

TABLE 8 – Chemical Weed Control in Forage Sorghum

Forage Sorghum, Sorghum/Sudangrass Hybrids – Preemergence

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves Annual grasses (EXCEPT fall panicum, green foxtail, giant foxtail, witchgrass, and crabgrass)	atrazine (commercial product)	2	2 qt 4L OR 2.2 lb 90DG	<ul style="list-style-type: none"> Do not use on sands, loamy sands, sandy clay loams or any soil with less than 1% organic matter. Heavy rains following application may cause injury. May be applied preplant incorporated. Do not apply to sudangrass. See label for details.

Forage Sorghum — Preemergence

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves Annual grasses	atrazine (commercial product)	1	1 qt 4L OR 1.1 lb 90DG	<ul style="list-style-type: none"> CAUTION: Seed must be treated with (<i>Concep II</i> or <i>Screen</i>) herbicide antidote. See label for additional restrictions. Commercial prepackaged mix (<i>Bicep II Magnum</i>) is available. See Table 1H. May be applied preplant incorporated. Do not apply to sudangrass or sorghum-sudangrass hybrids.
	+ s-metolachlor (<i>Dual II Magnum</i> , <i>Cinch</i>)	+	+	
	atrazine (commercial product)	1.2	1.2 qt 4L OR 1.3 lb 90DG	
	+ metolachlor (+ safener) (<i>Parallel</i>)	+	+	
		0.98	1 pt 7.8L	<ul style="list-style-type: none"> CAUTION: Seed must be treated with (<i>Concep II</i> or <i>Screen</i>) herbicide antidote. See label for additional restrictions. May be applied pre-plant incorporated. Do not apply to sudangrass or sorghum-sudangrass. Do not apply on medium soils with less than 1.5% organic matter.
	atrazine (commercial product)	1	1 qt 4L OR 1.1 lb 90DG	<ul style="list-style-type: none"> This is a low rate of the active ingredient when compared to the rate of <i>Dual II Magnum</i> and <i>Cinch</i>. Level of weed control may be affected. STALWART DOES NOT CONTAIN A SAFENER. CAUTION: seed must be treated with (<i>Concep II</i> or <i>Screen</i>) herbicide antidote. See label for additional restrictions. May be applied pre-plant incorporated. Do not apply to sudangrass or sorghum-sudangrass.
	+ metolachlor (<i>Stalwart</i>)	+	+	
		1.33	1.33 pt 8.0L	

Forage Sorghum, Sorghum/Sudangrass Hybrids — Postemergence

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves	atrazine (commercial product)	1.2	1.2 qt 4L OR 1.3 lb 90DG	<ul style="list-style-type: none"> • Apply after sorghum has reached the 3-leaf stage but before it exceeds 12 inches in height. • Apply before common lambsquarters and redroot pigweed reach 6 inches and other broadleaf weeds 4 inches • Heavy rainfall following application may cause injury. • Do not apply on sands or loamy sands. • Do not graze or cut for feed for 21 days following application. • Do not apply to sudangrass.
	+		+	
	crop oil concentrate		1 qt	
	2,4-D amine	0.5	1 pt 4L	<ul style="list-style-type: none"> • Apply when sorghum is 6-8 inches tall. • If sorghum is planted in rows, drop nozzles can be used when the crop is 8-15 inches tall. • Do not graze or harvest for forage for 14 days after treatment. • See remarks and limitations for 2,4-D under “Corn – Postemergence.” • Do not apply to sudangrass or sorghum-sudangrass hybrids. • Consult the 2,4-D label for clearance on forage sorghum.
	bromoxynil (<i>Buctril</i> , <i>Moxy</i> , others)	0.375	1.5 pt 2L	<ul style="list-style-type: none"> • Apply to weeds less than 4 inches tall for effective control. • Do not mix with spray additives or liquid fertilizers. • Some leaf burn may occur, especially under cool and cloudy or hot and humid conditions. • Do not cut for feed or graze for 45 days after application. • Do not apply to sudangrass or sorghum-sudangrass hybrids.
bentazon (<i>Basagran</i>)	0.75	0.75 qt 4L	<ul style="list-style-type: none"> • Do not apply to sorghum that is headed out. • Do not graze treated area or feed treated forage to livestock for 21 days following application. • Do not make more than one application per season. • Urea ammonium nitrate (28% liquid nitrogen) may be used at 1 gal/A instead of crop oil concentrate. Do not use urea ammonium nitrate if common lambsquarters is present. • Do not apply to sudangrass or sorghum-sudangrass hybrids. 	
+	+	+		
atrazine (commercial product)	0.75	0.75 qt 4L OR 0.8 lb 90DG		
+		+		
crop oil concentrate		1 qt		

TABLE 9 – Weed Response to Herbicides in Forage Sorghum*

Soil Applied	SITE OF ACTION	CORN TOLERANCE**	ANNUAL BROADLEAVES										ANNUAL GRASSES							PERENNIALS						
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	T-R LAMBSQUARTERS ^a	NIGHTSHADE (E. BLACK)	PIGWEEED (REDROOT)	RAGWEEED (COMMON)	RAGWEEED (GIANT)	SMARTWEEED	VELVETLEAF	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEDEGE	JOHNSONGRASS (seedling)	JOHNSONGRASS (rhizome)
Photosynthesis Inhibitors																										
ATRAZINE	C	1	F	F	E	N	E	G	E	G	G	F	E	G	P	F	F	G	P	P	P	F	F	F	N	N
Others																										
DUAL II MAGNUM/CINCH/ PARALLEL ^c / STALWART ^c	O	1	N	N	P	P	F	G	P	N	P	N	P	E	E	E	E	E	E	E	F	N	N	F ^b	P	N
Postemergence																										
Photosynthesis Inhibitors																										
ATRAZINE	C	1	G	G	E	N	G	E	E	G	G	F	E	F	P	F	G	G	P	P	P	F	F	F	N	N
Others																										
2,4-D AMINE	O	3	G	F	G	G	G	G	G	G	P	F	G	N	N	N	N	N	N	N	N	F	N	N	N	N
BASAGRAN	O	1	E	G	F	F	P	P	F	P	G	F	E	N	N	N	N	N	N	N	N	G	N	G	N	N
BUCTRIL/MOXY/OTHERS	O	2	G	G	E	E	G	F	G	G	G	G	F	N	N	N	N	N	N	N	N	P	N	N	N	N

Herbicide Site of Action: C = Photosynthesis inhibitor; O = Other

Herbicide Effectiveness: P = Poor; F = Fair; G = Good; E = Excellent; N = None; - = Not enough information to rank

* The above ratings are a relative comparison of herbicide effectiveness. Weather conditions greatly influence the herbicide's effectiveness, and weed control may be better under favorable conditions or poorer under unfavorable conditions.

**Crop Tolerance: 1=Minimal risk of crop injury; 2=Crop injury can occur under certain conditions (soil applied – cold, wet; foliar applied – hot, humid); 3=severe crop injury can occur. Follow precautions under Remarks and Limitations and on the label; 4=Risk of severe crop injury is high. Recommended only in rescue situations.

