Gibson Insurance Group

"The Risk Management Specialists"

Crop Insurance 2015

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MARCH 15

Is the last day to either obtain a policy or make changes to your present insurance policy

Inside this issue:

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Non-Compliance Could Cost You BIG $$$$

Provisions in the 2014 Farm Bill created linkage between conservation compliance guidelines and the eligibility for most programs administered by FSA and NRCS. This includes the Conservation Reserve Program, the Livestock Disaster Assistance program, and Marketing Assistance Loans program implemented by FSA. It also includes the Environmental Quality Incentives Program (EQIP), the Conservation Stewardship Program, and other conservation programs. New for this farm bill is the inclusion of premium subsidy assistance for **any** Federally reinsured crop insurance policy including, Muti-Peril Crop Insurance, Pasture, Rangeland, and Forage (PRF) Insurance, and Livestock Risk Protection (LRP).

By now some or most of you have received a letter from USDA indicating that you currently receive insurance benefits (premium subsidies) from the Risk Management Agency on your crop insurance policies and that you may not have the form AD-1026 on file with them. This form is certifying that you are in compliance with the highly erodible land conservation (HELC) and wetland conservation (WC) provisions.

What do producer's need to do and when to be sure that they are in compliance? ***To be eligible for the premium subsidies for any crop in the 2016 crop year and beyond, a producer must have on file a form AD-1026 with USDA by JUNE 1, 2015 for ALL of their acres regardless if they use it for crop or pasture***. Since many current FSA and Natural Resource Conservation (NRCS) programs have this requirement, most producers should already have this form on file at their local office. We would highly suggest that you call your local office to verify that they do have one on file **and** that you are still in compliance with the plan.

For those of you who do not have a conservation plan in place we would highly encourage you to go to your local FSA office to sign up for a plan as soon as possible.

The percentage of premium subsidies will vary according to the type of crop and the coverage level (see chart for COMBO Product). Premium for Pasture, Rangeland, and Forage policies are subsidized at 51% and Livestock Risk Protection at 13%.

Is this a significant amount? Let's take a look at the example below which shows the bottom right corner of Joe Farmer's schedule of insurance for 2014. Joe Farmer has a policy for corn and soybeans. He has chosen Basic Unit structure and elected the 75% coverage level for both crops. By using the COMBO chart you can see his premiums are subsidized at 56%. In 2014 he planted and insured 20.8 acres of corn and 75.1 acres of soybeans. With the premium subsidies, his actual premium bill was $1931.00 plus the standard $30 per crop FCIC fee. Without the subsi-

Risk Subsidies for the COMBO Product

Coverage Level	Insurable Unit: Basic	Insurable Unit: Optional	Insurable Unit: Enterprise
	Percent of Premium		
50%	67%		80%
55%	64%		80%
60%	64%		80%
65%	59%		80%
70%	59%		80%
75%	56%		77%
80%	48%		68%
85%	38%		53%

Non-Compliance Could Cost You Big $$$$ (continued)

dies his premiums would have more than doubled.

So therefore, it is very important to have the AD-1026 on file and to be in compliance with your farm plan. The benefits that you receive from taking this simple step will pay your operation significantly over the life of this farm bill.

FARM BILL

IMPORTANT DEADLINES

February 27
Reallocation of Base Acres
CC Yield update

March 31
PLC or ARC election

June 1
HEL and WC
AD-1026 deadline

'Beefing up' Missouri

In mid-December I had the opportunity to attend the Missouri Governor's Conference on Agriculture. One subject seemed to resonate throughout the conference and that was the interest in increasing beef production by keeping and feeding cattle in Missouri.

Missouri is 2nd in the nation in the number of beef cattle produced but we are 9th when it comes to the value of the cattle we raise. Only the state of Texas produces greater numbers of cattle than does Missouri. The sad part about this is the fact that we export 95% of our calf crop out of state prior to finishing. Over 75% of the calves go to other states at weaning to be backgrounded and/or finished. By sending these cattle out of state to be fed, we are losing the economic benefit of adding additional value to these cattle. Anytime we add value in the state we create jobs and turn over a lot more dollars in our communities which helps all of us.

