

HERBICIDE CLASSIFICATION

Repeated use of herbicides with the same site of action can result in the development of herbicide-resistant weed populations.



by MODE OF ACTION *(effect on plant growth)*

This chart groups herbicides by their modes of action to assist you in selecting herbicides 1) to maintain greater diversity in herbicide use and 2) to rotate among effective herbicides with different sites of action to delay the development of herbicide resistance.

SITE-OF-ACTION GROUP	SITE OF ACTION	CHEMICAL FAMILY	ACTIVE INGREDIENT	PRODUCT EXAMPLES (TRADE NAME [®])
1	LIPID SYNTHESIS INHIBITORS	Aryloxyphenoxypropionate (fops)	clodinafop	<i>Discover NG</i>
			cyhalofop	<i>Clincher</i>
			fenoxaprop	<i>Ricestar, Tecoma, others</i>
2	ACCASE INHIBITORS (acetyl CoA carboxylase)	Cyclohexanedione (dime)	fluazifop	<i>Fusilade DX</i>
			quizalofop	<i>Assure II, Targa</i>
			clethodim	<i>Select Max, others</i>
4	AMINO ACID SYNTHESIS INHIBITORS	Imidazolone	imazamox	<i>Raptor, Beyond, Clearmax</i>
			imazapic	<i>Plateau</i>
			imazaquin	<i>Scepter</i>
5	ALS INHIBITORS (acetolactate synthase)	Pyrimidinylthiobenzimidazole	bispyribac	<i>Regiment</i>
			pyrithiobac	<i>Staple</i>
			flucarbazone	<i>Everest, Pre-Pare, Sierra</i>
6	EPSP SYNTHASE INHIBITOR (5-enolpyruvyl-shikimate-3-phosphate)	Sulfonylurea	propoxycarbazone	<i>Olympus</i>
			thiencarbazone	<i>Varro</i>
			bensulfuron	<i>Londax</i>
7	GROWTH REGULATORS	Carboxylic acid	chlorimuron	<i>Classic</i>
			chlorsulfuron	<i>Glean</i>
			halosulfuron	<i>Permit</i>
8	T1R1 AUXIN RECEPTORS (synthetic auxins)	Phenoxy	iodosulfuron	<i>Autumn</i>
			mesosulfuron	<i>Osprey</i>
			metsulfuron	<i>Ally</i>
9	AUXIN TRANSPORT INHIBITOR	Organophosphorus	nicosulfuron	<i>Accent Q, Zest</i>
			orthosulfuron	<i>Strada</i>
			trifluralin	<i>UpBeat</i>
10	PHOTOSYNTHESIS INHIBITORS	Triazolopyrimidine	florasulam	<i>component of Orion</i>
			flumetsulam	<i>Python, Acolade</i>
			penoxsulam	<i>Grasp</i>
11	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Triazine	chlorimuron	<i>Classic</i>
			chlorsulfuron	<i>Glean</i>
			halosulfuron	<i>Permit</i>
12	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 7)	Triazine	florasulam	<i>component of Orion</i>
			flumetsulam	<i>Python, Acolade</i>
			penoxsulam	<i>Grasp</i>
13	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 6)	Urea	diuron	<i>Dirax, Karmex</i>
			fluometuron	<i>Cotoran</i>
			linuron	<i>Lorex, Linex</i>
14	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Phenylcarbamate	desmedipham	<i>Betalex</i>
			phenmedipham	<i>component of Betamix</i>
			atrazine	<i>AAtrex, others</i>
15	PHOTOSYSTEM I ELECTRON DIVERTER	Bipyridylum	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
16	GLUTAMINE SYNTHETASE INHIBITOR	Organophosphorus	glufosinate	<i>Liberty, Cheetha</i>
			glufosinate	<i>Liberty, Cheetha</i>
			glufosinate	<i>Liberty, Cheetha</i>
17	NUCLEIC ACID INHIBITOR	Arsenical	MSMA	<i>MSMA</i>
			MSMA	<i>MSMA</i>
			MSMA	<i>MSMA</i>
18	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
19	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
20	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
21	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
22	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
23	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
24	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
25	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
26	PHOTOSYSTEM II INHIBITORS (different binding than 5 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>
27	PHOTOSYSTEM II INHIBITORS (different binding than 6 & 7)	Triazine	atrazine	<i>AAtrex, others</i>
			acetochlor	<i>Harness</i>
			fluometuron	<i>Cotoran</i>

For more information and links to additional resources, visit TakeActionOnWeeds.com

TAKE ACTION IS ENDORSED BY THE FOLLOWING ORGANIZATIONS:



by PREMIX

This chart lists premix herbicides alphabetically by their trade names so you can identify the premix's component herbicides and their respective site-of-action groups. Refer to the **Site-of-Action** chart on the left for more information.