^aTriazine-resistant lambsquarters

^bControl of yellow nutsedge will be increased if the treatment is incorporated in the top 2-3 inches of soil.

^cThe recommended use rate of *Parallel* and *Stalwart* on forage sorghum is a low rate of the active ingredient when compared to the rate of *Dual II Magnum* and *Cinch*. Level of weed control may be affected.

TABLE 10 – Glyphosate Products Registered for Postemergence Application in Roundup Ready Crops.

Trade Name	Manufacturer	Glyphosate Formulation (lb/gal) ^a	Product Rate Equivalent to:			Surfactant is Needed? ^b	36 hr Preharvest Application on Alfalfa? ^d
			0.56 lb a.e.	0.75 lb a.e.	1.13 lb a.e.		
Buccaneer 4L	Tenkoz, Inc.	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Buccaneer Plus 4L	Tenkoz, Inc.	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Clearout 41 Unloaded 4L	Chemical Product Technologies, LLC	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Clearout 41 Plus 4L	Chemical Product Technologies, LLC	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Cornerstone 4L	Agrilience, LLC	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Cornerstone Plus 4L	Agrilience, LLC	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Credit 4L	Nufarm	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Credit Duo 4L	Nufarm	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Credit Duo Extra 4L	Nufarm	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Credit Extra 4L	Nufarm	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Durango 5.4L	Dow Agro	4 a.e.	18 fl oz	24 fl oz	30 fl oz	N	Yes
Gly-4 4L	Universal Crop Protection	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Gly-4 Plus 4L	Universal Crop Protection	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Gly Star Original 4L	Albaugh	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Gly Star Plus 4L	Albaugh	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Gly-Flo 4L	Micro-Flo	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Glyfos 4L	Cheminova	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Glyfos X-tra 4L	Cheminova	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Glyphomax 4L	Dow Agro	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Glyphomax Plus 4L	Dow Agro	3 a.e.	24 fl oz	32 fl oz	48 fl oz	N	Yes
Glyphomax XRT 5.4L	Dow Agro	4 a.e.	18 fl oz	24 fl oz	30 fl oz	N	Yes
Glyphosate 4 4L	FarmSaver.com	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Glyphosate 41% 4L	Helm Agro	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Glyphosate Original ^c 4L	Griffin	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Grandslam 4XS	Hide, LLC.	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Helosate Plus 4L	Helm Agro	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Honcho 4L	Monsanto	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Honcho Plus 4L	Monsanto	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Mirage 4L	UAP/Platte	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Mirage Plus 4L	UAP/Platte	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Rattler 4L	Helena	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Rattler Plus 4L	Helena	3 a.e.	24 fl oz	32 fl oz	48 fl oz	S	No
Roundup Original 4L	Monsanto	3 a.e.	24 fl oz	32 fl oz	48 fl oz	Y	No
Roundup OriginalMax 5.5L	Monsanto	4.5 a.e.	16 fl oz	22 fl oz	32 fl oz	S	Yes
Roundup UltraDry 71.4WG	Monsanto	64.9% a.e.	0.9 lb	1.2 lb	1.8 lb	N	Yes
Roundup WeatherMax 5.5L	Monsanto	4.5 a.e.	16 fl oz	22 fl oz	32 fl oz	N	Yes
Touchdown HiTech	Syngenta	5 a.e.	14 fl oz	20 fl oz	30 fl oz	Y	Yes
Touchdown Total	Syngenta	4.17 a.e.	17 fl oz	24 fl oz	35 fl oz	N	Yes

^a a.e. = acid equivalent, lb of glyphosate acid per gallon.

^b Y = Yes, surfactant is needed; S = Sometimes under certain conditions additional surfactant may improve control; N = No surfactant is needed. For products that may need a surfactant, a non-ionic surfactant at 0.25 to 1.0% v/v is the typical recommendation. Consult the herbicide label to verify the type and rate of surfactant to include. AMS should be included at 17 lb/100 gal to improve glyphosate activity.

^c Labeled only for over-the-top applications in *Roundup Ready* soybeans.

^d Treated alfalfa and weeds can be harvested and fed to livestock after 36 hours.

TABLE 11 – Rain-free Period for Postemergence Herbicide Applications

HERBICIDE	RAIN-FREE PERIOD (in hours)	HERBICIDE	RAIN-FREE PERIOD (in hours)
Accent	4	Glyphomax	2–6***
Accent Gold/Accent Gold WDG	6	Glyphomax Plus	1–2‡
Aim EW	1	Gramoxone Inteon	0.5
Assure II/Targa	1	Harmony Extra	Several
Atrazine	1–2**	Harmony GT	1
Backdraft SL	NL	Hornet WDG	2
Banvel	NL	Laddok	NL*
Clarity	4	Liberty	4
Basagran	4	Liberty ATZ	4
Basis	4	Lightning	1
Beacon	4	Marksman	4
Betamix	6	MCPA	4
Betanex	6	Mirage	NL
Buctril	1	Moxy	1
Buctril/Atrazine	1	Northstar	4
Butoxone (2,4-DB)	NL	Option	2
Butyrac (2,4-DB)	NL	Permit	4
Callisto	1	Phoenix	2
Celebrity	4	Poast	1
Classic	1	Poast Plus	1
ClearOut 41 Plus	NL	Progress	6
Credit Duo	2–6***	Puma	NL
Credit Extra	2–6***	Pursuit	1
Cobra	0.5	Raptor	1
Curtail	6	Reflex	1
2,4-D Amine	6–8	Reglone	NL
2,4-D Ester	1	Resource	1
Distinct	4	Roundup Original	NL
Equip	2	Roundup Original II	NL
Express	Several	Roundup WEATHERMAX	NL
Extreme	NL	Scepter	NL
FirstRate	2	Select/Arrow	1
Flexstar	1	Steadfast	4
Fusion	1	Stinger	6
Gly Star Original	2–6***	Synchrony XP	1
Gly Star Plus	NL	Touchdown	1–2‡
Gly-4	2–6***	Ultra Blazer	4
Gly-4 Plus	NL	UpBeet	4
Glyfos	2–6***	Valor	1
Glyfos X-tra	NL	Yukon	4

NL – not listed on label.

* Basagran's rain-free period is 4 hours.

** Rainfall will improve control from root uptake.

*** Rainfall within 6 hr. after application may reduce effectiveness. Heavy rainfall within 2 hr. after application may wash the chemical off foliage and a repeat treatment may be required.

‡ Extended time interval (6 hr.) recommended with cool, cloudy conditions. Heavy rainfall within 2 hr. may wash chemical off of foliage.

