

Zone Tillage Keys Farm Sale with a Happy Ending

By Chester Peterson Jr.

This past winter Kent Haarberg, Enders, Nebraska, had a farm sale to sell off most of his equipment. But, no, pleasant surprise, he wasn't getting out of farming at all.

Far from it. Actually, this spring he doubled the number of irrigated corn acres he was farming by adding 1,000 custom-farmed acres to his existing 1,000 acres. He also handled this expansion without the help of the hired man he'd been using before.

And, no, at first glance, and even second glance, all that doesn't compute. But, in real life he's quite readily made this work.

Haarberg reduced his machinery inventory of conventional tillage tools to zero. The machinery he sold included among other items his stalk cutter, tandem disk, mulch tiller, cultivator, and land finisher.

By doing this he thinks he lowered his machinery depreciation and upkeep costs by as much as \$8 to \$12 an acre.

He kept only one large tractor plus a smaller tractor for use in spraying. Then he bought a new 12-row, 30-inch row planter on which he mounted a 1-tRIPr made by Orthman Manufacturing, Inc., Lexington, Nebraska.

This piece of equipment, the brainchild of farmer Lynn Flaming, Elsie, Nebraska, is designed for zone tillage, sometimes also called strip or row tilling.

Each row unit has a variable depth shank that Haarberg runs eight inches deep to break hardpan below the seedbed. Then the following planter unit places the seed in a moist, near-optimum seed bed to the side of where the shank ran.



The 1-tRIPr shatters sub-soil while placing fertilizer directly in the root zone.

"This is the first time in my farming life I've been able to put fertilizer in the ground exactly where it should be, two inches below and two inches beside the seed," Haarberg comments. "The fertilizer tube on the back side of the ripper can be set to any of three depths."

His 1-tRIPr essentially eliminates four field operations, since he no longer has to drive into a field until he brings in the planter-1-tRIPr combination. He also notes that he was planting into moisture, even though rain had been exceedingly skimpy in the area.

As for his savings, they start with much more miserly fuel usage. Haarberg used to figure on burning six to seven gallons of diesel fuel in the spring to complete his tilling and planting operations. Now



Kent Haarberg, Enders, Nebraska, is pleased that he sold all of his conventional tillage equipment when making the switch to the 1-tRIPr and the zone tillage it allows.

he's investing only one-and-a-quarter gallons an acre, or approximately 15 percent as much in fuel expense.

That's the equivalent of another couple of "free" bushels of corn right there, he thinks. A dollar figure is a little more difficult to calculate, but his saving in

tractor hours, depreciation, and maintenance runs at the same ratio.

Also, part of the equation is whatever the saving of almost eight weeks of hay and supplement for livestock that otherwise would have had to be pulled off stalk fields. Because no tillage is needed, livestock can be kept on the stalks until the very day the planter came through the gate.

However, nice that they are, he doesn't consider all those savings advantages to be the real payoff from switching to zone tillage and the 1-tRIPr.

"We are in a water allotment area here. We're allotted only 14-½ inches of water a year," he advises. "Farmers still on conventional tillage were having to pre-water and then water their corn up. However, there was no need for that in my fields. The seedbed was nice and moist, so that saved me water."

"One of the farmers for whom I custom farm told me he was amazed at how moist the seedbed's condition was, and all without a drop of irrigation water," Haarberg adds.

On the other side of the coin, on the solitary planting day following a light rain he found he could get into the field to plant a little more quickly than he could have before with conventional tillage.

Downside items with his new zone tillage system are minimal. It's a heavy piece of equipment, and puts a good load on the tractor, though.

He's experienced no plugging problems even in a field with many four to five feet-long corn stalks on the ground. The only exception has been where an occasional deep sprinkler track accompanied a thick load of trash.

Although the 1-tRIPr provides a good many possible adjustment setting combinations, Haarberg reports he had no trouble fine-tuning his machine after watching originator Flaming set one up.

Although it can't be measured in dollars, he says another payoff is in relieving much of the previous pressure of having to make so many field operations in the spring before he could finally plant.

"Yes," he smiles, "it's also kind of nice now not having to be in a rush, rush, rush all spring-long anymore."





Lynn Flaming, Elsie, Nebraska.

The story behind the popular 1-tRIPr — “His zone tillage machine halves labor, water, equipment depreciation, and fuel—and yes, also increases yields.”

By Chester Peterson Jr.

If it's true that the most flattering recognition comes from your peers, then there are more and more good reasons for Lynn Flaming to feel mighty appreciated.

