



Department of Natural Resource Sciences
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MARYLAND WEED REPORTER

We're in the process of updating **Extension Bulletin 237, Pest Management Recommendations for Field Crops**. While we won't be printing it this Fall, we are updating all of the information on the web site. Don't forget - the **Weed Control Section** is interactive and there is a tutorial to help you understand how to use the interactive part.

CORN

We've seen a number of new products introduced this past year. **DuPont** introduced two new herbicides, one called **Resolve** and the other called **Stout**. The common name for Resolve is rimsulfuron. It is a component in the herbicide **Basis** and is also sold under the trade name **Matrix** for use in vegetable crops. Resolve can be applied preemergence or postemergence. While Resolve controls a number of annual grasses and broadleaf weeds when applied alone, I would recommend that it be added to one of the package-mix products in the market place such as **Bicep II Magnum**. The addition of Resolve to products like **Bicep** lies in its ability to provide good preemergence control of triazine-resistant weeds such as pigweed and lambsquarters. Resolve can also be applied postemergence and is a good tank-mix partner with glyphosate when sprayed in Roundup-Ready corn. Use rates range from 0.5 to 2.0 oz/acre, although DuPont recommends a use rate of 1.0 oz/acre for most applications.

Stout is actually a blend of **Accent** plus **Harmony GT**. Use rate is 0.5 to 0.75 oz/acre. This can be an extremely useful product where escaped annual or perennial grasses exist in combination with triazine-resistant weeds such as pigweed or lambsquarters. Plus, **Stout** has been priced relatively cheap in comparison to utilizing **Accent** by itself.

Over the past few years, **DuPont** has been selling **Cinch** and **Cinch ATZ**. They had an agreement with **Syngenta** to purchase **Dual II Magnum** and **Bicep II Magnum** and sell them under the trade names listed above. In 2007, DuPont will be acquiring acetochlor and acetochlor plus atrazine premix herbicides for preemergence use in corn from **Dow**

AgroSciences. Straight acetochlor will be offered under the brand name **DuPont Breakfree herbicide**. The two acetochlor/atrazine premixes will be offered under the brand names **DuPont Breakfree ATZ herbicide** and **DuPont Breakfree ATZ Lite herbicide**. They will be offering the products through bulk quantities only. No package products will be available for 2007. What's interesting is the fact that DuPont will not carry an inventory of acetochlor. Product will be delivered direct to the customer from Dow AgroSciences.

We will actually be seeing a lot of generics come to the market place. For instance, this past summer I had the opportunity to test a generic formulation of metolachlor (Dual without the Syngenta safener) and metolachlor plus atrazine (Bicep without the safener). The company making these products is from Israel and goes by the name of **Makhteshim Agam**. Their product names are **Parallel** (metolachlor) and **Parallel Plus** (metolachlor plus atrazine).

I'm sure most of you are familiar with a product from **Syngenta** called **Callisto**. It's labeled postemergence for use in corn. It is also a component in the preemergence herbicides from Syngenta called **Lumax** and **Lexar**. A number of companies have been screening this family of herbicides known as **HPPD inhibitors**. One new one that was sold this past summer is called **Impact**. It was developed by **BASF** but the rights to this herbicide were sold to a company called **AmVac** (American Vanguard Corporation) which is selling the product nationwide. Impact is labeled for all corn types and hybrids including sweet corn. **Bayer** is also testing a HPPD inhibitor. It will be sold under the trade name of **Laudis**. All three products require the addition of atrazine plus some type of adjuvant system. While all three materials have activity on a number of broadleaf weeds, Impact seems to have the best activity on annual grasses. Crop safety with all three herbicides is excellent.

Monsanto has sold the rights of their two postemergence corn herbicides to **Gowan**. Both **Permit** and **Yukon** will be sold by Gowan representatives in the area.

SOYBEANS

With the world-wide acceptance of Roundup-Ready soybeans, we haven't seen much activity in the development of new products. While we lost Canopy and Canopy XL, **DuPont** decided to reintroduce **Canopy** in 2006. Canopy is a blend of Classic plus Sencor. One has to be careful on light soils since both Classic and Sencor can injure soybeans especially when you have cold, wet conditions right after planting. DuPont had also lost Lorox to Griffin chemical company. However, with DuPont now owning **Griffin**, we will also see a reintroduction of **Lorox DF** in the market place.

Valent introduced a new formulation of **Select** called **Select Max**. It contains a proprietary ingredient which results in greater absorption and translocation to the growing points. It controls annual and perennial grasses and is very active on Roundup-Ready corn. No

additional surfactants are needed if it is tank-mixed with a glyphosate product that is already full loaded with adjuvants. Select Max is a 1.0EC. The use rate is not 2X that of Select, but only 1.5X that of Select. Thus, if you use 6.0 oz/acre of Select, then you would use 9.0 oz/acre of Select Max.

