

SUGARBEET HERBICIDE PERFORMANCE RATINGS

SUGARBEET WEEDS

- E** EXCELLENT (≥91%)
- G** GOOD (81-90%)
- F** FAIR (65-80%)
- P** POOR (<65%)
- N** NONE
- U** UNKNOWN

GRASSES

PREPLANT

	CROP TOLERANCE	SITE OF ACTION ^A	Barnyardgrass	Crabgrass	Fall panicum	Foxtail, gi/gr	Foxtail, yellow	Sandbur, field	Shattercane	Wild oat	Yellow nutsedge
Aim EC (carfentrazone)	FG	14	P	P	P	N	N	U	U	U	P
Eptam (EPTC)	G	8	G	E	E	E	E	GE	F	G	F
Nortron (ethofumesate)	G	8	P	G	FG	G	FG	F	P	G	P
Vida (pyraflufen)	FG	14	P	P	P	N	N	U	U	U	P

PREEMERGENCE

Nortron (ethofumesate)	G	8	P	G	G	F	F	F	P	FG	P
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POSTEMERGENCE

Assure II/Targa ^R (quizalofop)	E	1	E	E ^R	E	E ^R	GE	E	E	E ^R	N
Charger Basic/Dual Magnum ² (s-metolachlor)	GE	15	G	E	E	E	E	F	P	P	F
Cornerstone 5 Plus/Tomahawk 5/glyphosate ^{1R} (glyphosate)	E	9	E	E	E	E	E	E	E	E	F
Eptam - layby (EPTC)	G	15	F	GE	GE	E	E	E	G	FG	P
Outlook ² (dimethenamid-p)	G	15	G	E	E	E	E	F	P	P	F
Poast ^R (sethoxydim)	E	1	E	E ^R	E	E ^R	E	E	E	G ^E	N
Section Three/Select 2 EC/Cleanse ^R (clethodim)	E	1	E	E ^R	E	E ^R	E	E	E	E ^R	N
Sequence ¹ (glyphosate + s-metolachlor)	GE	9,15	E	E	E	E	E	E	E	E	F
Stinger (clopyralid)	G	4	N	N	N	N	N	N	N	N	N
Trust/Treflan HFP (trifluralin)	G	3	G	G	G	G	FG	F	F	P	F
UpBeet ^R (triflurosulfuron)	GE	2	P	P	P	F ^R	F	P	P	N	P

** May use other glyphosate herbicides: Roundup brands or others at labeled rates.

^A Site of action, described on page 759.

^R No control of herbicide resistant weed biotypes. See the list of known resistant weeds on the second page of the technical section.

¹ Roundup Ready sugarbeet only.

² Provides soil residual control only. Does not control emerged weeds.

³ See label of pigweed species controlled.

SUGARBEET HERBICIDE PERFORMANCE RATINGS

BROADLEAVES

Bindweed, field
Buffalobur
Canada thistle
Cocklebur
Jimsonweed
Knotweed
Kochia
Lambsquarters, common
Mallow, common
Morningglory, annual
Mustard, wild
Nightshade, black
Nightshade, hairy
Pigweed³
Ragweed, common
Russian thistle
Smartweed, annual
Sunflower
Velvetleaf
Wild buckwheat

PREPLANT

U	U	U	G	GE	U	E	GE	GE	E	U	G	PF	GE	F	E	GE	GE	GE	U	● Aim EC	
P	G	P	P	P	P	F	F	P	FG	P	FG	F	F	F	P	P	P	P	F	P	● Eptam
P	G	P	P	P	P	F	G	PF	F	F	F	FG	PF	GE	P	F	G	P	P	FG	● Nortron
U	U	U	G	GE	U	E	GE	GE	E	U	G	PF	GE	F	E	GE	GE	GE	U	● Vida	

PREEMERGENCE

P	G	P	P	P	P	F	FG	PF	F	P	P	F	F	F	G	P	F	G	P	P	FG	● Nortron
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POSTEMERGENCE

N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	● Assure II/Targa ^R
N	P	N	P	P	P	P	F	P	P	P	G	P	G	P	P	P	P	P	P	P	● Charger Basic/Dual Magnum ²
G	G	G	GE	E	E	E ^R	GE	G	G	G	G	E	E	G ^R	G	GE	E	GE	F	● Cornerstone 5 Plus/Tomahawk 5/glyphosate ^{1R}	
P	G	P	P	P	FG	FG	F	PF	P	P	F	F	F	F	P	P	P	P	F	● Eptam-layby	
P	P	P	P	P	P	P	G	P	P	P	G	F	E	P	P	P	P	P	P	P	● Outlook ²
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	● Poast ^R
N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	● Section Three/Select 2 EC/Cleanse ^R
G	G	G	GE	E	E	E ^R	GE	G	G	G	G	E	E	G ^R	G	GE	E	GE	F	● Sequence ¹	
P	G	GE	E	F	G	P	PF	P	P	P	FG	P	P	GE	PF	F	GE	P	FG	● Stinger	
P	N	P	P	P	FG	FG	FG	P	P	P	P	FG	P	PF	P	P	P	P	PF	● Trust/Treflan HFP	
P	U	N	P	F	F	G ^R	P	FG	N	E ^R	F ^R	U	G	F ^R	P	F	P	G	F	● UpBeet ^R	