He farms close to 4,000 acres of corn, wheat, soybeans, and dry beans near Elsie, Nebraska, plus runs a 500-cow beef herd. But, what he's becoming much more well-known for is his invention of a piece of equipment that brings practical strip or row tillage to the Great Plains.

A growing number of “converts” are saying that this piece of equipment just well may be the catalyst that changes tillage practices and how corn is grown on the region's sprinkler-irrigated sandy soils. Flaming admits to having been fascinated for years with the concept of combining deep tillage and residue management with planting into stalks or stubble.

He remembers that 20 or so years ago a company (BushHog) came out with a machine aimed in that direction. But, it was, “Long, incredibly heavy, and horsy to handle,” he remembers.

His first prototype left the farm shop back in the spring of 1996. It combined some off-the-shelf components with those he made, with emphasis on a more user-friendly piece of equipment that could be reconfigured easily for use in fields with varying amounts of residue.

The prototype lasted 40 acres. Yet when viewed from an airplane, Flaming recalls that it was obvious that something was happening in each narrow strip of ground. An improved second version covered three circles the next spring.

The third generation that eventually evolved from it became the 1-tRIPr that's now being made by Orthman Manufacturing, Inc., Lexington, Nebraska. One of its keys is a shank designed to

do the absolute maximum heaving at the bottom without disturbing soil at the surface.

Somewhat surprisingly, each tillage row of the 1-tRIPr is offset one-and-one-half inches to the side of where the planter unit just behind drops the seed. Trash is cleaned out of the way so the planting zone is completely clean-tilled. The seed is packed into moist, firm soil.

“This is basically a zone tillage system,” Flaming explains, “and is neither ‘trash farming’ nor no-till. Proper residue management is the secret to survival out here. Of all the things this machine accomplishes, everything is secondary to the incredible seedbed it makes.”

His years of experience using his machine shop has paid off in many ways. For instance, he estimates that labor needs, tractor hours, depreciation, and fuel burn have been at least halved compared to how he was tilling and planting before. Soil compaction has been nearly eliminated, too.

And, rather than having to run his cows off the corn stalk field two weeks before planting so he could “stir the dirt,” now they go out the same day he wheels in his 1-tRIPr-planter combo. This saves him hay and supplement costs.

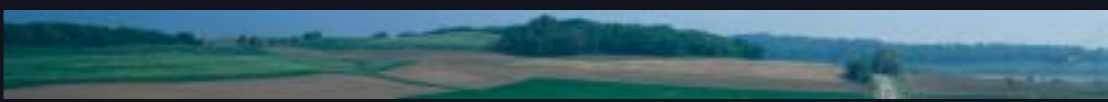
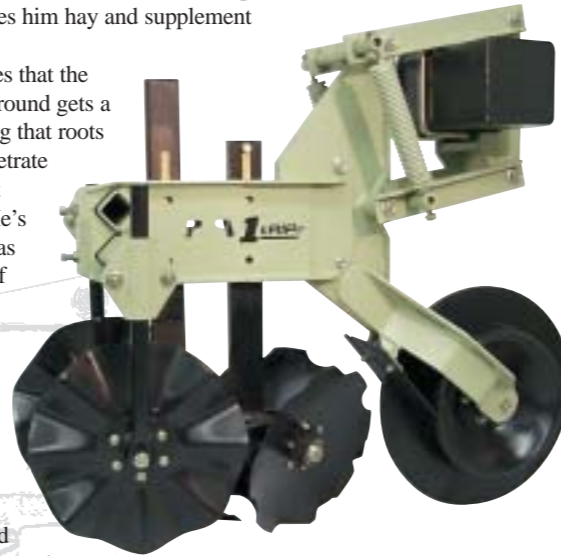
Flaming notes that the region's sandy ground gets a crust in the spring that roots don't like to penetrate and which won't hold moisture. He's convinced this has resulted in lots of wasted irrigation water over the years.

Instead, what's been needed has been a way to encourage root development, and that what the 1-tRIPr is designed to do, according to Flaming.

This past spring, a really dry one, he didn't have to pre-irrigate or even water even once even though neighbors watered up a couple of times pre-plant. Yet Flaming says he could virtually make mud balls in the strips where the 1-tRIPr had run. As for yields, easily the most important concern of most farmers considering a change to residue management, he reports his fields haven't suffered a bit. In fact, what he noticed right away was that while his good ground produced almost the same or slightly higher yields, he saw substantial increases on his poorer fields.

“All of a sudden my corn over the hills was just as good as it was in the valleys. This is almost certainly due to better early season root development,” Flaming says. “I didn't have to give up anything on yields.”

“My bottom line is that the 1-tRIPr has allowed me to raise more corn with less expense,” he sums up. “It's just a better way of farming.”



