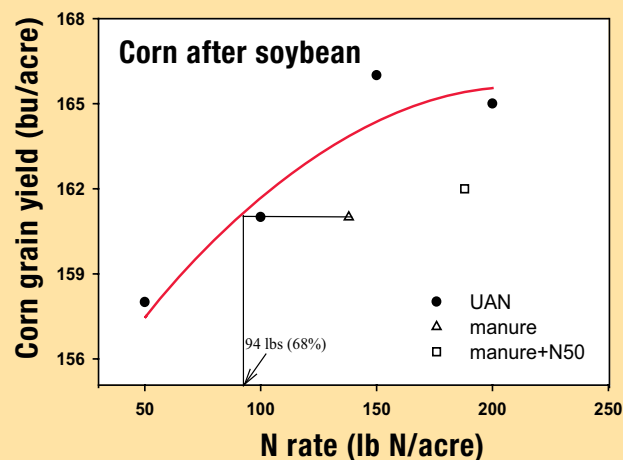




Nitrogen Equivalency of Liquid Swine Manure



In 2005 studies, nitrogen from manure was about 68% as available as nitrogen from UAN.

(Above) Manure was injected on soybean ground at various rates as part of these studies.

At the two sites for corn after soybeans, nitrogen from swine manure was only 68% equivalent to nitrogen supplied by the liquid nitrogen.

in this study were probably too small to be detected as statistically different in traditional small plot research.

“Obviously, we need to continue these studies,” Blackmer says.

Corn stalk nitrate analysis showed less variability among treatments than the yield data. The stalk analysis data, though, did confirm that 100 lbs. of nitrogen in UAN solution was sufficient to maximize yields.

He invites all row crop producers who are using, or have manure available for use, to become part of the On-Farm Network manure management strip trial studies. ■

Corn after corn

Corn responded to applied nitrogen as UAN up to a rate of 150 lbs. per acre. Strips where nitrogen was applied as manure yielded higher than those receiving UAN alone, making it impossible to calculate percentage equivalency of nitrogen applied in manure for this site.

“It’s difficult to explain why manure treatments tended to yield higher, but it’s not an uncommon occurrence,” says Dr. Tracy Blackmer, ISA director of research. “The UAN was injected into the soil at a depth of 2-3 in., which is where most of the corn residue remained from the previous corn crop. It’s possible that the carbon from the stalks tied up more of the nitrogen from the UAN than was tied up by the carbon in the manure.”

Corn stalk nitrate data from the corn-on-corn site showed less variability than yield data. Stalk analysis did not support yield observations that manure supplied more nitrogen than the UAN. The data did confirm, though, that 150 lbs. nitrogen per acre for corn on corn was sufficient to maximize yields.



Manure samples were collected for analysis during application.