SHOP-BUILT HYBRID COMBINES PARTS FROM TWO MANUFACTURERS

"John Holland" Swather

"I raise alfalfa hay for sale at a feed store so producing high-quality hay is a must," says Dave Miller who built what he calls a "John Holland" swather using the powertrain off a Deere 2280 swather and the header off a 488 New Holland pull-type haybine. The goal was to achieve the speediest drying time in order to produce the highest-quality, best-looking product.

The Oregon farmer previously used two 1960's New Holland 1469's with narrow 9-ft. wide headers and full width rubber conditioning rolls which put hay in completely flat 7 1/2-ft. wide windrows. Two swaths, equivalent to an 18-ft. swath, were then twin raked together ahead of Miller's balers.

However, after using the pair of haybines for more than 20 years, he found parts next to impossible to get. Plus, the old haybines had several drawbacks - gas engines, planetary drives, high-maintenance driveshafts, and no air conditioning.

"I still wanted the narrow swath and the wide conditioner, but no one builds a self-propelled machine that size," Miller says.

He started with a 9-ft. pull-type New Holland header, discarding the running gear.

"With a little measuring, I found that a Deere 2280 series swather powertrain would track behind the header if we changed to smaller wheels fitted with 12.4 by 18-in. turf tires," he says.

A new set of header lift arms was fabricated out of mild steel and attached to the existing lift points on both the header and powertrain. Existing Deere hydraulic lift cylinders were used, while counter balance springs from the New Holland machine provide "float" for the header.

"I removed the pulleys, belt, and header drive from the Deere and installed an industrial 30 gpm hydraulic pump behind the gear box using the Deere driveshaft, which I shortened by half," Miller says.

"The pump is supplied with oil from a 30-gal. reservoir mounted on the right side of the cab and drives a piston-type motor mounted on the header. The system is controlled with a ball valve and a bypass line and pressure regulator. When the header is taken out of gear, the conditioner rollers act like a flywheel, so a check valve was necessary to prevent the motor from turning into a pump and reversing oil flow. The return oil is routed through an oil cooler with an electric 12-volt fan mounted behind the cab.

"A dummy shaft was installed in place of the pto gearbox on the header and connects to the hydraulic motor with a high speed roller chain and hardened sprockets. The hydraulic drive absorbs a lot of the shock from the conditioner and makes a smoother running header."

To build his "John Holland" swather, Miller used the power train off a Deere 280 swather and the header off a New Holland 488 pull-type haybine.

Miller likes the machine's diesel engine, hydrostatic ground drive, air conditioned cab and Deere tractor-style seat. Because of the forward positioning of the header, it also offers the operator a better view of the crop coming through the rolls and the ground behind the cutterbar, making it easier to spot any potential plugs.

The only machining required for the project was shortening the gear box drive line and yoke, and the dummy shaft to replace the pto gearbox on the header, says Miller.

"The only minor problem I've noticed is that, because of the smaller tires, you lose a couple mph's from the normal transport speed of 15 mph," he says. "Otherwise, I used the machine last year to make four cuttings on 200 acres and it performed flawlessly."

Out-of-pocket expense was $8,500.

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Chain conveyor runs along one side of Bernholtz's wagon, with bales guided by 2 by 4's nailed on their edges to the floor. When not in use, conveyor is covered by a series of 4-ft. long plywood covers that are hinged on one side.

Wagon-Mounted Conveyor Makes It Easy To Unload Bales

Unloading bales from a hay wagon has never been this easy. Norman Bernholtz mounted a chain conveyor along one side of his wagon that runs directly to a bale elevator that carries bales up to a barn loft.

"I never have to walk more than a few steps to set bales on the conveyor. I can unload 140 bales in only about 15 minutes. It worked so well I put unloading conveyors on both of my wagons," says Bernholtz.

The conveyor consists of a chain that mounts inside a track made from 2-in. wide channel iron. The channel iron track bolts to the floor and extends almost all the way to the back of the wagon. The chain rides on sprockets at each end. The bales slide along between 2 by 4's nailed on their edges to the floor. When not in use, the conveyor is covered by a series of 4-ft. long plywood covers that are hinged on one side. Flipping the covers up out of the way exposes the chain for unloading.

"I open the covers one at a time as I unload the wagon because bales are stacked on top of the conveyor for transport," explains Bernholtz.

A 1/4 hp electric motor mounts under the wagon. It belt-drives a right angle gearbox that drives the chain. The gearbox is from an old corn picker. A switch on one side of the wagon is used to start the motor. Bernholtz also made an "offset hitch" for the wagon that allows him to easily line up the conveyor with the elevator as he drives the wagon forward.

Contact: FARM SHOW Followup, Norman Bernholtz, Rt. 3, Box 246, New Ulm, Minn. 56073 (ph 507 354-5128).

New "Hay Cradle" Simplifies Bale Handling

"It's great for hauling bales into the barn. I don't have to lift a thing," says William Keller, farmer-inventor of the "Hay Cradle" - a 2-wheel hand cart that makes moving square bales easy.

The patent pending "Hay Cradle" is fitted with a row of small steel tines across the bottom. A wide metal framework above them holds the bales - or other bulky loads - in place.

A triangle-shaped "hook" can be swung out in front to help secure bales. The unit can also be used to haul pails of feed, salt blocks, barrels, etc.

Sells for $250.

Contact: FARM SHOW Followup, Keller WK Ranch, 12075 270th Ave. N.E., Belgrade, Minn. 56312 (ph 877 957-2624; fax 320 243-2624).

The 2-wheel hand cart is fitted with a row of small steel tines across the bottom.

Conveyor runs directly to a bale elevator that carries bales up to a barn loft.