

FARM SHOW

For everyone in agriculture interested in latest new products.

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NEW MACHINES THAT CONVERT STRAW INTO VALUABLE LIVESTOCK FEED NOW ON THE MARKET

Get Set to Turn Straw into Money



Capacity of this first-to-be-introduced straw processor is 2 to 2½ tons per hour.

You'll be hearing a lot in the months ahead about revolutionary new machines designed to turn straw into money.

One of the biggest breakthroughs in the long search for a practical, economical way to boost the nutritional value of straw and other low quality roughages is the J-F Fabriken portable processor. Developed in Denmark and designed exclusively for processing straw, it's one of several new straw processing machines making headlines in farm magazines throughout Europe. The J-F processor has passed extensive field trials and feeding tests with flying colors and is already in commercial production, with customers waiting in line.

(Continued on next page.)

IN THIS ISSUE:

- New "hair net" for hay stacks • Round bale silage • Electric fence netting
- Revolutionary "reversible" toolbar • New planter frame folds forward for transport • Can you use a chopper dolley or self-elevating bogey? • Readers nominate "best" and "worst" buys • Farmer field tests new IH rotary combine • New tractors from Deere, Allis-Chalmers.

Straw Processors

(Continued from cover page)

to grab units as fast as they roll off the assembly line.

"We're hoping to get one or two machines shipped to the U.S. within the next several months," reports Terry Grace, president of Farmax, Mobile, Ala. His company handles sales of J-F Fabriken equipment in the U.S.

"We think the new J-F straw processor has great potential for turning straw into money," Grace told FARM SHOW. He anticipates that the machine will sell in the U.S. in the \$15,000 to \$18,000 range.

Two other popular straw processing machines in Europe are the Taarup, manufactured by Maskinfabrikken Taarup, A/S, 5300 Kerteminde, Denmark, and Farmland's Feed Processor.

A spokesman for Farmhand, headquartered in Hopkins, Minn., told FARM SHOW that limited straw-processing trials are underway in the U.S. but most of the work to date has been done by representatives of Farmhand's independent marketing organization in England. They've equipped the Feed Processor with a special device for applying caustic soda on straw as it's processed in the machine.

Straw processing machines now being sold in Europe have capacities

of 2 to 3½ tons per hour. Straw is finely ground (1 to 1¼ in. long) and treated with approximately one gallon of 30% sodium hydroxide solution per 100 lbs. of straw dry matter. This treatment has been shown to raise its feeding value to levels comparable to good grass hay or grass silage, and to about 70% the feeding value of barley.

Recommendations vary but feeding of processed straw can usually start about three to eight days following treatment. Treated straw is eaten willingly by animals. Adult cattle will eat 10 to 20 lbs. of processed straw per day, depending on the crude fiber content of other feed components. This means that as much as half the roughage of dairy cattle may be processed straw, and up to two-thirds of the roughage for young stock and beef cows. Processed straw is, however, very low in protein and must be properly supplemented to provide an adequate ration.

Processed straw is easily handled by silage equipment or front end loaders, and is easily mixed with silage and concentrates for complete ration feeding.

Processed straw must be kept dry but does not require special storage conditions or structures. It's high pH (8-8.5) retards activity of bacteria and fungi so spoilage is not a problem. Coverage with plastic is not recommended. Some farmers have stored processed straw in the bottom of vertical silos to absorb the highly nutritious juices which normally seep out of regular silage placed above it.

Here, according to Henning Pederson of the J-F Fabriken Co., is how his company's new processor, designed to process straw bales, works:

Individual bales are placed on the feeder table. While the bale is being chopped, it is kept in position by a holder plate above it and a grate. Finger knives in the chopper cut a number of tracks in the bale. The effect is comparable to 20 circular saw blades cutting through a straw bale. After chopping, the straw passes through a system of finger shearbars, ensuring that all straw in the bale is chopped in short pieces.

The special chopping system splits most of the straw lengthwise so that the liquid mixture of sodium hydroxide can be applied to the inner side of the straw. The liquid is sprayed on as straw leaves the chopper and falls into the mixing vessel.

"After three days and three nights of storage, digestibility is close to maximum and feeding can start," says Pederson. "The processed and treated straw is very compact, with from 2 to 4 times as much density as regular untreated straw bales."

For more details on straw processing equipment, contact the manufacturers of the recently-introduced processing equipment shown in the accompanying photos.



The Farmhand caustic soda applicator is mounted on a basic Farmhand Feed Processor which requires at least 85 tractor hp. Soda solution is metered by a roller vane pump as straw enters the Processor. For more details, contact: FARM SHOW Followup, Farmhand, Inc., 1011 South 1st St., Hopkins, Minn. (ph. 612 938-7651).



