"Plungerless" Big Square Baler Continually Compresses Hay

"My plungerless big square baler continually compresses hay during the tying process to make baling a non-stop operation," says Montana rancher Charlie Siebenga.

Montana rancher Charlie Siebenga says he's combined the best feature of large round balers – continuous compression – with the benefits of a large square baler to end up with a machine that he thinks could revolutionize haymaking.

"My plungerless large square baler continually compresses hay during the tying process so that baling with this big square baler is a non-stop operation," says Siebenga. "My prototype machine proves that it will work, and at this point it needs to be refined and further engineered so it can be tested under real haymaking conditions for a full season."

Siebenga has worked on his unique baling system for nearly 30 years. "I was with Vermeer in the mid 1980's and we tried to build a continuous compression large square baler; however, it didn't work out." Siebenga went on to start a successful farm equipment business that he sold a few years ago. In 2012, he started working on his plungerless baler idea again. He removed the plunger from a New Holland model 2000 baler and installed a prototype of his new compression mechanism. He took it to the field and even though a few glitches showed up with the feeding mechanism, he was pleased with the results.

"With this new continuous compression device my baler can move through the field and tie a bale without stopping," Siebenga says. "I didn't alter the needles or the knotter on the baler, so they still work the same way they did with the original plunger." The only difference is that with Siebenga's system the hay is continually compressed as a bale is being tied. That concept, Siebenga says, has several benefits for hay producers everywhere.

"With my system I think the framework of a large square baler can be produced with lighter-weight steel components," Siebenga says. "That could reduce the weight of the machine by 30 to 40 percent from the 14,000 lbs. that a plunger baler weighs. With a lighter machine, the cost of producing it would be less. And once the farmer buys it, instead of pulling it with a 120 to 140 hp tractor, the baler could be pulled with a 100 hp tractor.

"The numbers we've run show that we can produce a large bale for about $3 compared to the $5 that it costs with a plunger machine," Siebenga says. "In a 10,000-bale operation, that can mean a savings of $20,000 a year, which I think is real money in anyone's book."

Siebenga says his baler will also be better for hay fields. "A lighter baler with a smaller tractor causes less compaction on hay fields, moisture permeates better and re-growth is faster," he says. Siebenga has a patent pending on his invention and is looking for a company or investor to partner to help bring the machine to market.

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He Plants Small Grains, Cover Crops With A Corn Planter

Larry Hak is an Ohio crop farmer who's always looking for a way to maximize machinery use on his farm. "A few years ago it really bugged me that I needed an expensive piece of machinery to plant small grains and another one to plant corn and soybeans," Hak says. "One day I came up with a design for solid seed plates so I could plant wheat and other small grains with my corn planter." He calls them Seed Right plates.

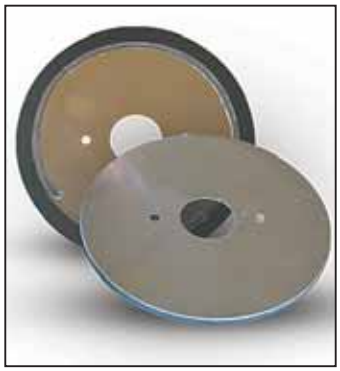
Hak first tested the plates on his 12-row Kinze interplant planter, and was pleased with the results. "I was able to plant wheat in 15-in. rows and have it meter out at about 3/4 the rate that I was planting with a Great Plains drill," Hak says. He set the planting depth at about 1 in. and the seed germinated and emerged real well.

"People told me I was really going to lose yield with 15-in. rows of wheat," Hak says, "but that wasn't the case at all. In the years I've used the plates the yield has been about 3 bu. less an acre than with drilled seed."

Hak figures he more than makes up for that 3-bu. yield disadvantage with the money he saved by selling his 30-ft. grain drill that had planted less than 500 acres. "On my farm it'll take me 20 years to make up that difference at 3 bu. an acre," he says. "In the meantime I'm making better use of my planter." He also uses the plates to plant oats, canola and rye with his corn planter.