Over the last several years we have seen a lot of land in this state being converted from pasture to row crop production. This change has been primarily due to the higher crop prices that we have seen in recent years and also the increased price of both land and rental rates. This year we have seen a definite retraction of commodity prices in the grain sector but cattle on the other hand, have continued to increase in value at quite a rapid rate. The recent price increases for beef is probably unsustainable. The cattle market will likely retract a small amount and level off in the near future but prices for cattle should remain healthy until the national cow herd can be rebuilt to its pre-drought size.

With the deflation of crop prices and the profitability of the beef sector, we are all asking what will happen to all of this land that has been moved from pasture to crop production. Will the ground revert back to grass?

There is some marginal ground that was broken out that will likely be returned to grass but it is my opinion and of many fellow participants at this conference, that we will not see a high percentage of this land moved back to grass. Is it possible for the producers in this state to increase beef production while allocating fewer acres to pasture? It is a definite possibility.

The rising land values and increased input costs of the

"Blessed are the flexible for they are never bent out of shape"

'Beefing' Up Missouri (continued)

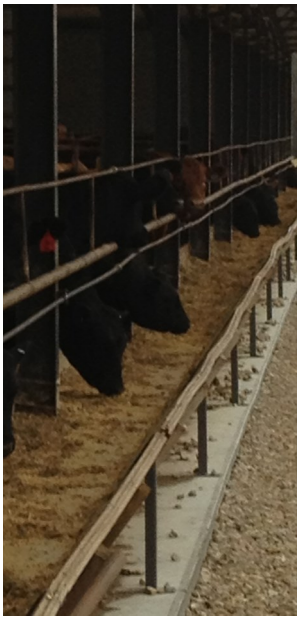
last ten years are forcing fundamental changes in how producers utilize their land assets. Producers like me are concerned about the high investment cost of land and only using it a portion of the year to produce income. This has led to the quicker adaptation of cover crops where an economic benefit can be realized. This practice lets a producer grow forage in the late fall and spring when typical row crops would not be planted. It also improves soil tilth, controls erosion, and provides several other benefits as well.

These same economic principles coupled with environmental concerns have encouraged producers to look into feeding cattle in confinement buildings. Many producers have looked at the cost of land in their area and have been resistant to dedicating the sole purpose of the farm to one enterprise. Animal feeding and row crop production work hand in hand very well. This is especially true with the beef sector. Facilities to finish animals need to be in an area where grains are plentiful. Background cattle need an abundance of higher quality forage year around. The row crop farmer needs all the available land possible and also needs the nutrients that can be captured from the manure of a confinement feeding operation. The use of cover crops have been producing acceptable tonnage levels of higher quality forage and have done this while saving soil and providing benefits to the following crop at the same time.

With the adaptation of cover crops and concentrated cattle feeding I believe that we will begin to see a higher percentage of Missouri cattle remain in the state at least through the backgrounding phase.

Why is it important to keep these cattle in Missouri? The first advantage would be the economic benefits of jobs. Input revenues and tax revenues would all be increased by producing more pounds of beef in the state. Even though some of the state is grain deficient, we still have an ample supply of DDGs and other by-products to make this enterprise economically attractive in many situations.

You might be surprised to see that we can actually feed cattle cheaper here in Missouri than they can in states like Kansas or Texas. We do have 2 disadvantages to these other states. The first is precipitation. Since we normally get more rain fall here, many times we would be feeding cattle in the mud thus eroding our feed efficiencies and rate of gain during these periods of wet weather. The second is the distance from the packers which would increase our transportation costs of these fed animals going to slaughter.



The message that I brought home from the Governor's Conference is that the State of Missouri is committed to making agriculture grow and become more profitable to producers in Missouri. The message was clear that they wanted to increase the number of cattle fed in Missouri and would like to retain more of the cattle raised in Missouri for a longer period of time. At the same time, the state and its citizens are committed to preserving water quality in the state and not have any negative impact from the further raising of cattle in the state. Is this combination possible to achieve?

