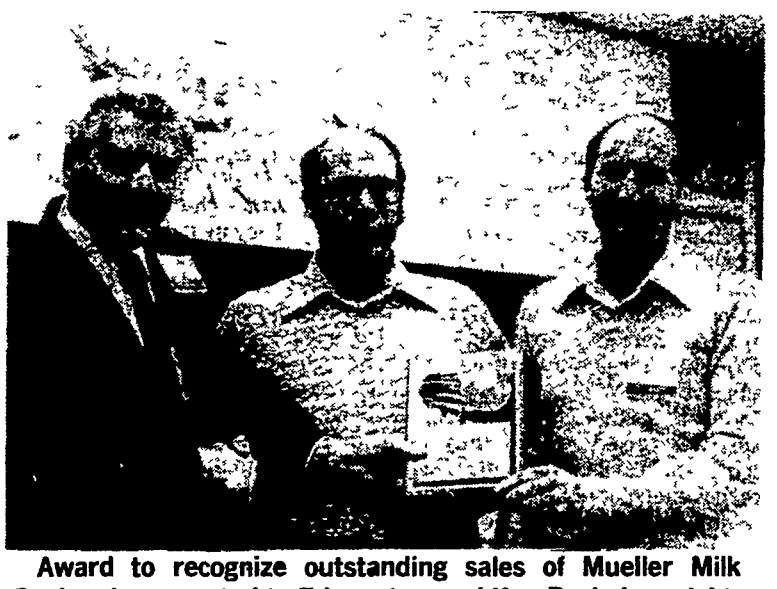
Farm Business News

Brubakers win award



Award to recognize outstanding sales of Mueller Milk Coolers is presented to Ed, center, and Ken Brubaker, right, of Rufus Brubaker Refrigeration, of Manheim. Making presentation at left is Jim Wickersham, of the Paul Mueller Company, Springfield, Mo. The Mueller company also is presently introducing a Refrigerated Receiver, which is a new concept in milk cooling. The unit cools milk rapidly before it is pumped into the milk cooler.

Hesston reports

HESSTON KS. — The Hesston Corporation reported a drop in sales and earnings for the first quarter of 1981 compared to the same period last year.

Consolidated sales for the first quarter ending March 31 were $69,587,000 compared with sales of $76,408,000 for the same period last year. First quarter earnings were $209,000, which after the distribution of preferred dividends resulted in a loss of two cents per common share, compared with earnings of $1,547,000 and 37 cents per common share, assuming no dilution, during the first quarter of last year.

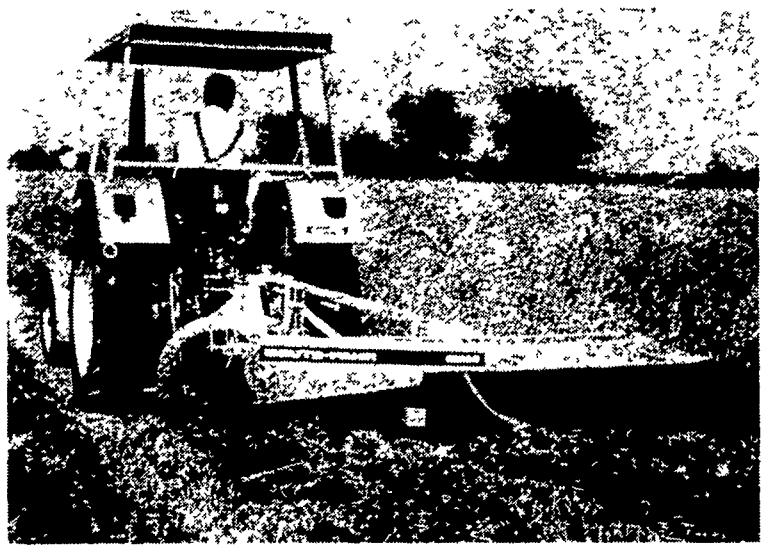
Hesston President Howard L. Brenneman said the sales were lower to allow for adjustments in dealer inventories. Despite high interest rates and continuing drought concern in some areas of the Midwest, Brenneman said sales for the remainder of the year are expected to improve.

Yoder cited

MORRISTOWN, N.J. — Glenn Yoder, of East Greenville, Pa., was honored recently for outstanding sales achievement by the Agricultural Group of Allied Chemical Corporation.

Yoder received the Eastern Zone Product Award for Poly-N ammonium polyphosphate, one of two nationwide awards. The presentation was made at Allied's 1981 annual dealer meeting in New Orleans.

