

GENETIC WONDERS THAT WORK
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Farmers are constantly looking for a less-expensive, easier, more-reliable way to establish alfalfa. With the release of successful grazing tolerant varieties (Alfagraze, AmeriGraze 401 +Z, AmeriGraze 701, and AmeriGraze 702) more farmers are adding alfalfa to improve their pastures.

Establishing a strong stand can be challenging, especially in pastures that are steep and subject to erosion and moisture stress. Conventional tillage in these conditions is a serious threat to soil conservation and stand establishment. Enter no-till alfalfa. Procedures developed through research and refined through large-scale farmer adoption have made no-till seeding practical and widely adopted in many areas of the United States.

Two key components helping no-till alfalfa succeed – herbicides and drills – also have improved. The use of short-duration, low-residual herbicides (Gramoxone and Roundup) and the development of improved no-till seeding drills have made no-till practical and an easier system of seeding.

Advantages of no-till over conventional seedings:

- More soil saved (less erosion)
- Lower costs
- Less time involved in seedbed preparation and seeding
- Less labor
- More soil moisture saved
- More timely seeding.

Success standards for profitable no-till alfalfa:

- Plan ahead – select your field at least one year before seeding.

- Seed on well-drained soil.
- Seed in spring after winter soil-frost melt, or in late summer (fall) at least six weeks prior to historic first-frost date.

• Test soil to determine lime and fertilizer needs and recommendations. Needed lime should be applied one year before seeding. Best soil pH range is 6.4 to 6.7. Nitrogen should NOT be used in no-till.

• Control plan competition before and after seeding.

• Seed 15 to 20 pounds per acre at 1/4- to 1/2-inch depth on most soils. (Can seed at 3/4-inch depth on sandy soils.)

• Scout often and control insects. Seedling vigor:

Alfalfa, once established, is a tough, very persistent legume. But young alfalfa seedlings can be very vulnerable. Competition with grass, broadleaf and grassy weeds, and resident legumes may cause many new seedlings to be crowded or smothered during early establishment. Control of existing plants prior to seeding is a must. Short-residual herbicides, such as Roundup and Gramoxone, offer very effective broad-spectrum weed control to keep weeds from competing prior to and during stand establishment.

Where no-till works best:

- In perennial cool-season grass sod
- Following row crops
- Never into an old, thinning alfalfa stand.

Techniques for seeding no-till alfalfa in perennial cool-season grass sods/spring seeding:

1. Reduce the competition from existing plants with appropriate herbicides. Decide prior to seeding

whether to eliminate the sod completely or maintain a portion to grow along with the alfalfa and modify herbicide application accordingly. Since errors in seed placement are a primary cause of alfalfa stand failure, use only no-till drills designed for seeding into sod. Regular grain drills cannot be depended upon to establish an optimum stand because they lack the engineering to get the seed through the residue and into the soil at the proper depth.

2. To eliminate as much of the sod as possible (if desired), mow or graze in early autumn and apply 1 quart of Gramoxone or 1 to 2 quarts of Roundup per acre. In early spring, a follow-up application of 1 pint Gramoxone may be used to achieve total control. No-till seed alfalfa in early spring (NOTE: When using Gramoxone, always include the recommended rate of surfactant for better control.)

3. To maintain a portion of the sod, graze or mow closely in early autumn and apply 1 quart of Gramoxone or 1 to 2 quarts of Roundup per acre. A follow-up spring application of 1 pint of Gramoxone is necessary *only* if winter annual weeds are a threat.

4. In areas where perennial broadleaf weeds such as dock, horse nettle, thistles or other persistent weeds are present, apply, 2,4-D and/or Banvel® at locally recommended rates and dates.

Late summer seeding (a new technique).