TABLE 12 – Herbicide Crop Rotation Restrictions

	SOIL pH RESTRICTIONS	(in months)												
		SOYBEANS	FIELD CORN	SEED CORN	WHEAT	OATS	BARLEY	RYE	ALFALFA	DRY BEANS	SUGAR BEETS	POTATOES	CUCUMBERS	TOMATOES
2,4-D amine, 2,4-D ester	None	*	0*	0*	–	10	10	–	10	10	10	10	10	10
Accent	Yes*	0.5	0	0	4	8	8	4	10	10	10/18*	10/18*	10/18*	10/18*
Accent Gold	None	10.5	0	10.5	4	8	8	4	10.5	10.5	26*	18	26*	26*
Aim	None	0	0	0	0	0	0	0	0	12	12	12	12	12
Assure II/Targa	None	0	4	4	4	4	4	4	4	0	0	4	4	4
Atrazine (1 lb a.i./A)	None	10	0	0	3	21	21	3	15	21	21	10	21	21
Atrazine (2 lb a.i./A)	None	18	0	0	15	21	21	15	21	21	33	18	33	33
Axiom	None	0	0	0	12	12	12	12	12	12	18	1	12	12
Backdraft*	None	0	9.5/18*	9.5/18*	4	11/18*	11/18*	18	18	11	26	18	18	18
Basagran	None	0	0	0	0	0	0	0	0	0	0	0	0	0
Basis	> 9.0	0.5	0	0	4	8	8	4	10	8	10	0	18	1
Beacon	None	8	0.5	0.5	3	8	8	3	8	8	18	8	18	18
Betamix	None	0	4	4	4	4	4	4	0	0	0	0	0	0
Betanex	None	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicep II Magnum/ Cinch ATZ	> 8.0	10	0	0	15	21	21	15	21	21	21	10	21	21
Bicep Lite II Magnum/ Cinch ATZ Lite	> 8.0	10	0	0	3	21	21	3	15	21	21	10	21	21
Boundary	None	0	8	8	4.5	12	4.5	12	4.5	12	18	8	12	12
Buctril + Atrazine	None	10	1	1	3	21	21	3	15	21	21	10	21	21
Buctril/Moxy	None	1	1	1	1	1	1	1	1	1	1	1	1	1
Bullet/Lariat	None	10	0	0	3	21	21	3	15	21	21	10	21	21
Butoxone 200/ Butyrac 200	None	–	–	–	–	–	–	–	–	–	–	–	–	–
Callisto	None	10	0	0	4	4	4	4	10	18	18	10	18	18
Camix	None	10	0	0	4.5	10	4.5	4.5	18	18	18	10	18	18
Canopy EX*	>7	0	10	10	4	4	4	4	10	12	30	30	18	10*
Celebrity	Yes*	1	0	0	4	8	4	4	12	10	10/18*	10/18*	10/18*	10/18*
Celebrity Plus	Yes*	4	0.25	0.25	4	8	4	4	12	10	10/18*	10/18*	10/18*	10/18*
Clarity/Banvel	None	4	4	4	1	1	1	1	4	4	4	4	4	4
Classic*	>7	0	9	9	3	3	3	3	12	9	30	30	18	9*
Cobra/Phoenix	None	0	0	0	0	0	0	0	0	0	0	0	0	0
Command*	<5.9	0	9	9	12	16	16	16	16	9	9	9	9	9/12*
Curtail*	None	10.5/18*	1	1	1	1	1	1	10.5	10.5/18*	12	18	18	18
Define	None	0	0	0	12	12	12	12	12	12	4	1	12	12
Degree Xtra/Harness Xtra/Keystone/ Volley ATZ	None	10	0	0	4	21	21	18	18	21	21	18	21	21
Distinct	None	1	0.25	0.25	1	1	1	1	1	1	1	1	1	1
Dual Magnum/Dual II Magnum/Cinch	None	0	0	0	4.5	4.5	4.5	4.5	6	0	10	0	10	6
Eptam	None	10	1	10	3	10	10	3	0	0	10	10	10	10
Equip	≥ 8.5	9	0.5	0.5	2	9	2	2	18	18	18	18	18*	18*
Expert	None	10	0	0	10	18	18	10	18	18	18	18	18	18
Express	None	1.5	1.5	1.5	0	1.5	0	1.5	1.5	1.5	2	1.5	1.5	1.5
Extreme	None	0	8.5	8.5	4	18	9.5	4	4	4	40*	26	40*	40*
Field Master	None	10	0	0	15	21	21	18	21	21	21	18	21	21

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TABLE 12 – Herbicide Crop Rotation Restrictions (continued)

	SOIL pH RESTRICTIONS	(in months)												
		SOYBEANS	FIELD CORN	SEED CORN	WHEAT	OATS	BARLEY	RYE	ALFALFA	DRY BEANS	SUGAR BEETS	POTATOES	CUCUMBERS	TOMATOES
FirstRate	None	0	9	9	3	9	30*	30*	9	9	30	18	30*	30*
Flexstar/Reflex	None	0	10	10	4	4	4	4	18	10	18	18	18	18
Fultime	None	10	0	0	15	21	21	18	18	21	21	18	21	21
Fusion	None	0	2	2	2	2	2	2	0	0	0	0	0	0
Gangster	None	0	9	9	3	9	30*	30*	30*	9	30*	18	30*	30*
Glyphosate	None	0	0	0	0	0	0	0	0	0	0	0	0	0
G-Max Lite	None	10	0	0	3	21	21	3	15	21	21	10	21	21
Gramoxone Inteon	None	0	0	0	0	0	0	0	0	0	0	0	0	0
Guardman Max	None	10	0	0	15	21	21	15	21	21	21	10	21	21
Harmony Extra	None	1.5	1.5	2.5	0	0	0	1.5	1.5	1.5	2	1.5	1.5	1.5
Harmony GT	None	0	0	1.5	0	0	0	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Harness/Volley/ Topnotch/Surpass/ Degree	None	10	0	0	4	18	18	18	18	18	18	18	18	18
Hornet WDG	> 7.8	10.5	0	0	4	4	4	4	10.5	10.5	26*	18	26*	26*
IntRRo/Micro-Tech	None	0	0	0	3	10	10	3	10	10	10	10	10	10
Kerb	None	12	12	12	12	12	12	12	12	12	12	12	12	12
Keystone LA/ Volley ATZ Lite	None	10	0	0	4	21	21	18	18	21	21	18	21	21
Laddock	None	10	0	0	3	21	21	3	15	21	21	10	21	21
Lexar	None	10	0	0	15	10	10	10	18	18	18	18	18	18
Liberty/Rely	None	0	0	0	2.5	2.5	2.5	2.5	4	4	4	4	4	4
Liberty ATZ	None	10	0	0	3	21	21	3	15	21	21	10	21	21
Lightning	None	9	8.5	8.5	4	18	9.5	4	9.5	9.5	40*	26	40*	40*
Lorox/Linex	None	4	4	4	4	4	4	4	4	4	4	4	4	4
Lumax	None	10	0	0	4.5	10	4.5	4.5	18	18	18	18	18	18
Marksman	None	10	4	4	3	21	21	3	15	21	21	10	21	21
Matrix	None	4	0	0	4	9	9	4	18*	10	18*	0	18*	18*
MCPA	None	–	–	–	–	–	–	–	–	–	–	–	–	–
Northstar	None	8	0.5	0.5	3	8	8	3	8	8	18	8	18	18
Nortron*	None	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12	6/12	0	6/12	6/12	6/12
Option	None	0.5	0.25	0.25	2	2	2	2	2	2	2	2	2	2
Outlook	None	0	0	0	4	4	4	4	10	0	10	10	10	10
Permit/Sandea	None	9	1	2	2	2	2	2	9	9	21	9	9	8
Poast/ Poast Plus*	None	0	1*	1*	1*	1*	1*	1*	0	0	0	0	0	0
Priority	None	9	1	2	2	2	2	12	12	12	21	12	12	12
Prowl, Pendimax, Prowl H2O	None	0	10	10	4	10	4	10	10	0	12	10	10	10
Puma	None	0	0	0	0	0	0	0	0	0	0	0	0	0
Pursuit	None	0	8.5	8.5	4	18	9.5	4	4	4	40*	26	40*	40*
Pursuit Plus	None	0	8.5	8.5	4	18	9.5	9.5	9.5	4	40*	26	40*	40*
Pyramin*	None	10	10	10	10	10	10	10	10	10	0	10	10	10
Python	> 7.8	0	0	0	4	4	4	4	4	4	26*	12	26*	26*
Raptor	None	0	9	9	3	9	4	4	9	9	18	9	9	9
Resource	None	0	0	0	4	4	4	4	1	1	1	1	1	1
Ro-Neet	None	–	–	–	–	–	–	–	–	–	–	–	–	–
Scepter*	None	0	9.5/18*	9.5/18*	4	11/18*	11/18*	18	18	11	26	18	18	18

