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Weed Control Research – Exploring Options

Herbicide development is a slow process – and it's not likely to get faster with the challenges we face in finding and testing new chemistries plus getting them approved for market. That's where a lot of the 'behind the scenes' research being done at both the private (company) and public (University) levels are so important. The North Central Weed Science Society of America meeting last week showcased some of that (very interesting...) work.

As expected, cover crops for weed suppression is a popular research topic with multiple posters/presentations focused on best management practices to help it double as a soil conservation *and* weed control practice. Results were mixed, but came with promising findings deserving continued research. For example, one study compared the allelopathic effect of barley vs. cereal rye on Palmer Amaranth, with barley exhibiting greater root/shoot suppression than cereal rye (Lago, Southern Illinois). It's one year of data but underscores the value of continually evaluating cover crops and how they might fit into an integrated weed management system.

Even as acreage tilled declines, it's 'original' place in the weed control toolbox means it is continually evaluated as a sort of 'standard'. A University of Minnesota study (Chiruvelli) evaluated differing tillage levels plus tillage combined with cover crops suggesting *if* tillage is going to be used, there may be ways to make it work better than before.

In our most desperate weed control hour, we may have tossed around the idea of electrocution or flaming – particularly if you're looking to reduce pesticide usage. Two electrocution studies were mixed (poor for tall fescue seedhead suppression; better for kocha when combined with a herbicide) but provide another tool in the toolbox should it be needed.

Any of the above have to continually be evaluated against what has long been the industry standard of clean fields resulting from appropriate herbicide use. New and old products are being evaluated so that new tankmixes can be developed and existing products can be preserved and used in a manner that is safe, effective, and sustainable. Examples in this arena include work with encapsulated formulations and even nanotechnology with the hope of reducing herbicide rates while maintaining weed control.

We'll look deeper into some of these studies through the winter, but take heart: even without new chemistry, efforts to control tough to beat weed species continues – with some pretty interesting results.