SUGARBEET HERBICIDE APPLICATION TIMING AND RESTRICTIONS

Herbicide	Application Timing*	Comments/Restrictions	GPA ¹		Rainfast (hrs)	Aerial Application	Intervals* (Days)		
			Ground	Aerial			Feeding Forage	Grazing Animals	Harvest
Aim EC	PRE	30 days prior to planting.	10	5		Y	NR	NR	NR
Assure II	POST	Apply to young actively growing grass from 3-leaf to early tillering stage.	10-15	3	1	Y	60	60	45
Charger Basic	POST	POST after the first true-leaf stage, and prior to weed emergence.	10	2		Y	NR	NR	60
Cornerstone Plus/Tomahawk 4 or Cornerstone 5 Plus/Tomahawk 5	PP PRE POST	Prior to planting. Prior to crop emergence. To RR sugarbeets up to 30 days PHI.	3-40				NR	NR	30
Dual Magnum	POST	POST after the first true-leaf stage, and prior to weed emergence.	10	2		Y	NR	NR	60
Durango DMA/Duramax	POST	POST to RR sugarbeets up to 30 days PHI.	5-20	3-15	5	Y	NR	NR	30
Elevore	PP	Burndown up to 14 days before planting.	8	5	1	Y	NL	NL	NL
Eptam 7E or 20-G	PP POST	PPI FALL before ground freezes or spring. POST incorporated 2" at layby.	10-50	NL		NL	NR	NR	45
Far-GO 4E or 10G	PP	PPI FALL or spring. FALL within 3 weeks of freeze up, or until snow cover. Spring before seeding and wild oat emerge. ^A Liquid.	10	NL ^A		NL ^A	NR	NO	NR
Fusilade DX	POST	Apply to emerged grass weeds.	5-40	5	1	Y	NR	NR	90
Gramoxone SL/SL 2.0	PP PRE	PP or PRE to emerged weeds and prior to crop emergence.	10	5	0.5	Y	NR	NR	NR
Liberty 280SL	PP PRE	Before planting. Before crop emerges.	15	10	4	Y	NR	NR	NR
Nortron SC	PP PRE POST	PPI 1-2" POST tank mixes.	10-60 20-60	NL		NL	NR	NO	90
Outlook	POST	Apply to sugarbeets after 2-leaf to 8-leaf stage. Also, from 9-leaf to 12-leaf. PHI 95 days for late application.	5	2		Y	NR	NR	60, 95
Panoflex	PP	PP and Post-harvest burndown and fallow weed control. PP 60 days or more before planting.	5	5	4	Y	NR	7	NR
Poast	POST	Apply to actively growing grasses at labeled sizes.	5-20	5	1	Y	NR	NR	60
Roundup PowerMAX/WeatherMax	PP PRE POST	PP or PRE to emerged weeds but prior to crop emergence (conventional sugarbeet). POST to RR sugarbeets up to 30 days PHI. ^C 3-40 GPA non RR crop.	5-20 ^C	3-15	5	Y	NR	NR	30
Section Three/Select 2 EC/Cleanse	POST	Apply to actively growing grasses at labeled sizes.	5-40	3-10	1	Y	NO	NO	40
Select Max	POST	Apply to actively growing grasses at labeled sizes.	10-20	5-15	1	Y	NO	NO	40
Sequence	POST	To Roundup Ready sugarbeets from 2-true leaf to canopy closure.	10-40	3-15	5	Y	NR	NR	60
Stinger	POST	Apply to beets from cotyledon to 8-leaf stage; weeds young and actively growing.	10	5	6	Y	NR	NR	45
Sugarbeet Mix	POST	Apply past two true-leaf beets.	10	5	6	Y	NR	NR	75
Targa	POST	Apply to young actively growing grass from 3-leaf to early tillering stage.	10-15	3-5	1	Y	60	60	45
Trust/Treflan HFP or Treflan TR-10	POST	Broadcast over 2-6" sugarbeets. Incorporate at once.	5-40	5-10		Y	NR	NR	NR
Upbeet	POST	Apply to weeds from cotyledon to 4 true-leaf stage.	10	5	6	Y	NR	NR	60
Vida	PP	Apply up to 24 hours before planting.	10	5	1	Y	NL	NL	NL
Warrant	POST	Apply from 2-8 leaf stage, with 4 leaf stage ideal.	10	3-15		Y	60	60	NR

*Application Timing and Interval

PP - Preplant surface, unless otherwise specified

PPI - Preplant incorporated

PRE - Preemergence

POST - Postemergence

NR - No restrictions

NO - Not permitted

NL - No related information on label

S - Heavy rainfall soon after application may require retreatment.

1 - Includes labeled minimum or range.

SUGARBEET WEED CONTROL

Preplant or Preemergence Herbicides

Herbicide	Rate/Acre			Comments/Restrictions
	Coarse*	Medium	Fine	
AIM EC	1-2 oz			30 days prior to planting.
CORNERSTONE PLUS/ TOMAHAWK 4 or CORNERSTONE 5 PLUS/ TOMAHAWK 5	Up to 48 fl oz or Up to 36 fl oz + 8.5-17 lb AMS/100 gal ^a			PP or PRE prior to crop emergence. See label for perennial rates. ^a Include NIS or WC+NIS ² as needed.
ELEVORE	1 fl oz			PP burndown to actively growing weeds up to 14 days before planting. Use with MSO.
EPTAM 7E	2.25 pt	3.5 pt	3.5 pt	PPI SPRING (IA, eastern NE, ND, SD, MI, MN) Apply just before planting and incorporate at once, or meter into irrigation water before or after planting. Can be used on high organic matter soil. Crop damage can occur on low organic matter soil. Notes 1, 3, 6.
EPTAM 7E or 20-G	4.5 pt 20 lb	5.25 pt 22.5 lb	5.25 pt 22.5 lb	PPI FALL (MN, ND only). Apply and incorporate in late fall before ground freezes. Notes 3, 6.
FAR-GO 4E	1.5 qt or 15 lb			PPI spring or FALL in CO, ID, KS, MN, MT, NE, NV, ND, OR, SD, UT, WA, and WY. Apply in fall within 3 weeks of freeze-up or until snow cover or frozen ground or apply in spring before seeding and wild oat emergence. 2ee MN, MT, and ND (exp. date not given) for fertilizer impregnation.
GRAMOXONE SL/SL 2.0	2-4 pt + 1 pt NIS/100 gal			PP or PRE. Apply in 10 GPA water by ground and 5 GPA by air. Apply to emerged weeds preplant or premerge, but prior to crop emergence.
LIBERTY 280SL	32-36 fl oz			PP or PRE. Apply prior to planting or before crop emergence. Apply to actively growing weeds. Warm temperatures, high humidity, and bright sunlight improve performance. Maximum 36 fl oz/A/season. Include AMS at 1.5-3.0 lb/A or WC+NIS ² .
NORTRON SC	PPI or PRE all regions except MN, ND 2.25-3.75 pt 3.75-6 pt 6-7.5 pt PPI or PRE MN, ND 6 pt 6 pt 7.5 pt			PPI or PRE. Furrow irrigation apply preplant and incorporate 1-2"; for sprinkler irrigation apply preemergence at or shortly after planting and immediately irrigate with 0.5" water. Observe rotation restrictions. 2ee MN, ND, MT, ID, NE, CO, WY, OR, WA (exp. date not given) for 2-4 fl oz/A tank mix with Progress, Betamix or Sugarbeet Mix.
PANOFLEX	0.3-0.6 oz			Burndown treatment when weeds have emerged and actively growing. Apply to crop stubble or fallow treatment. PP apply 60 days or more before planting. Include NIS, COC or MSO plus UAN/AMS ^{1,2} .
ROUNDUP POWERMAX/ WEATHERMAX **	11-32 fl oz + 8.5-17 lb AMS/100 gal ^a			PP or PRE. Apply to emerged weeds preplant or premerge, but prior to crop emergence. See label for perennial rates. Apply in 3-10 GPA water. AMS may improve control under stress, cool temperatures or hard water. ^a Or WC+NIS ² .
TOMAHAWK	SEE CORNERSTONE			
VIDA	0.5-2 fl oz			Do not apply within 24 hours of planting.

