Blanchat designed the new grain cart from the ground up for speedy , efficient "spill-proof" hauling. Cart's 16-in. auger unloads 650-bu. hopper in less than 3 min.

"IT WILL REVOLUTIONIZE THE WAY WE HARVEST GRAIN"

Self-Propelled 4-WD 650-Bu. Grain Cart

By Mark Newhall, Editor

"No one's ever built anything like it. It'll revolutionize the way we harvest grain," says Greg Blanchat of Blanchat Manufacturing about his giant new self-propelled 650-bu., 4-WD grain cart that he says can double or even triple harvest efficiency, getting grain out of the field fast, keeping combines and trucks running, and minimizing compaction.

The first prototype made its appearance last year. "Custom combiners are ecstatic. It's something they've always needed. Because we carry the load rather than pull it, we eliminate 'dead' axles on the wagons. It's much more maneuverable, and will work through the muddiest fields, leaving almost no tracks and causing minimal compaction. It'll unload the 650 bu. load in less than 3 min. with its 16-in. dia. auger. And it still works like a tractor. If the combine gets stuck, you can pull it out with the cart."

To build the new machine, Blanchat started with a Case/IH 4-WD 2670 tractor with a 290 hp engine. He says the Case 4-WD is perfect for the conversion because of the "trunnion" or crab-type steering which steers all four wheels but doesn't articulate, like most 4-WD's. He notes that the Case 2470, 2670 and 2870 tractors, which date back to 1973 but were discontinued a couple years ago, have had some mechanical problems and so can be purchased for a good price.

Blanchat totally disassembles the tractor, cutting the frame apart and then rebuilding from the ground up, relocating the trunnions, rebuilding the Powershift transmission and driveline, repositioning the cab, and building the 650 bu. grain tank into the frame of the machine.

"It's built heavy and strong. My method of construction is to figure out how heavy each part needs to be and then I double it. I'm not in the business of selling parts. I've been a farmer and I don't like parts. All the replaceable parts on the machine are standard, readily available from Case/IH. The parts we had to special-build are so heavy they'll last the life of the machine," says Blanchat.

The cab is positioned up high so the operator can easily see inside both the hopper on the cart and inside trucks he loads out to. "It eliminates problems with over or under-filling trucks because you can see what you're doing at all times," says Blanchat, adding that the 4-wheel crab steering lets the cart move in and out from combines and trucks while loading and unloading, also helping avoid spills and saving time.

Power is provided to the cart's 16-in. unloading auger by a 5,000 psi hydraulic pump that's driven off the front of the engine. It replaced the original pump on the tractor which produced 2,250 psi. At least 3,000 psi is needed to run the auger. Blanchat says they used the bigger pump to have plenty of reserve power. The auger is controlled by a hydrostatic-type lever that lets the operator precisely control the flow of grain. "You can slow it down to a trickle, slow enough to fill a 5-gal. bucket with grain. Makes it easy to top off a truck, unlike most unloading augers," says Blanchat.

The cart has a hydraulic-controlled gate inside the hopper which controls the flow of grain to the unloading auger. There's a second dump gate at bottom that can be opened by hand to dump into a pit or auger hopper. "We made the bottom gate manual so it couldn't be opened accidentally in the field and dump grain on the ground," says Blanchat, noting that after dumping "less than a 5-gal. bucket of grain is left to clean out of the bottom of the hopper".

Duals are mounted all the way around so the cart literally "floats" over the field. A dual-equipped 4-WD tractor pulling a big grain cart fitted with duals would leave more ruts than the new cart, according to Blanchat. "Carrying a load is completely different than pulling a load, because it takes much less power. No matter how big a tractor you use to pull a wagon, the axles will drag on soft ground."

Another advantage of the cart is that it still has the capability to function as a tractor and can be fitted with a drawbar and pto. "If the combine gets stuck, you can pull it out with the cart, even with a full load of grain."