With technologies of feeding cattle in confinement systems many of our disadvantages disappear. First, we are able to control the environment in which the cattle live. The issues of mud and extreme weather

'Beefing' Up Missouri (continued)

can be controlled by having the cattle confined in a building. Environmental concerns could be lessened because we are able to control and capture the manure that these cattle produce and then apply the manure back on to crop ground as fertilizer. It was suggested in some of the conversations at the Conference that the value of the manure produced by each calf in a confinement building should be $164 per calf after spreading costs. In an outdoor feeding environment we cannot take advantage of the manure and instead of an asset it becomes a liability in the form of runoff.

If the goal of the state is to encourage this economic growth through increased beef production, what type of programs could they come up with that would help producers make this step?

Every cattleman that you talk to is concerned about the environmental regulations that we are currently dealing with as well as what we expect in the future. Many producers are concerned that in the near future we will have to fence off all streams and protect run off of any sort. Producers, in general, are already very environmentally conscientious. However, if the state were to be more involved in the cattle industry it could either become an asset or a detriment, it all would depend on their approach.

There are 2 ways that government controls an industry. One is through penalties (regulations) and the other is though incentives (subsidies). If you look back though history and any government program, you will see that anything that you incentivize, you will get more participation. Anything that you regulate you will get less participation.

In regards to the water quality issue, let's take a look at two possible approaches that the state could take to get the results that they want.

If the single goal was to protect waterways and runoff the state may adopt regulations that would prohibit cattle from entering streams and require stringent regulations that control runoff. Producers who did not comply with these rules could be subject to big fines and penalties that would deter them from raising livestock in many cases. This would discourage feeding in the state and we would continue sending more and more young cattle out of the state and losing the economic benefits generated from this industry.

The second approach is the one that I would prefer. That would be to incentivize the building of concentrated cattle feeding operations in such a way that the manure is controlled and becomes an asset rather than a liability for producers. This would encourage the feeding of cattle in the state, increase the economic value of our beef industry, and stimulate our rural economies.

Over the past several years I have had the opportunity to visit several confinement cattle operations across the central part of the US. In the past year I have noticed a remarkable increased interest in Missouri in adopting this same practice. At this conference I have had the opportunity to speak with three different building manufacturers, with each reporting similar observations.

All of these buildings are different but have similar qualities. These units all concentrate cattle in a smaller space freeing up land for the production of forage and crops. They all capture the manure and the utilization of this product's nutrient value by spreading it back on the land. All of these systems will produce feed efficiencies of +15% over feeding cattle outside due to the controlled environmental conditions of a barn. Cattle health will improve and death loss will be reduced by the ease of handling and treating animals.

What role will our state government play in farmers adopting this new practice? This is yet to be seen but the message sent out at the

'Beefing' Up Missouri (continued)

Governor's Conference and the Missouri Department of Agriculture's Beef Summit were both positive. MASBDA (Missouri Agricultural and Small Business Development Authority) which is part of the Missouri Department of Agriculture as well as the Department of Economic Development are both interested in helping producers who are considering concentrated feeding in the state.

There are programs now available which would subsidize the building of these facilities and also there is a program that would give low interest loans and guarantees to producers interested in adopting these practices. The State of Missouri also has tax credits available for producers that choose to add an additional 200 pounds to their Missouri calves before they market them.

If you are interested in any of these programs I would encourage you to contact either JP Dunn or Shawn Inglish at MASBDA.

Battle Royale - Farmers vs Weeds

Water hemp and it's closely related sibling palmar amaranth, have became a major problem over most parts of Missouri. These used to be relatively easy weeds to control but in the past few years they have definitely become a force to be reckoned with. What has happen is that water hemp and palmer amaranth have become resistant to many of the herbicides that we are using to kill it. Why these plants and not all weeds? They are unique when it comes to many weeds. These plants have both male and female plants that pollinate each other. Over time as one plant built immunity to a chemical it crossed with another plant that wasn't chemically resistant. The seeds produced from this cross had the ability to tolerate the chemicals that we have been using to control it. Therefore, our sprays have became less and less effective.

