

Table beet

Pea

Pepper

Potato

Pumpkin & squash

Sweet corn

Table beet

Tomato

Planting

Plant in well-drained soil that is high in organic matter. Use minimum tillage to maintain good soil structure. Crusting seriously reduces seedling emergence. Rotating crops will help prevent damping-off.

Rows: 12–30 inches; 15–20 plants/ft of row.

Seed: 10–15 lb/a.

Table beets can be planted in paired rows 14 inches apart with 1.5 inches between paired rows. Use size-graded seed of monogerm varieties or multigerm varieties spaced 1 inch apart in each paired row. Smaller seed sizes of multigerm varieties are recommended, since a relatively

higher percentage of the “seedballs” will contain a single germ as compared to the larger seed sizes. Use 16–20 lb/a of seed. Plant seed no deeper than 0.5–0.75 inch in moist soil.

Lime and fertilizer

Lime: Use dolomitic limestone to maintain a pH of 6.0 on mineral soils and 5.6 on organic soils.

Fertilizer rates: Apply P_2O_5 and K_2O according to soil test recommendations before planting. Annual nitrogen, P_2O_5 , and K_2O recommendations are shown in the table below. Take credits for previous legume crops and manure.

Application: Broadcast fertilizer or apply in a band 2 inches to the side of the row and 2 inches below seed depth.

Nitrogen: Apply before planting or sidedress early in the growing season. On sandy soils, split the nitrogen into two or 3 applications over the growing season.

Boron: Apply 2–3 lb/a of boron with broadcast fertilizer before planting if boron soil test is very low (VL) or low (L). Omit application if boron soil test is in the excessively high (EH) range. During extended periods of dry weather, make foliar applications of boron (see *black spot* in Disease Control table).

Annual nitrogen, phosphate, and potash recommendations for table beet

Nitrogen		Phosphate and potash		
Organic matter (%)	Amount to apply (lb/a)	Yield goal (t/a)	Amount P_2O_5 to apply* (lb/a)	Amount K_2O to apply* (lb/a)
<2	120	5.0–10.0	10	30
2.0–9.9	100	10.1–15.0	15	50
10–20	80	15.1–20.0	25	70
>20	30			

*Amounts shown are for optimum (O) soil test levels. Apply 50% of this rate if soil test is high (H) and omit if soil test is excessively high (EH). If soil test is low (L) or very low (VL), increase rates according to soil test recommendations.

Disease control in table beet

Disease	Rate/a of active ingredient	Rate/a of commercial product	Days to harvest	Remarks and suggestions
Aphanomyces root rot	<i>Poor soil structure and compaction contribute to this problem. Well-drained soil in good till and rotation aid in control. Grass sod, cover crops, and plant residue (especially corn stubble) improve soil structure.</i>			
Black spot (boron deficiency)	18.0–20.0 lb borax	8.0–12.0 lb Solubor		Apply at planting. Also make 2 applications 2–4 weeks apart, beginning before midseason (spray with 10.0–20.0 lb borax or 6.0–11.0 lb Solubor/100 gal water per acre).
Cercospora leaf spot	azoxystrobin	9.0–15.5 fl oz Aframe, AzoxyStar, Quadris Flowable, Satori	0	Quadris, Satori, Cabrio, and Flint belong to the strobilurin group of fungicides. Do not exceed 1 application from this group before alternating with a fungicide that has a different mode of action. Do not exceed 4 applications of strobilurin fungicide per crop per year.
	pyraclostrobin	8.0–12.0 oz Cabrio EG	0	
	trifloxystrobin	2.0–3.0 oz Flint	7	
	copper hydroxide	1.33–2.66 pt Champ Formula 2 Flowable	0	Apply when conditions favor disease. Do not apply more than 21.6 pt/a per year.
	copper hydroxide copper sulfate	2.0–5.0 lb Kocide 101 77WP, DF	0	Spray weekly at first sign of infection. Follow a 3-year rotation between table beet crops.
		1.5–3.74 Kocide 2000 DF	0	
		0.75–2.0 lb Kocide 3000	0	
		1.3–3.3 pt Kocide 4.5 LF	0	
		2.0–4.0 lb Basic Copper Sulfate	0	
	fluxapyroxad + pyraclostrobin	5.5 fl oz Merivon	7	Follow resistance management guidelines.
	penthiopyrad	16.0–30.0 fl oz Fontelis	0	Make no more than 2 sequential applications before switching to a fungicide with a different mode of action. Do not exceed 61.0 fl oz/a per year.
	propiconazole	3.0–4.0 fl oz Bumper 41.8 EC, Topaz	14	Do not apply more than 12.0 fl oz of Bumper 41.8 EC/a per season or 16.0 fl oz of Tilt/a per season.
3.0–4.0 fl oz Tilt, Topaz		14		
tebuconazole	3.0–7.2 fl oz Monsoon, Orius 3.6F, Tebuzol 3.6, Toledo	7	Do not exceed 28.8 fl oz/a per season. Begin applications as soon as crop and/or environmental conditions become favorable for disease.	
trifloxystrobin	1.9–2.9 fl oz Gem 500 SC	7	Do not make more than 4 applications per year per season. Use higher rates when disease pressure is greater.	
	2.0–3.0 oz Flint	7	Apply preventively and follow resistance management guidelines as per the label.	
Pythium damping-off	mefenoxam	1.0–2.0 pt Ridomil Gold SL		Preplant-incorporated application or surface application at planting. Preplant to top 2 inches of soil.
		2.0–4.0 pt Ultra Flourish		
	metalaxyl	0.085–0.64 fl oz Apron XL/100 lb seed		Follow manufacturer's directions. Do not use treated seed for feed or food.
		4.0–8.0 pt MetaStar 2E AG		
	0.7 fl oz/100 lb seed Sebring 2.65 ST		Follow manufacturer's directions. Do not use treated seed for feed or food.	
	0.75 fl oz/100 lb seed Allegiance FL, Metalaxyl 265 ST			

