

NO-TILL WORKS ON THE FARM

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There is no doubt about it. No-till farming is here to stay because it pays. Over the last ten years it has paid off for us in improved soil conservation, reduced expenses, and the production of yields comparable or superior to those produced by conventional methods.

Beans no-tilled in wheat stubble, following two years of conventional corn, has been a real money-maker on level fertile corn land. On rolling ground a shortened rotation of one year of no-till corn followed by wheat and no-till beans has worked well. The wheat straw and chopped bean pomice are left on the ground over winter. Planting no-till corn into this residue in the spring means that with the exception of a brief period to establish wheat in the fall, the ground is protected year-round. Thus far nematodes have not been a problem. Before either of these rotations can be followed profitably, fields must be free of wild garlic and johnson grass. It may take three or four years, but wild garlic can be eradicated economically through the persistent use of the proper chemicals at the proper time. It appears that the new over-the-top grass killers have reduced the johnson grass problem to a manageable size.

Following corn harvest, lime and fertilizer are applied in quantities sufficient to meet the requirements of both wheat and beans. It is quite important to select an early maturing, short strawed variety of wheat both to accelerate the bean planting date, and to prevent lodging and an excessive mulch of straw which makes accurate seed placement difficult. If straw is forced into the planting trench, the seed is insulated from soil contact, germination is delayed, and valuable growing time is lost. For high yields in double-cropped beans, time is of the essence. A few days can be gained by combining wheat at 18 to 20% moisture, and drying it in the bin. The planter should be large enough to stay right behind the combine without having to start planting early in the morning when the straw is tough and difficult to cut through.

Weed control is perhaps the No. 1 problem in no-till beans. It can be made easier by planting the beans in rows twenty inches or less so that middles are shaded early in the season. A good uniform stand of wheat also helps. Because good chemical weed control is ultimately dependent on rainfall to wash herbicides, intercepted by the mulch, down to the soil, a much smaller volume of water is just as satisfactory as the forty or fifty gallons we used to use. It is wise to have a back-up plan in case of a weather related failure of the initially applied herbicides. Skipping two rows behind the tractor wheels greatly facilitates any later use of the spray boom, spot spray, or rub bar which may be required.

The no-tillage concept is just as applicable to forage crops as it is to grains. Looking toward a February seeding of other grasses and clover, a

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heavy stand of fescue was sprayed solid with paraquat. Half the acreage was sprayed in mid-November and the remainder a month later. The November spraying was followed by two or three weeks of mild wet weather, and an estimated 75% of the fescue was killed. The December spraying was more effective, with a kill of about 90%. The area was seeded in mid February with a Marliss drill to red clover, ladino, and timothy. The resulting stand is excellent. About three acres was seeded in the same way at the same time to alfalfa with no less successful results. A few spots of common bermuda, which had been sprayed with Roundup the previous summer, were included in the seeding. It is quite important that the old sod be grazed or mowed as closely as possible, and that any excessive clippings be removed. A short period for the grass to recover before spraying with paraquat seemed to increase the kill.

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