Marvin Bearinger's cob meal harvester was made from several different components, including the cutterhead off a Deere 3960 pull-type silage chopper, a Case IH cornhead, and the feederhouse off a Case IH combine.

Crop enters from the cornhead through the feederhouse to a feeding auger, which pushes it into the cutterhead. Material then moves to an impeller blower off a Dion forage harvester.

"Made It Myself" Cob Meal Harvester

By Jim Ruen, Contributing Editor

Marvin Bearinger's cob meal harvester looks fresh off the showroom floor, but it was built from scratch. Most components came from a local salvage yard, and a local machinery dealer helped him put it all together.

"I had a regular chopper with a 4-row header that was nothing but trouble," says Bearinger, a custom harvester. "I discussed modifying it with Riverside Equipment, my local dealer. They suggested starting from scratch and keeping the old one as back-up."

Bearinger went to work, using his imagination and a plentiful supply of parts from a friend who owned a local salvage yard, B&M Agri Parts. Components included a cutterhead off a Deere 3960 chopper, a Case IH 1043 cornhead and a feederhouse off a Case IH 1440 combine. The pto shaft, tongue pole assembly, and impeller came from a Dion forage harvester. A clutch for engaging the pto was adapted from a rear-end pto assembly on an IH 656 tractor.

"I laid them out to see how they could fit together and then welded a frame that would fit beneath them," says Bearinger. "Whenever I thought of something I needed, I would ask my friend at B&M if he had it. If he didn't, he would tell me what he had, and we would truck it down and try it."

The cutterhead is the most important component. Bearinger placed it at the end of the pto shaft gearbox and clutch (rear-end pto assembly). The pto assembly came complete with its own oil reservoir. Bearinger ran the pto power in one side and a pto drive for the cutterhead and feeding auger out the other side.

"I replaced the original engaging control lever with an electric solenoid so I could operate it from the tractor," says Bearinger.

The feeding auger is a heavy-duty, 18-in. dia. auger with 1/2-in. flighting. Crop enters from the cornhead through the feeder housing to the feeding auger. The auger pushes it endways into the cutterhead.

Behind the cutterhead, a concave style screen with 1/4 by 3/4-in. upright bars catches any long leaf material and returns it to the cutterhead. Properly sized material feeds through the screen to the processor, which rolls kernels and cob, crushing them fine. Material then moves to the impeller and up the spout to the wagon.

"I needed a reverser on the feederhouse in case of a jam," notes Bearinger. "I used an orbit motor with overriding clutch from a Gleaner combine. It hooks on back of the feederhouse shaft, opposite where the drive enters. Once I shut the header off, it can reverse both the feederhouse and the auger."

Initially Bearinger mounted the harvester frame on wheels and an axle from a Deere 6601 pull-type combine. The left wheel was mounted in front of the impeller to avoid making the 16-ft. wide harvester even wider. This caused the harvester to balance on the wheels. To get the proper weight on the tongue, Bearinger replaced the right wheel with a long oscillating tandem axle under the impeller blower.

Harvester frame mounts on a long oscillating tandem axle mounted under the impeller. Kernels and cobs are crushed fine before being blown into wagon.

Everything that can be hydraulic is. "I use electric over hydraulic controls," says Bearinger. "They control vertical movement of the header, turning the spout and the selector on the spout, swinging the pole from field to transport and engaging and disengaging the header and cutterhead."

Bearinger estimates he has spent just under $50,000 on the harvester, including about $3,000 on paint. He is confident of a good return on investment after its second year in the field.

"I started putting it together in June of 2014 and had it in the field by September," he says. "We did around 400 acres last year and about 380 this year with a lot of happy customers."

Bearinger is happy too. His cob meal harvester does a better job than his forage harvester did for the same job. "Forage harvesters are designed for corn silage, not cob meal," he says. "I've had nothing but trouble with them. This harvester can do 40 acres a day with far fewer mechanical problems."

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Working Trailer Designed For Rotational Grazing

Doug Abney has a college degree in engineering that has been a big help in finding ways to raise cattle more efficiently. He and his family raise Belted Galloway cattle in Johnson County, Indiana, using sustainable pasture grazing as their source of feed.

Abney and his family run a 45-acre farm dedicated to pastureland that he's developed through the assistance of conservation cost sharing programs and EQIP, the Environmental Quality Incentives Program. Abney's rotational grazing system is highly efficient, including a one-of-a-kind combination watering system/mineral trailer/tool cart that he built himself.

Abney built the device on a small trailer that he bought at a bargain price off Craigslist. "I think the original trailer was probably used at an airport, and it had been modified and lowered to the ground to haul something very heavy," Abney says. "I made a few changes to it myself, took it to the field to make sure it worked, then modified it again so our herd bull was able to use it just like the cows."

Abney's 4 by 10-ft. trailer carries a 300-gal. water tank that allows animals to drink on all sides. His registered Belted Galloway bull has such a large head that he had to make a special trough for him. The waterer/trailer includes a large toolbox with 2 compartments that hold 10 bags of mineral. The back of the trailer has a mineral feeder that holds 2 bags. As cattle lick the minerals, their necks rub against a small hood that wicks fly spray onto their necks. It's a self-application system that saves Abney time and increases cattle comfort.

Abney pulls the trailer with a small tractor and positions it in a lane where cattle from 2 pastures can reach it at the same time.

"The hardest part of rotational grazing is keeping water in front of the cattle at all times," says Abney. "This trailer allows me to do that because I have an in-ground water supply that's never more than 175 ft. away." He connects a hose to the float so the water tank is always full.

Doug Abney's rotational grazing system includes this combination watering system/mineral trailer/tool cart that rides on a 4 by 10-ft. trailer.

Abney is expanding his rotation acres and hopes to double the number of cattle he has on pasture in 2016. He says the trailer works so well that he may have to make another one just like it for use in other pastures near his farm.

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