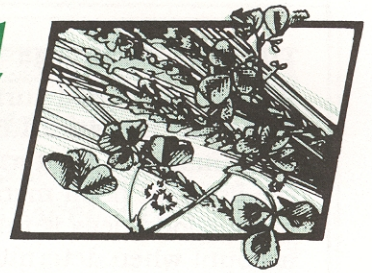


# SUSTAINABLE FARMING

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### Soil conservation takes root in reduced-till options

*The author, Jerry Harper, is district manager of the Palouse Conservation District, Pullman, Wash.*

The Palouse Conservation District is conducting a two-year demonstration of conservation seeding equipment for small grains, which allows producers to compare and evaluate the latest reduced-tillage and no-till equipment in actual side-by-side field-scale comparisons.

It also gives agency field technicians and researchers an opportunity to familiarize themselves with some of the conservation equipment being used on farms today.

The district has focused its efforts on seeding wheat after

peas or lentils, because this is the point in the crop rotation where most erosion occurs in our area. Seeding winter wheat after these low-residue crops is where producers can make the most progress in controlling erosion with the least amount of effort.

The current demonstration was seeded to wheat during September of 1990 using 12 equipment systems in two categories: **reduced tillage equipment**, often referred to as deep shank applicators, which places fertilizer in bands below the soil surface without prior tillage, ordinarily followed by a conventional drill, and **no-till equipment**, in which both fertilizer and seed are placed in a single operation without any prior

tillage. The site near Pullman is in rotation of winter wheat-spring barley-spring peas, with silt loam soils and slopes ranging from 8 to 14 percent.

#### Surface residue and surface clods measured

We compared the surface residue left after the seeding for each machine using the line and point method, a simple and effective way to measure the percent of surface cover. Six measurements were taken on each plot, and then averaged. The amount of surface residue left over winter is one of the key considerations in every producer's conservation farming plan. Many factors were taken into account when evaluating conservation plans, but surface residue remains one of the more verifiable components.

More TILLAGE, page 2

### Innovative computer system takes mystery out of weed identification

*The following is an edited version of an article that appeared in the July issue of Growers Guide.—ed*

University of Idaho weed scientist Richard Old has developed a unique weed identification system that might be the most useful technological advance in the field since the dichotomous key.

"We're getting the information out of the ivory tower," remarked Robert Callihan, Old's major professor and another UI weed scientist. Development of the system was the basis of Old's doctoral dissertation, while the computer programming was done by Robert Dobbins of UI agricultural computing.

More WEEDS, page 5

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- Legumes prove their value in Montana field testing. Page 3.
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