PREMIX	COMPONENT		SITE-OF-ACTION GROUP
	ACTIVE INGREDIENT	TRADE NAME [®]	
ACURON	bicyclopyrone	-----	27
	mesotrione	Callisto	27
	atrazine	AAtrex	5
	s-metolachlor	Dual II Magnum	15
ACURON FLEXI	bicyclopyrone	-----	27
	mesotrione	Callisto	27
	s-metolachlor	Dual II Magnum	15
AFFINITY BROADSPEC (Affinity Tankmix)	thifensulfuron	Harmony	2
	tribenuron	Express	2
AFFORIA	thifensulfuron	Harmony	2
	tribenuron	Express	2
	flumioxazin	Valor	14
	dicamba	Clarity	4
AGILITY SG	thifensulfuron	Harmony	2
	tribenuron	Express	2
	metsulfuron	Ally	2
ALLY EXTRA	thifensulfuron	Harmony	2
	tribenuron	Express	2
	metsulfuron	Ally	2
	pyroxasulfone	Zidua	15
ANTHEM ATZ	fluthiacet	Cadet	14
	atrazine	AAtrex	5
ANTHEM FLEX	pyroxasulfone	Zidua	15
	carfentrazone	Aim	14
	pyroxasulfone	Zidua	15
ANTHEM MAXX	fluthiacet	Cadet	14
ARMEZON PRO	tropramezone	Armezon	27
	dimethenamid-P	Outlook	15
AUTHORITY ASSIST	sulfentrazone	Spartan	14
	imazethapyr	Pursuit	2
AUTHORITY ELITE	sulfentrazone	Spartan	14
	s-metolachlor	Dual Magnum	15
	sulfentrazone	Spartan	14
AUTHORITY FIRST	cloransulam	FirstRate	2
AUTHORITY MTZ	sulfentrazone	Spartan	14
	metribuzin	Metribuzin	5
AUTHORITY XL (Authority Maxx)	sulfentrazone	Spartan	14
	chlorimuron	Classic	2
AUTUMN SUPER	iodosulfuron	Autumn	2
	thiencarbazone	Varro	2
	pinoxaden	Axial XL	1
AXIAL STAR	fluroxypyr	Starane	4
	flufenacet	Define	15
	metribuzin	Metribuzin	5
BASIS BLEND	rimsulfuron	Resolve	2
	thifensulfuron	Harmony	2
	desmedipham	Betalex	5
	phenmedipham	-----	5
BICEP II MAGNUM (Bicep Lite II Magnum)	s-metolachlor	Dual II Magnum	15
	atrazine	AAtrex	5
BOUNDARY	s-metolachlor	Dual Magnum	15
	metribuzin	Metribuzin	5
	fomesafen	Flexstar	14
BRAKE F2	fluridone	Sonar	12
BREAKFREE NXT ATZ (Breakfree NXT Lite)	acetochlor	Breakfree NXT	15
	atrazine	AAtrex	5
BROADAXE XC	s-metolachlor	Dual Magnum	15
	sulfentrazone	Spartan	14
BROADHEAD	carfentrazone	Aim	14
	quinclorac	Facet	4
	bromoxynil	Buctril	6
BRONATE	MCPA	MCPA	4
CALLISTO GT	mesotrione	Callisto	27
	glyphosate	glyphosate	9
CALLISTO XTRA	mesotrione	Callisto	27
	atrazine	AAtrex	5
	chlorimuron	Classic	2
CANOPY	metribuzin	Metribuzin	5
	chlorimuron	Classic	2
CANOPY EX	tribenuron	Express	2
CAPRENO	thiencarbazone	Varro	2
	tembotrione	Laudis	27
CARNIVORE	clopyralid	Stinger	4
	bromoxynil	Buctril	6
	glufosinate	Cheetah	10
CHEETAH MAX	fomesafen	Reflex	14
CINCH ATZ (Cinch ATZ Lite)	s-metolachlor	Dual II Magnum	15
	atrazine	AAtrex	5
CLEARPATH	quinclorac	Facet	4
	imazethapyr	Newpath	2
COLT + SALVO (Trump Card)	2,4-D	2,4-D	4
	fluroxypyr	Starane	4
	MCPA	MCPA	4
COLT + SWORD	fluroxypyr	Starane	4
	thiencarbazone	Varro	2
CORVUS	isoxaflutole	Balance Flexx	27
CURTIAL	clopyralid	Stinger	4
	2,4-D	2,4-D	4
CURTIAL M	clopyralid	Stinger	4
	MCPA	MCPA	4
DEGREE XTRA	acetochlor	Degree	15
	atrazine	AAtrex	5
DIFLEXX DUO	dicamba	DiFlexx	4