Water hemp has become the number one enemy to my crop production. In states like Arkansas and Mississippi, palmer amaranth pressure has gotten so bad that some producers have chosen to disc fields in rather than to try to fight a losing battle by attacking it chemically.

Over the past few years we have seen this weed get harder and harder to kill. Some producers, like myself, have been concerned that our spraying program is no longer working the way it used to. Farmers and chemical applicators alike are searching for what to do to make our programs work again. Some claim that we need to use more water or a different spray tip size to change the size of droplets. Others are suggesting paying closer attention to sprayer pressures or the pH of the water that we are using, or use different surfactants that would help the chemical stay on the waxy plants.

Another issue is that over the last 20 years we have become more and more dependent on post-emerge weed control with glyphosate being the primary chemical that we used to control all of the major weed pressures that we had. In the early days of Roundup this worked very well. A producer could start with clean fields plant a soybean crop then when the weeds got above the

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SUPPLEMENTAL REPLANT OPTION

DEADLINE MARCH 15

To add, change, or cancel coverages

This is a continuous policy. If you had the additional coverage last year you automatically have coverage for 2015

Water Hemp

Battle Royale (continued)

soybean canopy we could spay the crop one time and get a good control on all of the problem weeds. We used glyphosate so long by itself that we made this chemistry ineffective on some plants by building tolerance to this product.

The days of this type of program are long past. In recent years we have had to attack the weed at smaller heights to get any type of control even to the point that some producers are spraying their post treatments by the number of days after planting rather than when they identify that they have weed issues.

One farming practice that most of us have followed is to do less and less tillage in order to prevent erosion. This practice in itself has caused increased pressure from the water hemp plant. The lack of tillage creates an environment that is very advantageous for this plant. Water hemp seeds are very small and typically germinate from very shallow depths in the soil. Larger seeds like shatter cane and cocklebur can also germinate from shallow depths but because the seeds are larger they have higher stored seed reserves that can help them germinate from a much greater depth. In a no-till or a minimum till system seeds produced from previous year's water hemp plants are distributed near the soil surface. In these type of tillage systems there is usually plenty of cover and moisture to make an ideal environment for this plant to germinate and thrive.

With the adoption of minimum till farming, we have gotten away from using as many soil applied herbicides. When we do apply these herbicides, we seldom incorporate them into the soil the way that we did in the past. This is important because many of the herbicides we use are sprayed on with the burn down and has to wait for a rain to be activated and moved down into the soil structure.

A prime example of this happened on my farm a few years ago when we had a wet spring. When I sprayed Roundup as my burn down many water hemp plants were already 6" tall and resistant to this form of chemistry. Since the weather was already getting warm and I was nervous about getting beans planted, I did not put 2-4-D in my burn down because of the waiting period needed to plant beans. I started out with a mess and depended on my post emerge program to take care of problems that it was not intended to do. Many of the bigger plants that I did not get with my burn down program survived and produced seeds to add to the seed soil bank the following year.

We all have to be honest with ourselves and realize that the weeds we are fighting today are different than the ones of the past. They have built tolerances to the chemistries that we are currently using and if we continue to use the same program we are still going to get unsatisfactory results.

This winter I had the opportunity to speak at several chemical meetings about risk management and the farm bill. At these meetings water hemp and marestail were the hot topics. I learned about the different modes of action and what herbicides fell into each mode. The presenter talked about the importance of using herbicides with several different modes of action to control the water hemp problems and suggested farming by these mode of action numbers. He also stressed the importance of using small grains in your rotation and the need to go back to at least some form of tillage if we are going to be able to control this problem.

In Missouri, plants with 4 way chemical resistance have been tested and identified. In this example, the water hemp plant has been found to be resistant to a #5 photo inhibitor like atrazine, a #2 ALS like Pursuit, a #14 PPO inhibitor like Cobra, and a #9 EPSP like glyphosate. In this example, the challenge to the producer would be to use as many modes of action possible for burn down and pre and post emergence applica-

Did you know?