Syngenta will be introducing a blend of **Dual II Magnum** plus **Reflex** under the trade name **Prefix**. Currently, there is Prefix in the market place. However, all of the Prefix being sold only contains Dual II Magnum. It will be labeled preemergence only. The recommended use rate will give you 1.1 pt/acre of Dual II Magnum plus 1.0 pt/acre of Reflex.

A number of years ago, we tested a variety of soybean that had the **Liberty-Link** gene associated with it. In other words, the soybean was resistant to overtop applications of **Liberty** herbicide. This variety was not developed due to the European Union (and maybe others) not wanting the genetics of this gene in the food chain. However, in 2006, we had the opportunity to test this variety of soybean once again. It is uncertain when this variety of soybean will be available. The positive aspect of this soybean is the fact that Liberty herbicide is an excellent postemergence herbicide for control of marestalk (horseweed). With the widespread use of glyphosate in glyphosate-resistant soybeans, we are seeing a lot of glyphosate-resistant marestalk across the state. The use of Liberty herbicide overtop of Liberty-resistant soybeans will be an ideal tool to use in the control of these glyphosate-resistant weed species.

SMALL GRAINS

We now have two very good small grain herbicides labeled for grass control in small grains. **Osprey** by **Bayer** was available two years ago, while **Syngenta** introduced **Axial** last year. Osprey is a **sulfonylurea** while Axial is an **ACCase inhibitor**. So, what does all of this mean? Osprey will control **Italian ryegrass** that is resistant to **Hoelon**. Hoelon is an ACCase inhibitor. Therefore, **Axial will not control Hoelon resistant Italian ryegrass**. Are there other differences? Yes there are and I tried to list these differences below.

Axial vs Osprey

- Axial (8.2 oz/acre) is labeled on barley and wheat. Osprey (4.75 oz/acre) is only labeled on wheat
- Axial can be used with a complete liquid fertilizer solution when topdressing. Osprey has a 14 day restriction between spraying Osprey and applying fertilizer.
- Axial requires Syngenta's adjuvant called Adigor (9.6 oz/acre). Best control with Osprey occurs with a methylated seed oil.
- Axial is specific to Italian ryegrass. Osprey controls Italian ryegrass and bluegrass species as well.

Some **Clearfield wheat** may be available in our area in the near future. While Clearfield wheat was introduced 4 years ago, most of the varieties were developed for Central Plains region of the U. S. Clearfield wheat varieties were developed using traditional plant breeding techniques and are not considered to be GMO varieties. Two products are currently registered on Clearfield wheat varieties, **Beyond** and **Clearmax**. **Beyond** is actually the same herbicide we use in alfalfa and soybeans under the trade name **Raptor**. **Clearmax** is a blend of **Beyond plus MCPA**.

PASTURE

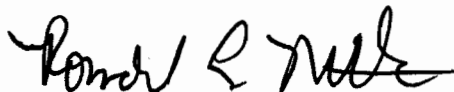
Two new products were introduced this past year by **Dow AgroSciences**, **Milestone** and **ForeFront**. ForeFront is a blend of Milestone plus 2,4-D. What is unique about Milestone? The chemistry is somewhat similar to Stinger. However, its spectrum of weed control is much broader. Some of the weeds controlled include buttercup, dock, horsenettle (and most other solanaceous weeds) spiny pigweed and most thistles. Both products do not have grazing restrictions. They also have good forage grass safety. However, the label states that you should not use Milestone if loss of legume species or other broadleaf species cannot be tolerated.

ODDS AND ENDS

This year, Syngenta introduced a new formulation of Gramoxone (paraquat) called Gramoxone Inteon 2L. According to Syngenta, this new Inteon Technology provides added safety measures and a 10X reduction in oral toxicity by including a special safening agent that is derived from a seaweed extract called "alginate." The herbicide forms a gel when it comes in contact with acid pH (1 to 3), which is typically found in the stomach. This slows dispersion of the herbicide into the small intestine allowing the emetic to act. Gramoxone Inteon is a slightly thicker consistency than Gramoxone Max, the odor is less offensive, and it is a 2 lb/gallon formulation. Thus, 2 pt/acre of Gramoxone Max is equivalent to 3 pt/acre of the new Gramoxone Inteon formulation.

Winter programming is just around the corner. If you can't reach me in the office, call my cell phone at 301-412-9858.

Until next time,



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