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**TABLE 12 – Herbicide Crop Rotation Restrictions
(continued)**

	SOIL pH RESTRICTIONS	(in months)												
		SOYBEANS	FIELD CORN	SEED CORN	WHEAT	OATS	BARLEY	RYE	ALFALFA	DRY BEANS	SUGAR BEETS	POTATOES	CUCUMBERS	TOMATOES
Select/Arrow	None	0	1	1	1	1	1	1	0	0	0	0	0	0
Sencor	≥ 7.0	4	4	4	4	4	4	12	4	12	18	4	12	12
Shotgun	None	10	0*	0*	3	21	21	3	15	21	21	10	21	21
Sinbar	None	24	24	24	24	24	24	24	24	24	24	24	24	24
Sonalan	None	0	10	10	10	10	10	10	10	0	8/13*	10	10	10
Spartan	None	0	10	10	4	4	4	4	12	12	30	30	18	30
Stalwart/Stalwart C Parallel/Parallel PCS	None	10	0	0	4.5	4.5	4.5	4.5	4	10	10	10	10	6
Starane	None	10	4	4	4	4	4	4	4	10	10	10	10	10
Steadfast	Yes*	0.5	0	10	4	8	8	4	10	10	10/18*	10/18*	10/18*	10/18*
Steadfast ATZ	None	10	0	10	10	18	18	10	18	18	18	18	18	18
Stinger*	None	10.5	0	0	0	0	0	0	10.5	10.5	0	18	18	18
Synchrony XP*	>7	0	9	9	3/4	3/4	3/4	3/4	12	9/12	30	30	18	9/15
Trifluralin	None	0	5	5	5	5	5	5	5	0	12*	5	5	5
Ultra Blazer	None	0	0	0	0	0	0	0	0	0	18	18	0	0
Upbeet	None	0.5	0.75	0.75	0.5	0.5	0.5	0.5	0.5	0.5	0	0.5	0.5	0.5
Valor	None	0	2	4	2	12	4	4	12*	4	12*	12*	12*	12*
Velpar	None	24	12	12	24	24	24	24	24	24	12	12	24	24
Yukon	None	9	1	2	2	2	2	2	9	9	21	9	9	8

This table contains general guidelines for crop rotation restrictions following herbicide application. Herbicide persistence and carry-over potential are variable and dependent upon soil and environmental characteristics.

– No information was given on the label.

* Consult the Remarks and Limitations sections in this guide and on the herbicide label for further information.

TABLE 13 – Toxicity, Solubility, Adsorptivity and Persistence of Herbicides

HERBICIDE	TOXICITY ¹ LD ₅₀ mg/kg		WATER SOLUBILITY (ppm at 25°C)	ADSORPTIVITY TO SOIL	SOIL PERSISTENCE AT STANDARD RATE (months)	RUNOFF/ ² LEACHING POTENTIAL	RESTRICTED ³ ENTRY INTERVAL
	Oral	Dermal					
Accent	>5000	>2000	70 (pH 7.0)	weak-moderate	1-10	3/1	4 hrs
Accent Gold	>5000	>2000	-	-	-	3/1	48 hrs
Aim EW	>5000	>5000	22	strong	-	-/-	12 hrs
Assure II/Targa	4100-5900	>2000	<1	moderate	0.5	1/2	12 hrs
Atrazine	1075-4346	>3100	33	strong	2-8	2/1	12 hrs
Axiom	1042-1308	>5000	56	moderate	2	2/1	12 hrs
Banvel/Clarity	2629-3512	>2000	4500	weak	1-6	3/1	24 hrs
Basagran	2063	>10,000	500	weak	0.5	3/1	4-8 hrs
Basis	>5000	>2000	-	-	-	-/-	4 hrs
Beacon	>5050	>2010	18,000 (pH 7.2)	weak	1-5	2/1	12 hrs
Betamix	4059	>1980	1	moderate	1	1/3	24 hrs
Betanex	3960	>9900	7	moderate	1	1/3	24 hrs
Buctril/Moxy	780	2000	50	moderate	0.5	2/3	12 hrs
Callisto	>5000	>5000	-	-	-	-	12 hrs
Classic	>5000	>2000	300	strong	1-10	2/1	12 hrs
Cobra	2400-2600	>2000	0.1	strong	0.5	2/3	12 hrs
Command	2084-5000	2000-5000	1100	v. strong	3-6	2/2	12 hrs
2,4-D	375-1492	>2000	900	weak	1	2/2	12-48 hrs
2,4-DB	>1706	2000	insoluble	weak	1	2/3	48 hrs
Define	1365	5000	56	moderate	-	-	12 hrs
Degree	2148	4166	223	moderate	1-2	2/2	12 hrs
DESICATE II	233	481	100,000	moderate	0.25	3/2	48 hrs
Reglone	600-810	260-315	infinite	v. strong	-	1/3	24 hrs
Distinct	>1800	>5000	-	-	-	-	12 hrs
Domain	1830-1920	>2000	56	moderate	2	2/1	12 hrs
Dual II Magnum/ Cinch/Stalwart/ Parallel	2672-2952	>2020	530	strong	1-3	2/1	24 hrs
Eptam	1325-5000	1500-5000	370	strong	1.5-2	2/3	12 hrs
Express	>5000	>2000	286	-	0.5	2/2	12 hrs
FirstRate	>5000	>2000	184	moderate	1-4	-/-	12 hrs
Fusion	3154	>2000	2 to 0.9	moderate	0.5	1/3	24 hrs
glyphosate***	>5000	>5000	900,000 (pH 7.0)	v. strong	1	1/3	SL
Gramoxone Max	283	>2000	infinite	v. strong	1	1/3	12-48 hrs
Harmony Extra	>5000	>2000	*	*	0.5	2/2	12 hrs
Harmony GT	>5000	>2000	2400	-	0.25	2/2	4 hrs
Harness	1249-2948	4166-5000	223	moderate	1-2	2/2	12 hrs
Hornet WDG	>5000	>5000	-	-	-	3/1	48 hrs
Kerb	>5000	>2000	15	strong	2-9	2/1	24 hrs
MicroTech/IntRRo	2000-5000	5000-7800	242	strong	1-2	2/2	12 hrs
Liberty	2119-2030	1390-5319	-	-	-	-	12 hrs
Lightning	>5000	>2000	-	-	-	2/1	12 hrs
Lorox	3600-4833	>2000	75	v. strong	2-4	1/2	24 hrs
Matrix	>5000	>2000	-	-	-	-/-	4 hrs
MCPA	800	1500	insoluble	v. weak	1-4	1/3	48 hrs
Nortron SC	>2100	>4100	110	strong	1-4	2/2	12 hrs
Option	>3881	>5000	-	-	-	-/-	12 hrs
Outlook	695	>2000	1174	moderate	1-2	2/2	12 hrs