“My 1-tRIPr is the best piece of equipment I've ever owned.”

“My 1-tRIPr is the best piece of equipment I've ever owned. It's simple, and it's just a Cadillac machine.”

“Use of the 1-tRIPr has let us cut out five to seven field operations before planting that we used to have to do to break up clods and get a field prepared the way we wanted. It's crazy to work all that ground so much.”

“Before we started using the 1-tRIPr on our planter two years ago we had to run four or five tractors all spring to get the ground ready. Now it just two of us can get it all done in the spring.”

“Labor is hard to find, often impossible out here, and the 1-tRIPr has let us cut out two men while still farming a bunch more ground.”

“If we had to go back to farming conventional-till we'd drop back to only half as many acres since we don't want to fight the labor situation.”

“Before we got our 1-tRIPr we put 1,000 hours a year on our two main tractors. Now we put on less than 500 hours apiece on each of those tractors on more acres. This has resulted in a big fuel savings for us.”

“We're limited on water here. Last year was really dry, too, with only a little rain. Yet on one 1,000-acre farm we averaged 207 bushels of corn an acre on just 11.4 inches of through the sprinkler irrigation systems.”

“This spring we were bone dry. However, thanks to the



Don Schilke, Imperial, Nebraska.

1-tRIPr we were still planting in good moisture even though we didn't prewater a single circle. The only reason we irrigated at all right after planting was to give a half-inch to water in the herbicide.”

“Every year of using the 1-tRIPr the ground gets softer and the yields go up.

In this sandy soil our ground might look kind of shaggy, but it isn't going to blow like fields tilled conventionally.”

“We're not as concerned about yield as we are our bottom line. Our 1-tRIPr saves us labor, fuel, water, and tractor investment and maintenance. The 1-tRIPr let us break into strip tilling the easy way.”

“Now in a normal year we can show a profit with \$1.90 corn!”

“Using the 1-tRIPr, now in a normal year we can show a profit with \$1.90 a bushel corn!”

“We got really tired of spending \$280 to \$420 an acre on corn and losing money. Since getting the 1-tRIPr we've been able to get our expense side lowered. If corn goes back up, great. But, now with the right weather we can make it on \$1.90 corn.”

“Our 1-tRIPr is the machine that makes it all happen.”

“We make only three passes a year in each field now in growing a corn crop: Planting, spraying, and harvest.”

“We justified the 1-tRIPr to the bank as a \$9 an acre one-year investment, rather than spreading out the investment over a seven-year lifetime. Our 1-tRIPr paid back in that first year. We've been very, very happy with the decision to buy this ‘iron’.”

“The 1-tRIPr saves us time, labor, equipment depreciation,



Jerry Kuening, Imperial, Nebraska.

diesel fuel, and water. And, it also makes the soil so much more mellow.”

“Last year, we used one large tractor for the fieldwork and to pull the grain cart at harvest on 12 circles of corn. We put only 400 hours on the tractor—but before I started using the 1-tRIPr we were putting 2,400 hours a year on it! Thanks to the 1-tRIPr this may possibly be the last tractor I'll have to buy.”

“Using the 1-tRIPr means we're putting only a sixth as many man-hours in the tractor seat every year.”

“With the 1-tRIPr the first day we're in the field in the spring is the day we plant. Our fields are untouched unless they need some pivot track attention.”

“Our neighbors jokingly accuse us of herding our cattle that have been grazing on the stalks out of

(Continued)

"Now in a normal year we can show a profit with \$1.90 corn!" continued

the fields with the planter. We'll typically move cattle off in a morning and be planting by afternoon."

"Not having to do any field work before planting lets us graze our cattle two to three weeks longer. In a wet year we can take them right to grass or in a dry year we won't have to feed so much before going to pasture. This takes care of most or all of that usual springtime void."

"The 1-tRIPr lets us plant in trash, rip as deeply as we need to, and get good seed to soil contact."

"The 1-tRIPr puts us ahead of conventional tillage in the spring by up to two inches of moisture. It always let's us plant in moisture."

"Although this has been an exceptionally dry year, we didn't have to pre-irrigate one or two times like our neighbors did. This moisture conserving saves pumping costs and more readily keeps us within our limited water allocation."

"The first year we planted a field with the 1-tRIPr on our planter our neighbors wanted to know why we quit farming. That's because a field won't turn green until the corn is a foot tall and able to reach over the stubble."

"To us on the days the wind is blowing 40 miles an hour that's much more beautiful than clean ground corn that's being



cut up by wind erosion."

"The 1-tRIPr has let us take some pretty marginal ground and make it work."



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