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Disease control in table beet *(continued)*

Disease	Rate/a of active ingredient	Rate/a of commercial product	Days to harvest	Remarks and suggestions
Rhizoctonia dry rot and seed rot	<i>Control black spot. Remove the crop promptly from the field; chop and work old plant refuse into the soil.</i>			
	thiram captan			Follow manufacturer's directions. Do not use treated seed for feed or food.
	azoxystrobin	0.4–0.8 fl oz Quadris Flowable/1,000 ft row	0	Use at planting. Follow manufacturer's directions.

Insect control in table beet

Insect	Rate/a of active ingredient	Rate/a of commercial product	Days to harvest	Remarks and suggestions
Aphids	alpha-cypermethrin	3.2–3.8 fl oz *Fastac	1	Apply when pests reach or exceed established thresholds. Do not apply more than 11.4 fl oz of Fastac per acre per crop season.
	azadirachtin	1.0–3.5 pt Aza-Direct 10.0–21.0 oz Azatin XL Plus 0.5–2.0 gal Neemix 0.25EC 0.25–1.0 pt Neemix 4.5EC	0	Apply every 7 days as needed.
	0.012–0.028 lb deltamethrin	1.5–2.4 oz *Delta Gold	3	Apply every 3 days as needed.
	0.25–0.5 lb dimethoate	0.5–1.0 pt Dimethoate EC	7	
	flupyradifurone	7.0–10.5 fl oz Sivanto	7	Foliar application. Apply when pests reach or exceed established thresholds. Do not apply more than 28.0 fl oz of Sivanto per acre per crop season.
	imidacloprid	0.31–0.74 fl oz Admire Pro/1,000 ft row 4.4–10.5 fl oz Admire Pro 3.5 fl oz Provado	21	Admire may only be applied once per season. Apply Provado every 5 days as needed. Do not exceed 3 applications per season. Maximum imidacloprid use per season is 0.5 lb ai/a from any formulation.
			21	
			7	
	thiamethoxam	1.5–3.0 oz Actara 25WDG 5.0–12.0 fl oz Platinum 2SC 1.66–4.01 oz Platinum 75SG	7	Do not apply more than 12.0 oz of Actara 25WDG or Platinum 2SC and no more than 4.01 oz Platinum 75SG per acre per crop season and apply sufficient water volume after in-ground application to ensure incorporation into the seed zone. Actara is applied as a foliar spray.
			30	
30				
0.04–0.1 lb zeta-cypermethrin + bifenthrin	4.0–10.3 fl oz *Hero	21	Do not apply more than 0.2 lb ai/a or exceed 2 applications per season.	
Cutworms	alpha-cypermethrin	1.3–3.8 fl oz *Fastac	1	Apply when pests reach or exceed established thresholds. Do not apply more than 11.4 fl oz of Fastac per acre per crop season.
	azadirachtin	1.0–3.5 pt Aza-Direct 10.0–21.0 oz Azatin XL Plus 0.5–2.0 gal Neemix 0.25EC 0.25–1.0 pt Neemix 4.5EC	0	Apply every 7 days as needed.
	1.0–2.0 lb carbaryl	Sevin Bait, WP, SP	3	Fourteen days to harvest if tops used for food or feed. Can only be used with mechanical harvest.
	2.0–4.0 lb diazinon	several formulations	14	Preplant broadcast application. Work into top 2–6 inches of soil before planting.
	0.225–0.9 lb methomyl	0.75–3.0 pt *Lannate LV	0	If tops are used for food or feed, 14 days.

