

Tillage Trials

Tillage is one of the most fundamental building blocks of a cropping system. There the agreement ends. Some prefer primary tillage, some say ridge tillage is the best of both worlds, and others believe no-till is the way of the future. This year six replicated tillage comparisons were carried out by three PFI cooperators.

Anyone attending a tillage show in the last year sensed the wide interest in no-till, particularly drilled soybeans. Most of the PFI trials this year were efforts by cooperators to get some answers for themselves.



Don and Sharon Davidson, Grundy Center, compared drilled soybeans to ridge-till soybeans ([Table 5](#)). Don was in the process of changing row widths on the farm, so the whole field was disked prior to planting. Don intends to keep the same trial on that ground for several more years. In 1992 there was no significant yield difference between the treatments, although the drilled soybeans might have yielded better if they hadn't had a weed problem at one end of the field. The whole field received a postemergence broadcast application of Assure II and Pinnacle. In a similar trial in 1991, the drilled soybeans yielded better but wound up costing Davidson more. In 1992, costs were greater in the row-planted soybeans.

Dave and Lisa Lubben, Monticello, practice no-till on part of their crop acres, and they are always trying to make it work better. They compared disk-tillage soybeans to no-till drilled beans in 1992 ([Table 5](#)). There was no significant yield difference, and the no-till costs were higher because of seeding rate differences and a preplant broadcast for the drilled soybeans. Lubben carried out two similar trials in corn that yielded contrasting results. In a field with good tilth, the yields were the same in both no-till and disk-till corn, and the no-till came out ahead because of lower input costs. However, in the former pasture Dave describes as having compacted soil, no-till yielded 22 bushels less than the disked ground. This information will help Lubben match the tillage to the field in future years.



Jeff and Gayle Olson, Mount Pleasant, compared ridge-till and no-till soybeans ([Table 5](#)). Yields were similar, and the two separate postemergence spray passes in the no-till helped to make it the less profitable practice in this trial.

Mike and Jamie Reicherts, Alta Vista, are serious about oats and about narrow strip intercropping, so naturally they want to know the best way to raise oats in strips. It would be convenient to drill oats right over the ridges left by the row crops in the strip system, but do oats yield better on tilled soil? There was no yield difference between "ridge-till" oats and conventional disk tillage oats in the Reicherts' field trial in 1992 ([Table 5](#)). A similar trial by neighbor Tom Frantzen in 1990 yielded the same result.