



Vernon Flamme's cob collector uses a conveyor to deliver cobs into trailing side dump wagon. System is powered by a diesel engine that direct-drives a hydraulic pump.

Self-Contained Cob Collector

"It's a self-contained system that requires no modifications to the combine," says Vernon Flamme, North Bend, Neb., who makes cash from corn cobs using a machine he has patented to collect cobs.

The cob collector makes use of a side dump wagon that pulls behind the combine. The system is powered by a diesel engine that direct-drives a hydraulic pump. It powers a conveyor that delivers cobs into the wagon, and it also operates an air cleaner.

The engine mounts on a metal frame attached to one side of the wagon, while the conveyor is attached to the front corner of the wagon. All controls, including dumping of the wagon, are located in the combine cab. "We take no electrical or hydraulic power from the combine," says Flamme.

The wagon has a capacity of four tons. It takes less than one minute to dump the wagon and bring it back down. "The engine powering the system only burns about 1/10 gal. of fuel per acre," notes Flamme.

"To switch from corn to soybeans all we have to do is unhook the wagon. That's the beauty of the system - there's no modification to the combine. We can easily pick corn in the morning and harvest soybeans in the afternoon. The stand-alone system also helps with the resale value of the combine."

He says they built their first cob collector 12 years ago and have made several improvements since then. They've sold wagons as far away as Canada. They also do custom har-



Side dump wagon has a capacity of four tons. It takes less than one minute to dump the wagon and bring it back down.

vesting for farmers in their area, with the agreement that they get to keep the cobs.

"We've never collected a cob we couldn't sell. Last year we could have sold 10 times as many cobs as we had," says Flamme. "It all started when we were approached by a cob processor to see if we'd be interested in trying to collect field corn cobs from a combine. We agreed to the challenge and this started our invention of the Cob Caddy. We've sold cobs to cattle feeders for both feed and bedding. It has also led to the use of making ethanol from cobs in the fast-growing biomass industry."

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Vacu-Stack Gives "Pull" To Flues

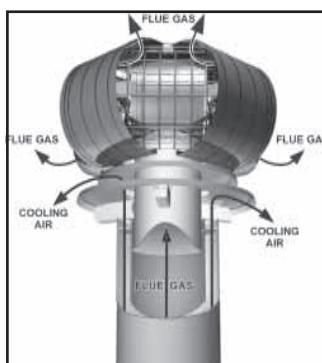
It's like an old-fashioned chimney cap with a high tech twist, says Improved Consumer Products, Inc., about its Vacu-Stack for chimney flues. It's designed to suck flue gas up and out to prevent downdrafts.

Like any chimney cap, the Vacu-Stack rotates away from the wind. The key to its effectiveness is that as wind flows around it, the wind velocity increases. This creates a partial vacuum close to the mouth of the unit and a positive draft that pulls flue gasses up and out of practically any size chimney.

"We have built Vacu-Stacks for refrigeration flues as small as 1 or 2 in. dia. and as large as 4 ft. across for old established resorts like the Grand Canyon Hotel," says Richard Paynton of ICP. "We've even made them for solar powered outhouses."

One very satisfied ICP customer is the U.S. Coast Guard. Paynton reports that in addition to use on cutters, hundreds of Vacu-Stack units have been installed on a base on Kodiak Island in the Aleutian Islands.

Vacu-Stack models are available for a wide variety of traditional and air-cooled chimneys. Prices vary from \$80 on up, depending on size and materials. A common 6-in. flue size is priced at \$115 while an 8-in. is priced



Vacu-Stack's design creates a positive draft that pulls flue gasses up and out of any size chimney. Drawing is of double-walled version.

at \$136.

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"It has a simple design but it works great," says Steve Ferrante about his home-built pto-driven, 3-pt. mounted stump grinder.

Stump Grinder Built For \$1,500

When Steve Ferrante, Gaylord, Mich., needed a new stump grinder, he couldn't find what he wanted on the market. So he decided to build his own 3-pt. mounted, pto-driven model.

"I built it for only about \$1,500. New commercial models sell for \$5,000 or more," says Ferrante.

Unlike a conventional stump grinder where the cutting wheel turns on a vertical plane, the cutting wheel on Ferrante's model rotates horizontally.

The entire unit mounts on an L-shaped steel frame. The cutting wheel was built by a local machine shop and is operated by a pto-driven gearbox. The cutting wheel consists of a 1 1/4-in. thick, 10-in. dia. steel plate with a 1-in. thick, 6-in. dia. plate welded on top of it. A 2 7/8-in. dia. hole was bored through the center of the two plates and a splined bushing for the gearbox was welded in. Sixteen 5/8-in. dia. holes were equally spaced near the edge of the plate to mount the cutter teeth - two holes for each of the eight teeth.

"It has a simple design but it works great," says Ferrante. "I finished building it last summer and use it on my 27 hp Ford diesel tractor. I was able to grind 25 stumps in only 1 1/2 hours."

"I came up with the idea because we have about 160 acres of wooded hills with 1 1/2 miles of trails that we made by cutting down trees. It left a lot of small stumps that couldn't be cut any lower with a chain saw. All the stumps made for quite a bumpy ride when riding in a golf cart or utility vehicle."

To cut a stump, Ferrante backs up to it and lowers the 3-pt. hitch until the cutting wheel touches the top of the stump. Then he backs up real slow. "Some stumps can be cut in one



Cutting wheel on stump grinder rotates horizontally and will cut about 3 in. below ground level.

pass while others require another pass or two. The cutting wheel will cut about 3 in. below ground level. It smoothes the stumps right out."

He also built a rack on the frame to hold a rake and a hoe. He uses the hoe to clear rocks away, and the rake to level the area back up after grinding the stump.

Ferrante says he kept the cost down by buying off-the-shelf parts. "The gearbox was designed for a Bush Hog rotary cutter, and I already had the steel plate that it's mounted on. I bought the steel frame at a store for \$100. I bought the cutting teeth from a supply store and paid \$100 apiece for the gearbox and shaft. Once I got all the parts, it took only about five days to build."

He says the machining work to form the cutting wheel and to mount the gearbox was the most expensive part of the project. "Anyone with a heavy duty drill press or lathe could probably build their own stump grinder like this for about \$500," he notes.

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Electric cord runs through hole in side of cement block to a 60-watt bulb. The metal waterer sets on top and is heated by the bulb.



Light Bulb Heats Chicken Waterer

Jack Middleton wanted a cheap way to keep the 2-gal. metal waterer inside his chicken house from freezing. The Gaylord, Mich., man found that a simple light bulb can do the job.

"It works great and cost less than \$5 to set up," he says.

Middleton drilled a 3/4-in. dia. hole in the side of a cement block, allowing him to run

an electric cord to a 60-watt bulb inside the block. The metal waterer sets on top.

"Sometimes I use a 100-watt bulb if it gets really cold, like around zero F. I used underground rated cable to run under the manure pack on the floor," says Middleton.

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