Hak says his aluminum plates work on any Kinze planter with brush-type seed meters. The solid aluminum plates fit on the inside of bean, sorghum and cotton plates, covering the seed channels except for a small space on the outside edge. A thin foam rubber gasket on that edge keeps the small seeds in the box from leaking out when the seed metering plates aren't turning. Bolts that hold the seed meters hold the Seed Right plates in place.

Hak figured out a formula for planting various crops with his Seed Right plates by planting different size seeds in his fields over a carefully measured distance. "I weighed the seed before planting and weighed the amount left after I planted one acre," Hak says. "I knew the number of seeds per pound and came up with a formula that matches what Kinze has in its planter manuals." Hak's formulas are also posted on his website and are easily accessible by smartphone. "Anyone can figure out the correct amount to plant if they know the approximate number of seeds per pound and can change transmission sprockets on their planter," Hak says.



Solid seed plates allow Larry Hak to plant wheat and other small grains with his corn planter.

Another great application for Seed Right plates is planting cover crops. Hak says, "we've come up with a way to accurately plant one type of cover crop seed in the front boxes and different seeds in the rear boxes."

Hak says he plants test plots on his own farm to make sure his planting formulas are accurate. "I started with wheat and moved to oats, canola, rye and a few years ago into cover crops like tillage radishes and cow peas," he says. He has customers across the country using his plates with planters from 6 rows up to 48 rows. His plates are even going to South Africa, Australia and South America.

"This invention has grown beyond my expectations," Hak says, "so I guess it's something that people were looking for." He sells the plates direct to farmers and also through Kinze dealers. In 2014, he'll be working on plates for use with air vac planters and hopes to have those available for the 2015 planting season.

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Tractor caddy keeps your valuables and tools right in front of you wherever you go.

Hood-Mounted "Tractor Caddy"

"It's designed to mount on the hood of most lawn or garden tractors. It keeps your valuables and tools right in front of you wherever you go, and is easy to remove for off-tractor projects," says Anita Epolito, Six Lakes, Mich.

The tractor caddy is made in Michigan from reground/recycled plastic and measures 23 in. long by 11 in. wide. It has a built-in cup holder and a personal storage compartment on back, with a large cargo compartment on front. A handy plastic utility basket with carrying handle that fits into the cargo compartment is available.

The bottom side of the caddy is fitted with 4 footpads that adhere to hook and loop mounting strips that you place on the tractor's hood. A template is provided to mark where the mounting strips should go. You apply the strips adhesive side down onto the hood, position the caddy over the hood, and then press the footpads down firmly onto the mounting strips. A bungee cord holds cargo in place.

"It works great for hauling just about anything, and it won't damage your tractor's hood," says Epolito. "You don't have to worry about losing your wallet, keys, cell phone, etc., because they're always right in front of you. The cargo compartment works great for hauling everything from shop and garden tools to firewood, flowerpots, baskets, gas cans, batteries, coolers, and barbeque supplies, as well as trash."

The tractor caddy is available in black only. It sells for $32.95 plus S&H.

Contact: FARM SHOW Followup, Anita or Mark Epolito, 340 Midway Walk, Six Lakes, Mich. 48886 (ph 517 282-3087; anitaepolito@yahoo.com; www.tractorcaddy.com).

Walk-In Trap Catches Pest Birds

"I built the first one a couple years ago and have used it every year since, catching hundreds of sparrows and other pest birds," says Gary Hulst, Zeeland, Mich., about his home-built "walk in" bird trap.

The trap measures 18 by 16 in. and is 8 in. high, made from wood and 1/2-in. hardware cloth. Birds land on a perch on one side and see food on a tray inside the trap. To get to the food they have to hop on a small wooden "teeter totter" mounted just inside the trap. As the teeter totter goes down, the bird enters a holding area and has to go through a hole that's covered by a clear plastic curtain, which shuts behind the bird as it goes through.

"Once in the trap, they become the bait," says Hulst. "The happier the birds in the trap, the more you catch. If a protected bird is trapped, it can be released unharmed."

The trap's design isn't new, says Hulst. "Havahart made a similar trap about 60 years ago, which has been copied over the years. I build 25 traps at a time and sell a few on the side."

"Walk in" bird trap measures 18 by 16 in. and is 8 in. high. It's made from wood and 1/2-in. hardware cloth.

The trap sells for $43 plus $15 S&H.

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