NO-TILL FARMER

May, 1998

NO-TILL ROTATIONS VS. EQUIPMENT... Ron Jacques encourages no-tillers to diversify their rotations.

"Growing crops planted and harvested at different times lets you utilize your equipment better," says the Hutchinson, Kan., no-tiller.

"If you have 1,000 acres of wheat, then you need equipment to handle 1,000 acres in a timely manner.

"If you have 333 acres each of three crops, you only need no-till equipment to plant and harvest 333 acres."

TRY CROP-OIL PROTECTION... Columbus Grove, Ohio, no-tiller Joe Schmersal has found that a good way to protect his planter is by spraying it with crop oil prior to planting in the spring.

"The crop oil puts a film on the rubber tires and planting units so they are protected from dust or the splashing of fertilizer," he says.

When he goes to clean the planter at the end of the corn and soybean planting season, he sprays it with water and finds the oil comes off easily.

ROUNDUP READY DATA QUESTIONED... Monsanto officials say soybean yield data on Roundup Ready soybeans released by other chemical companies is inconsistent with the experiences of many farmers and data gathered by seed companies, universities and Monsanto.

Data collected from 1,000 farmers who planted Roundup Ready soybeans in 1997 showed Roundup Ready soybean yields exceeded the U.S. average soybean yield, says Jerry Flint, Monsanto Roundup Ready Soybean technical manager.

Results also showed 90 percent of farmers were more satisfied with Roundup Ready soybeans and a Roundup Ready herbicide program than with regular soybeans and traditional herbicide programs.

FOR BURNDOWNS,TOUCHDOWN VS. ROUNDUP... In a 1997 Southern Illinois University study, weed scientist George Kapusta found Touchdown and Roundup provided equal weed burndown control in no-tilled corn. Both products controlled 99 percent of giant foxtail and 96 percent to 99 percent of common ragweed, common lambsquarters, smallflower buttercup and smallflower bittergrass.

"Touchdown tended to act a little quicker than glyphosate," explains Kapusta. "Both herbicides will achieve the same results in the end, but speed is a bit of a plus to some who would like a quicker burn. Touchdown will have a very good place in the no-till burndown market."

Chuck Foresman, weed control specialist at Zeneca, says the reason Touchdown burns down weeds faster than glyphosate lies in the chemical properties of its active ingredient—sulfosate. While sulfosate and glyphosate are both translocated to the growing points of the plant, including root and shoot growing points, sulfosate absorbs moisture from the air. This enhances its effectiveness and speed of action. Foresman says herbicides that dry more quickly are more difficult for plants to absorb.

—Frank Lessiter, Editor/Publisher

BURNING STRAW DOESN'T PAY... Six years of on-farm trials by North Carolina State University weed scientists show no yield benefit from burning fields prior to double-cropping no-tilled soybeans.

No-till yields with 545 variety and site comparisons were 2.2 bushels per acre higher than yields from tilled fields.

While burn and plant yields averaged 0.6 bushels per acre higher than the no-till yields, almost all of this insignificant yield increase came at two sites which had ideal moisture for the first three weeks after seeding, says Jim Dunphy, North Carolina weed scientist.

POTASSIUM PAYS IN NO-TILL CORN... Recent Iowa studies indicate yields increased with deep banding of potassium in a no-till corn and soybean rotation.

The advantage, says Iowa State University agronomist A.P. Mallarino, is related to increased potassium availability, even where soils test optimum to very high in potassium.

THINK ABOUT WHEAT HARVEST... With perennial weeds a continuing problem for many no-tillers, the best time of year to control them is summer.

"Probably the best opportunity for dealing with most of our common perennial broadleaf weeds using non-selective herbicides is following wheat harvest," says Jim Kells, Michigan State University weed scientist.

"This allows the application of herbicides to the weeds at the time of year when they are most susceptible."

—The Editors

WHAT YOU'LL FIND IN THIS ISSUE...

Creating A New No-Till Management Style

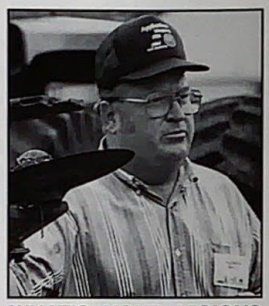
As precision farming technology advances, no-tillers who fine tune their management style will keep the competitive edge.

