



Densifier, rated at 7½ tons per hour, is believed to be first and only cuber that will cube wood chips.

FIRST OF ITS KIND BIOMASS CUBER

New 'Densifier' Cubes Wood, Straw, Cornstalks

"This machine, so far as we know, is the first of its kind in the world. It will cube virtually any and all kinds of biomass — everything from wood chips, straw and cornstalks to garbage, paper and anything else that will burn," says Cecil Warren, co-inventor of the Warren-Baerg heavy duty "Densifier".

Inventors of this first of its kind "cube anything" biomass cuber, slated for public unveiling early this summer, are Cecil Warren and Robert Baerg, of Dinuba, Calif. They're hay cubing experts and specialize in rebuilding Deere 525 and 390 cubers, converting them into all-hydraulic drives to boost capacity 50% (see FARM SHOW Vol. 2, No. 5).

"Ever since the energy crunch revved up several years ago, we've had dozens of requests for a machine that could cube all types of biomass, especially wood chips, straw, cornstalks and other crop residues. We experimented with a beefed-up 390 (stationary) Deere cuber. It works great for cubing paper and other burnable trash, but it isn't heavy enough for some biomass material, such as wood chips. So, we went to the drawing board and designed, from scratch, a heavy duty machine that will cube most any biomass you can feed into it, including wood chips, without having to add anything more than a small amount of ordinary tap water to hold the tightly-packed cubes intact," Cecil told FARM SHOW. "We envision cities, groups of farmers and custom owner-operators using our new heavy duty Densifier to cube a wide variety of biomass materials that conventional hay cubers aren't able to handle. We anticipate that the first Densifiers will be used primarily to cube wood chips."

Cecil notes that there is a "waiting market" for cubed wood chips which can be used to fuel boilers and furnaces in factories and other big



New Densifier presses wood chips into solidly-packed cubes.

buildings, and even furnaces in private homes. "Cubed wood is easier to ship than wood chips, and easier to burn and handle," explains Cecil. "On the other hand, wood chips are extremely difficult to cube. We think our new heavy duty Densifier is the first and only cuber available that will do the job."

Capacity of the new Densifier is 7½ tons per hour. Wood chips and other biomass is pressed into solidly packed cubes measuring about 1¼ in. square and about 2½ in. long. Cost of the Densifier is right at \$85,000, plus about \$35,000 for an optional feed-in system.

In addition to producing the new Densifier cuber for wood chips and other tough-to-cube biomass material, Warren and Baerg will continue to offer their special hydraulic drive conversions for used Deere Model 425 (field) and 390 (stationary) hay cubers. They custom convert for owners, and also sell converted Deere cubers. "Converted machines have

"THEY FIT A GRAIN PILE LIKE A GLOVE"

Look What He's Doing With Old Parachutes

By Armin Hecht

"They fit a grain pile like a glove," says Canadian farmer Adrian Trenchuk, of Warspite, Alberta, who has discovered that army surplus parachutes "work great" for temporary grain storage.

Trenchuk first tried the idea last fall. He bought two 65 ft. chutes at an army surplus store in Edmonton for \$300 each. "I'm told they're the largest parachutes available and are used by the Armed Forces to drop heavy equipment from transport aircraft. The chutes turned out to be an excellent grain storage idea," says Trenchuk. "Two men can cover an 8,000 bu. pile in 15 min. One side of the chute is put down and held in place by pegs pushed into the grain. Then, the chute is unfolded, pulled over the top of the pile and fastened at the other end."

Trenchuk notes that the nylon parachute material clings to the pile like a skin and the elastic base, in combination with the pegs, holds it in place. Rain, snow, wind, birds and animals are kept out, yet the chute's nylon material enables the grain to breathe," explains Trenchuk. "Plastic sheets, which cost more, are more awkward to use than parachutes. Also, poles have to be used to keep them in place and they're only good for one season. I expect to get at least two seasons' use from parachutes."

The army and navy surplus chutes come without the attached string or shroud assembly. In checking with various suppliers, FARM SHOW discovered that chutes up to 65 ft. in dia. were available in Canada, but we could find no U.S. supplier with surplus chutes more than 28 ft. in dia.

"The U.S. Government cuts up the bigger chutes to make sure that they don't get back into circulation as jumping or cargo chutes," one supplier told FARM SHOW.

"The reason large 55 and 65 ft. dia. chutes are hard to find is because we buy up most of them as fast as they become available," said a Canadian supplier. "When we have them in stock, we'll sell and ship these large 55 and 65 ft. dia. chutes in the U.S. as well as in Canada."

If you'd like to test the parachute idea for low-cost grain storage, here are several possible suppliers you may want to check with:

about 50% more capacity than a new conventional Deere hay cuber, cost about half as much, and last about twice as long," according to Cecil.

If you already own a Deere hay cuber, Warren and Baerg will rebuild it with completely hydraulic drive. The conversion, which boosts capacity of Deere cubers an estimated 10 tons per day, includes the Hydrostat (which includes a completely rebuilt



"Two men can cover an 8,000 bu. pile in 15 minutes," says Adrian Trenchuk. He expects to get two years' use from his parachute covers.



FARM SHOW Followup, S.O.S. Army Surplus, 10247 97th Street, Edmonton, Alberta, Canada T5J 0L9 (ph 403 422-3348).

FARM SHOW Followup, Schreck Wholesale, 3100 North Lincoln Ave., Chicago, Ill. 60657 (ph 312 477-0112).

FARM SHOW Followup, American Army and Navy Surplus Stores, 400 Hennepin Ave., Minneapolis, Minn. 55401 (ph 612 333-8325).

transmission and pto unit), the hydraulic pump conversion, a converter and elevator conversion, and a revamped pickup and feeding system.

For more details on the new Densifier, and hydraulic drive conversions for conventional Deere cubers, contact: FARM SHOW Followup, Warren and Baerg, 3995 Road, 108, Dinuba, Calif. 93618 (ph 209 591-6790).