



Production has already begun on the new residue burner. Electric motor automatically unloads crop residue into it from self-unloading forage wagons.

JUST 20% OF THE STALKS COULD DRY YOUR ENTIRE CORN CROP

“System Approach” To Biomass Burning

Only 20% of the total crop residue is needed to dry the entire corn crop,” says Eugene Sukup, president of Sukup Mfg., Sheffield, Iowa.

Last fall, biomass (husks and cobs) salvaged from one acre of corn yielding 150 bu. of grain per acre provided enough fuel to dry right at 300 bu. of corn with 10 points of moisture removed.

With this in mind, Sukup Mfg. has introduced the first complete “system” for using corn stalks, straw, husks and other crop residues as a fuel for drying grain.

Sukup manufactures in-bin drying and stirring equipment, an automatic residue burner and stoker, and a just-introduced, combine-mounted blower for collecting husks and cobs. The biomass burning system they developed combines existing equipment with the new blower, stoker and burner.

Residue from the combine is blown into any standard self-unloading forage wagon. The wagon is pulled alongside the residue burner where it is slowly unloaded with a simple electric drive Sukup makes. Any other similar method of slow unloading can also be used. A single load of husks and cobs will fire the burner automatically for up to 12 hours, according to Sukup. Heat from the burner can be used in most any existing drying setup.

The Sukup residue burner feeds heat directly from the firebox to the grain with no contamination problems — despite the fact that the products of combustion are blown directly into the grain.

“Temperature in the burner reaches

900°F and is diluted with cold, fresh air at the bin to provide 130 to 160°F drying air. The high burner temperature burns off most contaminants so the drying air is generally clean and no heat exchanger is needed. Drying capacity is rated at 300 bu. per hour maximum,” explains Sukup.

“We dried 15,000 bu. of corn with the system this past season. We had no contamination problems and there is very little ash left over in the burner. The ash removed from our entire harvest season filled just one wheelbarrow,” he adds.

Production has already begun on the new residue burner, and will begin this spring on the attachment for salvaging crop residue on-the-go. A different combine blower will be available for each model of combine. The blower is belt-driven. When not in use, two trap doors in the bottom allow residue to drop to the ground as usual.

Cost for the burner is \$6,900. The combine blower retails for \$1,800. The electric drive system with gearmotor and mountings for any forage wagon lists at \$790.

For more information, contact: FARM SHOW Followup, Sukup Manufacturing, Sukup Parkway, Box 616, Sheffield, Iowa 50475 (ph 515 892-4222).

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Stabilizing chains keep the side panels from moving apart once the bunk is filled with silage.

ONE MAN BUNKER SETS UP IN 45 MIN.

New Portable Silo

Farmers in the Southeast are catching on fast to a new farmer-manufactured, go-anywhere bunker silo that sets up with a tractor loader in minutes.

Bobby Rowan and Sonny Mathis, of Enigma, Ga. built the silo at a time when both were frustrated by the time and fuel they were wasting hauling silage from fields to pit storage, often more than 10 miles away. Working with 5 by 20-ft. metal panels, they came up with an above-ground bunker silo that sets up and moves easily. Thanks to the portable panels, they were able to store silage right in the field where they grew it.

“You fill the bunk and pack it, then cover the top and remove the sides to make another pile. With eight panels — four on each side — the bunker holds 240 tons of silage, three tons per running foot. By extending the pile you can stack any amount of silage in one place,” says Sonny Mathis, who’s formed R and M Farms with Rowan to market the portable silo. “The sides are held so tight you can pack it with a 40,000-lb. tractor. When you remove the sides, the silage is packed tight enough to practically eliminate spoilage.”

The secret to the R and M system is stabilizing chains spanning the distance between the two sides. They run from the top of one panel down through an iron channel at the bottom of it, across to the other side and up to the top of the opposite panel. There are three chains per pair of 20-ft. panels.

According to Mathis, three people can put up an 8-panel bunker in about 45 min. with the help of a tractor loader. Although the panels can be placed as far apart as desired, they’re designed for a 20-ft. spread. That’s primarily so standard widths of plastic can be used to cover the piles after they’re made.

Each panel weighs about 600 lbs. The ¼ in. chain used to hold the sides is snugged up loosely with a chain binder but gets extremely taut under pressure from silage and machinery. The silo should be erected on a level spot. Turnbuckle braces will level out the sides on uneven terrain.

“Farmers who have been interested in bagging silage with new ‘sausage stuffing’ machines now on the market are paying us a lot of attention,” Mathis told FARM SHOW. “You can fill faster with our system, yet put up just as high quality silage. And the cost is much less.”

To feed a stack, Mathis and Rowan place a self-feed gate — which they also make — at the head of the stack and an electric fence around the perimeter. The cattle’s own feeding action moves the feed gate into the stack and every few days they move the fence back. The two farmers, who put up 6,000 tons of silage with their system last year, figure capacity per stack at 100 head of cattle.

For more information, contact: FARM SHOW Followup, R and M Farms Cattle Equipment, P.O. Box 68, Enigma, Ga. 31749 (ph 912 533-5535).

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