Palmer Amaranth was a staple in the diets of Native Americans. When collected very young, Amaranth is much like spinach.

Palmer Amaranth

Battle Royale (continued)

tions as conditions allow to try to kill these plants with a mode of action that they are not resistant to.

This is a problem that needs to be taken very seriously, and I am going to attack chemical resistant water hemp on my operation very aggressively. This problem did not come about in one year nor will we be able to solve it in a year either so it is important to create a good plan of attack and be willing to modify that plan if you are not seeing good results.

In my operation, I have used no-till or minimum till for a number of years. I know that I have a high population of water hemp seed in the soil bank at a very shallow level. Last week I visited the Moniteau County NRCS office and inquired about modifying my conservation plan to include moldboard plowing my fields that are going to soybeans 1 in every 6 years. The idea is that since water hemp seeds are shallow germinators, I will be burying this seed to a level that it will not be possible for them to germinate. At these depths studies show that the majority of water hemp seeds will not survive to germinate if it is turned under for 4 years.

I am going to study the charts from the University of Wisconsin Extension that we have provided with this newsletter to develop my spray program using the different modes of action. When it comes to burn down I would like to use Paraquat, a #22, which is a Photosystem I electron diverter. This chemistry is still effective on water hemp and no tests that I have seen show any resistance to this mode of action.

For my pre-emerge chemical I will choose a mix that uses several different modes of action that will include a #14 and a #2 or a #5 depending on what the previous crop was and the modes of action used on it. I am considering using Liberty seed so I can use Liberty herbicide which is a #10, glutamine synthesis inhibitor. I have used this program in the past and had excellent results.

It is important to chose different modes of action each year depending on crop rotations to help prevent weeds from becoming chemically resistant.

Cover crops and wheat will remain in my rotation since they shade the ground and prevent sunlight from penetrating the canopy therefore, eliminating some of the germination of weeds. Some of the best control that I saw this year was where a producer planted soybeans into a cover crop field of rye. This field was planted in 30" rows and look very clean all year long. Prior to harvest I walked this field for the final time and was amazed at the lack of weed pressure. The cover crops were important but the producer also selected and applied the right burn down and other applications that made it a success. Notice the picture of the cover crop mat between the rows of soybeans in this picture.

To summarize I think that it is important that we make a multi year plan of attack to control problem weeds. This attack will include more tillage, the use of different chemical packages using various modes of action. Rotation will remain important as well as applying a pre-emerge spray as near to planting as possible in order to get maximum residual control. In the future, I may even return to rowed bean on problem fields and cultivate to get additional mechanical control.

Production Due Now

2014 Corn, Soybeans, and Grain Sorghum

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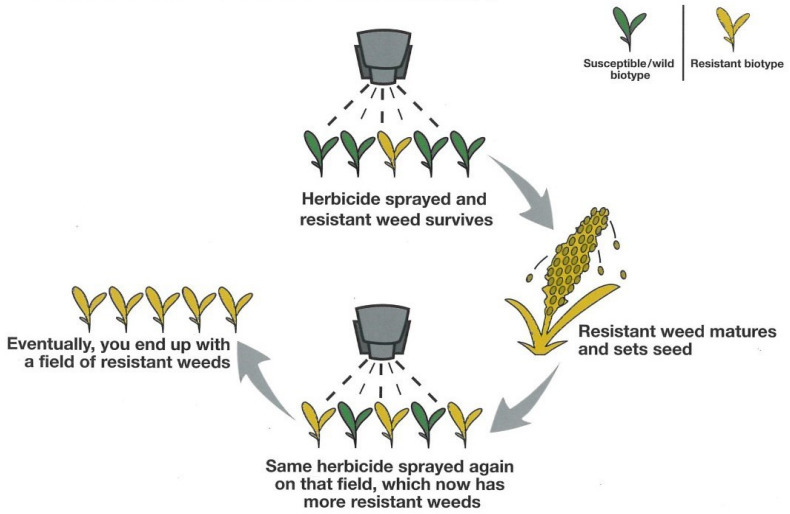
How do resistant weed biotypes increase in number?