Graze or mow existing cover by late spring. Apply 1 quart of Gramoxone or 2 quarts of Roundup per acre. No-till seed 20 to 25 pounds per acre of foxtail (German) millet per acre. Harvest the mill for hay or silage in 7 to 8 weeks (at early head stage). If weeds or other plants survive the spring herbicide and summer smother crop, apply 1 pint of Gramoxone per acre for fall cleanup. Seed alfalfa no-till at 15 to 20 pounds of seed per acre at least 6 weeks ahead of historic freeze date.

Following row crops:

1. Following corn (harvested as grain or silage), seed a small grain for winter cover. If triazine herbi-

cides (atrazine/simazine) are used in row crop production, their residual effects can injure legumes planted the following spring, so stick with labeled recommendations for best results. The following spring, apply 1 to 2 pints of Gramoxone in 20+ gallons of water per acre on the small grain when 4 to 6 inches tall. No-till drill 15 to 20 pounds alfalfa immediately. Should small regrowth occur (5 to 6 inches), mow just above the alfalfa or graze to help prevent smothering.

2. Alfalfa also may be seeded without tillage into standing small grain (8 to 10 inches) and wheat cut in the dough stage help reduce regrowth potential.

3. When small grain silage is made before the boot stage, wait 5 to 10 days for regrowth and apply 1 pint of Gramoxone in 20 gallons of water per acre, prior to seeding no-till alfalfa.

4. When the small grain is harvested as grain, fall seeding of alfalfa is best. Just before seeding, at least six weeks before historic freeze date, apply 1 to 2 pints of Gramoxone per acre to control weeds when soil moisture conditions are favorable. Volunteer small grain should be mowed or controlled with Poast after seeding – if it reaches 5 to 7 inches in height and threatens to smother the alfalfa seedlings.

No-till seeding is cost-effective:

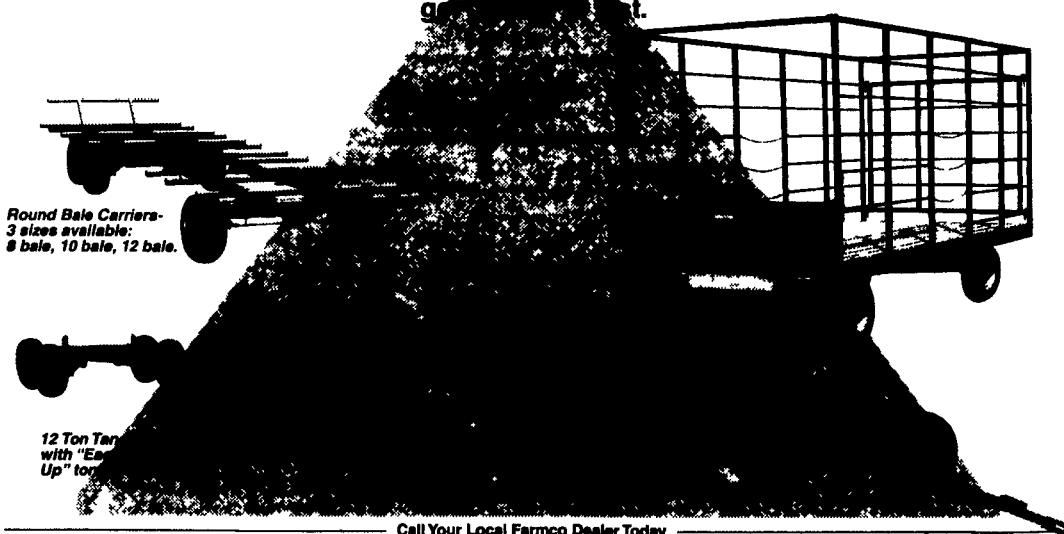
Despite additional herbicide costs, no-till seeding of alfalfa is comparable in cost to conventional seeding when managed properly, according to many years of university research. The added benefits of no-till – reduced trips across the field, less machinery wear and tear, reduced seedbed preparation and seeding time and labor, reduced soil erosion, increased soil moisture – offset increased expenses in chemicals.

No-till alfalfa works!

Obviously, successful no-till seeding of alfalfa requires attention to detail and proper management to obtain a good stand.

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