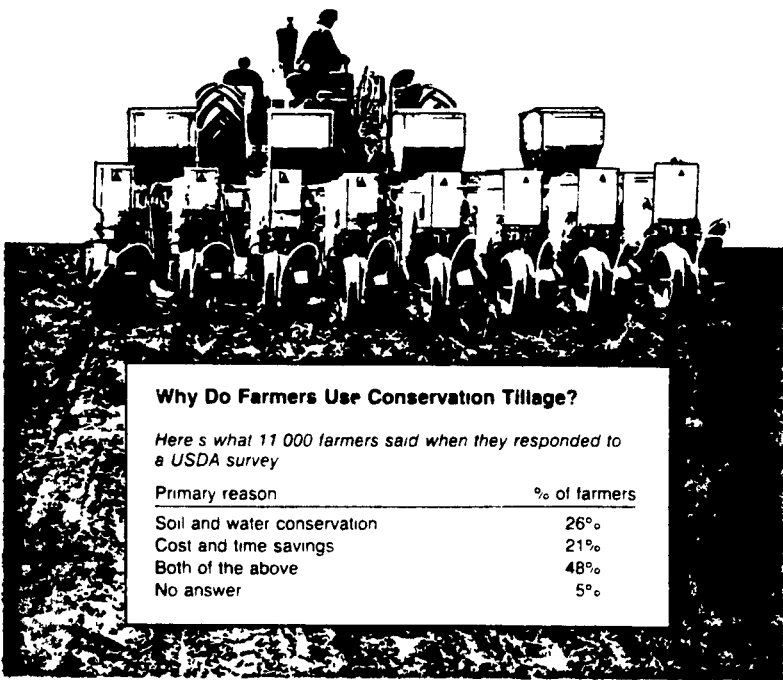


Plowbusting: Conservation



Why Do Farmers Use Conservation Tillage?

Here's what 11,000 farmers said when they responded to a USDA survey

Primary reason	% of farmers
Soil and water conservation	26%
Cost and time savings	21%
Both of the above	48%
No answer	5%

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Economic Research Service

Bob Wetherbee says it saves him time, labor, and fuel, and he agrees with Fred Awe who likes it because it helps reduce soil erosion. Still other farmers cite increased yields as a benefit.

They are all talking about conservation tillage, a planting method that has redefined the role of the plow — and often does entirely without it.

Unlike conventional tillage, where all the topsoil is mixed or inverted through plowing, power tilling, or multiple disking, conservation tillage minimizes soil disturbance and leaves plant residues on the field surface. Practices vary from no-till, where only a narrow slot is opened to plant seed, to the more common minimum till, where the entire field surface may be worked with some form of limited tillage.

Conservation tillage has caught on in a big way, almost doubling in acreage across the nation during the last decade, according to USDA economist Richard Magleby of the Economic Research Service. Estimates vary. Some place current acreage in conservation tillage at close to 100 million, up from about 49 million acres in 1974. Other estimates are lower, but one thing is sure: Before 1970, there wasn't much acreage in conservation tillage to count.

It's mainly been a phenomenon of the last decade and a half, Magleby says, although there were farmers who practiced the methods as early as the late 1940's.

"We used some minimum till on our family farm in Minnesota back in the early 1950's when I was a kid," recalls Frank Lessiter who is now editor of *No-Till Farmer*, a monthly magazine that keeps farmers informed of the latest trends in conservation tillage.

A Boost From OPEC

Lessiter says that, at the beginning, conservation tillage practices really spread by word of mouth. "One farmer might try it and have some success. Then his neighbor would see the results and try it too."

Word-of-mouth got a boost from the oil crisis of 1973, when the cost and availability of fuel became an issue for everyone.

"Farmers discovered they could save a third to half the fuel needed for conventional plowing if they used some form of conservation tillage instead," Lessiter says.

Despite its acceptance in the mainstream of agriculture today, conservation tillage is not for everyone. Soil conditions, climate, terrain, and the crops themselves must be factored into farmers' tillage decisions.

Conservation tillage is generally most successful with row crops grown in moderate climates. The major benefits are lower fuel and labor requirements and significantly reduced soil erosion and water runoff. Nutrient loss is also controlled to a more limited

extent.

But there are tradeoffs. Weed and insect problems can change with conservation tillage. It may

require adjustments in pest management practices, different herbicide and insecticide mixes, and less reliance on weed cultivation. In some instances, pest control costs are higher.

Nonetheless, researchers say that overall cost savings with conservation tillage can be significant. Savings on energy and labor have a direct impact on net returns, Magleby points out, usually offsetting additional chemical expenses, if any.

Who, What, and Where?

How many farmers use conservation tillage, where do they farm, and what do they grow? A recent USDA survey of over 11,000 farmers nationwide helps answer these questions.

The survey, which focused on the cropping practices of farmers in 1983, indicated that more than a fifth of the nation's farmers who grew crops during that season used at least one form of conservation tillage on all or part of the land

they planted.

