

David G. Hallauer  
Meadowlark Extension District Agent  
Crops & Soils/Horticulture

### **Soybean Weed Control – The Importance of Timing**

One of my favorite slides from a presentation by KSU Weed Specialist Dr. Dallas Peterson this past winter depicts a field of palmer amaranth. Now before you get concerned about my excitement over palmer amaranth (believe me, I am **not** excited about more pigweeds!), you should know that it was showing the excessive growth of palmer under good conditions in a very short time frame. Weeds went from just emerged to six plus inches in less than five days. All of a sudden products that might do a good job of control would have been less effective, ineffective, or off label! It underscored the need for an integrated weed management system that includes soil-applied residual herbicides to optimize weed control and maintain our current arsenal of control products.

The benefits of a good soil-applied residual herbicide for soybeans are many. Early season weed competition is reduced, giving us greater flexibility for postemergence treatments. From a resistance management standpoint, we add sites of action to slow the development of herbicide resistant weeds which helps reduce the weed seedbank over time. Then, there's yield!

University of Nebraska studies have shown that a nine inch weed can reduce yields as much as six percent. Allowed to grow to twelve inches, losses increase to 22 percent! According to work done by UNL Weed Specialist Steven Knezevic, soybean yields typically drop about 2% for each leaf-stage of delay past the optimum weed control time (V2 in narrow row soybeans; V1 in 30 inch rows) up until the beginning pod stage. South Dakota State University research confirms this finding, with studies showing that weeds can start stealing yield as soon as three weeks after soybeans emerge. University of Minnesota research puts some economics to those losses. Fritz Breitenbach, University of Minnesota Extension IPM Specialist notes that the penalty from a 2014 trial showed soybean yields in 30-inch rows dropped eight bushels per acre, or about 15 percent, when weed control was delayed from V1 to V3. Most of that loss occurred in the five days between V2 and V3 – a great indicator as to how tight the weed control window is and how quickly it can close!

Is a residual herbicide in your soybean weed control program? If not, research shows it's an economical choice – and one that can help avoid even bigger problems later. To determine what herbicides might be a good fit for you as well as getting the latest on K-State soybean herbicide program recommendations, check out this recent KSU Agronomy eUpdate article at:

[https://webapp.agron.ksu.edu/agr\\_social/eu\\_article.throck?article\\_id=1311](https://webapp.agron.ksu.edu/agr_social/eu_article.throck?article_id=1311) or request a copy from your local Extension Office.