

Get Ready: Post-Patent Roundup Ready 1 Era Coming

Midwest soybean farmers have had access to Roundup Ready 1 (RR1) soybean trait technology since the mid-1990s. Monsanto patented the biotech trait with tolerance to glyphosate herbicides and incorporated the trait into soybean seed in the early 1990s.

The patent covering the trait was obtained to protect the biotech innovation from potential competitors. U.S. patents are only granted for a 20-year period, however, so Monsanto's RR1 trait patent is about to expire. Here's what you need to know about the change.

What does RR1 trait patent expiration really mean?

Ultimately, RR1 trait patent expiration means that soybean farmers will no longer have to pay trait royalties to Monsanto to purchase and plant RR1 seed. Farmers should be aware that other protected intellectual property may be in some soybean seed with RR1, so even if the trait patent has expired, some seed may be protected by a variety patent on the seed's germplasm. Farmers will need to confirm with their seed companies if a variety patent is in place.

What is the timeframe for RR1 patent expiration?

Monsanto's RR1 trait patent will expire in 2014. However, other patents that may cover or include RR1 soybeans may have different expirations or regulations. Beginning with the 2015 planting season, farmers may be able to buy generic soybean varieties with only the RR1 trait. Soybean association leaders are working with Monsanto and other seed suppliers to address questions farmers may have about their ability to buy generic soybean varieties with the RR1 trait and ensure a clear pathway for availability of generic versions after patent expiration.

When can I legally save seed and quit paying the trait royalty?

After 2014, the RR1 trait will be off patent. Starting with the 2015 crop season, Monsanto will no longer collect trait royalty payments from those who purchase or sell RR1 seed varieties. In addition, Monsanto will not pursue variety patents on Monsanto-developed varieties containing the RR1 trait when farmers plant such saved seed varieties on their own farm. Farmers who wish to save and plant RR1 trait seed varieties after 2014 should definitively check with their seed companies to ensure a variety is not patent protected.

If the RR1 patent does not expire until 2014, why do I need to worry about it now?

Midwest farmers should continue to choose the soybean varieties that make the most sense for individual farming operations. If you want continued access to RR1 soybean varieties, other varieties that contain the RR1 trait or that contain additional modes of herbicide tolerance, you should make your wishes known to seed companies. Both public and private seed researchers may be able to create generic RR1 stand-alone varieties. Seed companies need to know whether demand for RR1 trait seed will continue. Soybean leaders urge farmers to contact seed companies as soon as possible and communicate future interests.

Are all RR1 soybean varieties affected by patent expiration?

Yes. Monsanto's Asgrow brand soybeans and other Monsanto-owned seed brands will no longer offer any RR1 varieties after the 2014 season. Monsanto will move to 100 percent Roundup Ready 2 Yield technology in soybeans. Monsanto has extended RR1 trait licenses through patent expiration so that other seed companies and universities have everything they need to

offer generic versions of RR1 soybeans as a single trait seed. It is not clear yet how many companies may choose to do so. Seed companies that continue to offer RR1 trait varieties after license and royalty obligations have expired do not need any additional patent rights, access to regulatory data or new regulatory approvals to offer RR1 as a single trait in a soybean variety.

What will happen to the price of soybean seed post patent?

At this time, Monsanto or other companies cannot predict what may happen to the price of RR1 trait varieties. Value will continue to be determined by the germplasm present, as well as good old fashioned supply and demand economics. Again, you will not have to pay trait royalties.

What about other biotech traits -- will they follow the same process as patents expire?

The Biotechnology Industry Organization (BIO) has initiated a process to ensure a predictable framework for all biotech traits as they come off patent in the years ahead. Soybean association leaders will continue to collaborate with BIO on these post-patent processes. No other soybean or corn traits have near-term patent expiration dates at this time.

How does RR1 patent expiration affect other seed companies and stacked trait technology?

Unlike pharmaceuticals, agricultural biotech has no rules regarding generic product development by the time of patent expiration. Since the timeline for product development and regulatory approval in the seed industry is some seven to 10 years, developers need certainty for generic entrants in securing an ultimate path to market successful products.

Time is of the essence to set up rules to enable post-patent competition to flourish. Pioneer Hi-Bred International, Inc., for example, believes a fair post-patent policy should include removal of anti-stacking and other anti-competitive provisions in Monsanto's trait licenses to allow new, competitive seed products to market at the time the patent expires; access to Monsanto's RR1 data package and/or access to RR1 itself in order to allow development of data packages to expeditiously obtain foreign registrations, with appropriate compensation to the patent holder; and development of an independent, third-party association to represent the interests of generic developers and users. The American Farm Bureau Federation, American Soybean Association and National Farmers Union have issued a statement on biotech seed industry competition and innovation that urges organizations to work with technology providers, regulators and others to resolve competition and innovation issues in a satisfactory and timely manner.

How will RR1 patent expiration affect foreign demand for U.S. soybeans?

Monsanto has committed to maintain full regulatory support for RR1 in export markets until at least the year 2021. The commitment provides the industry with more than a decade to develop other mechanisms to provide regulatory support for traits as they move to generic status. The American Farm Bureau Federation (AFBF) reports that the first export certifications for RR1 expire in 2018-19. Some industry observers cited by AFBF estimate up to 80 percent of U.S. produced soybeans at that time may still include RR1 traits.