



Casper Holter stripped the tying assembly from a wire-tie Case baler, leaving only the plunger. He piles boards up on pickup table, then feeds them one at a time into plunger.

## Baler Converted Into "Board Breaker"

What used to be a 1940's Case small square baler has been converted into a low-cost "board breaker" that requires very little horsepower and fuel to operate.

The baler is powered by a 2-cyl. air-cooled engine and is used to break boards up to 8 in. wide into small pieces that average about 14 in. long.

"It uses impact rather than a lot of power to do the splitting," says inventor Casper Holter of Glasgow, Montana.

Holter stripped the tying assembly from the wire-tie baler, leaving only the plunger which still has the cutting knife on it. He piles the boards up on the pickup table, then feeds them one at a time into the plunger.

"It works good and will break up the boards as fast as I can feed them in. I can chop a truck load of wood in only about two hours," says Holter. "I get a lot of boards from old wooden buildings that blew down long ago on our farm. I use the broken-up wood in our



Baler breaks boards up to 8 in. wide into small pieces that average 14 in. long.

wood burning stove and in our fireplace. My neighbors often use the machine to get rid of branches up to two inches in diameter and leftover wood. Every time the plunger breaks through the wood it makes a loud popping noise, like someone is shooting a .22 rifle."

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A light sensor is located on each side of wagon chute, sending a light beam across chute which detects when grain stops flowing.



## Light Sensor Shuts Off Tractor When Bin Auger Runs Empty

Carl Walter of Spring Valley, Ill., recently sent in this tractor shut-off idea for filling bins.

"We dump our grain cart into a wagon parked next to the bin auger and then head back to the field. The problem is, most of the time the wagon runs out of grain before we return with the cart and the auger is running empty. To solve the problem my nephew, Paul Pearson, and I came up with a shut-off sensor for the tractor that operates the auger.

"We drilled a hole on opposite sides of the wagon chute and mounted a light sensor on each side that sends a light beam across the chute, which detects when grain stops flowing.

"A cord runs to a waterproof switch box that's wired to the tractor's battery and ignition. Because we use three different tractors to operate the augers on different farms, Paul wired each tractor with a pigtail from the battery and ignition switch with snap connectors that connect to the switch box. A toggle switch and light mount on the outside of the box. The switch is necessary to divert power from the box to the tractor's ignition, and the light indicates when that connection is made.

"Here's how it works. We dump grain into the wagon. Then we flip the toggle on the



Cord runs to waterproof switch box that's wired to tractor's battery and ignition.

switch box and the light comes on, indicating that power has been diverted from the box to the tractor's ignition. The tractor and pto are started and the gate on the wagon is opened to start grain flow. The toggle is then flipped again and power is diverted to the time light sensors. Once grain stops flowing, the light beam sensor activates the time delay shutoff switch. The time delay shutoff is adjustable and we have it set up on a 23-second delay so the auger empties out before the time delay shuts off the tractor. Works great. I spent about \$250 for all the parts."

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The tank is the frame on this gooseneck trailer. "It pulls like a dream," says B&W.

## Lightweight Tanker Trailers

Instead of a tank on a frame, the tank is the frame on this new line of 1,500 and 2,500-gal. gooseneck trailers.

"People who see them keep saying 'Somebody finally did it,'" says Harry Wallace, B&W Mantrad, Inc. "It pulls like a dream. Instead of getting snapped around like you can with a gooseneck when the frame flexes, a tank won't bend. There isn't any flex."

B&W welds the gooseneck to the tank. However, a moveable trunion allows the operator to shift the wheels forward and back depending on the weight and size of the towing truck.

"With a 3/4-ton truck, you don't want more than 4,000 lbs. on the gooseneck ball, but with a one-ton truck, you can increase the weight," explains Wallace. "With our long skinny tanks and the moveable trunion, you can adjust the weight on the ball to match the vehicle. You get better traction and better maneuverability."

Wallace says the long skinny tank is stronger. It has less wind resistance, and as a gooseneck, it has a lower profile, less than 7 ft. This lets operators pull the tank into parking garages and standard sheds

where most similar size tank trailers won't go. The lower profile also saves fuel.

The tanks are made with specially coated mild steel that gives them the corrosion resistance of stainless steel.

"We found a paint that has been used in the oil fields for 25 years on nastier stuff than most farmers will ever haul," says Wallace. "We paint the inside of the tank with that and it will stand up to fertilizers and chemicals. It'll even stand up to real strong acids."

The company is already planning improvements in the design, such as an auxiliary braking system. "We're also looking at adding a diesel generator in place of the current motor and vacuum pump," says Wallace. "It would offer 240-volt electricity for electric motors, multiple small pumps and an AC switch for power tools."

The 1,500-gal. gooseneck tanker starts at a base price of \$11,000 and the 2,500-gal. unit starts at \$15,000.

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## Bug Your Flies To Death

Tired of being bugged by flies around your livestock? Kunafin Insectary may have the answer for you. The Texas firm is spreading the word on Biological Integrated Insect Control (BIIC), a fancy way of saying they use bugs to kill bugs.

"We work everywhere from beef feedlots, dairies, poultry and swine buildings to dog kennels and horse barns," says Clifton Castle, a Kunafin consultant.

Kunafin raises predator insects that will seek out and lay their own eggs in fly eggs and larvae. One of Kunafin's predators is the trichogramma wasp. Only 1/50 of an inch in size, it is naturally attracted to more than 200 species of fly eggs. When the Kunafin predator egg hatches, it eats the egg or fly larvae. Incubators - bags loaded with predator insect eggs - are shipped to customers on a regular basis. A consultant like Castle helps set up a control program that includes number and placement of incubators.

"Each program depends on the number of animals, existing fly pressure and type of manure handling, whether a pile or a lagoon with a crust," says Castle. "We recommend the number of incubators needed and how often they should be set out."

Placement is important, he advises, as the parasites tend to stay in the area. Timing is also key. Weekly placement of fresh incubators is common, but it also depends on the fly pressure. A single incubator that costs \$37, including shipping, might be all that's needed for a small dairy or livestock operation, es-



A Texas company uses bugs to kill bugs. Photo shows wasp laying eggs in target insect pupa.

pecially if the fly population is controlled early.

"The best time to start is when flies first appear," says Castle. "One incubator has thousands and thousands of predators, but a single fly can lay 2,000 eggs."

If heavy fly pressure already exists, Castle suggests a combination of predator incubators for eggs and larvae and limited chemical spray and bait for adult flies. Using a combined approach not only helps prevent resistance to chemical controls, but can also save money.

"We've had feedlot customers who cut their fly control costs in half from when they used only foggers and chemical control," says Castle.

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