

## What was done

In our On-Farm Network tillage case study, the focus is on evaluating the economic impact of fall ripping of soybean stubble by measuring corn yields the year following ripping.

To develop credible data, replicated strip tests were established on fields in central and northeast Iowa. These tests were designed to evaluate the yield effects of deep ripping, to a 16 in. depth, with a John Deere 2100 Minimum Till inline ripper. On each farm, there were eight strips, 50 ft. wide, that alternated between ripped and non-ripped treatments. These strips extended the length of the field. This resulted in four replicated sets of strips. The same tractor and ripper were used to establish most of the strips. However, some farmers used their own equipment. Other than the ripping on four 50 ft. wide strips, all other practices were the same across the field. Yield data was collected with combines equipped with GPS and yield monitors. Yield data was processed by ISA.

Growers participating in the 2004 strip trials saw yield differences of from nearly 12 bu. more to nearly 7 bu. less on the ripped strips, with an average 1.4 bu. increase over all sites. As in previous years, growers where significant numbers of stones are present in the topsoil found they needed to remove more rocks from the ripped strips. Higher yield responses generally were seen in fine, less well-drained soils.

While most realize the need to look at multiple years of data, we understand that preliminary data is important to growers, as well. This report reflects results from one year on 29 sites for the 2004 crop season.

Data suggest no carryover effect in soybeans two years after ripping. For 2005, we'll also collect data from strips ripped for the 2003 crop year to see whether corn two years after initial ripping is impacted.

### On-Farm Network™ Partners

This project is supported in part by the Iowa Department of Agriculture and Land Stewardship, Division of Soil Conservation, through funds appropriated by the Iowa General Assembly for the Integrated Farm and Livestock Management Program and the soybean checkoff. Additional funding and in-kind support for On-Farm Network studies include:

- Natural Resources Conservation Service
- AgVantage FS, Inc.
- Iowa State University
- GeoVantage
- John Deere AMS
- Des Moines Area Community College

## Do your own tests

On-Farm Network™ participants need only two tools and an interest in solving their own problems to conduct meaningful on-farm studies.

To test a current practice or product against a new option, growers must first plant alternating strips the width of the combine header of the current practice and the new practice. It's recommended that at least three pairs of strips be planted in a field. The more strips you can accommodate, the more reliable your comparison results will be.

GPS can be used to mark the different strips and then record location at harvest with the only other tool necessary, a yield monitor on the combine.



A yield monitor (above) and GPS (right) are the only tools needed to conduct meaningful on-farm trials.



Many of the On-Farm Network™ strip trials are marked with field signs that can be seen from major roads. If you see one of our field signs and would like to talk to the cooperater, email ISA at [info@isafarmnet.com](mailto:info@isafarmnet.com) or call 800-383-1423.