*Coarse – Sand, loamy sand, sandy loam.

Medium – Loam, silt, silt loam

Fine – Silty clay loam, sandy clay loam, silty clay, sandy clay, clay loam, clay.

O.M. – Soils with low organic matter - use

lower rate, with high organic matter –

use higher rate within the range.

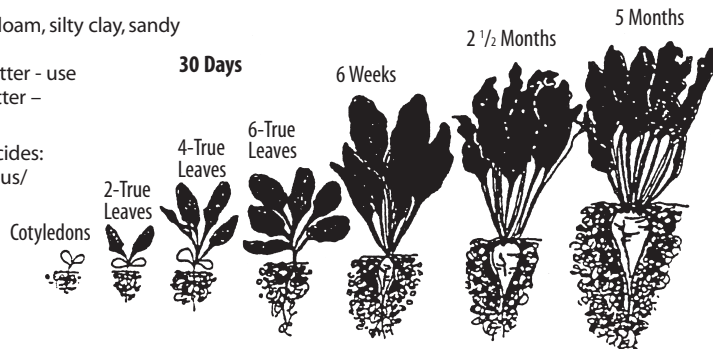
**May use other glyphosate herbicides:

Roundup brands, Cornerstone Plus/

Tomahawk 4, Durango DMA/

Duramax, or others

at labeled rate.



Vegetative Stage

SEE NOTES AT END OF SECTION.

Sugarbeet Growth Stage Terms
(Adapted from the University of Nebraska)

- Cotyledons = Unfolding endosperm or specialized seed leaves.
- 2-True Leaves = First leaves visible above cotyledons.
- 6-True Leaves = 6 leafed nodes visible.

¹ Between and Superb HC (COC) and Succeed/Ultra and Destiny HC (MSO) are HSOC adjuvants, generally used at half standard COC or MSO rates.

² Class Act NG or Flex, Alliance, or Ultra-Lite may be used where herbicides require NIS and AMS or a water conditioner.

