

# Crop Diversity In Wheat Country

Taking a long-term view helped this Oklahoma no-tiller see the value of crop rotations, as well as double crops and cover crops.

By Darrell Bruggink,  
Managing Editor/Publisher

SOUTHWEST OKLAHOMA is considered wheat country, but one no-tiller is working to change that perception.

While wheat is still a large part of Alan Mindemann's production system, the Apache, Okla., no-tiller has added several crops to his rotation, as well as given cover crops a role in his no-till management system.

In 2008, Mindemann actually planted more acres of corn than wheat, although he says that could be subject to change in the future. In fact, canola may be the main crop for 2009, he says.

With an average annual precipitation of 32 inches and a frost-free period of about 216 days, Mindemann says he has the ability to plan several cropping seasons.

He can no-till winter wheat and winter canola in the fall, corn in the spring and double-crop milo, sunflowers, corn or cowpeas in the summer if he has adequate moisture.

"My country is all wheat. That's the way it's been for years, but things are slowly beginning to change with more local farmers switching to no-till and rotations," Mindemann says. "I didn't want to go the route of all wheat because too many guys have not been able to make it by going that route."

**Plan Your Rotations.** But to raise a variety of crops in moisture-challenged areas like the Plains takes planning and foresight, and Mindemann says you need to do your homework.

"You need to know your available moisture," he says. "I count on only receiving half my annual growing-season rainfall. If I know what I have stored up in moisture and how much it takes to grow a crop, that helps me decide what crop to grow."

He adds that your no-till checklist needs to include access to harvesting equipment and access to markets. For example, an oilseed processor is located close enough to allow him the opportunity to grow crops like sunflower and canola.

"And you always need to know your rotational options," Mindemann says. "Our



**VARIOUS CROPS.** While many Oklahoman producers have historically raised continuous wheat, Alan Mindemann is among a wave of growers seeing the value in rotations. Here Mindemann no-tills winter wheat into double-crop milo.

rotations are almost always up in the air; it depends upon the moisture that I get and the seasonal timing. And I may be able to get something like cotton planted, but the market may be telling me that I need to grow wheat right now."

**Double-Cropping Options.** Seeking out double-crop opportunities has not only



*Don't be afraid of too much residue. Only be afraid of poorly managed residue...*

been good for raising the organic matter of his soils and keeping something actively growing, Mindemann says it can also improve your productivity and profitability. However, you'll want to keep your landlords informed of what you are doing.

"Double-cropping is kind of a dirty word in our part of the world, and is often

perceived as being abusive to the land," Mindemann says. "So, be sure to always inform your landowner about what you are doing and why you are doing it.

"You need to be thinking 2 or 3 years down the road as to how this will affect your rotations. Many of the herbicides in wheat are very damaging to double crops, so I don't use any products with long residual activity. I keep my options open."

Mindemann says double-crop milo is most reliable behind wheat, although sunflowers may also take that distinction.

"If we have a full moisture profile after wheat harvest, we have a real good shot of making a decent crop," he says. "We've made 70 to 80 bushels of milo per acre with a fair level of moisture."

Cowpeas are a relatively new double crop for Mindemann.

"I've always grown it for seed and they usually make pretty good money," he says. "All of these minor crops have gone up in price because nobody wants to mess with them when corn is \$5 and wheat is \$10."

**Thinking Long Term.** Sorghum Sudan grass as a cover crop behind wheat has been one of the things that Mindemann says, "has

got his neighbors talking,” because they are used to it being used for forage and not left in the field.

“I had to change my way of thinking to what I could do to make this field better in the next 5 years, and that’s when I started growing cover crops,” he says. “There are long-term benefits like increased water utilization and nutrient management.

“If you use up your moisture growing a cover crop, the residue will catch the next rainfall and help replenish what you lost. You will end up with a net gain.”

He says sorghum Sudan grass as a cover crop has more value to him than as a bale of hay to a rancher.

“It allows me to spend all winter gathering up moisture for my sunflower crop the next spring and that residue stays well beyond the sunflower crop,” Mindemann explains.

Yellow peas are planted in mid-September and grow to knee-high stage. They provide 50 to 60 pounds of nitrogen per acre.

He’s looking to experiment with them as a grain crop. They typically die once temperatures drop into the low to mid-teens, but some years that never occurs in his area.

Mindemann says he likes what bin-run sunflowers do for the soil. He has used them between back-to-back wheat crops.

“I wanted to do something to rot the straw without working the field because of disease and insect concerns,” Mindemann says. “The sunflowers keep the field moist.

“With my soils that have been in no-till

## Canola Best Planted Into Low Residue Levels

While Alan Mindemann likes to keep residue levels as high as possible in his no-till fields, there is one crop that takes more management when planting into residue.

“You’ll want to no-till canola into a low-residue situation,” the Apache, Okla., no-tiller says. “I’m seriously looking at planting winter canola behind corn because the residue will be coarser, leaving more exposed ground than wheat stubble.

“I recently installed residue managers on my no-till air seeder to move residue out of the row. Hopefully, this will improve my canola stand.

“Canola thinks the residue is the top of the ground, and it will put down its roots into the residue. So you need to make sure you’re getting that seed into the soil when planting into heavy residue.”

for a long time, anything that comes into contact with that moist soil will degrade quickly.

“With sunflowers, I may get rid of disease and the Hessian flies that are associated with wheat residue.”

**Covers Build Residue.** Since much of his cropping system is in wheat, Mindemann says residue breaks down quickly on his farm. Adding cover crops into his rotation is helping build residue levels.

“Don’t be afraid of too much residue,” he says. “Only be afraid of poorly managed residue.”

He runs a stripper header on his wheat combine to maintain more residue in fields and keep it off the ground for planting double crops or cover crops.

Before planting into a cover crop, he usually likes to kill it with glyphosate about 10 days before planting so that he isn’t planting into a green crop. Yet, he still maintains plenty of residue cover at planting time.

He also advises no-tillers to kill a cover crop before it goes to seed.

“Most times, you shouldn’t let anything go to seed,” Mindemann says. “If you have cowpeas as a cover crop and they go to seed and you want to plant cotton, it will make a weed in your next crop.”

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In the effort to build residue levels without impacting the effectiveness of no-till planting or drilling, Mindemann says you need to spread the residue evenly behind the combine. He adds that no-tillers need to leave as much residue standing as possible.

“Don’t knock it down before no-tilling unless you have a good reason,” he says. “Once you get that residue in contact with the soil, it goes away pretty quickly.”

He also recommends investing in a no-till drill rather than attempting to modify a conventional drill.

For the more costly crops that he plants, such as corn or cotton, he recommends using a no-till planter to get equal seed spacing for improved yield potential. 🌻

## Rotations Used By Alan Mindemann

Following are a couple of the rotations that Alan Mindemann has used in his no-till operation:

- Corn, canola, double-crop milo, wheat, wheat and double-crop sunflowers.
- Corn, canola, cover crop sorghum Sudan grass, wheat, wheat, cover crop sunflowers.



**COVERED UP.** While many Plains growers would harvest sorghum Sudan grass for livestock feed, Alan Mindemann finds more value to knocking this tall cover crop to the ground when he no-tills Austrian winter peas.