The JF straw processor requires about 70 pto hp and applies caustic soda solution as straw leaves the hammermill-type grinder. "Hard-mixing" occurs in the mixing chamber where liquid is rubbed into the straw by a beater-type mixer. Capacity is 2-2½ tons per hr. For more details, contact: FARM SHOW Followup, Terry Grace, Farmax, Box 8523, Mobile, Ala. 36608 (ph. 205 479-8663).



The Taarup Straw Processor has a capacity of 2-2½ tons per hr. and requires a 100 hp tractor. Caustic soda solution is applied as straw leaves the grinder. A series of spiked rotors massages the solution into the straw. For more details, contact: FARM SHOW Followup, Maskinfabrikken Taarup A/S, 5300 Kerteminde, Denmark.

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2 □ FARM SHOW - 1-5



"It works," says Howard Hanson who has tested the netting on stacks made with most types of one-man stacking equipment, including Deere, Hesston, Owatonna, McKee, Farmhand and his own Hanson Dry-Chop Stacking System.

KEEPS TOPS INTACT REGARDLESS OF HOW HARD THE WIND BLOWS

New "Hair Net" for Hay Stacks

Howard Hanson finally found it — a low cost way to keep freshly-made stacks of loose or chopped hay from blowing away.

His solution: A "hair net" for hay stacks that keeps the tops intact regardless of how hard the wind blows.

"We've tested it on all kinds of stacks made by a wide variety of one-man stacking systems. We know it works," Hanson told FARM SHOW.

He manufactures and markets the Hanson Dry Chop system which tows behind a forage chopper to stack dry chopped hay or roughage as it's harvested. "Even stacks of straw, milo or cornstalks — which generally are the worst to blow — stay put when they're protected with this netting," says Hanson.

The netting is moisture proof, rot resistant and colored black to resist ultra-violet rays of the sun. "We figure it can be reused every year for at least 5 years," says Hanson. He has the netting custom fabricated in 100 ft. rolls measuring 12 ft. wide. One roll will cover four or five stacks, depending on how close you measure and how much "lap over" you allow for the ends. "One man can put the netting on but it works best if there's someone at each end of the stack. It takes two persons only a minute or two to cut off a 20 ft. length of netting from the 100 ft. roll, lay it over the top and then tie the ends with twine. You can hang weights around the edge of the netting to help hold it down but our experience indicates that adding weight isn't all that necessary. Simply tying the net together at both ends of the stack with twine seems to do the job," explains Hanson.

To introduce the new "hair net" for hay stacks, he's offering the 100 ft. rolls (12 ft. wide) at \$35 per roll, including shipping anywhere in the U.S. That figures out to right at \$1.40 per stack per year, assuming the net can be reused for five years and that one roll will take care of five stacks.

Hanson recommends netting stacks as soon as possible after they're made, then leaving the netting intact until the stack is ready to be fed or processed. Stacks can be moved and handled without disturbing the netting.

For more details, contact: FARM SHOW Followup, Hanson Dry Chop Systems, Box 306, Wolverson, Minn. 56594 (ph. 218 995-2344).



Net is easily secured to stack top by tying it at both ends with twine.

PROVIDES WORLD-WIDE EXPOSURE FOR NEW INVENTIONS — INCLUDING YOURS!

New "Hotline" for Inventors

Got a new invention you'd like to tell the world about — without having to invest a lot of money and worrying about getting "ripped off"?

For \$100, you can list your "brainchild" with Technotec, a new world-wide "yellow pages of technology" which has been launched by Control Data Corporation, headquartered in Minneapolis, Minn.

"We think farmer-inventors can benefit tremendously from this world-wide exchange of inventions and other new technology," William C. Norris, chairman and chief executive officer, told FARM SHOW.

Norris emphasizes that Control Data, which boasts a one billion dollar CYBERNET network consisting of more than 5,000 computer terminals in more than 150 cities in 15 different countries, is equipped to handle the new world-wide technotec program with existing facilities. Technotec puts a farmer-inventor in touch with a prospective manufacturer or investor; the parties themselves work out the details. Control Data does not collect any royalties or commissions — just the \$100 fee that inventors pay to have their inventions listed, and the "search" fee — about \$10 per search that companies or individuals pay to search the Technotec data bank for new inventions and ideas.

Norris points out that "the wheel is being re-invented every day throughout the industrial world." He considers this to be a waste and feels that "better use of our technology would enable us to find solutions to the world's most urgent problems."

As a result of this conviction, Control Data is promoting its world-wide "hotline" for marketing new technologies. Someone who develops a new product, technique or service can list it on the Technotec data base. Someone looking for that particular product, technique or service can search the data base. If a match is made, contact can then be made. Object: A meaningful economic relationship.

Does it work?

You bet. Soon after the service was launched, for example, Jim Decker, of Modesto, Calif., listed a new freeze-dried peeling process for fruits and vegetables. Within a few months, he had negotiated licenses for the new process in Norway, Poland, Spain, Japan and the United States.

