

News Column

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For Release 12/31/18  
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## SOYBEAN TECH TRAITS

Glyphosate herbicide was first introduced to farmers in 1974, marketed by Monsanto as Roundup. Glyphosate is a non-selective herbicide that made it possible for farmers to control nearly every weed without tillage.

Up to that time, most farmers were tilling to achieve a weed-free seedbed, then using pre-emergent herbicides to control emerging weeds. Glyphosate made no-till a reality.

Roundup Ready soybeans were first introduced to the market by Monsanto in 1996. At that time, many farmers liked the concept – they could spray Roundup over the top of their Roundup Ready beans and kill the weeds without hurting the beans – but they were concerned about “yield drag”.

Farmers were concerned that Roundup Ready soybeans might yield less than conventional beans, but it didn't take long for that concern to go away. In just a few short years, Roundup Ready soybeans dominated the market.

Along the way, you may have noticed a change in terminology from Roundup Ready to glyphosate tolerant. This started around the year 2000, when the Roundup patent expired. Once generic glyphosate formulations were on the market, we gradually stopped calling them all Roundup.

In 2009, LibertyLink technology was introduced to soybean growers. The concept was similar to Roundup Ready technology in that a grower could plant LibertyLink soybeans, then

spray over the top with Liberty herbicide, killing the weeds and not harming the soybeans.

LibertyLink worked, but it didn't catch on very fast,....at least not around here. Like we first heard with Roundup, there were concerns about yield drag, but the biggest thing holding it back was the cost. Glyphosate was cheaper.

Over the last three or four years there has been a significant increase in the use of LibertyLink technology because glyphosate is no longer effective on many weeds. Today, there are too many weeds with glyphosate resistance for farmers to be able to rely solely on glyphosate for their weed control.

The next innovation to hit the market was dicamba tolerant soybeans. Dicamba tolerant soybeans were first planted in 2016, but the dicamba product labeled for use on soybeans didn't receive federal approval until 2017. So, the first legal use of dicamba tolerant soybeans was in 2017.

Weed control with dicamba has proven to be good, but drift issues have persisted, causing much debate about whether dicamba should even be labeled for use on soybeans. Because there was so much fuss over drift, we didn't hear a lot of discussion about yield lag with dicamba resistant beans. But, I'm sure those questions still exist.

#### Coffee Shop Agronomy – January 10

Soybean Tech Traits will be the lead-off topic for the season's first Coffee Shop Agronomy meeting. Bill Schapaugh, KSU soybean breeder, will discuss yield and performance of soybean varieties exhibiting the various technology traits, including glyphosate and dicamba resistance, and the LibertyLink technology.

Since Schapaugh is a soybean breeder, you can expect to hear more about the development of varieties and how each performs, instead of just how the herbicide technologies

function. I'm interested in his perspective on how varieties compare across the board, and not just among varieties with the same herbicide resistance.

The Soybean Tech Trait coffee shop meeting will be held at 10:30 a.m. on Thursday, January 10 at Nelson's Landing in Leonardville. There is no charge to attend, but we ask that you register online at [www.riley.ksu.edu](http://www.riley.ksu.edu) by noon the day before the meeting to let us know you plan to attend.

If you have questions, you can reach me at the Riley County Extension Office at 785/537-6350. Or, you can send e-mail to [gmclure@ksu.edu](mailto:gmclure@ksu.edu).

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