

Working Model Grain Elevator, Thresher Amaze Crowds

A few years ago, Brian Harvey volunteered to serve on the board of his local agricultural society. That led to another volunteer project which quickly became a labor of love, and practically an obsession.

Harvey decided to build an educational and interactive display that would increase attendance to the local fair in Swan River, Manitoba, known as "Northwest Round-up," held every July.

For the fair's agricultural exhibition, called "Down on the Farm," Harvey designed and built an intricate working model grain elevator, which has been wildly popular for the past two years with adults and children alike.

Last year, he added an amazing working model 1/3-scale threshing machine. This year, he's adding a dump truck, three grain bins, and a self-propelled grain auger. All of these items are operated by remote control.

Harvey says he's grateful for the tremendous assistance provided by his brother Jerry, daughter Meredith, friend Geoff Child, and a few other people.

The working models are an ideal way to engage, entertain and educate about farming because they're so much fun to operate, Jerry says.

The elevator stands about 5 ft. tall and all aspects of its operation can be controlled by remote control.

"You can start and stop the leg, turn the garber spout at the top of the leg, open and close the chutes at the bottom of the bins, weigh grain and send it to a bin within the elevator, or out to a truck or train," Brian says. "There's a cute little G-scale train with an awesome sound card in it, and a proper grain car and caboose that sit on a raised track. You can load the grain car, drive the train onto a trestle that has a hole in it, and drive a semi truck underneath. Once you drop the grain into the truck, you can drive the truck up into the elevator and dump the grain into the front pit."

Harvey says three people at a time are allowed to work the controls. One drives the belly dump truck, one drives the train, and one runs the console on the elevator. Then they switch places until they've all had a turn with each model.

Two computers are involved in the operation of the elevator, one of which was built from scratch by friend Geoff Child, and is located inside the elevator. It converts raw data from the infrared bin sensors and then

sends it out to the desktop computer for display.

Harvey also built miniature push brooms and corn brooms that are used to sweep up the mess after the truck has unloaded into the elevator.

In order for people to see into the elevator and learn how it works, Harvey left one corner of it open, with a scalloped edge.

His daughter Meredith, cut and glued on more than 2,300 individual tapered cedar shingles, as well as each piece of siding.

The elevator took a little over 2,000 hrs. in all to build.

He says the stationary threshing machine required 2,300 hours to build. When folded up, it's 10 ft. long and 3 ft. 6 in. to the top of the feeder housing.

"The thresher puts out grain that a seed cleaner would be proud of," Jerry states. "Everything about it is the same as a real threshing machine, but smaller. One thing that's different is that it has windows so you can see in to see how it works."

Because these machines are dangerous, the brothers demonstrate them inside a fence for 10 minutes at a time, and then take down the fence so people can see them up close.

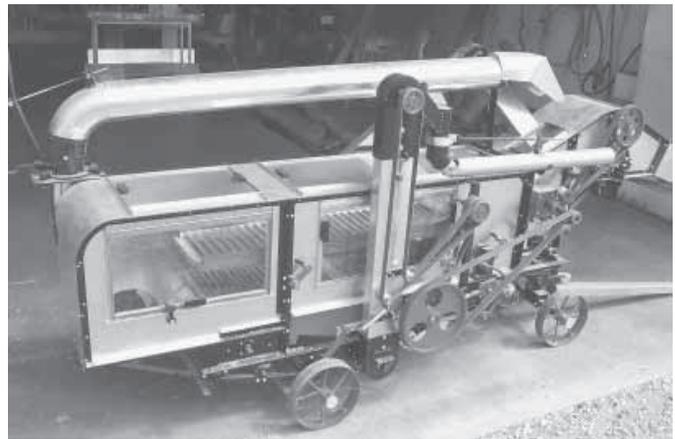
For the first time this year, the threshing machine and the elevator demos will be neatly "tied together" thanks to three bins, a dump truck and a self-propelled grain auger, that Harvey also designed and built.

Now, the thresher dumps grain directly into a holding bin. From there the dump truck picks it up and then it's driven over to where the hopper bottom bins are. Then the truck empties its box into the self-propelled auger, which puts the grain into the hopper bottom bins. The semi trailer truck then drives beneath the bin's auger and is filled so it can transport its load to the elevator. This is exactly what would happen in a farm situation, Brian explains, except that today, the threshing machine would be a combine.

To build the semi and the dump truck, Harvey used model truck cabs he purchased, and then he made his own more rugged chassis, steering, wheels and tires. This aspect of the system took hundreds of hours.

"For all of the time that these models have taken to design and build, I have to admit that after a 1/2 an hour of watching the grandpas and the young people enjoy it, I'm paid in full for my effort," Jerry says.

The response from the business people in



Brian Harvey built this working model, 1/3-scale stationary threshing machine. When folded up, it measures 10 ft. long and 3 ft. 6 in. high. Side windows let people look inside to see how it works.



Harvey also built this intricate working model grain elevator, leaving one corner open so people can see how it works. Elevator stands about 5 ft. tall and all operations can be controlled remotely. Grain loads out onto a mini truck or train. Three people at a time are allowed to work the controls. One drives a belly dump truck, one drives the train, and one runs the console on the elevator.

Swan River Valley to donate and or help pay for building supplies was tremendous. Contact: FARM SHOW Followup, Brian

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'Bits And Pieces' Allis Chalmers

Terry Miller of Lane, S. Dak. says he and his partner Elaine Schlenker had a lot of fun reviving an old WD45 Allis Chalmers tractor they bought for \$150.

The couple call it their "Bits and Pieces" tractor because it now consists of a mish-mash of parts from many different machines.

The tractor sports a Chevy 305 V-8 engine they got out of Terry's 1979 Capris, which had 160,000 miles on it and still ran well.

They pulled a Chevy 350 transmission out of another car and rebuilt it at a cost of \$600.

The Allis has the original wide front end. They lengthened its frame by 3 ft. before installing a used Chrysler radiator. They mounted different used electric fans on the transmission cooler and the radiator.

"We had to redo the front end," Miller explains. "The steering knuckles are all brand new and it has new wiring, too. I special-made the exhaust system for the manifold, using two manifolds I already had off a '55 Chevy."

Miller says the back tires and wheels came off an Allis 6926 combine and the fenders are from a D17 Allis tractor.

The speedometer and tach came with the transmission, but Miller custom made everything from the hood back, including the dash panel and the fuel tank.

"It has the original steering wheel and the original snap couplers still work real well, so if you wanted to mount an Allis plow on it, you could," he says. "We equipped it with a custom high-backed seat (not shown in photos) and re-painted everything except the back rims."

Miller says, "It was fun just to see if we could do it."

He and Schlenker worked on the unique tractor in their spare time for a couple of years, and figure they spent about \$3,000 on the project.

Now that it's complete, they enjoy driving it around and looking at it.

"This tractor has a lot of power and can travel at speeds up to 40 mph," Schlenker points out.

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Terry Miller and his partner Elaine Schlenker revived this old WD45 Allis Chalmers tractor. It sports a Chevy 305 V-8 engine they got out of Terry's 1979 Chevrolet Capris. They lengthened the tractor's frame 3 ft. in order to install a used Chrysler radiator.