SUGARBEET WEED CONTROL

Postemergence Herbicides

Herbicide	Rate/Acre	Comments/Restrictions
ASSURE II	5-12 fl oz: annuals 8-12 fl oz: perennials + 0.5 gal HSOC-COC ¹ /100 gal	Apply to young, actively growing grass from 3-leaf to early tillering stage. Apply a minimum of 24 hours prior to or 7 days after applying broadleaf herbicides. Tank mixes with broadleaf herbicides may result in loss of grass control. 45 day PHI. Do not feed beet tops for 60 days.
CHARGER BASIC/ DUAL MAGNUM	1 pt: coarse 1.33 pt: medium 1.67 pt: fine	Apply after the first true-leaf stage. Does not provide control of emerged weeds. May be chemigated. Total of all applications should not exceed 2.67 pt/A. PHI 60 days. May be tank mixed with other registered herbicides. Tank mixtures and the addition of COC or MSO ¹ may increase risk of crop response. It is not recommended to make a POST application to fields previously treated with Nortron. Application to coarse soils prior to beet emergence may cause injury.
CORNERSTONE PLUS/ TOMAHAWK 4 or CORNERSTONE 5 PLUS/ TOMAHAWK 5	Up to 1.5 qt + 8.5-17 lb AMS/100 gal ^a	Apply only in Roundup Ready sugarbeets up to 30 days PHI. Use up to 1.5 qt/36 fl oz/A up to 8 leaf and up to 1 qt/24 fl oz/A between 8 leaf and canopy closure. PHI 30 days. ^a Include NIS or WC-NIS ² as needed.
DURANGO DMA/ DURAMAX	Up to 1.9 qt: Up to 8-leaf Up to 1.5 qt: 8-leaf to canopy closure + 8.5-17 lb AMS/100 gal ^a	Apply only to Roundup Ready sugarbeets up to 30 days PHI. Maximum of 36 fl oz/A emergence to 8-leaf, and 24 fl oz/A 8-leaf to canopy closure. Maximum of 4 sequential applications at least 10 days apart. ^a Or WC+NIS ² .
EPTAM 7E or 20G	3.5 pt or 15 lb: coarse 3.5 pt or 15 lb: medium 3.5 pt or 15 lb: fine	LAYBY. Apply to soil at base of plants after thinning and cultivation. Incorporate 2" deep at once. Notes 1, 3, 6.
FUSILADE DX	Up to 24 fl oz + 1-2 qt HSOC-COC ¹ /100 gal	Apply to emerged grass weeds. May use NIS. Do not apply >48 fl oz/A/year.
OUTLOOK	12-21 fl oz	Apply POST to beet from 2-leaf to 8 true-leaf stage. Extended timing from 9 to 12-leaf; PHI increased to 95 days. No control of emerged weeds. May be chemigated.
POAST	1-1.5 pt + 1 pt HSOC-COC ¹	Apply to actively growing grasses at sizes and rates specified on label. 0.5 pt/A on wild proso millet only. Add N for many grass species. PHI 60 days. Note 5.
ROUNDUP POWERMAX/ WEATHERMAX	Up to 32 fl oz: up to 8-leaf Up to 22 fl oz: 8-leaf to canopy closure + 8.5-17 lb AMS/100 gal ^a	Apply only to Roundup Ready sugarbeets up to 30 days PHI. Maximum of 32 fl oz/A emergence to 8-leaf, and 22 fl oz/A 8-leaf to canopy closure. Maximum of 4 sequential applications at least 10 days apart. May tank mix PowerMAX with Assure II, Cleanse, Dual Magnum, Nortron, Outlook, Select 2 EC, Stinger, or Upbeet. PHI 30 days. ^a Or WC+NIS ² .
SECTION THREE	4-10.67 fl oz	40 day PHI. Maintain 14 day interval for repeat applications. Use 1 pt/A of HSOC-COC or HSOC-MSO ¹ , WC+NIS ² or 8.5-17 lb/100 gallons of AMS.
SELECT 2 EC/CLEANSE	6-16 fl oz + 0.5 gal HSOC-COC ¹ /100 gal	8-16 oz/A labeled for perennial grasses. Apply to actively growing grasses at sizes specified on label. Nitrogen additive is optional. May tank mix with Stinger. Apply immediately after emergence and at 5-7 day intervals. Certain states only. See label. PHI 40 days.
SELECT MAX	9-32 fl oz + 1 pt HSOC-COC ¹	Apply 9-16 fl oz/A for control of annual grasses and 12-32 fl oz/A for control of perennial grasses. AMS may be added. PHI 40 days.
SEQUENCE	Up to 3 pt: 2-8 lf Up to 2.5 pt: 8 lf to canopy closure + 8.5-17 lb AMS/100 gal	Apply to Roundup Ready sugarbeet. Do not exceed 2.5 pt/A on coarse soils and 3 pt/A on medium and fine soils from 2-8 leaf. Maximum of 4 POST applications and 7 pt/A/season.
STINGER	0.25-0.67 pt	Apply to sugarbeets from cotyledon to 8-leaf stage; weeds at sizes and rates specified on label. Use 0.67 pt/A for Canada thistle and perennial sowthistle. May tank mix with Upbeet or Poast. Observe rotational restrictions. PHI 45 days.
SUGARBEET MIX	4.5-7.5 pt	Apply past the 2-true leaf stage of beets. Use 4.5-6 pt/A at the second application when beets have at least 4 leaves. See label for micro-rates.
TARGA	4-12 fl oz	Do not apply >25 fl oz/A/season, or make >4 applications/A/season. Application interval must be >7 days.
TOMAHAWK	SEE CORNERSTONE	

¹ Between and Superb HC (COC) and Succeed/Ultra and Destiny HC (MSO) are HSOC adjuvants, generally used at half standard COC or MSO rates.

² Class Act NG or Flex, Alliance, or Ultra-Lite may be used where herbicides require NIS and AMS or a water conditioner.

SEE NOTES AT END OF SECTION.

SUGARBEET WEED CONTROL

Postemergence Herbicides (continued)

Herbicide	Rate/Acre	Comments/Restrictions
TRUST/TREFLAN HFP or TREFLAN TR-10	1 pt or 5 lb: coarse 1.25-1.5 pt or 6.25-7.5 lb: medium 1.25- 1.5 pt or 6.25-7.5 lb: fine	Cover exposed roots with soil before application. Broadcast over 2-6" plants. Incorporate at once, throwing treated soil toward plants in the row. Note 4.
UPBEET (alone or) + STINGER	0.5-1 oz + 0.25 pt (add 0.5 gal HSOC-COC ¹ /100 gal with UpBeet alone)	Use 0.5 oz for most weeds. Apply to weeds from cotyledon to 4 true-leaf stage. Use a minimum of 2 sequential applications (maximum of 1.5 oz/year). Split application of 0.75 oz UpBeet at 5-7 day interval is a preferred option. Use no additive with tank mixes. UpBeet has no soil activity. UpBeet alone will not control ALS-resistant kochia. 14-day rotation restriction for all crops. A tank mix at 0.25-1 oz plus glyphosate may be applied as a POST in Roundup Ready sugarbeets. UpBeet improves control of wild buckwheat, common lambsquarters, common mallow, redroot pigweed, and velvetleaf. NIS at 0.25% v/v in some UpBeet plus glyphosate tank mixes may improve weed control. AMS may be added if recommended for glyphosate. Do not apply >2.5 oz/A/season. 2ee CO, ID, ND, NE, MI, MN, MT, SD, WY (exp. 12/2019) tank mix with glyphosate or glyphosate plus clopyralid for Roundup Ready sugar beets.
WARRANT	Coarse/Medium/Fine O.M. < 1.5% 1.25-1.6 qt/ 1.25-1.7 qt/1.25-1.9 qt O.M. >1.5% 1.25-1.7 qt/1.25-1.9 qt/1.25-2 qt	Apply from 2-8 leaf stage, with 4 leaf stage ideal. Allow 7 days between sequential applications. Apply before weeds emerge.No control of emerged weeds. Supplemental label (exp. 1/2018) for POST application.

¹ Between and Superb HC (COC) and Succeed/Ultra and Destiny HC (MSO) are HSOC adjuvants, generally used at half standard COC or MSO rates.

² Class Act NG or Flex, Alliance, or Ultra-Lite may be used where herbicides require NIS and AMS or a water conditioner.

Note 1: Injury may occur if conditions for germination and growth are not optimum. Harmful residues should not remain after harvest.

Note 3: Do not use on loam or coarse soils with less than 3% organic matter.


Note 4: Do not plant sorghum or oats for 12-18 months (see label).

Note 5: For control of wild oats, large crabgrass, volunteer corn and volunteer cereals, add 0.5-1 gal. UAN or 2.5 lb AMS per acre.

