

## 16. SHORTCUT SODBUSTING

Putting in the center pivot on Rabbit Creek was easy compared to the big job that loomed ahead of the traditional 'sodbusting' to establish alfalfa.

Even before that, the prairie had to be dressed up enough to allow farm equipment and the center pivot to operate. I started by bulldozing and grading out the edges of the ravines that ran southeasterly through the Crested Wheatgrass.

Once the ground was smoothed up enough to work on, the traditional approach would have been to prepare a conventional seedbed by disking, plowing, mulching and harrowing so that the tiny alfalfa seeds could be positioned about one-half inch deep in a fine, firm soil.<sup>1</sup>

I fretted about how expensive, time consuming and risky it could be to establish a good stand of Alfalfa. We were then into May so it was going to be a race against time.

The narrow window of opportunity was dictated by the seasonal flow in Rabbit Creek. We had to get the alfalfa planted in time to be ready to 'water it up' by the first of June at the latest – or wait a whole year.

I took a chance on some unconventional shortcuts that involved two specialized pieces of equipment.

The first was an unusual type of sub-soil chisel called a *Sub-Mulcher* designed to shatter and aerate the soil about a foot deep with little disturbance of the surface. It took a week to chisel the 100 acres. Zach Thode now has our old *Sub-Mulcher* in use on the Roberts Ranch (pictured opposite).

Alfalfa germinates slowly, and the young plants are vulnerable to sun, wind and weeds. To mitigate this problem, alfalfa was frequently sown with a 'nurse crop' of oats drilled about two inches deep. The oats sprout and grow quickly, shading the delicate young alfalfa seedlings and competing with weeds.

Usually the oats would be cut green and put up as oat hay in mid-summer, leaving the now well-estab-

lished young alfalfa plants strong enough to compete with any weeds and benefit from full sun.

I decided to use a brand-new technology to shortcut the seedbed preparation so that I could utilize the existing native grass cover instead of a nurse crop.

John Deere had just introduced a power take off (PTO) driven seeder designed to inter-seed grass, clover and alfalfa into native sod (pictured opposite). It used a gang of rotating discs (that looked like power saw blades arranged in a row) to prepare 'mini seedbeds' about 1" wide by 1" deep. The seeder had twelve of these discs spaced 8" apart, so it planted 8' with every pass. The seed was metered into the 'mini seedbeds' and the soil firmed over the seed with packing wheels.

The variety of Crested Wheatgrass that was established where the pivot would operate was as well adapted to irrigation as to dryland. That was a disadvantage: As soon as the new sprinkler was turned on, the Crested Wheatgrass would respond with a growth spurt that could choke out the delicate new alfalfa seedlings.

The Crested Wheatgrass needed to be 'knocked back' so that the new alfalfa seeding could get a head start. Then the grass would need to recover fast enough to function as a nurse crop.

To the extent that there was any advice available for this new technology, it favored some kind of chemical intervention to stunt the grass temporarily, but I was never very good with sprayers and I didn't like to use chemicals.

I decided to use cows instead. I reasoned that if I could get the Crested Wheatgrass grazed down heavily enough, it would take a while to recover...

So, as long as the old-timers' jaws were working overtime down at The Forks, we gave them something extra to chew on. Kent and I put up an electric fence around the pivot circle and turned out about 150 cows and calves to work on the Crested Wheatgrass. In about ten days it looked like a billiard table.

I knew that any damage to the grass was going to be temporary because grass has evolved to take this kind of beating as long as it's quick and temporary (picture a thundering herd of buffalo eating everything in sight). Besides, it was going to get a good watering shortly.

By this time the pivot was assembled and operational. I tied a blacksmith's anvil to the end tower with a chain and turned on the pivot (but not the pump). In a day or so the pivot had dragged the anvil all the way around leaving a gouge that I could follow with the first pass of the seeder.

After moving the cows to 'greener pastures', I spent a very dusty week seeding the pivot. The seeder took quite a bit of horsepower and the 'saw blades' threw up a furious cloud of pulverized dirt as the whole shebang crept slowly around in a spiral until it finished up at the center.

It was an unqualified success (thanks to a lot of good luck). We applied enough water through the sprinkler to sprout the alfalfa. The weather conditions were just right. The germination rate was high and the stand was thick and even. The grass recovered enough to provide some shade but not enough to crowd out the alfalfa. And the flow in the creek held up to keep the sprinkler running well into June.

This field produced a bumper crop the next season and for years afterward. Since it was right by the road, everyone could see, and talk about it. One of the secrets to the long life of this alfalfa stand was that we planted *Nebraska Common* an old-fashioned dormant variety. Winter kill was never a problem. This was at some sacrifice to yield, compared to more modern varieties, but with much longer stand life.

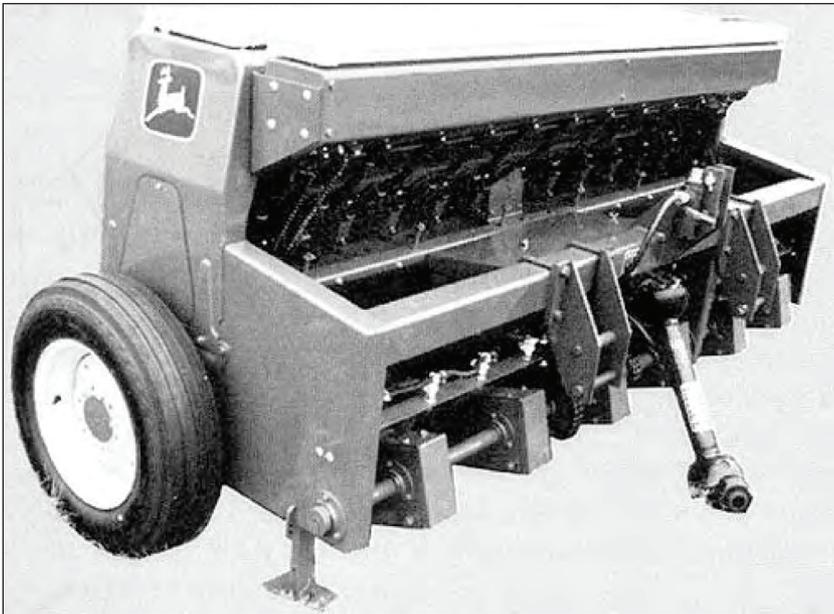
<sup>1</sup> At our Wellington Farm, we had specialized in growing alfalfa hay for dairies (with the price determined by the protein content), so I had some experience with seeding alfalfa.



The Rabbit Creek Pivot



3-Shank Sub-Mulcher



John Deere 1500 Powr-Till Seeder

