



HAPPINESS IS — A farmer getting three days worth of hay to his cattle before the weekend storm breaks. Farmers have

felt the frustrations of a succession of weekend storms as sub-zero weather and

wind causes livestock waterers to freeze, farm yard drives to be cleaned of drifts

for access to cattle yards and problems getting to cattle in farm fields.

Good Yields Reported With No-Till

By Alan Sieve

Planting at a slow enough planting speed, using a "rescue" herbicide and using a starter fertilizer were three predominant reasons for the success of Iowa county farmers using no-till this year, according to the results of a survey conducted by the Soil Conservation service, Williamsburg.

Iowa county farmers known to have used no-till were surveyed in December as to their practices and results, said Ted Oswald, conservation technician. He noted 63 farmers were sent questionnaires and responses were returned by 32.

The 63 farmers planted no-till on 100 farms in 1981, Oswald continued, noting that represented 8,500 acres. The use of no tillage grew 50 percent over 1980, he added, noting Iowa county ranked third in the state for the amount of no-till used. It ranks behind number one Cedar county, with 11,000 acres planted with no-till, he said.

Of the respondents, Oswald noted six were particularly successful in their no-till operations. He compiled data, listing their methods and results,

which is described below. He and soil conservationist Harry Bryant also described other success factors and noted common mistakes they also found among the survey answers.

Planting Speed

One of the common mistakes, they noted, was that farmers sometimes planted too fast, at six to eight miles per hour. Furrows didn't close, giving poor soil-seed contact; farmers had rodent or bird problems in sod ground, and had poorer germination when they planted too fast, according to Bryant and Oswald.

In a preliminary tabulation of the first 23 questionnaires returned, the survey results showed four planted at six to seven miles per hour and one at seven to eight mph.

Of ten who planted in sod ground, four had rodent or bird problems, which Oswald attributed to planting too fast. "It went hand in glove," he said.

Five of the 23 reported poor furrow closing and soil to seed contact, and eight reported they felt the percentage of germination was not as good as in

conventionally tilled fields. Both are also related to planting speed, Oswald said. Planting in fields that are too wet could also result in poor germination, Bryant added, but this was not a wet year and therefore that was probably not the cause.

The six most successful farmers planted at an average four miles per hour, they noted. Only one reported germination poorer than conventional fields.

Weed Control

Weed control is cited as the number one problem farmers will encounter in using no-till. One factor cited in the better yields achieved by the six most successful no-tillers, was that three used a "rescue" herbicide, one applied before the five-leaf stage in the plant development. Aatrex or Atrazine was cited as the rescue herbicide used.

Five of the six most successful farmers reported good early and late weed control, while one did not. Three of the six used Paraquat as a burn-down herbicide, which Bryant and Oswald strongly recommended for

beginning no-tillers, while three did not, using their usual herbicide program instead. Other herbicides used by the six in addition to, or instead of, Paraquat were: Atrazine or Aatrex, four; Lasso, three; 2-4-D, two, and Bladex, one.

Oswald recommended Lasso and Bladex if the farmer planned on planting a legume crop next year, or Lasso and Atrazine or Aatrex if they planned to plant corn next year.

One mistake they found in survey results was that a farmer used wrong herbicide, one that is to be incorporated. As herbicides are sprayed on the surface with no-till, this wouldn't take effect, Bryant noted.

Another success factor Bryant and Oswald noted they found from the survey results was the use of a starter fertilizer, applied at planting time. All of the six successful no-tillers used one, said Oswald, and he added that the other survey results showed farmers got 15 to 20 bushels per acre more by using one.

Four of the six successful no-tillers (Please turn to page 6B)

No-Till - -

(Continued from page 1B)

used an insecticide this year: three used Counter and one used Lorsban. However, Bryant said the results showed use of an insecticide did not play a significant role in the use of no-till this year.

Yields

The average yield of the six most successful no-till farmers was 139 bushels per acre, noted Oswald. Soil type would also have an effect on yield, Bryant added, noting the fields planted in no-till were probably more marginal lands. They planted a total of 320 acres. The survey did not ask soil types, he said.

Of the six, five felt their yields were comparable with conventionally tilled fields, while one felt his was worse. This was the same farmer that noted poorer weed control and germination, Oswald noted.

