



Corn Pre	Herbicide Group Number		Active Ingredient	Active Ingredient	Active Ingredient
Anthem	14	15	Fluthiacet-methyl	Pyroxasulfone	
Anthem ATZ	5	14 15	Atrazine	Fluthiacet-methyl	Pyroxasulfone
BalanceFlexx	27		Isoxaflutole		
Corvus	2	27	Thiencarbazono	Isoxaflutole	
Dual II Magnum	15		S-Metolachlor		
Fierce	14	15	Flumioxazin	Pyroxasulfone	
Harness / Surpass	15		Acetochlor		
Harness XTRA/Harness XTRA 5.6/ Keystone LA NXT/BreakFree ATZ NXT	5	15	Atrazine	Acetochlor	
Lumax	5	15 27	Atrazine	S-Metolachlor	Mesotrione
Outlook	15		Dimethenamid-P		
PreQuel	2	27	Rimsulfuron	Isoxaflutole	
Sharpen	14		Saflufenacil		
Surpass NXT	15		Acetochlor		
TripleFlex / SureStart	2	4 15	Flumetsulam	Clopyralid	Acetochlor
Verdict	14	15	Saflufenacil	Dimethenamid-P	
Zemax	15	27	S-Metolachlor	Mesotrione	
Zidua	15		Pyroxasulfone		
Corn Post					
Anthem	14	15	Fluthiacet-methyl	Pyroxasulfone	
Anthem ATZ	5	14 15	Atrazine	Fluthiacet-methyl	Pyroxasulfone
Callisto	27		Mesotrione		
Callisto XTRA	5	27	Atrazine	Mesotrione	
Capreno	2	27	Thiencarbazono	Tembotrione	
Halex GT	9	15 27	Glyphosate	S-Metolachlor	Mesotrione
Liberty	10		Glufosinate-		
Impact	27		Topramezone		
Laudis	27		Tembotrione		
Realm Q	2	27	Rimsulfuron	Mesotrione	
Status	4	19	Dicamba	Diflufenzopyr	
Zidua	15		Pyroxasulfone		
Soybean Pre					
Anthem	14	15	Fluthiacet-methyl	Pyroxasulfone	
Authority Assist	2	14	Imazethapyr	Sulfentrazone	
Authority First / Sonic	2	14	Cloransulum-methyl	Sulfentrazone	
Authority MTZ	5	14	Metribuzin	Sulfentrazone	
Boundary	5	15	Metribuzin	S-Metolachlor	
Enlite	2	14	Chlorimuron	Thifensulfuron	Flumioxazin
Fierce	14	15	Flumioxazin	Pyroxasulfone	
Matador	2	5 15	Imazethapyr	Metribuzin	Metolachlor
Optill	2	14	Imazethapyr	Saflufenacil	
Optill PRO	2	14 15	Imazethapyr	Saflufenacil	Dimethenamid-P
PreFix	14	15	Fomesafen	S-Metolachlor	
Prowl	3		Pendimethalin		
Trifluralin	3		Trifluralin		
Valor	14		Flumioxazin		
Verdict	14	15	Saflufenacil	Dimethenamid-P	
Warrant	15		Acetochlor		
Soybean Post					
Anthem	14	15	Fluthiacet-methyl	Pyroxasulfone	
Cadet	14		Fluthiacet-methyl		
Cobra	14		Lactofen		
Flexstar GT 3.5	9	14	Glyphosate	Fomesafen	
Marvel	14		Fluthiacet-methyl	Fomesafen	
PreFix	14	15	Fomesafen	S-Metolachlor	
Resource	14		Fumiclorac pentyl		
Synchrony XP	2		Chlorimuron ethyl	Thifensulfuron	
Warrant	15		Acetochlor		
Zidua	15		Pyroxasulfone		

Herbicide Classification by Site/Mechanism of Action

Group	Site of action	Examples	General Description
1	Acc-ase inhibitor	Select (clethodim), Fusilade (fluzafop), Poast (sethoxydim)	This group includes the 'fops' and the 'dims' used for postemergence grass control. Includes products are widely used for volunteer corn control. Controls grasses by inhibiting lipids needed for cell membranes.
2	ALS inhibitor	A c c e n t (nicosulfuron), P u r s u i t (imazethapyr), Classic (chlorimuron)	This group includes all of the sulfonylureas and imadazolinones. Most numerous category of herbicides with a wide range of weed spectrum, selectivity and residual length. Controls weeds by inhibiting amino acids needed for protein development.
3	Mitosis inhibitor	Prowl (pendimethalin), Treflan (trifluralin)	Seedling growth inhibitors- includes "the yellows" such as Prowl and Treflan. This group is widely used in turf. Excellent activity on grasses and small seeded broadleaves. These actives need moisture or incorporation to activate. Controls weeds by inhibiting cell division in seedling root growth.
4	Synthetic auxin	2,4-D Banvel/Clarity (dicamba)	Growth regulator herbicides used primarily for broadleaf control. Volatility is greatly affected by formulation. Avoid physical drift to sensitive crops. Controls broadleaf weeds by causing rapid cell growth and division which leads to vascular tissue destruction.
5	Photosystem (PS) II inhibitor	Atrazine Sencor (metribuzin)	This group includes the triazine herbicides which have both foliar and soil activity. Triazines enhance the activity of paraquat and hppd inhibitors such as Callisto and Laudis. These products control weeds by blocking electron transport which results in chlorophyll and cell degradation.
6	Photosystem (PS) II inhibitor	Buctril (bromoxynil), Basagran (bentazon)	This group is similar to group 5 but has a different binding site than the triazines. These products are primarily used for post broadleaf control in several crops.
9	EPSPS inhibitor	Roundup (glyphosate)	Glyphosate is non-selective, and has no soil activity. Weeds are controlled by blocking the production of aromatic amino acids needed for cell growth.
10	Glutamine synthase inhibitor	Liberty (glufosinate)	Glufosinate is non-selective, with no soil activity. Requires greater spray volume and coverage than glyphosate. Controls weeds by blocking the conversion of glutamine which leads to a buildup of ammonia in cells.
13	Carotene inhibitor	Command (clomazone)	This class results in bleaching activity of foliage and has both foliar and soil activity. Controls weeds by blocking pigment pathways needed for chlorophyll formation.
14	PPO inhibitor	Valor (flumioxazin), Authority (sulfentrazone), Sharpen (saflufenacil), Reflex (fomesafen)	This class is described as the cell membrane disruptors, including a wide range of products that have both soil and foliar activity. Controls weeds by blocking the PPO enzyme involved in light interception resulting in free radical formation that degrades lipids, membranes, and chlorophyll.
15	Long chain fatty acid inhibitor	Harness (acetochlor) Outlook (dimethenamid-P) Dual (s-metolachlor)	This group includes the seedling growth inhibitors most widely used in the "pre- grass" corn herbicide segment. These control weeds by inhibiting seedling growth but do not affect germination.
19	Auxin transport inhibitor	Status (diflufenzopyr)	Synergizes the activity of growth regulators such as dicamba in Status by accelerating the accumulation of growth regulators in growing points.
22	Photosystem I inhibitor	Gramoxone (paraquat)	These products are non selective, with no soil activity. They control weeds by blocking photosynthesis and forming free radicals that result in rapid cell degradation.
27	HPPD inhibitor	Callisto (mesotrione) Laudis (tembotrione) B a l a n c e (isoxaflutole)	This class includes the bleaching herbicides widely used in corn. HPPD inhibitors may have both soil and foliar activity and can have enhanced activity when mixed with atrazine. They control weeds by blocking the HPPD enzyme which is needed for pigment development.