More than 250,000 bu. of grain have already been hauled by the prototype which was in the field for the first time last year. It got a good workout in one field of 253 bu. per acre corn, being harvested by a Deere 9600 combine equipped with an 8-row head. Traveling at a rate of 5 1/2 mph, the combine filled its hopper about every 5 min. The cart hauled grain from the combine to trucks parked on the road. Because the cart could unload in less than 3 min., it was able to keep the combine moving without stopping. "In 10 days we harvested 150,000 bu. of corn with only one combine and our cart. On a good day we were able to harvest more than 20,000 bu. Because we were able to keep the combine in the field cutting at all times, it did the work of three combines," says Blanchat.

The cart reduces the number of trucks needed and saves on labor because there's less down time for drivers. "When you're filling 600 and 700 bu. trucks in less than 3 min., drivers don't have time to climb down off the truck and stand around. We also save wear and tear on trucks because they don't have to drive into the field, and we eliminate the fire hazard of running trucks through stubble."

In another field test, Blanchat Manufacturing tested the new cart against a conventional 600 bu. grain cart in dry conditions. "We were able to move twice as much grain. When conditions are wet, we've got even more advantage."

Blanchat built the cart with custom operators in mind. But he's also had interest from some large farmers, and from farmers interested in doing custom work. The grain cart, which has the wheelbase and approximate dimensions of an Axial Flow combine, can be transported on any combine trailer. Blanchat also custom-built a trailer with automatic locking rear ramps. All you have to do is drive on and it's ready to go.

One Deere dealer who saw the cart in the field got so excited he wanted to sign up for a dealership right then and there. But Blanchat only sells direct to customers. He plans to build several carts this year to sell for $32,000 to $35,000. "The price may go up later but right now we want to get all the bugs out. We plan to go slow and solve all our problems in the field before we get too many machines out."

He's also working on a bigger machine with 800 bu. capacity, using a Case 2870 tractor.

For more information, contact: FARM SHOW Followup, Blanchat Manufacturing, P.O. Box 444, Harper, Kan. 67058 (ph 316 896-7145).

Crittenden put a bale spear on his squeeze-type Gehl bale mover and then mounted a set of dolly wheels underneath to carry weight of bale.

TAKES THE WEIGHT OFF THE TRACTOR

3-Pt. "Self-Supporting" Wheeled Bale Mover

"I owned a 3-pt. mounted Gehl 1500 clamp-type bale handler but I didn't like the space I had to leave between bales in order to open up the arms when setting a bale in place. It took up too much room," says Tom Crittenden, Mansfield, Penn.

"I made the arms stationary by mounting a piece of 4-in. sq. tubing between them and then fitted the arms with a bale spear mounted on a rectangular frame. I remounted the hydraulic cylinder that previously opened and closed the arms to a new position so it would tilt the bale spike up and down.

"This was an improvement over the old system but the bale was now so far back a lot of weight was put on the rear of the tractor, making it unstable and causing a strain to the back of the tractor. It wasn't safe.

"I went back to the shop and mounted a set of dolly wheels made out of a narrowed-up house trailer axle on the bale carrier. They're raised and lowered by hydraulic cylinder.

"Now when I load a bale, I simply stab the spear into the bale and lower the dolly wheels. I don't even have to use the 3-pt. lift. All weight and strain is on the dolly wheels, which follow the tractor fine except on sharp turns. I solve the problem by lifting the 3-pt. arms on turns, raising the entire bale carrier and bale. After the turn, I lower them back down.

"I can now store five 51/2 ft. bales in the same space where I could previously only store 4 bales because of the space I had to leave between.

"To use the bale carrier for unrolling bales, I can remove the dolly wheels, hydraulic cylinder, spear and stabilizer in about 1/2 hour to put it back to its original configuration.

"I use the bale mover mostly to load bales onto my converted school bus hay hauler. Total cost was only about $300, since I already owned the Gehl bale carrier. I'd be happy to answer questions from anyone wanting to build one."

Contact: FARM SHOW Followup, Tom F. Crittenden, 207 Crittenden Drive, Mansfield, Penn. 16933 (ph 717 662-2742).