

He's Gearing Up To Plant 12-Inch Corn

He hasn't done it yet, but Jon Brower of Claremont, Minn., is prepared to harvest corn in 12-in. rows planted by a Deere 750 drill equipped with Kinze finger pickup units.

"Few people have tried planting corn in rows this narrow because there isn't a commercial head to harvest it," says Brower, who bought a used 15-ft. Deere soybean head for \$500. He welded a 2 1/2-ft. long steel I-beam vertically to each side of the head and bolted reel mounting arms onto the I-beams to raise the reel 30 in. He used lengths of steel tubing welded onto the head in front of both I-beams for reinforcement.

"I've planted corn in 20-in. rows for the past two years and have seen significant yield increases over 30-in. rows. Going to 12-in. rows should increase yields even more," says Brower, who plans to try 12-in. corn for the first time this year. "I got the idea of using a soybean reel to harvest corn from a sugarbeet farmer who had tried it years ago on his 20-in. row corn. He said it worked well except that the extra trash ruined his straw walkers. My Deere 8820 has six straw walkers which should eliminate the problem."

Brower says he thinks his Deere 750 drill can be modified to plant corn. "It has depth

Photo by John Pockoc, The Farmer
Brower raised the reel 30 in. on this Deere bean head to harvest 12-in. corn.

bands that are similar to the ones on MaxEmerge planters, and some farmers already use it with Kinze brush-type metering units to plant narrow row soybeans. I think the same idea will work using Deere MaxEmerge or Kinze corn planter finger units. The finger units and brush-type metering units both use the same brackets and mounting hardware so the same drill could be used to plant both corn and soybeans. You wouldn't even need a planter."

Brower says his goal with 12-in. corn is to have equidistant spacing with seeds spaced 12 in. apart within the row. Popula-

tion would be 43,560 seeds per acre. "I already plant 40,000 seeds per acre on 20-in. rows with no problem. Planting another 3,000 seeds per acre wouldn't be a big change, and with 12-in. rows it might work even better because each plant would have more room to grow. I've set up a test plot to see which hybrids respond best to 20-in. rows. I've found some work much better than others."

To harvest 20-in. corn, Brower had K & M Mfg., Renville, Minn., build a 20-in. corn head out of a used 6-row, 20-in. Deere 642 head and a Deere 643 6-row, 30-in. head. "I

bought the 642 head from a farmer who had switched back to 30-in. rows after he quit raising sugarbeets (sugarbeets are grown in 22-in. rows). The tin on the 642 was different than on the 643, and the snouts on the 643 are about 6 in. shorter than the snouts on the 642 so it's not the perfect corn head," says Brower. "However, I modified the head so that all the snouts ride the same distance off the ground."

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Randy Lubben of Reading, Minn., is another farmer who's switched to narrow rows. He spent \$2,000 to convert his 6-row (30-in.) corn head to an 8-row (22-in.) head. The conversion required buying flexible snouts and moving gathering chains closer together.

Promising New Theories On Winter Feeding

Heated Feedbunks Serve Up "Hot Meals"



He Teaches Cattle To Eat Snow

Don't put cattle on welfare.

That's the advice of range management consultant Wayne Burlelson who has convinced a number of farmers to try his unusual "low maintenance" method of overwintering cattle on pasture with no need to supply daily food or water.

"Too many farmers pamper their cattle in winter, confining them in small area, and providing water, hay, protein supplements, and so on. They let the manure build up and then they have to spread it in the spring. It's a lot of work and it's expensive. We've come up with an easy way to keep cattle out on pasture all winter so they do most of the work themselves," says Burlelson who works with farmers in the western U.S. and Canada.

For the past five years, Burlelson has been pushing the idea of "Swath Grazing" - leaving strips of windrowed small grains or standing hay in fields and letting cattle forage for their food. What makes the idea practical is something that seems like a crazy idea: He "teaches" cattle to eat snow so there's no need for water supply.

"They get along just fine. Licking snow is a learned behavior. After animals learn that snow is a source of water, they'll readily switch back and forth between snow and water with no problem," says Burlelson.

Most farmers who hear the idea for the first time ask: "Doesn't eating snow rob a lot of body energy from cattle?" Burlelson cites research by a Canadian animal scientist that found no additional metabolic energy requirement for snow-dependant cattle. "It's like slowly licking an ice cube. Because they eat small bits of snow at a time, it actually has much less cooling effect than when they drink large amounts of water from a cool stream. Cattle modify their eating habits when they're dependant on snow. They eat slower and take bits of snow between bites of forage."

Burlelson says the wintering of livestock is one of the biggest operating costs a northern cattleman faces because of extra labor, bedding, minerals and equipment. "Eliminating many of these costs can be the difference between profit and loss."

For farmers who want to try "swath graz-

ing," Burlelson recommends planting several different small grains - wheat, barley, oats - in the same fields, swathing them into windrows before the grain ripens, and dividing the fields with semi-permanent electric fence. During winter, he suggests further subdividing fields with ribbon-type electric fence to direct cattle to areas with plenty of feed.

"I timed one farmer and it took only 30 min. to provide enough winter feed for 250 replacement heifers for the next five days. It's important to monitor the forage so cattle clean it all up before you move them to the next area," he says.

"It's tenth grade science. The more you do to maintain a cow's body temperature, the more milk she'll produce for you," says Roy Noble explaining his reasons for building a heating system for feedbunks that provides "hot meals" for his cows during winter.

He says the system lets him use more economical feedstuffs and keeps his 150 Holsteins from wasting energy just to warm up their food in cold weather.

"I'm able to feed low cost wet brewer's grains from a local brewery and cull potatoes from a New York potato chip plant, both of which always froze before," says Noble. "At the same time, my cows make milk more efficiently than ever before."

The heart of Noble's system is a 110,000 btu fuel oil-fired boiler. It's housed in a 10 by 12-ft. poured concrete shed and heats a concrete feed bunk just outside.

To heat the 2-ft. wide, 70-ft. long bunk, Noble lined the bottom with 3-in. Styrofoam insulation and 1/2 in. of aluminum reflective insulation. Four hundred ft. of 1/2-in. dia. polybutyl pipe was then laid in four loops on top of the insulation.

The pipe was covered with a layer of sand,

then concrete. Bunk mangers were lined with 2-in. thick, 4-in. sq. ceramic tile which helps conduct the heat to the feed. Biodegradable anti-freeze circulates through the bunk from the boiler.

"It's very energy efficient," says Noble. Operating around the clock in winter, it uses only about 4 gal. of fuel oil a day in even the coldest weather, he says, adding that he's measured feed temperatures as high as 115° F in the bunk.

He also provides warm whey to cattle at various locations around the farm. It's trucked in hot from New Jersey and stored in four big insulated stainless steel holding tanks. A 20 gpm stainless steel centrifugal pump delivers the whey via underground lines to liquid feeders around the feedlot. Some are as far as 500 ft. away.

Noble installed his heated feedbunk system for about \$7,500 in 1994.

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Farmers who try the idea have to have a plan for emergency situations, such as a blizzard with extra deep snow.

Burlelson offers on-site consulting and also conducts seminars on range management and other farm and ranch planning topics. He and his wife also wrote a book called "Rut Buster" on goal setting and personal development.

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