SUGARBEET INSECT CONTROL


SUGARBEET INSECTS

Labeled Insecticides		SUGARBEET																								
INSECT*	INSECTICIDE	Actara	Advise Four	Asana XL	Closer	Comite	Counter 20G	Dibrom 8E	Dipel DF/ES	Entrust SC	Fastac EC/CS	Intrrepid	Lannate LV/SP	Lorsban Advanced	Microthiol Dispers	Movement/Movement HL	MSR	Mustang Maxx	Onager	Radiant SC	Sevin XLR Plus	Stallion Brand	Thimet 20G	Transform WG	Yuma	
Aphid		5																								
Armyworm				S ²																	1					
Beet Armyworm			S																							
Beet Leaf Beetle																										
Beet Leafhopper																										
Cabbage Looper																										
Cross-striped Cabbageworm																										
Cutworm						S						S	4													
Diamondback Moth																										
Dipterous Leafminer																										
Flea Beetle																					S					3
Grasshopper																										
Hornworm																										
Imported Cabbageworm																										
Leafhopper																										
Leafminer																										
Looper																										
Lygus Bug																										
Nematode						S																				
Root Maggot			S ³																							
Saltmarsh Caterpillar																										
Spider Mite																										
Sugarbeet Cyst Nematode						S											S									
Symphylan						S																				
Webworm																										
White Grub																										
Wireworm																										

BEE ALERT
 See Insecticide Classification in the Technical Section for information on insecticide toxicity to bees.

* Many other insects may be controlled, see label.
 S - Suppression.
¹ Not for yellow-striped or western yellow-striped.
² Beet armyworm only.
³ Adult.
⁴ Variegated.
⁵ 24c, 2ee or Supplemental Label

 See Insecticide Resistance Management in the TECHNICAL INFORMATION section.

Insect Treatment Guidelines				
Insecticide	Rate/Acre	PHI	G/F	Comments/Restrictions
APHID				Reduction in yield can reach 0.85%/day/plant so control should be based on the number of days left until harvest and the percentage of plants infested. In other words, the more days left until harvest, the lower the percentage of infested plants can be tolerated. ET: Only one colony of > 30 aphids per plant. Note 6.
ACTARA	3-4 oz	-	-	24c OR (exp. 12/2020), for control of green peach aphid in sugarbeet grown for seed. Control may require application at a 7 to 10 day interval. Minimum 10 GPA ground, 3 GPA aerial.
ADVISE FOUR	3-6 fl oz	-	-	Soil application in CA only.
CLOSER	1.5-2	7	-	Do not apply 3 days prior to bloom-after petal fall.
COUNTER 20G	3-6 oz/1000' row	150	150	Banded or modified in-furrow. Minimum spacing is 20" rows or no > 9.8 lb. Notes 1, 2.
LANNATE LV or SP	0.75-3 pt or 0.25-1 lb	21	30	30 day PHI if tops fed.
LORSBAN ADVANCED	1-2 pt	30	30	Note 3.
MOVENTO/MOVENTO HL	2.25-4.5 fl oz/ 4.5-9 fl oz	28	-	Includes black bean and root aphid. Maximum of 9 fl oz/A/season. Minimum application interval of 14 days. Must be applied with an adjuvant with spreading and penetrating properties.





PHI - preharvest interval days.

G/F - grazing and feeding interval days.

SEE NOTES AT END OF SECTION.

SUGARBEET INSECT CONTROL

Insect Treatment Guidelines (continued)

Insecticide	Rate/Acre	PHI	G/F	Comments/Restrictions
APHID (continued)				
MSR	1.5-2 pt	30	30	Up to 2 applications permitted. PHI 30 days for tops as feed or forage. Note 4.
MUSTANG MAXX	2.24-4 oz	50	50	Control may be variable depending on species present and host-plant relationships. PHI 50 days for tops or roots. Note 6.
STALLION BRAND THIMET 20G	11.75 oz 3.4-4.5 oz/1000' row 4.9-7.5 lb	30 30	30 -	Drill to side of seed or apply in a band over seed. Avoid direct contact with seed. Direct granules over row toward base of plants when plants are dry. Lightly incorporate.
TRANSFORM WG	0.75-1.5 oz	7	7	Do not make applications < 14 days apart. Notes 4, 9.
ARMYWORM 				
These are foliage feeders that occasionally become common and cause economic damage. No economic level has been established for them. But, more than 10-20% defoliation can be expected to cause economic loss.				
DIPEL DF or ES	1-2 lb or 2-4 pt	0	-	Bt.
ENTRUST SC	4.5-10 fl oz	3	-	For sugarbeet as a leafy vegetable, use 1.25-2.5 oz/4-8 fl oz.
INTREPID	8-16 fl oz	7	-	Apply at egg hatch or when first signs of feeding occur.
LANNATE LV or SP	0.75-3 pt or 0.25-0.5 lb	21	30	Yellow-striped and beet only. 30 day PHI if tops fed.
LORSBAN ADVANCED	1-2 pt	30	30	Can use lower rate as a band. Notes 3, 4.
MUSTANG MAXX	2.24-4 oz	50	50	PHI 50 days for tops or roots.
RADIANT SC	5-10 fl oz	7	-	Not for yellow- or western-striped. Note 4.
SEVIN XLR PLUS	1-1.5 qt	28	28	May be applied up to 2 times but not more often than every 14 days. Notes 4, 8.
STALLION BRAND	11.75 oz	30	30	
YUMA	1-2 pt	30	30	Can use lower rate as a band. Notes 3, 4.
CUTWORM 				
ET: 4-5% cutting of seedling beets or 3-5 larvae/square foot in late summer. Watch for Variegated Cutworm.				
ASANA XL	5.8-9.6 fl oz	21	-	Use 0.45 fl oz/1000' row at planting. Maximum of 29 fl oz/A/season.
COUNTER 20G	6 oz/1000' row	150	150	20" row spacing minimum as a band application or no > 9.8 lb. Suppression only. Notes 1, 2.
DIPEL DF or ES	0.5-1 lb or 1-2 pt	0	-	Bt.
FASTAC EC/CS	2.2-3.8 fl oz	50	-	Apply when weeds reach thresholds. Minimum 7 days between applications.
INTREPID	6-16 fl oz	7	-	Suppression. For sugarbeet as a leafy vegetable, use 4-8 fl oz/A early and 8-10 fl oz/A mid-to late-season.
LANNATE LV or SP	1.5 pt or 0.5 lb	21	30	Variegated only. 30 day PHI if tops are fed.
LORSBAN ADVANCED	2 pt	30	30	Can use lower rate as a band. Notes 3, 4.
MUSTANG MAXX	2.24-4 fl oz	50	50	PHI 50 days for tops or roots. Also labeled 4 oz at-planting. Notes 5, 6, 7.
SEVIN XLR PLUS	1.5 qt	28	28	May be applied up to 2 times but not more often than every 14 days. Notes 4, 8.
STALLION BRAND	11.75 oz	30	30	
YUMA	2 pt	30	30	Can use lower rate as a band. Notes 3, 4.
FLEA BEETLE 				
Feeding on small seedlings is most damaging. Effect on yield not known. Plants usually recover.				
ASANA XL	5.8-9.6 fl oz	21	-	Maximum of 29 fl oz/A/season.
FASTAC EC/CS	2.2-3.8 fl oz	50	-	Apply when weeds reach thresholds. Minimum 7 days between applications.
LORSBAN ADVANCED	2 pt	30	30	Can apply 1.33 pt in a band. Adult only. Notes 3, 4.
MUSTANG MAXX	2.24-4 fl oz	50	50	PHI 50 days for tops or roots. Notes 6, 7.
SEVIN XLR PLUS	1-1.5 qt	28	28	May be applied up to 2 times but not more often than every 14 days. Notes 4, 8.
STALLION BRAND	11.75 oz	30	30	
YUMA	2 pt	30	30	Can apply 1.33 pt in a band. Adult only. Notes 3, 4.
GRASSHOPPER 				
Not considered to be a serious sugarbeet pest, will occasionally feed in field borders. Note 6.				
ASANA XL	5.8-9.6 fl oz	21	-	Maximum of 29 fl oz/A/season.
FASTAC EC/CS	2.2-3.8 fl oz	50	-	Apply when weeds reach thresholds. Minimum 7 days between applications.
LORSBAN ADVANCED	0.5-1 pt	30	30	Notes 3, 4.
MUSTANG MAXX	2.24-4 fl oz	50	50	Notes 6, 7.