	tembotrione	Laudis	27
DILIGENT*	chlorimuron	Classic	2
	rimsulfuron	Resolve	2
	flumioxazin	Valor	14
ENLIST DUO	2,4-D	2,4-D	4
	glyphosate	glyphosate	9
ENLITE	chlorimuron	Classic	2
	thifensulfuron	Harmony	2
	flumioxazin	Valor	14
	chlorimuron	Classic	2
ENVIVE	thifensulfuron	Harmony	2
	flumioxazin	Valor	14
	s-metolachlor	Dual Magnum	15
EXPERT	atrazine	AAtrex	5
	glyphosate	glyphosate	9
EXTREME	imazethapyr	Pursuit	2
	glyphosate	glyphosate	9
	acetochlor	Harness	15
FIELD MASTER	atrazine	AAtrex	5
	glyphosate	glyphosate	9
	flumioxazin	Valor	14
FIERCE	pyroxasulfone	Zidua	15
	pyroxasulfone	Zidua	15
	flumioxazin	Valor	14
FIERCE XLT	pyroxasulfone	Zidua	15
	chlorimuron	Classic	2
	chlorsulfuron	Glean	2
FINESSE	metsulfuron	Ally	2
FINESSE GRASS AND BROADLEAF	chlorsulfuron	Glean	2
	flucarbazone	Everest	2
	fomesafen	Flexstar	14
FLEXSTAR GT	glyphosate	glyphosate	9
	aminopyralid	Milestone	4
FOREFRONT HL	2,4-D	2,4-D	4
FOXFIRE	fenoxaprop	Tecoma	1
	pinoxaden	Axial XL	1
FULTIME NXT	acetochlor	TopNotch	15
	atrazine	AAtrex	5
FUSION	fluzafop	Fusilade DX	1
	fenoxaprop	Puma	1
	flumioxazin	Valor	14
GANGSTER	cloransulam	FirstRate	2
	pyroxasulfone	PowerFlex HL	2
GOLDSKY	florasulam	-----	2
	fluroxypyr	Starane	4
	s-metolachlor	Dual Magnum	15
HALEX GT	mesotrione	Callisto	27
	glyphosate	glyphosate	9
	acetochlor	Harness	15
	atrazine	AAtrex	5
HORNET	clopyralid	Stinger	4
	flumetsulam	Python	2
HUSKIE	pyrasulfotole	-----	27
	bromoxynil	Buctril	6
	pyrasulfotole	-----	27
HUSKIE COMPLETE	bromoxynil	Buctril	6
	thiencarbazone	Varro	2
INSTIGATE	rimsulfuron	Resolve, Matrix	2
	mesotrione	Callisto	27
KEYSTONE NXT (Keystone LA NXT)	acetochlor	Surpass NXT	15
	atrazine	AAtrex	5
	2,4-D	2,4-D, others	4
KOCHIAVORE	fluroxypyr	Starane	4
	bromoxynil	Buctril, others	6
LEADOFF	rimsulfuron	Resolve	2
	thifensulfuron	Harmony	2
	mesotrione	Callisto	27
LEXAR EZ	s-metolachlor	Dual II Magnum	15
	atrazine	AAtrex	5
LUMAX EZ	mesotrione	Callisto	27
	s-metolachlor	Dual II Magnum	15
	atrazine	AAtrex	5
MARVEL	fluthiacet	Cadet	14
	fomesafen	Flexstar	14
OBEY	clomazone	Command	13
	quinclorac	Facet	4
OPTILL	saflufenacil	Sharpen	14
	imazethapyr	Pursuit	2
OPTILL PRO	saflufenacil	Sharpen	14
	imazethapyr	Pursuit	2
	dimethenamid-P	Outlook	15
ORION	florasulam	-----	2
	MCPA	MCPA	4
PANOFLEX	thifensulfuron	Harmony	2
	tribenuron	Express	2
PERMIT PLUS	thifensulfuron	Harmony	2
	halosulfuron	Permit	2
PREFIX	s-metolachlor	Dual Magnum	15
	fomesafen	Reflex	14
PREQUEL	rimsulfuron	Resolve	2
	isoxaflutole	Balance	27
	desmedipham	Betalex	5
PROGRESS	phenmedipham	-----	5
	ethofumesate	Norton	16
PULSAR	dicamba	Clarity	4
	fluroxypyr	Starane	4
QUELEX	halauxifen	Arylex	4
	florasulam	-----	2
RAVE	trifluralin	Amber	2
	dicamba	Clarity	4
RAZE	flucarbazone	Everest	2
	fluroxypyr	Starane	4
REALM Q	acetochlor	Resolve	2