



Last month we talked about waterhemp and its' challenges. We also discussed Dual chemistries and ways to utilize them in a soybean crop setting. This month, we will discuss corn weed control programs and chemistries.

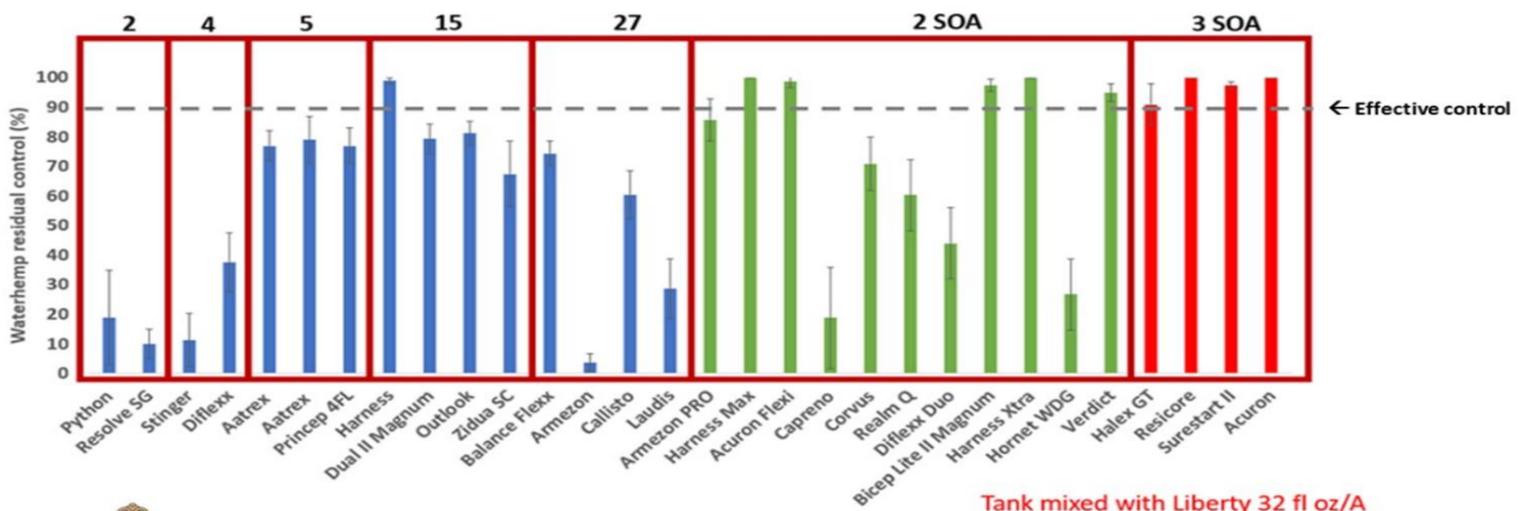
The biggest advantage we have in corn weed control is that corn is a grass plant. This makes controlling broadleaves (giant ragweed and waterhemp) much easier and critical in corn. Why does it take on an extra importance of late? Waterhemp is a prolific seed producer, meaning every escape we have can turn into a large problem. Many of our growers are in a corn-soybean rotation. In this type of a rotation, an escape in a corn program will arise in the following years soybean crop where control is more difficult. Running a stout and effective corn herbicide program helps producers control weeds the following year and years to come.

Last month we discussed mode of action (MOA) and why using multiple MOAs is so important. In soybeans, we can use MOA groups 2 (Firstrate), 3 (Prowl), 4 (Dicamba and Enlist), 9 (Roundup), 10 (Liberty), 14 (Cobra & Valor), and 15 (Dual). As discussed last month, groups 2, 9, and 14 have confirmed resistance in waterhemp and giant ragweed populations throughout the Midwest. This makes our **truly effective** MOA options in soybeans very limited. Those options become even more restricted when you look at what can be applied post emerge.

MOAs used in soybeans and in corn are 3, 4, 9, 10, and 15. For this reason, single reliance on one of these MOAs in a corn program is not advised to avoid genetic resistance. MOAs that can be used in corn but not soybeans include 5 (Atrazine) and 27 (Callisto).

The chart below is from UW-Madison and looks at residual chemistries in corn for waterhemp control. For this study, they sprayed Liberty with every trial to get a "clean" slate to evaluate waterhemp residual control. As you can see in the chart, not all corn chemistries are the same with varying levels of control. In soybeans, we rely heavily on group 15's for residual control of waterhemp. While they do a great job in corn too, Rock River likes to combine multiple MOAs or sights of action (SOA) to achieve above 90% control. We accomplish that by adding group 5 and group 27 where we can, so we change the corn program up compared to the soybean program. The chart shows that all four, 3 SOA chemistries get an acceptable control level on waterhemp.

## Waterhemp Residual Control 25 DAT (corn, V7 stage) Brooklyn, WI 2019



# ROCK RIVER SEED AND CHEMICAL

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All four chemistries with 3 SOA have effective control because of multiple MOAs. Take Acuron for example. Acuron is made up of atrazine, which on the chart is labeled as Aatrex, and gets 80% control alone. Callisto which gets 60% control and Dual with 80% control. Alone, no one chemical reaches effective control, but when combined they are almost near 100% control. Our corn chemistry program must continue to use multiple, effective MOAs to fight resistance.

The chart from above is looking at waterhemp control but another problem weed has started to pop up more and more. Giant ragweed continues to be a battle in certain geographies and cropping systems. Callisto and atrazine are both labeled as good on giant ragweed. Combining these chemistries together allows for excellent control.

Grass control has continued to pop up as issues in one pass herbicide conversations. Unfortunately, our best weapon verse grass continues to be Roundup for contact control and Dual for residual control. Just like for waterhemp control, some chemistries are better than others, as noted in differences in the chart below put together by UW-Madison.