WHAT'S NEW



The SM 30 disc mower by Deutz-Fahr can be used with tractors as small as 25-30 pto hp. A larger SM 40 mower can be powered by tractors as small as 40 pto hp.

New disc mowers

ATLANTA, GA. — A new SM Series of disc mowers by Deutz-Fahr has been announced for the 1981 season by Deutz Corporation, of Atlanta, Ga.

Design features of the mowers include a tubular steel beam to support the cutter-bar assembly, spiral-bevel gears and a hex shaft running in oil and large oval cutting discs, which increase the amount of knife overlap.

The new Deutz-Fahr SM 40 mower, with eight knives on four discs, mows a seven-foot swath, powered by tractors as small as 40 pto hp.

The new SM 30 mower cuts a swath of five and one-half feet with six knives on three discs, using tractors as small as 25-30 pto hp.

Both mowers are the mounted-type for either Category I or II three-point hitches and offer three transport positions – vertical rear, vertical side or horizontal rear.

IH summarizes Axial-Flow testing data in continuing combine choice controversy

CHICAGO — America's farmland is becoming the scene of an increasingly confusing battle during harvest time.

There's always been the issue: "What is the best combine?" But now complicating that question is the more recent controversy: "Which is better, the rotary or conventional machine?"

Presently, four North American-based companies offer rotary-type combines. Two companies are standing by their conventional models.

In an attempt to put International Harvester's Axial-Flow rotary combine into perspective, IH engineers involved with its development reviewed recent test data and specific patented features. Included were Donald Murray, chief engineer; Richard DePauw, machine design manager; and Robert Francis, product engineer.

The men began with a discussion of test data.

"IH conductd extensive tests during the Axial-Flow combine's development," said DePauw, "and the tests haved been supplemented by outside results."

Kansas State University agricultural engineers, for example, made field comparisons of the IH rotary combine and conventional machines operating in small grains in Kansas in 1978. The conclusions were reported at the 1978 winter meeting of the American Society of Agricultural Engineers.

The results included:

The Axial-Flow combine harvested more wheat per unit area at both high and moderate feed rates. At moderate feed rates on four series of trials, the Axial-Flow averaged a 4.5 percent yield advantage over the conventional combines.

The Axial-Flow combine caused less crackage in all varieties of wheat harvested.

The Japanese government tested an IH 1440 Axial-Flow in very high moisture wheat in 1980. Typical of test results was one where grain moisture was 32.1 percent and straw moisture was 49.5 percent. The yield was 73.5 bushels per acre. Total grain loss from all causes, at an average speed of 3.4 mph, was only 1.1 percent compared to crop yield.

"In simple terms," Francis said, "this means the Axial-Flow design reduces grain loss, crackage and dockage in the crops it is harvesting, regardless of conditions."

"Yet another concern to farmers is fuel consumption," Francis continued. "The best criteria for measuring fuel consumption is number of bushels or acres harvested per gallon of fuel.

"In our own tests, we consistently had more productivity per gallon of fuel used."

One example: a 1480 Axial-Flow combine and a conventional IH 915 machine worked in the same rice field. The Axial-Flow used 9.26 gallons per acre, while the conventional used 12 gallons per acre.

Two IH combines also were compared in soybeans. The 1460 used 1.01 gallons per acre.

One report received by the engineers was from a custom operator who had operated his own IH 1460 and a conventional, competitive machine.

The operator reported that he harvested almost 2,000 acres of wheat and over 600 acres of corn with his Axial-Flow. In wheat, the Axial-Flow harvested 1.305 acres per gallon; and the conventional combine, 1.096 acres per gallon. The Axial-Flow combine, therefore, harvested 19 percent more acres per gallon.

In corn, the Axial-Flow harvested 0.861 acres per gallon; and the conventional, 0.698 acres per gallon. Thus, the Axial-Flow harvested 23 percent more acres per gallon.

Reports from other countries include one from an Australian IH Axial-Flow owner. He said his IH Axial-Flow harvested 48 bags of sorghum per Imperial gallon of fuel. By contrast, his conventional combine harvested 46.5 bags per Imperial gallon.

Again, the Axial-Flow combine's design, according to DePauw, is the main reason it harvests more efficiently. And the design involves certain patented features.

"The threshing-separating system, the heart of the Axial-Flow combine, actually involves several patents," DePauw continued.

"Patents cover the conical front end of the rotor, which is the transition area between the feeding system and the rotor, and the impellers on the front of the rotor."

