. Limit 12.0 fl oz/A per season. Allow 3 days between applications.

Diazinon (14 days-PHI)

For aphids, leafminers.

Diazinon AG500 (4E): 0.5-1 pt/A.

Diazinon 50WP: 0.5-1 lb/A.

Imidacloprid (7 days-PHI)

For aphids, flea beetles, leafhoppers, whiteflies.

Provado 1.6F, Pasada 1.6F: 3.5 fl oz/A.

Imidacloprid + cyfluthrin (7 days-PHI)

For flea beetles, aphids.

Leverage 2.7SE: 3.5 fl oz/A. Limit 10.5 fl oz/A per year.

Malathion (7 days-PHI)

For aphids.

Malathion 5EC; Malathion 57EC: 1.5-2 pt/A.

Malathion 8 Aquamul: 1-2.5 pt/A.

Malathion 8EC: 0.5-1 pt/A.

Methoxyfenozide (14 days-PHI)

For caterpillars: cabbageworms, loopers, armyworms.

Intrepid 2F: 6-16 fl oz/A. Limit 64 fl oz/A per season.

Spinetoram (7 days-PHI)

For leafminers, caterpillars.

Radiant 1SC: 6-8 fl oz/A. Limit 4 applications per year.

Spinosad (3 days-PHI)

For leafminers, caterpillars, thrips.

SpinTor 2SC: 3-6 oz/A.

Entrust (80WP): 1-3 oz/A.

Thiamethoxam (7 days-PHI)

For aphids, flea beetles, leafhoppers, whiteflies.

Actara 25WDG: 1.5-4 oz/A. Limit 8 oz/A per season.

Zeta-cypermethrin (1 day-PHI)

For flea beetles.

Mustang Max 0.8EC: 1.28-4 fl oz/A.

Mustang 1.5EW: 1.4-4.3 fl oz/A.

Weed Control

Preplant Incorporated

RoNeet 6E: Apply 2.0-2.5 qt/A, preplant incorporated (3-4 inches deep) immediately after applications. Especially good on annual grasses. Use on mineral soils only. Weed control is quite variable.

Preemergence

Pyramin FL: Apply 3.8 qt/A preemergence. For control of annual weeds.

Dual Magnum: Controls germinating annual grasses and broadleaf weeds. Apply 0.33 to 0.67 pt/A Dual Magnum after seeding, followed by irrigation (at least 0.5 inches) if rainfall is not expected. Do not use on soils with less than 1.5% organic matter and weed control may be reduced on muck soils. Users must be in possession of the correct supplemental label and must indemnify Syngenta Crop Protection. To obtain a copy of the label, visit the FarmAssist web site (www.farmassist.com). You must register and complete an indemnification agreement to download the label.

Postemergence

Poast: For control of grass apply 2.5 pt/A. Include COC 1% V/V (60 days-PHI).

Spin-Aid: Controls several common broadleaf weeds if applied when weeds are at the 2 true-leaf stage. Apply 3 to 6 pt/A when beets are in the 4 to 6 true-leaf stage. Severe crop injury may result if applied before this stage.

SelectMax: Controls annual and perennial grasses. Apply 9-16 fl oz/A plus non-ionic surfactant at 0.25% of final volume. Repeat applications can be made at 14-day intervals for a maximum allowed use per season of 64 fl oz/A. Pre-harvest interval is 1 day. **Select 2 EC** (30 day PHI) may also be used. Apply 6-8 fl oz/A plus crop oil concentrate at 1% of final volume. Do not apply more than 8 fl oz/A in a single application.

Stinger: For control of specified broadleaf weeds including common ragweed and cocklebur apply 0.25-0.5 pt/A when target weeds are actively growing. A second application is permissible, provided the total applied is not more than 0.5 pt/growing season and no later than 30 days before harvest (30 days-PHI). **Clopyr Ag** and **Garrison** are additional clopyralid containing herbicides registered on beets. Both products can be applied two times/growing season *but* to a maximum combined application rate of 1 pt/A.