By Julie Orchard, Associate Editor

MOST PEOPLE WHO meet Doug Harford are so impressed with his precision farming knowledge, they assume he holds a doctorate in agricultural engineering.

But the Mazon, Ill., no-tiller's expertise doesn't come from the classroom. He became a master of the field through 22 years of research on his own farm.

While most no-tillers began experimenting with grid sampling within the past five or 10 years, Harford began in 1976. He set up 2 1/2-acre grids and marked the different soil types with colored pencils. It wasn't until 1992 that he created yield maps.



WHAT'S YOUR VISION? Doug Harford encourages no-tillers to look five years into the future and determine what their farm will look like. On his Mazon, Ill., farm, Harford uses precision farming data to help find new business opportunities.

"We had a 386 computer wedged in my combine cab with wires running everywhere," recalls Harford. "It was the first yield monitor and it didn't work out so well. The next year, we made some changes. I got an Ag Leader unit and laptop. I had a yield map of every field.

"What didn't work at all in 1992 worked in 1993 in every field. My point is that you need to have patience."

What's Expected? After finding out how long Harford has been working with precision farming, your first question probably is, "Has he made any money with it?"

"That answer is no," he admits. "But we need to have some patience to help us get to a point where we figure out where the money is."

Harford enjoys telling the story of one of his first successes with the technology.

"This is a favorite story of mine because it really empowered me," he says. "I have a 160-acre field with one soil type and it's as flat as can be.

"In 1994, I planted beans in it. When I was combining it in September, I saw some areas I thought would have about a bushel yield decrease.

"But the yield monitor picked up a 20-bushel difference—58 bushels vs. 78 bushels. Wow! I missed something out there.

"Now, I consider myself to be a good crop scout. So here I am out there splitting up roots and trying to figure out what I missed. I modemed a map to my agronomist and he said it's soybean cyst nematode.

"What? Soybean cyst nematode! It can't be! There were no big yellow spots out there. They'd never cost me 20 bushels per acre."

Armed with Harford's yield map, a soil-test lab technician went out and sampled the soil in areas where soybean yields were the lowest.

"Guess what?" Harford queries. "We got 'em!

"At this point, I'm an empowered farmer. This is a problem that I wouldn't have known existed without a yield map. Do you know how much more money I can make than you if I have one of these?"

Not Always Reliable. But Harford's results haven't always been so clear-cut. He emphasizes that the real value in precision farming is in validating your cropping experiences.

"A lot of people out there get into precision farming and say it's going to tell me how to farm," he explains. "That's baloney!"

There are two types of variability that you can see in a no-till field—temporal and spatial.

"Many people confuse temporal variability and spatial variability," he says. "Temporal variability is change over time and spatial variability is how things vary within the field."

He clarifies this with an example.

"My highest-yielding hybrid in 1995 was 1996's lowest yielder," he says. "And 1995's lowest was 1996's highest. If I had used my precision farming data to pick hybrids, I'd have planted the whole darn farm to the lowest-yielding hybrid I had."

When you know how your field is changing over time, you'll be able to make better management decisions, says Harford.

"With enough time and patience, you should get the right answer," he quips.

Know Your Vision. "The bottom line is to use precision farming data to find new business opportunities," he says.

Harford challenges every no-tiller to develop a vision.

"We need to be able to look out five years from now and know what our farm looks like," he says. "By using precision farming, we can use the soil to answer our questions instead of what someone tells

Get More By Sharing Information

Mazon, Ill., no-tiller Doug Harford had an eye-opening experience when he visited Argentina last year.

"They're really good farmers, farming really good dirt," he reports. "But these farmers are different than Americans. They have plenty of land and they're willing to work together to share data."

For example, Harford met 12 farmers who formed a group to look for new opportunities. Group members travel abroad twice a year and within Argentina every month looking for new ideas.

"When someone locates an opportunity and leaves to study it, the other 11 farmers take care of his operation," says Harford. "If that happened in my neighborhood, the other 11 would be trying to rent my land out from underneath me while I was gone.

"Their vision of opportunity is endless because there is plenty of ground. The American farmer's view of opportunity is finding more ground. This is a finite view because someone has to fail for us to succeed."