He explained that the front of the Axial-Flow rotor is larger in diameter than the rest of the cylinder. In the 1460 model, for example, the impeller area is 36 inches in diameter. The rotor is 24 inches in diameter.

"This alows a wide feeding system, yet the crop is gently funneled into the threshing process," Francis said. "Thus, the Axial-Flow design experiences little plugging, and the efficient transition from the feeder to the impeller is especially important in tough, high moisture crops."

Spiral rasp bars at the front of the rotor are another patented, exclusive feature. Other rotary combines either have straight rasp bars or spiral bars at the rear of the rotor.

"The front-mounted spiral rasp bars are there to keep the material moving through the machine. Again, this greatly decreases plugging while providing better control of the crop during the threshing process," DePauw said.

Patents also cover the discharge area near the rear of the rotor. One applies to the expansion chamber, mounted at the rotor's end. As the name implies, it is an enlarged chamber that enables crop residue – straw, cobs, husks, etc. – to "fly away" from the rotor easier. Again, according to engineers, this means more efficient movement of material through the machine – and better separation.

A patent on the gear case and rotor drive, the mechanical method of driving the rotor, allows the farmer to adjust the speed of rotation on-the-go within each of two ranges, by means of a fingertip switch control. This matches harvesting speed with crop conditions. The simplicity of design, according to Francis, also assures high reliability.

"The beater (or chopper) is located in the discharge area," DePauw continued. "Because the beater receives the material directly from the rotor and propels it back to the spreader, flow through is enhanced."

Overall, DePauw noted, the Axial-Flow combine is designed to move a crop through the threshing and separating process in a very efficient manner. This ability to significantly reduce plugging thus enables the IH rotary combine to harvest more crops in tougher conditions than any other rotary machine.

"We also believe that no machine, rotary or conventional, is as simply designed as the Axial-Flow combine," he continued. "The IH combine has a minimum of drives – belts and pulleys. This makes it an easier machine to operate. It also makes it easier to service while assuring high reliability."

Critical drives are easily accessible to both the dealer service person and the farmer, the engineer said. The rear service deck gives access to the engine, hydraulic fluid reservoir, fuel tank filler cap and related components. Side doors swing open to drives as well as the concaves. It takes one man only about 30 minutes to change a set of concaves for different crops.

"Finally," DePauw said, "the Axial-Flow combine's ability to harvest various crops in various conditions enables us to offer several sizes of grain combines, a pull-type model, a hillside model and rice machines."

Donald Murray, chief engineer,

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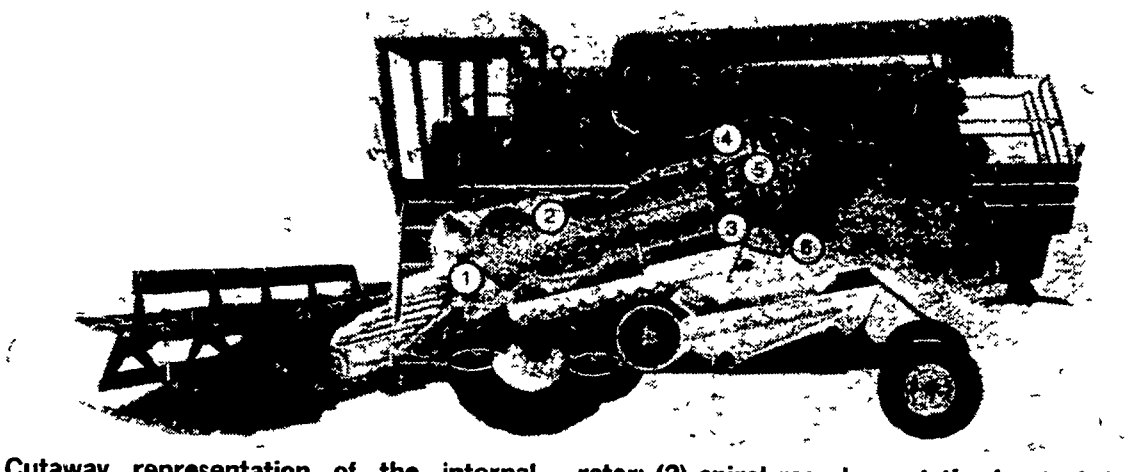

Cutaway representation of the internal mechanism of the International Harvester Axial-Flow combine points out patented or special features which are basic to the machine's design. These primary features include (1) the conical front end of the single rotor; (2) spiral rasp bars at the front of the rotor; (3) discharge area near the rear of the rotor, including (4) the expansion chamber; (5) gear case and rotor drive; and (6) beater (or chopper) location.