

## Starter and Fertilizer Placement Trials

In 1993, cooperators carried out trials to test whether starter fertilizers would work and where they would be most effectively placed. Three "with-and-without" trials were conducted by **Jeff and Gayle Olson**, **Ray and Marj Stonecypher**, and **Dick and Sharon Thompson** ([Table 3](#)). All three found no yield increase with starters.

But wait. Three other trials examined starter rates or placement and did show a starter fertilizer benefit ([Table 4](#)). They also did not show that either the rate or placement was critical. **Doug Alert**, Hampton, compared: 1) no

Doug Alert talking about tractors at a PFI field day.



starter, 2) starter two inches below and two inches to the side of the

seed, and 3) starter two inches directly below the seed. The last treatment was accomplished with the aid of a custom-made planter shoe. Both starter treatments yielded significantly more than the corn without starter fertilizer, but the yields of these two starter treatments were not significantly different from each other.

**Harlan and Sharon Grau**, Newell, deep-banded 12+30+100 pounds per acre at last cultivation of corn, comparing that to a broadcast of the same rate and to no fertilizer. Both sidedressing methods yielded significantly better than the zero-fertilizer check treatment. But there was no difference between the two kinds of placement.

Dick and Sharon Thompson, Boone, compared three rates of starter for corn and a zero-starter treatment. The starter fertilizer was applied with the same kind of deep bander used by Doug Alert. The low-rate 20+14+27 starter produced a greater yield than the check treatment and the same yield as the higher starter rates. Why did this trial show a starter effect while the other trial by the Thompsons showed none? Perhaps it

The Olsons cultivating their fields.



was because the field had received only three dry tons of manure, plowed down in the spring, while the field where the trial showed no effect had six dry tons plowed down in the previous fall. Dick is wondering if nutrients from fall-incorporated manure are more available to the succeeding year's corn.

While these trials are interesting, it is important to remember they are only one year's data. Placement or rate effects may be different in a year with weather different from 1993. PFI cooperators will continue to experiment. Harlan Grau, for instance, has this fall banded fertilizer five inches deep into the ridges of next year's corn fields, hoping to achieve a starter effect.