*Restricted-use pesticide.

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Insect control in table beet *(continued)*

Insect	Rate/a of active ingredient	Rate/a of commercial product	Days to harvest	Remarks and suggestions
Cutworms <i>(cont.)</i>	0.05 lb zeta-cypermethrin	4.3 oz *Mustang Maxx	50	Apply at planting to the soil surface in a 5- to 7-inch band or broadcast in a minimum of 3–5 gal/a. Do not exceed 0.15 lb ai/a per season.
	0.025–0.06 lb zeta-cypermethrin + bifenthrin	2.6–6.1 fl oz *Hero	21	Do not apply more than 0.2 lb ai/a or exceed 2 applications per season.
Flea beetles	<i>Treat when flea beetles are so numerous on small plants that feeding is causing stand reduction.</i>			
	alpha-cypermethrin	1.8–3.8 fl oz *Fastac	1	Apply when pests reach or exceed established thresholds. Do not apply more than 11.4 fl oz of Fastac per acre per crop season.
	1.0 lb carbaryl	Sevin (several)	3	If tops used for food or feed, 14 days. Can only be used with mechanical harvest.
	0.018–0.028 lb deltamethrin	*Delta Gold	3	Apply every 3 days as needed.
	imidacloprid	0.7–1.7 fl oz Admire Pro/1,000 ft row	21	Admire may only be applied once per season. Apply Provado every 5 days as needed. Do not exceed 3 applications per season. Maximum imidacloprid use per season is 0.5 lb ai/a from any formulation.
		7.0–10.0 fl oz Admire Pro	21	
		3.5 fl oz Provado	7	
	thiamethoxam	1.5–3.0 oz Actara 25WDG	7	Do not apply more than 8.0 oz of Actara 25WDG or Platinum 2SC and no more than 4.01 oz Platinum 75SG per acre per crop season and apply sufficient water volume after in-ground application to ensure incorporation into the seed zone. Actara is applied as a foliar spray.
		5.0–12.0 fl oz Platinum 2SC	30	
		1.66–4.01 oz Platinum 75SG	30	
	0.028–0.05 lb zeta-cypermethrin	2.4–4.3 oz *Mustang Maxx	50	Do not exceed 0.15 lb ai/a per season.
	0.04–0.1 lb zeta-cypermethrin + bifenthrin	4.0–10.3 fl oz *Hero	21	Do not apply more than 0.2 lb ai/a or exceed 2 applications per season.
Leafminers	<i>Plants past the eight-leaf stage can compensate for damage caused by average leafminer populations.</i>			
	0.25–0.5 lb diazinon	several formulations	14	Will not control organophosphate-resistant leafminers.
	0.25–0.5 lb dimethoate	0.5–1.0 pt Dimethoate EC	7	
	0.047–0.062 lb spinetoram	6.0–8.0 fl oz Radiant SC	7	Do not apply more than 32.0 fl oz/a or make more than 4 applications per year. Do not exceed 2 consecutive applications.
	spinosad	4.5–10.0 fl oz Entrust SC	3	Apply to small larvae or at egg hatch. Do not exceed 4 applications a crop year. Do not exceed 21.0 fl oz/a Entrust SC per season.
	0.028–0.05 lb zeta-cypermethrin	2.4–4.3 oz *Mustang Maxx	50	Do not exceed 0.15 lb ai/a per season.

