

MESSENGER-INQUIRER



April 1, 2023

Weed Control in Soybean

The cost of weed control has become one of the largest expense line items in the production budget for both corn and soybean. The investment is justified as crops that become infested with weeds will yield poorly due to competition for sunlight, nutrients, and water.

Weed control in corn is easier than soybeans. As part of the grass plant family, many soil-residual herbicides are available that are highly effective in suppressing broadleaf weed emergence with no negative consequence to the corn. Beginning with a quality weed control program prior to planting is key to winter annual weed eradication. Following with sound soil-residual products soon after planting provides season-long weed control. Soybean weed control is more challenging. Being a broadleaf plant, it is subject to injury if it emerges too soon after certain types and rates of herbicide application have occurred to prepare the field for planting.

Early control of marestail is critical. Fields should be sprayed over the next two weeks, prior to marestail elongation. After the plant grows taller, the percentage of it receiving herbicide coverage is less, reducing effectiveness. Many farms are currently spraying all of their land with products approved for both corn and soybean pre-plant foliar “burndown”. They will return prior to planting with additional non-selective herbicide if necessary and soil residual herbicide products specific to the crop to be planted. Waiting until May to initiate burndown

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will result in taller marestail requiring greater use rates, decreased control, and subsequent planting delay restrictions.

After the marestail is destroyed, the next step in soybean weed control is prevention. It is much easier to prevent weed emergence rather than having to kill the plant. Our recommendation is to sink some money into soil-residual products before you plant. It is important to treat as if all of your land is infested with waterhemp, palmer amaranth, and of course marestail. Dr. Travis Legleiter, UK Extension Weed Specialist, suggests a three-way tank mix of a group 5, 14, and 15 site of action chemistry to prevent these tough weeds from ever emerging. The product active ingredient in group 5 would be metribuzin, group 14 would be sulfentrazone, flumioxazin, or fomesafen. The active ingredient options which have soil residual in the group 15 herbicides are metalachlor, acetochlor, or pyroxasulfone. These active ingredients all have brand or generic name products available that I'll leave for your salesperson to identify. The three-way split might seem excessive and certainly expensive, but a great soil residual program is the first step to suppression. Using three site of action control groups will most likely prolong resistance.

Weed control in soybeans doesn't stop with pre-plant soil residual. Enlist or Xtend Flex soybean traits represent most of what is grown in this area. While Liberty, Enlist, or one of the approved dicamba herbicide products for post-emergence application to soybeans is highly effective broadleaf weed control, our recommendation continues to be that additional soil residual is applied at the post-emergence application. Certain products of metalachlor, pyroxasulfone, and dimethenamid active ingredients are allowed early post-emergence in soybeans. Another key to adequate weed control is getting the post-emergence herbicide applied in a timely manner. The foliar herbicides are most effective on weeds less than 4 inches in

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height, 6 inches maximum. Don't wait to spray until a field has weeds visible from the road. We've found getting soybeans sprayed 3-4 weeks after emergence while weeds are small, and including additional residual herbicide is key for optimum season long weed control. If you choose to use a soil residual with the post application, be sure to observe crop growth stage requirements. Most products have a maximum plant size restriction. Waterhemp and palmer amaranth germinate from April to August. Any locations in soybean fields that lack a dense, lush canopy are subject to late-season weed emergence.

A very useful extension publication for studying the various soil residual herbicide products with multiple site of action specifically for prevention of waterhemp and palmer amaranth can be found on my website at <https://daviess.ca.uky.edu/anr>.

Grain Demonstration Plots

If you would like to host a Daviess County Extension/KCTCS corn or soybean brand yield demonstration plot on your land call me at 270-685-8480. There are several farms already committed to hosting a location but we always welcome additional sites to increase the validity of results. Planting and harvest generally require 3-4 hours each. The best information you will ever access is what is measured on your own farm.

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