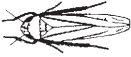



PHI – preharvest interval days.

G/F – grazing and feeding interval days.

SEE NOTES AT END OF SECTION.

SUGARBEET INSECT CONTROL

Insect Treatment Guidelines (continued)

Insecticide	Rate/Acre	PHI	G/F	Comments/Restrictions
GRASSHOPPER (continued)				
STALLION BRAND YUMA	11.75 oz 0.5-1 pt	30 30	30 30	Notes 3, 4.
LEAFHOPPER				Not usually a problem in sugar beet. Treat when large numbers are seen and leaf curling occurs. Systemic insecticides will kill leafhoppers and sometimes reduce virus incidence.
ADVISE FOUR	3-6 fl oz	–	–	Soil application in CA only.
ASANA XL	5.8-9.6 fl oz	21	–	Maximum of 29 fl oz/A/season.
CLOSER	2.75-5.75	7	–	Do not apply 3 days prior to bloom-after petal fall.
COUNTER 20G	6 oz/1000' row	150	150	Knife-in at planting. Minimum 20" rows or no > 9.8 lb. Can also apply POST banded at 3-6 oz/1000' row. Notes 1, 2.
DIBROM 8E	1 pt	2	–	Apply in 1-5 GPA by air.
MSR	1.5-2 pt	30	30	Up to 2 applications permitted. PHI 30 days for tops as feed or forage. Note 4.
MUSTANG MAXX	2.24-4 fl oz	50	50	PHI 50 days for roots or tops. Note 6.
THIMET 20G	3.4-4.5 oz/1000' row	30	–	Drill to side of seed or apply in a band over seed. Avoid direct contact with seed.
TRANSFORM WG	0.75-1.5 oz	7	7	Do not make applications less than 14 days apart. Notes 4, 9.
SEVIN XLR PLUS	1-1.5 qt	28	28	May be applied up 2 times but not more than every 14 days. Note 4.
STALLION BRAND	11.75 oz	30	30	
LYGUS BUG				ET: 1-4 bugs per plant (adults + nymphs) and >3 weeks until harvest.
LORSBAN ADVANCED	1 pt	30	30	Tarnished plant bug. Notes 3, 4.
MUSTANG MAXX	2.24-4 fl oz	50	50	PHI 50 days for roots or tops. Note 6.
STALLION BRAND	11.75 oz	30	30	
YUMA	1 pt	30	30	Notes 3, 4.
NEMATODE				Several species of these soil organisms cause death of sugarbeet seedlings, stunting, yellowing of leaves and wilting during hot part of the day. No resistant varieties. Long rotations are helpful (3 years or more). If infestations are moderate to high, use a nematicide.
COUNTER 20G	6 oz/1000' row	150	150	Drill granules at planting 2 inches to the side of and 2-4 inches below the seed. Suppression. Notes 1, 2.
MOVENTO/MOVENTO HL	2.25-4.5 fl oz/ 4.5-9 fl oz	28	–	Suppression. Maximum of 9 fl oz/A/season. Minimum application interval of 14 days. Must be applied with an adjuvant with spreading and penetrating properties. Make application early when there is sufficient foliage for uptake.
TELONE EC	9-18 gal	–	–	
SPIDER MITE				
COMITE	2-3 pt	–	–	On beets grown for seed only. SLN in OR.
DIBROM 8 E	1 pt	2	–	Apply in 1-5 GPA by air.
LORSBAN ADVANCED	1 pt	30	30	Notes 3, 4.
MICROTHIOL DISPERSS	5-10 lb	–	–	Red spider mite. Apply as soon as symptoms appear and repeat every 2-3 weeks or as needed.
MSR	1.5-2 pt	30	30	Labeled for mites. Up to 2 applications permitted. PHI 30 days for tops as feed or forage. Note 4.
ONAGER	12-24 pt	45	–	Western U.S only (see label for geography). For application prior to adult mite buildup (will not control adults). No more than 1 application/year.
THIMET 20G	3.4-4.5 oz/1000' row 4.9-7.5 lb	30	–	Drill granules to side of seed or place in a band over the seed. Avoid direct contact with seed. Direct granules over row toward base of plant. Apply post emergence when plants are dry.
YUMA	1 pt	30	30	Notes 3, 4.
SUGARBEET ROOT MAGGOT				Applications at or near peak fly emergence should result in better yield than applications made at planting time. Sticky red stakes, yellow water pans and baited Japanese beetle traps can all be used to monitor fly emergence. Applications of soil insecticides made in absence of the insect will probably reduce yield, but the number of insects which justifies treatment is not well defined.