(Continued on next page)

TABLE 13 – Toxicity, Solubility, Adsorptivity and Persistence of Herbicides (continued)

HERBICIDE	TOXICITY ¹		WATER SOLUBILITY (ppm at 25°C)	ADSORPTIVITY TO SOIL	SOIL PERSISTENCE AT STANDARD RATE (months)	RUNOFF/ ² LEACHING POTENTIAL	RESTRICTED ³ ENTRY INTERVAL
	Oral LD ₅₀ mg/kg	Dermal					
Permit	1287	>5000	15	–	–	2/2	12 hrs
Poast	2200–4100	2000–5000	48	moderate	0.25	2/3	12 hrs
Princep/Sim-Trol	>5000	2000–2500	5	strong	2–8	2/1	12 hrs
Prowl/Pendimax/ Prowl H ₂ O	3956	>2200	<1	v. strong	3–6	1/3	24 hrs
Pursuit	3506–5000	>2000	1,400	weak	2–8	1/1	12–24 hrs
Pyramin	1160	>2000	1	strong	1–2	2/2	12 hrs
Python	>5000	>2000	49	moderate	2–8	3/1	12 hrs
Raptor	>5000	>4000	–	weak	1–2	–/–	4 hrs
Reflex/Flexstar	3683–8160	>1000	600,000	weak	6	2/1	24 hrs
Resource	3200–4100	>2000	.189	strong	–	3/2	12 hrs
Ro-Neet	3160–3690	>4640	85	strong	1–3	2/2	12 hrs
Scepter	5000–6598	2000–5000	60	moderate	2–8	3/1	12–48 hrs
Select/Arrow	2920–3610	>5000	infinite	moderate	0.25	3/3	24 hrs
Sencor	1500–2794	>5000	1200	moderate	2–4	2/1	12 hrs
Sinbar	5000–7500	>5000	710	moderate	5–6	2/1	12 hrs
Sonalan	3300–5000	>5000	1	v. strong	3–5	1/3	24 hrs
Spartan	2416	>5000	110	moderate	2–8	–/–	12 hrs
Steadfast	>5000	>2000	–	–	–	–	4 hrs
Stinger	>5000	>5000	1000	moderate	1–10	3/1	12 hrs
Surpass	1426–1942	>2240	223	moderate	1–2	2/2	12 hrs
Trifluralin	3738	>2000	<1	v. strong	3–6	1/3	12 hrs
Ultra Blazer	4790	3250	infinite	strong	1	2/2	48 hrs
Upbeet	>5000	>2000	110 (pH 7.0)	weak	–	–/–	4 hrs
Valor	>5000	>2000	1.78	–	–	–	12 hrs
Velpar	1100–4120	>5000	33,000	strong	4–6	2/1	24 hrs
(Table Salt)	3320	–	360,000	–	–	–	–
(Aspirin)	1200	–	2,500	–	–	–	–

– No information available.

Sources: *Herbicide Handbook*.

¹ The LD₅₀ is a standard toxicological term which indicates the number of milligrams (mg) of pesticide per kilogram (kg) of test animal body weight required to kill 50% of a test animal population. Values less than 10 indicate extremely high toxicity to mammals. The LD₅₀ data have been obtained from the Material Data Safety Sheets.

² The runoff/leaching potential ratings are from the ARS/NRCS pesticide properties database and were developed for use with the NRCS soils ratings for water quality in the NRCS “Soil-Pesticide Interaction Ratings.” 1=high, 2=medium, 3=low.

³ Read and follow label directions. Post areas or give oral warnings that areas have been treated to warn workers not to enter until the REI has elapsed as required by the label. SL=See Label.

* Combination of *Express* and the active ingredient in *Harmony GT*.

** Combination of *Lexone* plus chlorimuron.

*** Glyphosate IPA salt; active ingredient in products in Table 10.

Premixes: Refer to Tables 1H and 2E for components of herbicide premixes.

