

Bob and Rick Smith built this self-propelled mower out of parts from an IHC 403 combine and an Oliver 1850 tractor. A Bush Hog 10-ft. mower deck mounts on front.

## **Combo Mower Built From Combine, Tractor Parts**

Bob and Rick Smith say their big farm mower is built so well and is so easy to service, it should virtually last forever.

The unique mower was built out of parts from an IHC 403 combine and an Oliver 1850 tractor. A Bush Hog 10-ft. mower deck mounts on front.

The first step to building the combine mower was to drop the engine down to rest on the frame of the IHC. "The framing had to be moved closer together to support the engine. Then the frame was reinforced by 6in. steel channel iron," says Bob Smith.

The engine, along with the water and oil supply, were moved to a spot behind the power plant, in-line with the hydrostatic drive. The mower combine was fitted with the old grill and hood from the Oliver tractor, mounted on the rear to protect the engine assembly.

To bring engine power to the Bush Hog mower, a jackshaft was added that drives three V-belts and pulleys which reduce pto speed from 1,800 rpm's to 540. The old 3-pt.



Tractor frame on back was reinforced with 6-in. channel iron.

hitch from the Oliver keeps the mower securely attached at the mowing speed of 3 mph or road speed of 12 mph. The previous owner, Miles Filer, Vandalia, Ill., built the combine mower. It took Filer 200 shop hours and \$2,000 to complete the project. The Smiths bought it a couple years ago and have been using it ever since.

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## "Sling Shot" Pumpkin Launcher

There are all kinds of pumpkin shooters out there but teacher Norman Wilson and his physics class at Pana High School, Pana, Ill., have come up with a new idea. He and his students recently built a "sling shot" pumpkin launcher that shoots pumpkins with greater accuracy than ever before.

"We built it to compete in the Illinois Punkin Chuckin' Meet sponsored by the Morton, Ill., Chamber of Commerce," says Wilson. "We managed to shoot our pumpkins 763 feet to hit an old car that had been placed there as a target, breaking its windshield. The next closest competitor was 400 ft. away."

The launcher works something like a sling shot, using a 20-ft. length of PVC pipe as a barrel. Elastic bands made of amber latex tubing are stretched from the outside base of the barrel, then over a series of pulleys down the center of the barrel where they're attached to a basketball net. The net is closed at the bottom to provide a pocket for the pumpkin. A cable is attached to the net containing the pumpkin.

To stretch the elastic bands, Wilson and his students use an exercise bike that powers a winch. The pumpkin is fired by pulling a pin.

The launcher can be equipped with anywhere from 12 to 36 of the elastic bands. It takes about 2,000 lbs. of pressure to pull down on 36 bands.

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Pumpkin launcher works something like a sling shot, using a 20-ft. length of PVC pipe as a barrel. Exercise bike pulls pumpkin down for launching.

Elastic bands stretch from outside base of barrel o ver a series of pulleys down the center of barrel where they're attached to a basketball net that holds pumpkin. Easy-To-Make Floating Intake Pipe

A unique water float made from plastic pipe saves a lot of frustration when trying to suck water out of a farm pond, says Nick Calibaba of Stoughton, Sask., who came up with the idea after struggling with various ways of keeping his suction hose free from debris.

"I tried all kinds of things to hold the hose up, but nothing worked very well until I got the pipe idea," he says. "It took a lot of experimenting, but the float I finally settled on works just great. I've used it now for four years."

Calibaba's own experience using the float was so positive that six months ago, he started selling the devices. He calls them "Bar C Water Floats" and says he's had only positive feedback about them.

The oval-shaped float is made up of four elbows and a couple pieces of 2-ft. long PVC pipe. The pieces are cemented together so they're airtight and then pressurized.

The 3-in. dia. suction hose clamps to the float. The suction pipe has multiple rows of holes drilled into it, creating a built-in screen. The float holds the sucking hose about four inches from the top of the water, so that the operator never has to worry about the screen plugging.

"I'm also going to make a 2-in. float with a check valve on the end. These will work well for pumps that don't hold their prime," Calibaba says. "There's a lot of work that goes into making these pipe floats. It takes



Oval-shaped water float is made up of four elbows and a couple pieces of 2-ft. long PVC pipe. Float holds intake nozzle about 4 in. from top of water and is perforated to keep screen from plugging up.

about three days to make one."

He says the floats are also useful in another application - for households that use dugouts for their water supply. By anchoring the float to cables with weights, and tying the pressure system's suction hose to the float, it's possible to maintain a suction hose level two feet from the bottom of the dugout. This way, in the wintertime, the hose level would never fluctuate with the water level, and it would never come up and freeze in the ice.

Calibaba is selling his Bar C Water Floats for \$450 (Canadian) plus shipping and handling.

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Bar nosky removed vertical wood siding to make an opening about 32 in. wide from top to bottom of his barn. He then installed a line of removable windows in opening.

## Windows Make Hay Storage Easier

Setting up the elevator to put bales in the barn is easier since commercial hay producer John Barnosky, Windham, Ohio put in a line of windows that go from the hayloft floor up about 22 ft. to the peak of the barn roof.

Since the windows start at the floor, the elevator can be set low, so the first bales don't have to drop 15 or 20 ft. to the floor. "I have a lot fewer broken bales now," he says.

Barnosky's barn had vertical wood siding. "I removed six of the siding boards to make

an opening about 32 in. wide from top to bottom," he says. "Then I welded together a 1 by 1-in. angle iron frame that fit into the opening. Inside the frame, I welded 1-in. long pieces of mini-channel iron to make brackets to hold pieces of 4-ft. plexiglas cut the width of the frame."

The mini channel iron is roll-formed 12 or 14-gauge steel, 1/2 in. deep by 3/8 in. wide. Barnosky found it in a salvage yard. "I cut it into short lengths and welded pieces to hold the plexiglas panes at the top and the bottom. It's positioned inside the frame so the top of each pane tips in slightly and each pane overlaps the one below it slightly, so rain runs down them rather than into the barn."

The channels holding the bottom of the

pane are closed at the bottom, while the ones at the top are open, allowing him to remove any pane separately. "When I start filling the barn, I remove the bottom panes and back in the elevator. As the barn fills, I remove panes above the elevator, raise it up, and then replace panes below it. I don't have to reset the elevator. By raising it, I can keep the hay coming off of it at the level I'm stacking," he says.

The old barn has four bays in the upper level. He put windows in each of the two outside bays, which he uses to store about 3,800 of the 4,000 to 6,000 square bales he makes every year. "The windows let in light, but keep out the weather," he says. "They rattle a little bit in a strong wind, but because they're not hinged, they don't flap and clatter."

Barnosky worked six or eight evenings welding together the scrap angle and channel iron he used to make the frames. The expensive part was the plexiglas. Aside from that, he says he had hardly any expense in the project.

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