PHI – preharvest interval days.

G/F – grazing and feeding interval days.

SEE NOTES AT END OF SECTION.

SUGARBEET INSECT CONTROL

Insect Treatment Guidelines (continued)

Insecticide	Rate/Acre	PHI	G/F	Comments/Restrictions
SUGARBEET ROOT MAGGOT (continued)				
COUNTER 20G	3-6 oz/1000' row	150	150	Apply in a band over the row at planting and lightly incorporate; or apply as a modified in-furrow (see Note 5); or postemergence over the row. Notes 1,2.
LORSBAN ADVANCED	2 pt	30	30	Apply near peak adult emergence. May band at 1.33-2 pt/A. Notes 3, 4.
MUSTANG MAXX	2.24-4 fl oz	50	50	Adults. Suppression. A second application may be needed.
STALLION BRAND	11.75 oz	30	30	
THIMET 20G	3.4-4.5 oz/1000' row	30	–	Drill granules to side of seed or place in a band over the seed. Avoid direct contact with seed. Direct granules over row toward base of plant. Apply post emergence when plants are dry.
YUMA	4.9-7.5 lb	30	–	
YUMA	2 pt	30	30	Apply near peak adult emergence. May band at 1.33-2 pt/A. Notes 3, 4.
WEBWORM 				ET: 50% of the leaves have eggs (small, pearly white) or small larva present in 50-75% of leaves.
ASANA XL	5.8-9.6 fl oz	21	–	Maximum of 29 fl oz/A/season.
DIPEL DF or ES	0.5-1 lb	0	–	Bt.
INTREPID	8-16 fl oz	7	–	For sugarbeet as a leafy vegetable, use 4-8 fl oz/A early and 8-10 fl oz/A mid-to late-season.
LANNATE LV or SP	0.75-3 pt or 0.25-0.5 lb	21	30	30 day PHI before feeding tops.
LORSBAN ADVANCED	1-2 pt	30	30	Apply in 2-5 GPA by air or ≤ 10 by ground. Notes 3,4.
MUSTANG MAXX	2.24-4 oz	50	50	PHI 50 days for roots or tops. Note 6.
SEVIN XLR PLUS	1-1.5 qt	28	28	Notes 4, 8.
STALLION BRAND	11.75 oz	30	30	
YUMA	1-2 pt	30	30	Apply in 2-5 GPA by air or ≤ 10 by ground. Notes 3,4.
WIREWORM 				Gaucho provides early season protection. Note 6.
COUNTER 20G	4-8 oz/1000' row	150	150	Apply in band over the row at planting and lightly incorporate; or apply as a modified in-furrow (see Note 5). Minimum 20" rows or no > 9.8 lb. Notes 1,2.
MUSTANG MAXX	4 fl oz	50	50	In-furrow or T-band. Notes 5, 7.

PHI – preharvest interval days. G/F – grazing and feeding interval days.

NOTE 1: The use of an insecticide on sugarbeets at planting time can cause significant loss of stand, and therefore should be used only when deemed absolutely necessary to control damaging insect populations. To minimize possible damage, do not allow insecticide to come into direct contact with the seed. Also avoid concentrating the chemical in close proximity to seed or seedling. Never apply in a band narrower than 7" with Counter, and not into an open furrow.

NOTE 2: Make only one application per year.

NOTE 3: Do not apply within 30 days before harvest of beet roots and tops. Do not allow meat or dairy animals to graze area or harvest treated beet tops as livestock feed within 30 days after last treatment.

NOTE 4: May be applied through sprinkler irrigation systems. (See label).

NOTE 5: Apply in-furrow at planting or in 3-4" band for wireworm or grub and 5-7" band or broadcast for cutworm.

NOTE 6: Gaucho 480 (commercially applied) or Cruiser 5FS provides early season protection of seedlings against injury by whitefly, aphids, leafhoppers, root aphid, thrips and wireworms.

NOTE 7: Mustang Maxx labeled at-plant for wireworm, white grub and cutworm.

NOTE 8: PHI 28 days roots or forage.

NOTE 9: Do not apply within 7 days of harvest. Do not make applications <14 days apart. Do not make >4 applications/crop nor >2 consecutive applications/crop. Do not apply >8.5 oz/A/year (0.266 lb ai sulfoxaflor/A/year). If blooming vegetation is present 12' out from downwind edge of field, a downwind 12' on-field buffer must be observed. Do not use on soybeans.