TABLE 14 – Glossary of Chemical Names

TRADE NAME** AND (MANUFACTURER)	COMMON NAME	CONCENTRATION COMMERCIAL FORMULATION†
ACCENT (DuPont)	NICOSULFURON	75% DF, SP
ACCENT GOLD (DuPont)	CLOPYRALID + FLUMETSULAM + NICOSULFURON + RIMSULFURON	83.8% DG (51.7 + 19.1 + 6.5 + 6.5)
ACCENT GOLD WDG (DuPont)	CLOPYRALID + FLUMETSULAM + NICOSULFURON + RIMSULFURON	69.5% WDG (42.8 + 15.9 + 5.4 + 5.4)
AIM EW (FMC)	CARFENTRAZONE	1.9 lb/gal L
ARROW 2EC (Makhteshim-Agan)	CLETHODIM	2.0 lb/gal L
ASSURE II (DuPont)	QUIZALOFOP-P-ETHYL	0.88 lb/gal L
* ATRAZINE (several)	ATRAZINE	4 lb/gal L; 90% DG
AXIOM (Bayer CropSciences)	FLUFENACET + METRIBUZIN	68% DF (54.4 + 13.6)
BACKDRAFT SL (BASF)	IMAZAQUIN + GLYPHOSATE	1.05 lb/gal (ae)
BANVEL (Micro Flo)	DICAMBA	4 lb/gal L
BASAGRAN (Micro Flo)	BENTAZON	4 lb/gal L
BASIS (DuPont)	RIMSULFURON + THIFENSULFURON	75% DG (50 + 25)
BEACON (Syngenta)	PRIMISULFURON	75% DG (in pouches)
BETAMIX (Bayer CropSciences)	DESMEDIPHAM+PHENMEDIPHAM	1.3 lb/gal L (0.65 + 0.65)
BETANEX (Bayer CropSciences)	DESMEDIPHAM	1.3 lb/gal L
* BICEP II MAGNUM (Syngenta)	ATRAZINE + S-METOLACHLOR (+ SAFENER)	5.5 lb/gal L (3.1 + 2.4)
* BICEP LITE II MAGNUM (Syngenta)	ATRAZINE + S-METOLACHLOR (+ SAFENER)	6 lb/gal L (2.67 + 3.33)
BOUNDARY 6.5EC (Syngenta)	S-METOLACHLOR + METRIBUZIN	6.5 lb/gal (5.25 + 1.25)
BUCTRIL (Bayer CropSciences)	BROMOXYNIL	2 lb/gal L
* BUCTRIL-ATRAZINE (Bayer CropSciences)	ATRAZINE + BROMOXYNIL	3 lb/gal L (2 + 1)
* BULLET (Monsanto)	ATRAZINE + ALACHLOR	4 lb/gal L (1.5 + 2.5)
BUTOXONE (Cedar)	2,4-DB	2 lb/gal L
BUTYRAC (Albaugh)	2,4-DB	2 lb/gal L
CALLISTO (Syngenta)	MESOTRIONE	4 lb/gal SC
CAMIX (Syngenta)	MESOTRIONE + S-METOLACHLOR (+ SAFENER)	3.67 lb/gal L (0.33 + 3.34)
CANOPY EX (DuPont)	CHLORIMURON + TRIBENURON	29.5% DG (22.7 + 6.8)
CELEBRITY (BASF)	NICOSULFURON + DICAMBA	Co-Pack
CELEBRITY PLUS (BASF)	DICAMBA + DIFLUFENZOPYR + NICOSULFURON	70% DG (42.4 + 17.0 + 10.6)
CINCH (DuPont)	S-METHOLACHLOR (+ SAFENER)	7.64 lb/gal L
* CINCH ATZ (DuPont)	ATRAZINE + S-METOLACHLOR (+ SAFENER)	5.5 lb/gal L (3.1 + 2.4)
* CINCH ATZ LITE (DuPont)	ATRAZINE + S-METOLACHLOR (+ SAFENER)	6.0 lb/gal L (2.67 + 3.33)
CLARITY (BASF)	DICAMBA	4 lb/gal L
CLASSIC (DuPont)	CHLORIMURON ETHYL	25% DF
COBRA (Valent)	LACTOFEN	2 lb/gal L
COMMAND (FMC)	CLOMAZONE	3 ME
CURTAIL (Dow AgroSciences)	CLOPYRALID + 2,4-D	2.38 lb/gal L (0.38 + 2.0)
2,4-D (Several)	2,4-D	various
DEFINE (Bayer CropSciences)	FLUFENACET	60% DF
DEFINE SC (Bayer CropSciences)	FLUFENACET	4 lb/gal SC
* DEGREE (Monsanto)	ACETOCHLOR (+ SAFENER)	3.8 lb/gal L
* DEGREE XTRA (Monsanto)	ACETOCHLOR (+ SAFENER) + ATRAZINE	4.0 lb/gal L (2.7 + 1.3)
DESICATE II (Cerexagri)	ENDOTHALL	2.0 lb/gal L
DISTINCT (BASF)	DICAMBA+DIFLUFENZOPYR	70% DS (50 + 20)
DUAL MAGNUM (Syngenta)	S-METOLACHLOR	7.62 lb/gal L
DUAL II MAGNUM (Syngenta)	S-METOLACHLOR (+ SAFENER)	7.64 lb/gal L
EPTAM (Syngenta)	EPTC	7 lb/gal L; 10% G
EQUIP (Bayer CropSciences)	FORAMSULFURON + IODOSULFURON (+ SAFENER)	32% DG (30 + 2)
* EXPERT (Syngenta)	ATRAZINE + S-METOLACHLOR + GLYPHOSATE	4.88 lb/gal L (2.14 + 1.74 + 0.75ae)
EXPRESS (DuPont)	TRIBENURON METHYL	75% DF
EXTREME (BASF)	IMAZETHAPYR + GLYPHOSATE	2.17 lb/gal (ae)
* FIELDMASTER (Monsanto)	ACETOCHLOR (+ SAFENER) + ATRAZINE + GLYPHOSATE	4.06 lb/gal L (2 + 1.5 + 0.56 (ae))
FIRSTRATE (Dow AgroSciences)	CLORANSULAM METHYL	84% WDG

(Continued on next page)

TABLE 14 – Glossary of Chemical Names (continued)

