Farmer Builds Hay Aerator To Renew Pastures

Garry Klassen, Plum Coulee, Manitoba, built a 15-ft. wide aerator for rejuvenating the grass on terraces, alfalfa fields, and pasture lands.

He welded a big I-beam underneath the hitch so when he lifts the unit, it's all above the ground. The I-beam drags down mole hills and little piles of manure. He used a 20-in. drum with 95 1/2-in. thick by 8-in. long steel tines welded to the top of the drums. The drum has a frame around it with four heavy duty wheels on the back and a straight frame welded onto the housing of the tubular frame. The wheels in the back lift up hydraulically to add down pressure to the aerator.

Without water in the drum, the aerator weighs about 6,000 lbs. Klassen's 140 hp tractor has no problem pulling the unit.

Klassen studied a commercially-built aerator and felt his idea would work just as well, if not better, and cost less. Using a bigger drum makes his aerator a little less aggressive and easier on the sod.

"I didn't want to damage the sod too much," he says.

He estimates the materials cost around $4,000. It took about two months to build.

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Aerator has a 20-in. dia. drum with 8-in. steel tines welded onto it. I-beam in front of drum drags down mole hills and small piles of manure.

One-Pass Tree Planter

"It lets us plant two rows of trees 8 ft. apart and one mile long in just 30 minutes," says Dale Younker of the Hodgemore County Natural Resources Conservation Service in Jetmore, Kansas. The planter was built at Younker's request by Mike Hornung, Offerle, Kansas.

"I'd built a lot of farm machines but I'd never built a tree planter," says the machine shop operator. Hornung enlisted Melvin Strecker, a farmer and neighbor, to help him build the machine.

"The NRCS wanted a heavy-duty machine that would plant trees into sod, lay down a plastic subsurface drip irrigation line, and put a black plastic weed barrier over the top, all at the same time," Hornung says. He studied other tree planters, but in the end, he decided he needed a new design.

The tree planter requires at least 70 hp to pull. Using it, farmers and NRCS workers have been able to plant two rows of trees 8 ft. apart and a mile long in just 30 minutes.

Directly behind the tractor is a 3-pt. mounted toolbar with a spike that rips open a furrow where trees are to be planted. The drip irrigation line is inserted by the spike as it digs. Two operators facing rearward ride behind the bar to drop trees into the open furrow. Wheels on the main bar assure uniform depth of the furrow and the drip tube.

On the rear of the tree planting unit are caster wheels that allow the unit to follow directly behind the tractor, even on sharp turns or while backing up.

On back of the planting unit is a 3-pt. hitch and parallel linkage to which the fabric unroller is attached. A third operator rides on the fabric-laying unit to run a knife to slit the plastic around each tree.

A brake on the unroller keeps the fabric tight as it unrolls onto the ground. Finally, heavy disc hillers on either side of the fabric throw soil on the edges to hold it in place.

Younker says the planter, which cost about $15,000 to build, was used to set out around 3,000 trees during the first year, and another 5,000 this past spring. He hopes it will increase participation in the district's tree planting programs. "Since it's a one-pass planter, land owners will no longer have to spend a lot of time preparing the area where they're going to plant trees," he says. And, too, with the buried drip line, tree survival rate should be greatly improved.

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Heavy-duty machine plants trees into sod, lays down a plastic subsurface drip irrigation line, and puts a black plastic weed barrier over the top, all in one pass.

Chute Blows Straw And Chaff Into Trailing Wagon

When combining small grains, John Hoegl used to use a Redekop collector to drop chaff and straw on top of windrow, so he could bale it up for cattle feed.

But last year his crop was so short and thin it would have been a waste of time to do it the normal way. Hoegl, who farms near Lloydminster, Sask., figured he could eliminate a trip across the field by blowing the straw and chaff into a wagon pulled behind the combine. The question was how to do it.

After giving the matter some thought, he decided to run the straw through the chopper on back of the combine and up a chute into a side-dump silage wagon. It is necessary to have a "fine cut, wide spread" chopper which has flail type hammers in it to have enough air flow to keep the straw moving. "This is a John Deere option and the only one we have experience with," Hoegl notes.

He made the chute from sheet metal formed around an angle iron frame. It's wide at the bottom to catch the chopped straw as it's blown up from the combine. It narrows at the top, and has an adjustable deflector to better direct material into the wagon.

"There are no moving parts in the chute," Hoegl tells. "The chopper throws the straw hard enough that it just needs to be directed to the wagon. There's no bottom in it, either. That way, if a heavy, wet slug comes through the combine, it just falls away from the chute, rather than plugging it up."

There is an adjustable deflector at the bottom as well. Hoegl mounted the chute with the brackets that came with the chaff collector cyclone. It's hinged at the bottom and suspended by cables on the sides, so it flexes if he backs into something or it happens to hit the wagon.

The chaff is still collected with the Redekop unit as before, but it's blown into the high dump wagon with a simple extension on the tube that went into a cyclone tank before.

Hoegl figures the chute cost $500 to make. "We haven't used this system on heavy crops yet but we think it will work just as well," he says.

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Straw goes through chopper on back of combine and up a chute into a side-dump silage wagon. Chaff is still collected with Redekop unit.

Side-dump silage wagon delivers material into truck.