When a herbicide is applied to a sensitive population, most of the weeds in the population die as a result of the herbicide application. However, sometimes the initially rare resistant weed biotypes can survive, mature and produce seed. With repeated use of the same herbicide or family of related herbicides, or lack of diversity in the herbicide management program, the resistant weeds may eventually be "selected" from the population and dominate (Figure 2). Generally, the more effective the herbicide, the greater the selection pressure and the greater the probability that only resistant weeds will survive.

Figure 2. Selection of resistant weed biotypes with repeated applications of the same herbicide or same mode-of-action herbicides.



Modified source: J.L. Gunsolus. Herbicide-Resistant Weeds. 1998 North Central Region Extension Publication 468.

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Corn and Soybean Herbicide Chart

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 herbicides with different sites of action to delay the development of herbicide resistance.

The Site of Action Group is a classification system developed by the Weed Science Society of America.

	Site of Action Group	Site of Action	Number of resistant weed species in U.S.	Chemical Family	Active Ingredient	Product Examples (*Trade Name* ®)
Lipid Synthesis Inhibitors	1	**ACCase Inhibitors** (acetyl CoA carboxylase)	15	Aryloxyphenoxy propionate	fenoxaprop fluazifop quizalofop	component of ***Fusion*** ***Fusilade DX*** ***Assure II, Targa***
				Cyclohexanedione	clethodim sethoxydim	***Select, Arrow*** ***Poast, Poast Plus***
Amino Acid Synthesis Inhibitors	2	**ALS Inhibitors** (acetolactate synthase)	44	Sulfonylurea	chlorimuron foramsulfuron halosulfuron iodosulfuron nicosulfuron primisulfuron prosulfuron rimsulfuron thifensulfuron tribenuron	***Classic*** ***Option*** ***Permit*** ***Autumn*** ***Accent Q*** ***Beacon*** ***Peak*** ***Resolve*** ***Harmony*** ***Express***
				Imidazolinone	imazamox imazaquin imazethapyr	***Raptor*** ***Scepter*** ***Pursuit***
				Triazoloyrimidine	flumetsulam cloransulam	***Python*** ***FirstRate***
				Triazolinones	thiencarbazone	component of ***Capreno***
	9	**EPSP Synthase Inhibitor** (5-enolpyruvyl-shikimate-3-phosphate)	13	None accepted	glyphosate	***Roundup, Touchdown,*** others
Growth Regulators (Synthetic auxins)	4	**Specific site unknown**	10	Phenoxy	2,4-D	***Weedone***, others
				Benzoic acid	dicamba	***Banvel, Clarity***, others
				Carboxylic acid	clopyralid fluroxypyr	***Stinger*** ***Starane***
	19	**Auxin Transport**	0	Semicarbazone	diflufenzopyr	component of ***Status***
Photo-synthesis Inhibitors	5	**Photosystem II Inhibitors** (different binding than 6 & 7)	24	Triazine	atrazine simazine	***AAtrex***, others ***Princep***
				Triazinone	metribuzin	***Sencor***, others
	6	**Photosystem II Inhibitors** (different binding than 5 & 7)	1	Nitrile	bromoxynil	***Buctril, Moxy***
				Benzothiadiazole	bentazon	***Basagran***
	7	**Photosystem II Inhibitors** (different binding than 5 & 6)	7	Ureas	linuron	***Lorox, Linex***
Nitrogen Metabolism	10	**Glutamine Synthesis Inhibitor**		None accepted	glufosinate	***Liberty***
Pigment Inhibitors	13	**Diterpene Synthesis Inhibitor**	1	Isoxazolidinone	clomazone	***Command***
	27	**HPPD Inhibitors**	1	Isoxazole	isoxaflutole	***Balance Flexx***
				Pyrazolone	topramezone	***Impact, Armezon***
				Triketone	mesotrione tembotrione	***Callisto*** ***Laudis***
Cell Membrane Disrupters	14	**PPO Inhibitors**	2	Diphenylether	acifluorfen fomesafen lactofen	***Ultra Blazer*** ***Flexstar, Reflex***, others ***Cobra, Phoenix***
				N-phenylphthalimide	flumiclorac flumioxazin	***Resource*** ***Valor***
				Aryl triazinone	sulfentrazone carfentrazone fluthiacet-ethyl	***Spartan*** ***Aim*** ***Cadet***
				Pyrimidinedione	saflufenacil	***Sharpen***
	22	**Photosystem I Electron Diverter**	5	Bipyridilium	paraquat	***Gramoxone Inteon***
Seedling Root Growth Inhibitors	3	**Microtubule Inhibitors**	6	Dinitroaniline	ethalfluralin pendimethalin trifluralin	***Sonalan*** ***Prowl H_2O***, others ***Treflan***, others
Seedling Shoot Growth Inhibitors	8	**Lipid Synthesis Inhibitors** (not ACCase)	5	Thiocarbamate	butylate EPTC	***Sutan +*** ***Eradicane***
	15	**Long-chain Fatty Acid Inhibitor**	1	Chloroacetamide	acetochlor	***Degree, Harness, Surpass, Warrant***, others
					alachlor metolachlor dimethenamid	***Intrro, Micro-Tech*** ***Dual II Magnum***, others ***Outlook***
				Oxyacetamide	flufenacet	***Define***
				Pyrazole	pyroxasulfone	***Zidua***

