



Each growing season presents unique challenges for farmers, but 2021 may provide some additional complications thanks to approximately 3 million prevented-plant acres in North Dakota in 2020.

Wet conditions kept farmers from getting crops established on those acres in 2020, and as a result, there are ramifications for growers in 2021.

The Northern Corn and Soybean Expo will feature a panel of North Dakota State University (NDSU) experts to help growers address concerns with soil fertility, weed control and tillage. The panel includes Dr. Dave Franzen, Dr. Aaron Daigh and Dr. Joe Ikley.

## Weed Control

Among the primary concerns for managing acres that weren't planted the previous year is weed management. Some prevented-plant acres were seeded with cover crops while other fields were left fallow or managed with tillage.

NDSU Extension Weed Control Specialist Joe Ikley says that the weed-management approach he saw most frequently in eastern North Dakota was tillage or an application of glyphosate. "There were lots of dead weeds, but waterhemp, marestail and kochia were the surviving weeds," Dr. Ikley states. "In that case, you know which weeds went to seed, and you know they produced a lot of seed because of a lack of other competition. Going into the production year, farmers are going to want to have a pretty robust herbicide program geared toward controlling those weeds, knowing they're the ones that produced seed."

Dr. Ikley explains that waterhemp will likely be the most common weed that farmers will need to control in acres that weren't planted in 2020. Because there will be ample seed in the seed bank, it's imperative that farmers don't shortcut their management.

"If weeds produced a lot seeds, this is the year you don't want to skip a pre-emergence herbicide," Dr. Ikley says. "We really never want to skip putting on a pre-emerge, but farmers are going to be dealing with so much seed that's been returned to seed bank, and it's going to germinate and be a problem this year that growers will need to have that preemerge down at planting."

## **Soil-Health Balance**

NDSU Associate Professor for Soil Physics and Hydrology Aaron Daigh states that some of the first concerns which many farmers have with weeds and herbicide resistance is the tillage options that they can potentially use for weed control.

"But the question also usually comes, how do I not screw up everything I just did for my soil health the last several years," Dr. Daigh says. "My response so far this year has been, if you want to control weeds with tillage, you're going to have to get very aggressive with it, which means taking a setback with your soil-health practices that you've built up over the years."

Dr. Daigh states that, while most experts recommend two passes with herbicides for weed control, there has been a tendency for farmers to forego one herbicide application and to use tillage instead. He explains how that practice isn't effective.

Dr. Daigh knows that farmers are concerned with balancing herbicide use with tillage in order to get good weed control without sacrificing soil health. As is often the case, each farm and each



Dr. Aaron Daigh



Dr. Joe Ikley



Dr. Dave Franzen

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"Either way, coming off of these prevent-plant acres, the weed seed bank is probably going to be a bit higher if they weren't able to get in to spray to manage some of those weeds," Dr. Daigh says.

How farmers approach those prevented-plant acres in 2021 is likely still dependent on spring weather. Dry conditions may allow growers to get back into the fields in a timely fashion while a wet spring could cause a delay. Dr. Daigh states that it's best if farmers have a plan for either scenario.

"Have a dry-spring plan and a wet-spring plan," Dr. Daigh explains. "That will help to be prepared."

## **Fertility Factor**

NDSU Extension Soil Specialist Dave Franzen says that, in addition to weed management and soil health, farmers will also need to address soil-fertility needs for prevented-plant acres. A key first step is to make sure those fields are soil tested so that growers know what nutrients are needed. That approach isn't confined to prevented-plant fields.

"There was a lot of fall fertilizer applied, but because farmers were anxious to get their crops out of the field, there are still some decisions to be made," Dr. Franzen states.

Dr. Franzen describes how some fields aren't conducive to the fall application of nitrogen, plus the fall was very dry, so conditions weren't ideal for nitrogen application. As a result, there are still many decisions that will have to be made come spring.

Dr. Franzen says that he frequently hears from farmers who are uncertain about their plan for 2021. Fortunately, North Dakota's agriculture diversity gives the growers options.

"North Dakota farmers are unique compared to growers in many other states because they have so many crop choices," Dr. Franzen contends. "Sometimes, farmers don't know what they're going to do until the day they hit the field, and they can change their crop choice on the fly. It's pretty remarkable."

Dr. Franzen states that there is still a lot of planning which farmers can do before they hit the fields again in the spring. One Northern Corn and Soybean Expo panel should help provide some direction.

"It will be a good place to get information, especially in the unusual circumstance of dealing with a prevented-plant field or many fields," Dr. Franzen says.

The Prepping the Field panel will take place on Wednesday, February 24.

—Story by Daniel Lemke, photos courtesy NDSU



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