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Weed control in table beet

Weed	Rate/a of active ingredient	Rate/a of commercial product	Days to harvest	Remarks and suggestions
Annual grasses and some broadleaf weeds	3.0–4.0 lb cycloate	0.5–0.66 gal Ro-Neet 6E		Rate varies by soil type. Apply before planting and incorporate immediately, preferably by double disking. (Use on mineral soils only.)
	1.88 lb ethofumesate	60.0 fl oz Nortron SC or Ethotron SC		Apply alone or in a tank mix preemergence at time of planting or shortly after, but before weed germination. Where table beets are grown in beds, apply after bedding and incorporate. Do not exceed a total of 96 fl oz/a Nortron SC in a single growing season. Do not use on muck or peat soils.
Annual broadleaves	0.24–0.49 lb *phenmedipham	1.5–3.0 pt Spin-Aid	60	Controls small annual broadleaves but not redroot pigweed. Apply when beets are at the two-leaf stage or later. Multiple applications are allowed. Consult label for application rates and environmental conditions that may cause injury.
Emerged broadleaves	0.094–0.187 lb clopyralid	0.25–0.5 pt Stinger	30	Effective on common ragweed and eastern black, cutleaf, and hairy nightshade. Apply to table beet in the two- to eight-leaf stage of crop growth. Do not apply more than twice per crop year and do not exceed a total of 0.5 pt/a.
	0.24–0.49 lb desmedipham	1.5–3.0 pt Alphanex	14 (table beet tops) 50 (table beet roots)	Controls several early-germinating broadleaf weeds. Rate varies based on table beet growth stage. Do not apply until table beets have reached at least the two-leaf stage. Do not add wetting agents or other spray adjuvants. Must follow all applicable directions, restrictions, and precautions on supplemental and federal label.
	0.164–0.328 lb ethofumesate	5.25–10.5 fl oz Nortron SC or Ethotron SC		Apply postemergence for enhanced weed control. Use lower rates for table beets with two to four leaves; apply at 10.5 fl oz/a rate for table beets with six to eight leaves.
	0.016 lb triflurosulfuron methyl	0.5 oz UpBeet	30	Apply postemergence to small weeds when table beets are in the two- to four-leaf stage. Additional applications may be made at the four- to six-leaf stage and the six- to eight-leaf stage. Combined applications must not exceed 1.5 oz/a UpBeet per growing season.
Emerged weeds	glyphosate	several manufacturers and formulations available		See manufacturer's label to assure that the formulation is labeled for this crop and for specific instructions. Glyphosate may be applied any time before crop emerges. Apply before crop seed germination in coarse sandy soils. If weeds have been mowed or tilled, do not treat until they have resumed active growth and reached the recommended stage on the label. Unless otherwise stated, allow 7 or more days before tilling treated fields. Do not tank mix with soil-residual herbicides unless otherwise specified.

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Weed control in table beet *(continued)*

Weed	Rate/a of active ingredient	Rate/a of commercial product	Days to harvest	Remarks and suggestions
Emerged grasses	0.068–0.12 lb clethodim	9.0–16.0 oz Select Max	30	Apply to actively growing grasses. Repeat treatments may be made at 14-day intervals up to seasonal maximum. Do not cultivate grasses within 7 days before or after application. Include appropriate surfactant as required by label. Do not apply if rain is expected within 1 hour.
	0.094–0.125 lb clethodim	6.0–8.0 oz Select 2EC	30	
	0.164–0.328 lb ethofumesate	5.25–10.5 fl oz Nortron SC or Ethotron SC		Apply postemergence for enhanced weed control. Use lower rates for table beets with two to four leaves; apply at 10.5 fl oz/a rate for table beets with six to eight leaves.
	0.094–0.47 lb sethoxydim	0.5–2.5 pt Poast	60	Make postemergence applications to actively growing grasses within the size ranges indicated on the label. Check the label for wild proso millet or rescue treatment rate and for information on quackgrass control. Do not exceed 2.5 pt per application or 5.0 pt/a per season. Always add 2.0 pt/a of crop oil concentrate. Do not cultivate within 5 days before or 7 days after treatment.

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