Precision Farming Toolkit for 2018 Needs Stronger Risk Analysis

by Stefan Guertzgen | Lauren McCallum

If 2017's dicamba controversy demonstrated anything, it's that risk-management solutions better be part of the precision farming toolkit that crop protection manufacturers carry with them into 2018.

For agrichemical manufacturers, the still-unfolding case of the herbicide causing damage to millions of acres of soybeans and other U.S. crops provides a headline grabbing reminder that with the rise of data-driven precision farming technologies come escalating risks that need to be analyzed and mitigated.

Much of the buzz about precision agriculture today surrounds technology in the farm field. For chemical manufacturers to build and sustain a strong presence in precision farming, they need dynamic digital tools to analyze and mitigate the risks.

Here are three areas in which manufacturers would be wise to focus in the year ahead — and beyond:

1. Upstream. This past June, Monsanto and Atomwise, a company that uses artificial intelligence to develop new medicines and agricultural compounds, announced a partnership to use AI and predictive tools to quickly and cost effectively zero in on molecules that look promising for crop protection. As promising as upstream advancements like this are for the precision farming industry, they also present chemical manufacturers with new risks. With the ability to develop crop protection products more quickly, manufacturers also need tools to quickly test and analyze those products before beginning production to ensure they meet relevant standards and regulations.

A high-performance analytics platform with environment/health/safety management tools can prove invaluable to chemical manufacturers, particularly if it's equipped with a robust determination engine that quickly and concisely evaluates new chemical products for compliance at every level and across borders and jurisdictions.

Agribusiness is no stranger to upstream risk-mitigation tools. Some companies have made it regular practice to check the ingredients in proposed formula changes against regulatory requirements like REACH (the European Union's Registration, Evaluation, Authorization and Restriction of Chemicals program) before moving them to production.

2. Downstream. Agchem manufacturers need to apply risk tools downstream as well as upstream. Given the complex and highly fluid regulatory environment surrounding crop protection, it's imperative that manufacturers find tools that enable them to conduct stringent risk analysis beyond the R&D stage, as part of the go-to-market and product lifecycle planning phases.

These types of solutions are available today. Some use collaborative tools and dashboards that provide insight into potential risks to various parties along the supply chain, fostering strategic cooperation on risk-mitigation strategies. Some alert manufacturers to regulatory changes that could impact sales. Some help companies spot earlier-than-expected weed resistance to a particular herbicide. And some give them predictive sales and real-time demand-sensing capabilities. If you can find a platform that offers all or most of these capabilities, all the better.

It's also important to have tools that provide real-time actionable insight into activity on your website, and in particular about how your customers are behaving. There's lots of strategically relevant information to be gleaned from these interactions.

The rise of robotic technology in precision farming puts a premium on downstream risk analysis and mitigation tools. You'll likely hear a lot more about "agribot" technology in 2018 for its ability to add precision, and subtract cost, from farming. But there are new risks involved when autonomous farm equipment applies pesticides, herbicides, and fertilizers to crops.

3. In the regulatory environment. Uncertainty and flux reign in the regulatory realm, and the merger and acquisitions frenzy in the chemical manufacturing sector is a big reason why. Regulatory agencies with oversight over the wheeling and dealing are requiring agchem companies to sell off entire product portfolios, changing competitive landscapes globally, regionally and locally. Manufacturers need tools to monitor these developments so they can adjust their precision farming decision-making accordingly.

Approval processes for new products are long and unpredictable. And government regulation also is impacting markets for GMO products. The right predictive analytics modeling tools can help answer questions like that.

The precision farming landscape heading into 2018 is fraught with shape-shifting risks, not just in the U.S. but around the world. The more certainty that dynamic, data-driven solutions can offer to chemical manufacturers, the better positioned they will be to push the precision farming movement forward.