

Weed Seed Destructor Ready For Market

In early 2012 FARM SHOW published an article on the Harrington Seed Destructor (Vol. 36, No. 2), a machine that destroys weed seeds behind a combine. After a full year of testing across a large portion of southern Australia, the machine has received many positive reports. Trials at 14 locations showed the Destructor reduced annual ryegrass emergence by 40 to 90 percent, depending on the initial level of infestation. The machine is now being produced by DeBruin Engineering and will sell for about \$240,000 (Australian).

Ray Harrington, who designed the initial pull-type Destructor, says a new approach will soon be available for larger combines. A specially designed weed seed "destructor" will be incorporated directly into the harvesters. Instead of chaff and weed seeds needing to be conveyed out of the machine for processing, the integrated destructor will process straw, seeds and chaff before it exits the machine. The auxiliary destructor uses power from the combine engine to process chaff at more than 30 tons an hour. The

commercial tow-behind machines will still be used on class 6, 7 and 8 size harvesters.

Adam Davis, a USDA weed scientist from Illinois, says it's unlikely that grain farmers in North America will adopt this type of technology. That's because these systems rely on weed seeds being harvested with mature grain, which isn't much of a problem now for row crop and grain farmers. That may change as more herbicide resistant weeds, like palmer amaranth and giant ragweed, become more of a problem. In Australia, however, herbicide resistant weeds have been a problem for many years. More than 70 percent of the farmers either collect the chaff in a cart behind the combine, bale it directly behind the combine or burn the chaff in small windrows on the ground. All of those methods are somewhat effective and always labor intensive. Harrington thinks the new integrated mill in larger harvesters may be the best answer.

More than 20 years ago, FARM SHOW wrote about Arkansas farmer Johnny Reyenga (Vol. 14, No. 1), who built his own



Harrington Seed Destructor destroys weed seeds behind a combine. After a full year of testing across southern Australia, it's now in production.

combine-mounted grain cleaner to collect and destroy weed seeds. Although Reyenga used the device several years on his own farm and had the idea patented, it didn't achieve commercial success.

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Gravity Box Handles Bulk Seed And Pro Boxes

"I get soybean seed in pro boxes and super sacks but didn't have a good way to handle both of them together," says Indiana grain farmer Lester Graber. "So I came up with my own solution." Graber modified a 20-year-old 150 bushel Parker gravity box by adding a center divider so it would handle two types of bulk seed. Then he made special rails for the top of the gravity box so it would carry two pro boxes placed side-by-side. His custom-made tender is just another example of necessity being the mother of invention.

"If I want to, I can go the field with 4 different types of seed at one time," says the inventive Graber. "I just have to make sure the varieties I want to plant first are in the tender hoppers. I do that by dumping a sack in either side of the center divider, then load full boxes on the rails." The tender is also large enough to hold 4 super sacks without any pro boxes on top.

Graber says it took him less than a week to build his customized seed tender and he

probably has less than \$300 invested into the new steel he used for the divider, the rails and new door slides. The center divider is made of 1/8-in. sheet steel that's held in place by angle irons bolted to the insides and bottom of the gravity box. Two pieces of 3-in. wide by 3/8-in. thick angle iron extend across the top and center of the box. Those rails support the divider and provide a sturdy base for one side of the seed boxes. The other base rails are angle irons mounted on top of the old gravity box in the front and back.

"The 3-in. wide angle iron really stabilizes the top frame of the tender and provides a solid surface for the seed boxes," Graber says. "I only haul full boxes on top when there's seed in the wagon below. The 7-ton running gear with 15-in. tires is very stable, so I've never worried about it being top-heavy or tipping over." The base of the seed boxes is about 5 ft. off the ground when they're loaded on the tender.

Graber rigged up special doors so he can



Lester Graber modified a 150-bu. Parker gravity box to carry 2 bulk seed boxes placed side by side. A center divider keeps the seed separate.



unload beans from both compartments of the tender at once or from each one individually. "I made an 8 by 10-in. metal door out of flat steel for each compartment," Graber says. "I drilled 4 holes in each door and put a big thumb screw for each one on the outside of the main door. To unload one of the compartments I just tighten that screw so it holds the inside door when I lift the main door handle. The other one is loose and stays closed."

A cupped auger powered by a hydraulic motor moves seed from the tender to

the planter. Graber can use either tractor hydraulics to run the auger or a self-contained hydraulic pump that sits in his pickup. Graber made that setup using parts from an old IH Cyclo planter and he runs it with a 10 hp Briggs engine. He says it works great and plans to use it to run other augers in his grain setup.

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Rubberized Dehuller Works On Spelt

David Tanner rubberized a rethresher off an old combine to dehull his organically raised spelt. Spelt has hulls that don't thresh free easily. This was a problem for Tanner who could get a premium for spelt at the Regina, Sask., farmers' market.

"Spelt is popular for use in bread and other flour recipes," he says. "A lot of people who can't eat modern wheat are able to use it. I thought it would be a good crop to grow, but I needed a dehuller of workable size."

Commercial grade dehullers are available, but not economical for Tanner's 40 to 60-acre crop. When he saw a small-scale dehuller made from a Massey Ferguson rethresher for sale at an auction, he bought it.

"Rethreshers were standard on 410 or 510 Massey Ferguson combines," says Tanner. "They mounted on the side of the combine, where they rethreshed grain that had already gone through the cylinder once. Early ones were too aggressive with fingers instead of rub bars. Later models had rub bars."

The dehuller he bought had the earlier style, which he replaced with the rub bars. Though spelt is harder to dehull, it's softer than many grains that are more common.

"The steel rub bars cracked the spelt,"



David Tanner rubberized a rethresher off an old combine so he can dehull his organically raised spelt.

says Tanner. "I replaced them with 4 by 5-in. pads cut from rubber belting. I also attached rubber to the inside of the access door. The most difficult thing was reaching in to tighten nuts."

With the pads in place, Tanner found the spelt often has to be put through the dehuller twice. He then runs it through a grain cleaner.

"The dehuller creates a lot of chaff and dust," he says. "You need to run it outside."

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Where To Learn More About Mini Cattle Breeds

The International Miniature Cattle Breeders Society and Registry® hosts a website (www.minicattle.com) that carries information about 26 different breeds of miniature cattle. You can spend hours there looking at pictures and reading stories about the cutest and most unique cattle breeds on the planet. If you're more inclined to learn from a book, order *The Beginners Guide to Starting Your Own Miniature Cattle Business* written by Professor Emeritus Richard Gradwohl. It's available from the website or from local booksellers.

Another great place to learn about miniature breeds is at Dustin Pillard's Miniature Cattle website (www.miniaturebull.com). Based in Rockwell, Iowa, Dustin has raised miniature heritage cattle since 1993 and typically has 20 animals for sale every year. His website has several photos, sire information, tips on how to raise the cattle and even a clever section on why people should be interested in miniature breeds. For example, if you have new acreage, mini cattle are great at clearing brush. Or if you have too much grass to mow, mini's are great living lawn



Dustin Pillard has been raising miniature cattle for 20 years. He's shown here with Ripley, a 37-in. tall bull.

ornaments, provide great organic food and fertilizer. They could also help you build a petting zoo business and make great therapy animals for the handicapped and elderly.

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