** indicates product is not registered for use at the time of printing. Check for a label and MSDS at www.cdms.net to confirm status.*

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 **Mode of Action** chart on the left for more information.

Premix Trade Name ®	Component: *Trade Name* ®	Component: Active Ingredient	Site of Action Group
Anthem	***Zidua***	pyroxasulfone	15
	Cadet	fluthiacet-ethyl	14
Autority Assist	***Spartan***	sulfentrazone	14
	Pursuit	imazethapyr	2
Authority First	***Spartan***	sulfentrazone	14
	FirstRate	cloransulam	2
Autority MTZ	***Spartan***	sulfentrazone	14
	Sencor	metribuzin	5
Authority XL	***Spartan***	sulfentrazone	14
	Classic	chlorimuron	2
Autumn Super	***Autumn***	iodosulfuron	2
	-------	thiencarbazone	2
Basis Blend	***Resolve***	rimsulfuron	2
	Harmony	thifensulfuron	2
Bicep II Magnum (Bicep Lite II Mag)	***Dual II Magnum***	s-metolachlor	15
	AAtrex	atrazine	5
Boundary	***Dual Magnum***	s-metolachlor	15
	Sencor	metribuzin	5
Breakfree ATZ (Breakfree ATZ Lite)	***Breakfree***	acetochlor	15
	AAtrex	atrazine	5
Bullet	***Micro-Tech***	alachlor	15
	AAtrex	atrazine	5
Callisto Xtra	***Callisto***	mesotrione	27
	AAtrex	atrazine	5
Canopy	***Classic***	chlorimuron	2
	Sencor	metribuzin	5
Canopy EX	***Classic***	chlorimuron	2
	Express	tribenuron	2
Capreno	-------	thiencarbazone	2
	Laudis	tembotrione	27
Cinch ATZ (Cinch ATZ Lite)	***Dual II Magnum***	s-metolachlor	15
	AAtrex	atrazine	5
Corvus	-------	thiencarbazone	2
	Balance Flexx	isoxaflutole	27
Degree Xtra	***Degree***	acetochlor	15
	AAtrex	atrazine	5
Enlite	***Classic***	chlorimuron	2
	Harmony	thifensulfuron	2
	Valor	flumioxazin	14
Envive	***Classic***	chlorimuron	2
	Harmony	thifensulfuron	2
	Valor	flumioxazin	14
Expert	***Dual II Magnum***	s-metolachlor	15
	AAtrex	atrazine	5
	glyphosate	glyphosate	9
Exteme	***Pursuit***	imazethapyr	2
	glyphosate	glyphosate	9
Fierce	***Valor***	flumioxazin	14
	Zidua	pyroxasulfone	15
Fierce XLT*	***Valor***	flumioxazin	14
	Zidua	pyroxasulfone	15
	Classic	chlorimuron	2
Flexstar GT	***Flexstar***	fomesafen	14
	glyphosate	glyphosate	9
Fusion	***Fusilade DX***	fluazifop	1
	Puma	fenoxaprop	1
Gangster	***Valor***	flumioxazin	14
	FirstRate	cloransulam	2
Guardsman Max (G-Max Lite)	***Outlook***	dimethenamid-P	15