SUGARBEET DISEASE CONTROL

Disease Treatment Guidelines (continued)

Fungicide	Rate/Acre	PHI	G/F	Comments/Restrictions
Foliar (continued)				
CARAMBA	9-14 fl oz	14	NR	For powdery mildew. Begin application prior to disease development. Apply at 14 day intervals. Do not apply > 2 DMI fungicides per season.
CERCOBIN	10.9-21.8 oz	21	NO	Apply when conditions are favorable for disease development and follow with a non-benzamide fungicide within 14 days. Tank mix with protectant fungicide if resistant strains present. East of the Rocky Mountains no more than 1 application/year.
CONFINE EXTRA	1-4 qt	0	–	Apply 1-4 qt/A foliar in minimum 20 gal/water/A and by aerial in minimum 10 gal/water/A.
CUPROFIX ULTRA 40 MZ	1.25-3 lb	–	NO	Begin applications when disease first threatens. Repeat at 7-10 day intervals. Use high rates and apply every 3-7 days with moderate to severe disease pressure and when conditions favor disease.
DELARO 325 SC	8-11 fl oz	21	–	Apply at first sign of disease. For suppression of soilborne diseases, begin either foliar or broadcast applications at 4-leaf to row closure growth stage. 14- to 30-day spray schedule.
DITHANE F-45	1.2-1.6 qt	14	NO	Application frequency: 7-10 days. A surfactant improves performance. Notes 1, 2.
EMINENT VP	8-13 fl oz	14	NL	Apply when conditions favor disease development or based on forecasting system. After application, alternate to a non-triazole (non-Group 3) fungicide. For powdery mildew, apply at first sign of disease. 13 fl oz/A for Cercospora leaf spot.
EMINENT 125SL	13 fl oz	14	–	Apply at 21-28 day intervals. Alternate with a non-triazole. For CO, MI, MN, MT, NE, ND and WY. Notes 1, 2.
ENABLE 2F	8 fl oz	14	–	Apply at 14-21 day intervals. Alternate with a non-triazole fungicide.
FLINT EXTRA	3-3.6 fl oz	21	NL	Apply on 10- to 14-day interval as needed. Alternate each application with fungicide having a different mode of action. Maximum of 10 fl oz/A/year.
GEM 500SC	2.9-3.6 fl oz	21	–	Begin applications preventatively and continue as needed on 10-14 day interval. Alternate with fungicides having other modes of action. GEM 500SC may be mixed with graminicides and the required adjuvant, insecticides, or Stinger. But, do not mix more than one pesticide at a time. Note 1.
HEADLINE SC	9-12 fl oz	7	–	Apply at 14 day intervals. Rotate with products having alternate mode of action. Do not make more than 2 sequential or 4 total applications per year. Notes 1, 2, 3.
INSPIRE XT	7 fl oz	21	–	Apply in a 10-21 day schedule and alternate with a non-group 3 fungicide. Maximum 21 fl oz/A/season. Notes 1, 2.
KOCIDE 2000 or 3000	1.5-3.75 lb 0.75-2 lb	–	–	Application frequency: 10-14 days. Include a spreader-sticker. Notes 1, 2.
KOVERALL	1.5-2 pt	14	NO	Start applications when disease threatens and repeat every 7-10 days as needed. Use an NIS for better efficacy. No more than 14 lb/year.
KUMULUS	5-20 lb	–	–	Apply at the first sign of disease. Repeat as needed.
MANZATE PRO-STICK or MANZATE MAX	1.5-2 lb or 1.2-1.6 qt	14	NO	Begin when disease first threatens. Application frequency: 7-10 days. Notes 1, 2.
MICROTHIOL DISPERS	5-10 lb	–	–	Begin applications when disease first threatens. Repeat at 7-14 day intervals. Notes 1, 2.
PENNZOZEB 75DF	1.5-2 lb	14	–	Begin when disease first threatens. Application frequency: 7-10 days. Notes 1, 2.
PREVISTO	1-2 qt	0	NR	Begin applications when conditions first favor disease development and repeat at 10- to 14-day intervals or as needed.
PRIAXOR	6-8 fl oz	7	7	Apply prior to disease development on 14 day interval. Use higher rate when disease pressure is high. Apply at 8 fl oz for Rhizoctonia. Do not use with EC or solvent-based formulations, COC, MSO, OS, MSO/OS, or NIS adjuvants. Maximum 24 fl oz/A/season. Maximum 3 applications before rotating to another mode of action.
PROLINE	5-5.7 fl oz	7	–	Apply at the first sign of disease. Use the higher use rate and shorter intervals when conditions are favorable for severe disease pressure and/or when growing less disease resistant varieties.
RIDOMIL GOLD MZ	2.5 lb	14	NO	Apply when conditions favor disease, but before it appears. Application frequency: 14 days. Notes 1, 2.

PHI – preharvest interval days.

G/F – grazing and feeding interval days.

NO – do not graze or feed.

NR – no restrictions.

SEE NOTES AT END OF SECTION.

SUGARBEET DISEASE CONTROL

Disease Treatment Guidelines (continued)

Fungicide	Rate/Acre	PHI	G/F	Comments/Restrictions
Foliar (continued)				
SERENADE ASO	2-6 qt	–	–	Bacillus subtilis is a biological fungicide. Begin application soon after emergence or transplant and when environmental conditions are conducive to disease development. Repeat on 7- to 10-day interval or as needed.
TETRABAN	6-20 fl oz	0	–	See label for disease-specific rates, timing and application methods.
TOPAZ/TILT	4 fl oz	21	–	Begin application at first sign of disease. Repeat at 10-14 day intervals. Maximum of 2 consecutive applications and 12 fl oz/A/season. Notes 1,2.
TOPGUARD	10-14 oz	21	NR	Apply preventively when conditions are favorable for disease development. Tankmix with Koverall for resistance management. 14 day retreatment interval. No more than 2 applications/year.
TOPGUARD EQ	5-7 fl oz	21	–	Foliar application after planting. Apply preventatively, continue every 14 days. No single application may exceed 7 fl oz/A. Do not apply >2 applications/year.
TOPSIN M 70WP/WSB	0.5-1 lb	21	–	Application frequency: 14 days. Apply sequentially with a non-benzimidazole fungicide. Notes 1,2.
VERTISAN	14-30 fl oz	–	–	Begin application prior to disease development and continue on 7-14 day interval. Maximum 61 fl oz/A/year. Maximum 2 sequential applications before switching to a different mode of action.

PHI – preharvest interval days.

G/F – grazing and feeding interval days. NO – do not graze or feed. NR – no restrictions.

NOTE 1: May be applied by air.

NOTE 2: May be applied by chemigation.

NOTE 3: NIS at 0.25% v/v may improve performance.