In the preliminary tabulation, eight felt yields were comparable, nine did not and six did not report.

One farmer reported double cropping, planting corn after the first cutting of a hay crop. Oswald noted it was interesting that he was able to do it. The farmer had a yield of 130 bushels per acre from the corn crop and estimated the value of the two crops as equal to the value of one crop.

The preliminary survey results also showed that a variety of no-till planters were used, with different type coulters. The different types had no significant effect on the outcome, said Bryant.

"They'll all do the job if they're adjusted right," he said.

Conclusions

The major conclusion Oswald and Bryant noted from the survey was that farmers would be most successful if they stuck to recommended procedures for no-till planting, as the six most successful farmers had. "Follow the tried and true method," said Oswald. "This method that they have used has shown to be the most effective in the past."

Bryant added that those wanting to try no-till also shouldn't do an entire farm at once. "It's a different management completely," he said. The Agricultural Stabilization and Conservation service will still offer \$10 per acre for up to 40 acres to try no-till, he added.

Beginners should plant in bean ground first, as it would be easier to rescue them if they have problems, he continued. Oswald added if farmers have questions, they should also ask people that can help, noting they could help if reached at the right time.

The most important conclusion they found in the survey, however, was that substantial erosion control could be effected with no-till, Bryant noted. One farmer would have lost 15 to 20 tons per acre; 15 to 20 times what he lost with no-till, Bryant said. "You can get the soil loss down to one ton very easily," he commented.

Actual questions and answers given by the 23 respondents in the preliminary tabulation are as follows:

Number of acres no-tilled? 945 total.

Previous crop? corn, 11; soybeans, 8; sod, 10.

Planted crop? corn, 23, soybeans, 1.

Type planter? John Deere, 6; Allis

(Continued on page 7B)

Chalmers, 11; Kinze, 1; White, 1; Buffalo, 2; International Harvester, 1; no report, 1.

One inch coultter, two inch coultter or double disc opener? one inch, 7; two inch, 11; double disc opener, 4.

Was field customed sprayed? yes, 17; no, 6.

Was Paraquat used as a burn down? yes, 14; no, 9.

Other herbicides? Lasso, 12; Bladex, 9; Sutan, 1; Bamvel, 1; Atrazine, 5; Aatrex, 7; 2-4-D, 2; no report, 4.

Was early weed control good? yes, 15; no, 4; fair, 4.

Was late weed control good? yes, 10; no, 8; fair, 4.

Did you use a rescue herbicide treatment? yes, 6; no, 16.

Were you pleased with overall weed control on no-tilled fields? yes, 13; no, 9.

Were you pleased with overall weed control on other fields? yes, 15; no, 5, not available, 2.

Was an insecticide used? yes, 15; no, 8.

Was it effective? yes, 13; no, 2.

What insecticide used? Counter, seven; Dyfonate, one; Lorsban, two; Thimet, three; Amaze, one; not reporting, one.

Did you have a rodent/bird problem in sod ground? yes, four; no, six.

What was your planting speed? 2-3 mph, one; 3-4 mph, one; 4-5 mph, nine; 5-6 mph, six; 6-7 mph, four; 7-8 mph, one.

What condition was the soil? wet, 3; dry, 12; uneven, 3, rocky, 1; good, 7.

Did furrow close and allow good soil-seed contact? yes, 15; no, 5; fair, 3.

Do you feel the percentage of germination was worse than, as good as, or better than conventionally tilled fields? worse than, 8; as good as, 13; better than, 1; not reporting, 1.

Did you try double cropping? yes, 1; no, 22.

Yield of first crop? not reported.

Yield of second crop? 130 bushels per acre corn.

Do you feel that the total value of both crops was less than, equal to or greater than the total value of one crop? equal to.

What was your yield? 80-89, one; 90-99, two; 100-109, two; 110-119, five; 120-129, two; 130-139, two; 140-149, two; 150 plus, one; not reporting, six.

Was yield comparable to your conventional fields? yes, eight; no, nine; not available, two; not reporting, four.

Did you use a starter fertilizer? yes, 8; no, 13.

Did you side-dress anhydrous ammonia? yes, 0; no, 23.

Have you no-tilled rented ground? yes, 5; no, 16.

Do you intend on doing no-till in 1982? yes, 16; no, 2; not sure, 4.