	AAtrex	atrazine	5
Halex GT	***Dual Magnum***	s-metolachlor	15
	Callisto	mesotrione	27
	glyphosate	glyphosate	9
Harness Xtra	***Harness***	acetochlor	15
	AAtrex	atrazine	5
Hornet	***Stinger***	clopyralid	4
	Python	flumetsulam	2
Instigate	***Resolve***	rimsulfuron	2
	Callisto	mesotrione	27
Keystone (Keystone LA)	***Surpass***	acetochlor	15
	AAtrex	atrazine	5
Lexar EZ	***Callisto***	mesotrione	27
	Dual II Magnum	s-metolachlor	15
	AAtrex	atrazine	5
Lumax EZ	***Callisto***	mesotrione	27
	Dual II Magnum	s-metolachlor	15
	AAtrex	atrazine	5
Marksman	***Clarity***	dicamba	4
	AAtrex	atrazine	5
NorthStar	***Beacon***	primisulfuron	2
	Clarity	dicamba	4
Optill	***Sharpen***	saflufenacil	14
	Pursuit	imazethapyr	2
Permit Plus	***Harmony***	thifensulfuron	2
	Permit	halosulfuron	2
Priority	***Aim***	carfentrazone	14
	Permit	halosulfuron	2
Prefix	***Dual Magnum***	s-metolachlor	15
	Reflex	fomesafen	14
Prequel	***Resolve***	rimsulfuron	2
	Balance Flexx	isoxaflutole	27
Pursuit Plus	***Pursuit***	imazethapyr	2
	Prowl	pendimethalin	3
Realm Q	***Resolve***	rimsulfuron	2
	Callisto	mesotrione	27
Resolve Q	***Resolve***	rimsulfuron	2
	Harmony	thifensulfuron	2
Require Q	***Resolve***	rimsulfuron	2
	Clarity	dicamba	4
Rezult	***Basagran***	bentazon	6
	Poast	sethoxydim	1
Sequence	***Dual Magnum***	s-metolachlor	15
	glyphosate	glyphosate	9
Shotgun	***AAtrex***	atrazine	5
	-------	2,4-D	4
Sonic	***Spartan***	sulfentrazone	14
	FirstRate	cloransulam	2
Spartan Charge	***Spartan***	sulfentrazone	14
	Aim	carfentrazone	14
Spirit	***Peak***	prosulfuron	2
	Beacon	primisulfuron	2
Status	-------	diflufenzopyr	19
	Clarity	dicamba	4
Steadfast Q	***Accent Q***	nicosulfuron	2
	Resolve	rimsulfuron	2
SureStart	***Surpass***	acetochlor	15
	Stinger	clopyralid	4
	Python	flumetsulam	2
Synchrony	***Classic***	chlorimuron	2
	Harmony	thifensulfuron	2
TripleFLEX	***Harness***	acetochlor	15
	Stinger	clopyralid	4
	Python	flumetsulam	2
Valor XLT	***Valor***	flumioxazin	14
	Classic	chlorimuron	2
Verdict	***Sharpen***	saflufenacil	14
	Outlook	dimethenamid-P	15
Widematch	***Stinger***	clopyralid	4
	Starane	fluroxypyr	4
Yukon	***Banvel***	dicamba	4
	Permit	halosulfuron	2
Zemax	***Callisto***	mesotrione	27
	Dual II Magnum	s-metolachlor	15

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