TRADE NAME** AND (MANUFACTURER)	COMMON NAME	CONCENTRATION COMMERCIAL FORMULATION†
FLEXSTAR (Syngenta)	FOMESAFEN	1.88 lb/gal L
* FULTIME (Dow AgroSciences)	ACETOCHLOR (+ SAFENER) + ATRAZINE	4 lb/gal L (2.4 + 1.6)
FUSION (Syngenta)	FLUAZIFOP-P-BUTYL + FENOXAPROP	2.66 lb/gal L (2.0 + 0.66)
GANGSTER (Valent)	CLORANSULAM-METHYL + FLUMIOXAZIN	Co-pack
GLYPHOSATE (Severl)	GLYPHOSATE	3, 3.7, 4, 4.5 lb/gal L (ae), 65% (ae)
* GRAMOXONE MAX (Syngenta)	PARAQUAT	3 lb/gal L (ae)
* G-MAX LITE (BASF)	DIMETHENAMID-P + ATRAZINE	5 lb/gal L (2.25 + 2.75)
* GUARDSMAN MAX (BASF)	DIMETHENAMID-P + ATRAZINE	5 lb/gal L (1.7 + 3.3)
HARMONY EXTRA (DuPont)	THIFENSULFURON METHYL + TRIBENURON METHYL	75% DF
HARMONY GT (DuPont)	THIFENSULFURON METHYL	75% DF
* HARNES (Monsanto)	ACETOCHLOR (+ SAFENER)	7 lb/gal L; 20% G
* HARNES XTRA (Monsanto)	ACETOCHLOR (+ SAFENER) + ATRAZINE	6 lb/gal L (4.3 + 1.7)
* HARNES XTRA 5.6L (Monsanto)	ACETOCHLOR (+ SAFENER) + ATRAZINE	5.6 lb/gal L (3.1 + 2.5)
HORNET WDG (Dow AgroSciences)	FLUMETSULAM + CLOPYRALID	68.5% WDG (18.5 + 50.0)
* INTRRO (Monsanto)	ALACHLOR	4.0 lb/gal L
* KERB (Dow AgroSciences)	PRONAMIDE	50% WP (in soluble pouches)
* KEYSTONE (Dow AgroSciences)	ACETOCHLOR (+ SAFENER) + ATRAZINE	5.25 lb/gal (3.0 + 2.25)
* KEYSTONE LA (Dow AgroSciences)	ACETOCHLOR (+ SAFENER) + ATRAZINE	5.5 lb/gal L (4 + 1.5)
* LADDOK (Sipcam Agro)	ATRAZINE + BENTAZON	3.3 lb/gal L (1.7 + 1.7)
* LARIAT (Monsanto)	ATRAZINE + ALACHLOR	4 lb/gal L (1.5 + 2.5)
* LEXAR (Syngenta)	S-METOLACHLOR (+ SAFENER) + ATRAZINE + MESOTRIONE	3.7 lb/gal L (1.74 + 1.74 + 0.224)
LIBERTY (Bayer CropSciences)	GLUFOSINATE	1.67 lb/gal L
* LIBERTY ATZ (Bayer CropSciences)	ATRAZINE + GLUFOSINATE	4.3 lb/gal L (3.3 + 1.0)
LIGHTNING (BASF)	IMAZETHAPYR + IMAZAPYR	70% DG (52.5 + 17.5)
LINEX (Griffin)	LINURON	4 lb/gal L
LOROX (Griffin)	LINURON	50% DF
* LUMAX (Syngenta)	MESOTRIONE + S-METOLACHLOR (+ SAFENER) + ATRAZINE	3.95 lb/gal L (0.268 + 2.68 + 1.0)
* MARKSMAN (BASF)	ATRAZINE + DICAMBA	3.2 lb/gal L (2.1 + 1.1)
MCPA (Severl)	MCPA	Various L
* MICRO-TECH (Monsanto)	ALACHLOR	4 lb/gal L
MOXY (Agrilience)	BROMOXNYL	2 lb/gal L
NORTHSTAR (Syngenta)	PRIMISULFURON + DICAMBA	43.8% DG (7.5 + 36.3)
NORTRON SC (Bayer CropSciences)	ETHOFUMESATE	1½ lb/gal L; 4 lb/gal SC
OPTION (Bayer CropSciences)	FORAMSULFURON (+ SAFENER)	35% WDG
OUTLOOK (BASF)	DIMETHENAMID-P	6 lb/gal
PARALLEL (Makhteshim-Agan)	METOLACHLOR (+ SAFENER)	7.8 lb/gal L
PARALLEL PCS (Makhteshim-Agan)	METOLACHLOR	8.0 lb/gal L
PEAK (Syngenta)	PROSULFURON	57% DG
PENDIMAX (Dow AgroSciences)	PENDIMETHALIN	3.3 EC
PERMIT (Gowan)	HALOSULFURON	75% DS
PHOENIX (Valent)	LACTOFEN	2 lb/gal
POAST (Micro Flo)	SETHOXYDIM	1.53 lb/gal L
POAST PLUS (Micro Flo)	SETHOXYDIM + DASH	1.0 lb/gal L
PRINCEP (Syngenta)	SIMAZINE	4 lb/gal L; 80% WP; 90% DG
PRIORITY (Tenkoz)	CARFENTRAZONE + HALOSULFURON-METHYL	62.5% DG (12.5 + 50)
PROGRESS (Bayer CropSciences)	DESMEDIPHAM + PHENMEDIPHAM + ETHOFUMESATE	1.8 lb/gal L (0.6 + 0.6 + 0.6)
PROWL (BASF)	PENDIMETHALIN	3.3 EC
PROWL H ₂ O (BASF)	PENDIMETHALIN	3.8 lb/gal ACS
PUMA (Bayer CropSciences)	FENOXAPROP-P-ETHYL	1 lb/gal EC
PURSUIT (BASF)	IMAZETHAPYR	2 lb/gal L; 70% DG, ECO-PAK
PURSUIT PLUS (BASF)	IMAZETHAPYR+PENDIMETHALIN	3 lb/gal L (0.2 + 2.8)

(Continued on next page)

TABLE 14 – Glossary of Chemical Names (continued)

TRADE NAME** AND (MANUFACTURER)	COMMON NAME	CONCENTRATION COMMERCIAL FORMULATION†
PYRAMIN (Micro Flo)	PYRAZON	67% DF
PYTHON (Dow AgroSciences)	FLUMETSULAM	80% WDG
RAPTOR (BASF)	IMAZAMOX	1 lb/gal L
REFLEX (Syngenta)	FOMESAFEN	2 lb/gal L
REGLONE (Syngenta)	DIQUAT	2 lb/gal L
RESOURCE (Valent)	FLUMICLORAC	0.86 lb/gal L
REZULT (BASF)	BENTAZON+SETHOXYDIM+DASH	Co-Pack
RO-NEET (Cedar)	CYCLOATE	6 lb/gal L; 10% G
SANDEA (Gowan)	HALOSULFURON	75% DG
SCEPTER (BASF)	IMAZAQUIN	1.5 lb/gal L; 70% DG, ECO-PAK
SELECT (Valent)	CLETHODIM	2 lb/gal L
SENCOR (Bayer CropSciences)	METRIBUZIN	75% DF; 4 lb/gal L; Solupak
* SHOTGUN (United Agro Products)	ATRAZINE+2,4-D ESTER	3.25 lb/gal L (2.25 + 1)
SIM-TROL (Sipcam Agro)	SIMAZINE	4 lb/gal L; 90% DF
SINBAR (DuPont)	TERBACIL	80% WP
SONALAN (Dow AgroSciences)	ETHALFLURALIN	3 lb/gal L
SPARTAN (FMC)	SULFENTRAZONE	4 lb/gal L
STALWART (Sipcam Agro)	METOLACHLOR	8.0 lb/gal L
STALWART C (Sipcam Agro)	METOLACHLOR (+ SAFENER)	7.8 lb/gal L
STALWART XTRA (Sipcam Agro)	METOLACHLOR (+ SAFENER) + ATRAZINE	5.5 lb/gal (2.4 + 3.1)
STARANE (Dow AgroSciences)	FLUROXYPYR	1.5 lb/gal L
STEADFAST (DuPont)	NICOSULFURON+RIMSULFURON	75% WDG (50 + 25)
* STEADFAST ATZ (DuPont)	NICOSULFURON + RIMSULFURON + ATRAZINE	89.3% WDG (2.7 +1.3 +85.3)
STINGER (Dow AgroSciences)	CLOPYRALID	3 lb/gal L
* SURPASS (Dow AgroSciences)	ACETOCHLOR (+SAFENER)	6.4 lb/gal L
SYNCHRONY XP (DuPont)	CHLORIMURON ETHYL+THIFENSULFURON METHYL	28.4% DG (3:1)
TARGA (Gowan)	QUIZALOFOP-P-ETHYL	0.88 lb/gal L
* TOPNOTCH (Dow AgroSciences)	ACETOCHLOR (+SAFENER)	3.2 lb/gal L
TRIFLURALIN (Several)	TRIFLURALIN	4 lb/gal L; 10% G
ULTRA BLAZER (BASF)	ACIFLUORFEN	2 lb/gal
UPBEET (DuPont)	TRIFLUSULFURON METHYL	50% WDG
VALOR (Valent)	FLUMIOXAZIN	51% WDG
VELPAR (DuPont)	HEXAZINONE	2 lb/gal L; 90% SP, 75% DF
* VOLLEY (Tenkoz)	ACETOCHLOR (+ SAFENER)	6.4 lb/gal L
* VOLLEY ATZ (Tenkoz)	ACETOCHLOR (+ SAFENER) +ATRAZINE	5.25 lb/gal L (3.0 + 2.25)
* VOLLEY ATZ LITE (Tenkoz)	ACETOCHLOR (+ SAFENER) +ATRAZINE	5.5 lb/gal L (4.0 + 1.5)
YUKON (Monsanto)	HALOSULFURON+DICAMBA	67.5% WDG (12.5+55)

*Restricted use pesticides

***"Several" means there are numerous trade names for the chemical. The mention of trade names does not imply that they are endorsed or recommended over those of similar nature not listed.