However, regional differences were pronounced. In the Corn Belt, 39 percent of the farmers practiced some conservation tillage. That's the highest percentage of any region. Farmers in the Northern Plains came in next, with a 30-percent adoption rate.

"The rates of adoption are generally better in the North than in the South and West," Magleby says. Conservation tillage was reportedly used by only 13 percent of farmers in the Rocky Mountain states, 6 percent of farmers in the Southeast, and just 4 percent of farmers in the Mississippi Delta region.

Regional cropping patterns play a role. "Conservation tillage is used primarily when growing corn, soybeans, and small grains," Magleby says. For that reason, it comes as no surprise that the highest adoption rates are found in the regions (particularly the Corn

Belt and Northern Plains) where these crops are most widely grown.

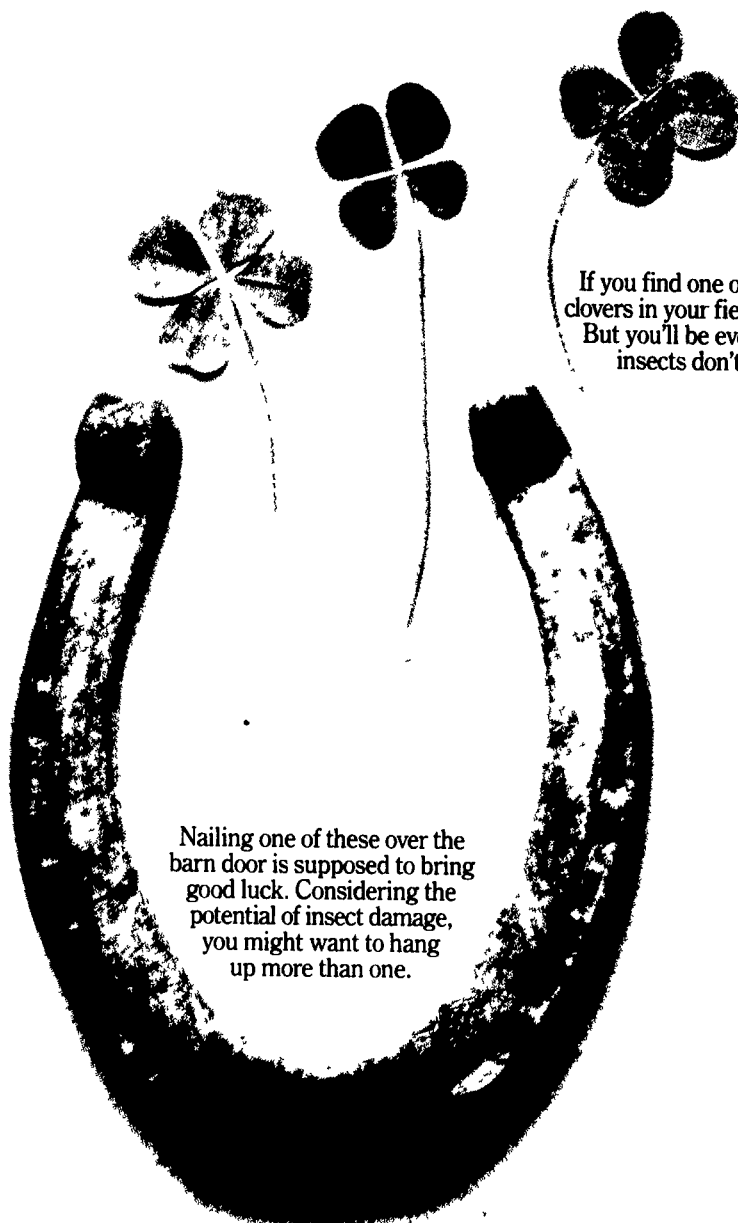
Almost half the farmers who practiced conservation tillage in 1983 grew corn for grain or silage, with no double-cropping. Farmers who double-cropped soybeans following wheat, oats, or barley also tended to use conservation tillage, particularly the no-till practice, because of the speed in which they could get the second crop in the ground, Magleby says.

The size of the farming operation also had an impact on how likely farmers were to adopt conservation tillage. Of the farmers who used the practice in 1983, Magleby says, two-thirds operated farms of 180 acres or more.

Looking for Motives

Most analysts agree that there are two major reasons to use conservation tillage — soil and water conservation and the savings in cost and time. What is

CORN FARMERS WHO DON'T USE FURADAN WILL NEED SOME EXTRA EQUIPMENT THIS YEAR.



You might want to get yourself a fertility doll. Aztec farmers depended on them for years. Then again, the Aztecs are extinct.

If you find one of these four-leaf clovers in your field, you're in luck. But you'll be even luckier if the insects don't find it first.

Nailing one of these over the barn door is supposed to bring good luck. Considering the potential of insect damage, you might want to hang up more than one.

Why worry about insect damage when you can simply get a rabbit's foot, cross your fingers and wish real hard.

