



# Making **soybean** fungicides pay off for customers

## **Decision to use disease-control tools in the crop is more complicated; requires tighter management**

As summer heats up and disease threatens to creep into fields, customers may look to you to help them decide whether spraying fungicides on their soybeans will generate a return on investment and what else they can do to control disease.

Daren Mueller thinks back on the early days of new fungicide products becoming available for soybeans. "Back then, almost every product looked similar when we did trials," he recalls. "If one fungicide had a three or four bushel response, they all did." Mueller is Associate Professor and Extension Plant Pathologist at Iowa State University.

How times have changed. In the last three or four years, he notes that the decision to spray that soybean crop, and what to use, has become more complicated than it was 10 or 15 years ago. Yet, there are tactics to deploy that can help control yield-robbing diseases.

**For your farmer customers, working through these steps can help you develop a successful plan for 2022 and beyond.**

01

### **START WITH YOUR VARIETY.**

In season is not the time to ask this question, but a good time to evaluate performance of the varieties customers have planted. Mueller notes that if you've selected a variety that is highly resistant, or has good resistance, to a disease like frogeye leaf spot you might "pump the brakes a little bit" on fungicide use. "If you have a variety that's susceptible to frogeye, you want to keep an open mind and be on the lookout for development of the disease," he adds.

And frogeye leaf spot has become a significant challenge for soybean farmers across the key production areas of the Midwest, even to the fringes of soybean country in North Dakota. And for this disease, Mueller explains, farmers should assume if it's present in the field it is also resistant to a key class of fungicides—strobilurins. These are called QoI—or Quinone Outside Inhibitors—and known as FRAC 11 fungicides.

02

### **KNOW THE CODE.**

Given the rise in resistance to a single class of fungicides—Mueller points to brown spot and other diseases identified to have resistance to the strobilurin class—the fungicide choice requires more thought. A key part of that thought is knowing the code for the active ingredients in a particular fungicide, and whether the product you choose offers multiple modes of action.

Just like with herbicides these days, knowing mode of action matters. And each fungicide label shows the FRAC code. FRAC stands for Fungicide Resistance Action Committee, which is a specialist technical group of CropLife International whose purpose is to provide fungicide resistance management guidelines to prolong the effectiveness of "at risk" fungicides. Having fungicides with more than one code, or mode of action, on the label for the product you choose will help steward the effectiveness of these products for future use.

03

## THINK PREMIX.

"Using a multiple mode-of-action product will make a difference," says Nate Wyss, Market Development Specialist, Indiana, for Corteva. "The common theme with fungicides is preventive versus after the fact, trying to make up for a problem. With a multiple-mode-of-action product you can have both of those characteristics."

Some active ingredients provide protection in advance of disease in the crop and have some residual benefit. Others are more curative, working to stop disease when used to treat. Mueller is concerned about rising resistance of some diseases to specific classes of fungicides. And when choosing a premix, that's an issue. If you have the presence of a significant disease that's already resistant to one component of a premix that may have only two ingredients, "do you really have a premix?" he asks.

When reviewing the premix, understand the disease spectrum controlled by all its components and the overlap for your key crop diseases when making the choice. Working with customers, you can help them determine the proper premix for their disease challenges identified during scouting.

04

## TIMING THAT TREATMENT.

For Wyss, R3 is the go-to timing for fungicide application. "There's some talk that an earlier application pays better," he says. "But the best return on investment we've seen is around that R3 stage."

But the first step is deciding to treat, and for 2022, Mueller is watching the weather as much as the soybean crop. "There's a test I tell farmers to try," Mueller says. "Pick whatever activity you like, a morning walk, walking beans—heaven forbid—or golf. If you do that at 8:00 in the morning and your shoes don't get wet then you're less likely to see a disease problem, because there's not enough moisture to cause disease."

Many of the key diseases that impact soybeans require moisture to thrive, and the conditions farmers are seeing across the Midwest may be a sign to wait on the application. Spore populations are out there and if weather conditions turn disease can reappear, so scouting matters. But "the diseases that respond to a fungicide, they like moisture," Mueller says. The varied weather impacting the Midwest this season is a key area to watch. If it's been dry in your region, a turn in the weather can bring disease back quickly.

05

## STEWARDED THE TECHNOLOGY.

The rise of multi-mode-of-action premixes can keep fungicide products working longer. Mueller also notes that using disease-resistant varieties wherever possible can make a difference, too. The idea is breaking the disease life cycle.

With a resistant variety and an effective premix, as needed, Mueller says farmers not only steward the active ingredients in fungicides, but they're also stewarding the resistance genes in the varieties. There is some concern that diseases will overcome that in-bred resistance. This one-two punch can make a difference. And given current market prices, taking actions that preserve crop yield can make a difference. "With crop prices this high, we want to get every bushel we can," says Corteva's Wyss. "It doesn't take that much fungicide to get a return. If you get a two or three bushel increase, you're well into the money."

Plants that stay healthy longer into the season can boost returns, but applying fungicides is no longer a simple question. As a trusted adviser, your role in identifying the right premix to help protect the crop can also help keep those fungicides working in the future.

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