† ACS – aqueous capsule suspension, DC – dry concentrate, DF – dry flowable, DG – dispersible granule, DS – dry soluble granule, EC – emulsifiable concentrate, EW – emulsifiable concentrate G – granular, L – liquid, WDG – water-dispersible granules, WP – wettable powder, WSP – wettable soluble powder.

TABLE 15 – Glossary of EPA Registration Numbers

Aatrex 4L	Syngenta	100-497	Durango	Dow AgroSciences	62719-517
Aatrex 90	Syngenta	100-585	Eptam 7-E	Syngenta	10182-220
Accent Gold	DuPont	352-593	Eptam 20-G	Syngenta	10182-199
Accent Gold WDG	DuPont	352-612	Equip	Bayer CropSciences	264-686
Accent	DuPont	352-560	Expert	Syngenta	100-1161
Aim EW	FMC	279-3242	Express	DuPont	352-509
Alachlor-4EC	Micro Flo	524-314-51036	Extreme	BASF	241-405
Arrow 2EC	Makhteshim-Agan	66222-60	Field Master	Monsanto	524-497
Assure II	DuPont	352-541	FirstRate	Dow AgroSciences	62719-275
Axiom	Bayer CropSciences	264-766	Flexstar	Syngenta	10182-418
Backdraft SL	BASF	241-407	FulTime	Dow AgroSciences	62719-371
Banvel	Micro Flo	51036-289	Fusion	Syngenta	10182-343
Basagran	Micro Flo	7969-45	Gangster	Valent	62719-275-59639
Basis	DuPont	352-571	Gly-Flo	Micro-Flo	51036-312
Basis Gold	DuPont	352-585	Gly Star Original	Albaugh	42750-60
Beacon	Syngenta	100-705	Gly Star Plus	Albaugh	42750-61
Betamix	Bayer CropSciences	264-621	Gly-4	Universal Crop Protection	42750-60-72693
Betanex	Bayer CropSciences	264-620	Gly-4 Plus	Universal Crop Protection	42780-61-72693
Bicep II Magnum	Syngenta	100-817	Glyfos	Cheminova	4787-31
Bicep Lite II Magnum	Syngenta	100-827	Glyfos X-tra	Cheminova	4787-23
Boundary 6.5EC	Syngenta	100-1162	Glyphomax	Dow AgroSciences	62719-323
Buccaneer 4L	Tenkoz	524-445-55467	Glyphomax Plus	Dow AgroSciences	62719-322
Buccaneer Plus 4L	Tenkoz	524-454-55467	Glyphomax XRT	Dow AgroSciences	62719-517
Buctril	Bayer CropSciences	264-437	Glyphosate 4	Farmsaver.com	72167-23-73220
Buctril + Atrazine	Bayer CropSciences	264-477	Glyphosate 41%	Helm Agro U.S., Inc.	74530-4
Bullet	Monsanto	524-418	Glyphosate Original	Griffin	352-607-1812
Butoxone 200	Nufarm	71368-46-81315	Gramoxone Inteon	Syngenta	100-1217
Butyrac 200	Albaugh	42 750-38	Gramoxone Max	Syngenta	100-1074
Callisto	Syngenta	100-1131	Grandslam	Hide, LLC.	75095-4
Camix	Syngenta	100-1148	G-Max Lite	BASF	7969-200
Canopy EX	DuPont	352-635	Guardsman Max	BASF	7969-192
Celebrity	BASF	7969-166	Harmony Extra	DuPont	352-538
Celebrity Plus	BASF	7969-175	Harmony GT	DuPont	352-446
Cinch	DuPont	100-818-352	Harness	Monsanto	524-473
Cinch ATZ	DuPont	100-817-352	Harness Xtra 5.6L	Monsanto	524-485
Cinch ATZ Lite	DuPont	100-827-352	Harness Xtra	Monsanto	524-480
Clarity	BASF	7969-137	Helosate Plus	Helm Agro U.S., Inc.	74530-4
Classic	DuPont	352-436	Honcho 4L	Monsanto	524-445
Clearout 41 4L	Chemical Product Technologies	70829-2	Honcho Plus 4L	Monsanto	524-454
ClearOut 41 Plus	Chemical Products Technologies	70829-3	Hornet WDG	Dow AgroSciences	62719-315
Cobra	Valent	59639-34	IntRRo	Monsanto	524-314
Command 3ME	FMC	279-3158	Kerb 50-W	Dow AgroSciences	707-159
Cornerstone	Agrilliance	42750-60-1381	Keystone	Dow AgroSciences	62719-368
Cornerstone Plus	Agrilliance	524-454-1381	Keystone LA	Dow AgroSciences	62719-479
Credit	Nufarm	524-445-71368	Laddok S-12	Sipcam Agro	7969-100
Credit Duo	Nufarm	71368-25	Lariat	Monsanto	524-329
Credit Duo Extra 4L	Nufarm	71368-25	Lexar	Syngenta	100-1201
Credit Extra	Nufarm	71368-20	Liberty	Bayer CropSciences	264-660
Curtail	Dow AgroSciences	62719-48	Liberty ATZ	Bayer CropSciences	264-668
2,4-D	many	many	Lightning	BASF	241-377
Define	Bayer CropSciences	264-765	Linex	Griffin	1812-245
Define SC	Bayer CropSciences	264-819	Lorox DF	Griffin	352-394
Degree	Monsanto	524-496	Lumax	Syngenta	100-1152
Degree Xtra	Monsanto	524-511	Marksman	BASF	7969-136
Desiccate II	Atochem/Cerexagri	4581-381	MCPA Amine	many	many
Distinct	BASF	7969-150	Micro-Tech	Monsanto	524-344
Domain	Bayer CropSciences	264-771	Mirage	UAP	524-445-34704
Dual Magnum	Syngenta	100-816	Mirage Plus 4L	UAP/Platte	524-454-34704
Dual II Magnum	Syngenta	100-818	Moxy	Terra	51036-256-9779
Dual II Magnum SI	Syngenta	100-829	Northstar	Syngenta	100-923
Dual IIG Magnum	Syngenta	100-910	Nortron SC	Bayer CropSciences	264-613