Ed Harvey, of Arlington, Va., an electrical engineer, searched Tech-

notec for queries on woodworking. He found that a group of woodworkers in Caracas, Venezuela, were seeking a process for bending wood without its splitting or cracking. He was able to supply technology the Venezuelans needed and collected several hundred dollars for his efforts.

This is what Technotec is all about — matching a new technological process with a potential user. Companies with terminal computers can plug right into the Technotec system direct. If no terminal computer is readily available, you can phone Technotec headquarters and they'll run the search for you.

To date, the system has about 20,000 subscribers, including farm equipment manufacturers who routinely search the system for new inventions and ideas. Suppose, for example, you've invented a revolutionary method of threshing grain and wanted to use Technotec to get in touch with prospective manufacturers throughout the world. You'd use a series of code words to describe the invention, such as farm machinery, combine, harvesting equipment, food processing, grain threshing, rotary cylinders, wheat harvesting, corn harvesting, and so forth.

A company or individual searching Technotec for new inventions would use one or more of these same code words to "intercept" and learn about your new idea.

Your invention can be programmed for world-wide exposure. If, because of patents or other reasons, you aren't interested in foreign inquiries, you can limit its Technotec exposure to North America.

Many inventors, companies or individuals with new ideas charge a contact fee of about \$50 before disclosing their name and address. This "contact charge", which is paid to Technotec, allows the subscriber to qualify or restrict responses. For example, an individual with an idea for a first-of-its-kind hydrostatic tractor may not want to divulge his idea to existing tractor manufacturers. Or, he may want to talk only with existing tractor manufacturers.

For more details on the new Technotec service, call this toll free number (800/328-1870), or write to FARM SHOW Followup, Technotec, Control Data Corporation, 8100 34th Avenue, Box 0, Minneapolis, Minn.



Les Renner reports that his new IH "rotary" has no cylinder or straw walkers.

Photos by Pennington County Courant

Owner Reports on New IH "Rotary"



Les Renner at the controls of his new IH "rotary" combine.

4 □ FARM SHOW 1-5

Reprinted from the Pennington County Courant, published at Wall, S. Dak., and written by D. R. Lewis, Editor.

"It's a new concept in threshing," said Les and Rodney Renner, the owners of this new 24' International combine.

Instead of a cylinder and straw walkers, this new machine has a rotor. All threshing and most of the separating of grain is done in the first couple feet of the rotor.

International has been very hush-hush on this new machine. They have built only 300 and 11 of them are being used in South Dakota. It probably won't be available on the open market until next year. So far there isn't even any literature out on the machine.

Actually, International made their first rotor combine 11 years ago. They have been working ever since perfecting their idea. The combine will harvest everything from corn, wheat and beans to millet and rice.

Straw goes three and a half times round the rotor before it reaches the end, whereas the conventional cylinder only works on the straw about one-third of a turn.

The machine costs between \$55,000 and \$60,000.

The electronics on the machine are amazing. All the major shafts have a monitor and digital read-outs in the air-conditioned cab.

This machine has a 436 cubic inch turbo drive diesel engine. It is rated at 165 hp. It has a 175 bushel wheat bin and when the machine is loaded it weighs about 30,000 pounds.

"When they were trying to sell us this new machine," Les said, "they wined us and dined us down at Mitchell and told us all the things this new rotor would do. At that time I said to Rodney — if that machine will do only half what they say it will do, I'd be satisfied."

So far Renners have harvested 200 acres with the new machine and it is working as good as the engineers said it would.

EDITOR'S NOTE: The new International Harvester Axial Flow "rotary" combines reportedly will be the feature attraction at the company's exhibit at the upcoming Farm Progress Show. It will be held Sept. 27, 28 and 29 near Washington, Iowa.



"Biggest farm tractor in the world" is how Versatile bills its brand new 8-wheel drive tractor. First public showing is slated for the 1977 Farm Progress Show to be held Sept. 27, 28 and 29 near Washington, Iowa.

Developed by Versatile's Fargo, N. Dak., manufacturing facility, it's a single power unit driven by a 600 hp Cummins diesel and equipped with four axels. It has tandem, independently suspended axles front and rear, and articulates and oscillates between the pairs of tandem axles. The cab and fuel tank are up front, the engine in the rear. A close circuit TV system monitors implement action behind the tractor.

Dickey-john dealers we've visited recently are understandably excited about the company's new monitors, including the first total performance monitoring system ever developed for farm tractors.

On a single console that mounts on the hood or fender in easy view of the operator, it gives a direct readout of wheel slip, engine rpms, pto speed, engine hours, true ground speed, distance traveled, acres worked and battery voltage output. Audible alarms sound whenever wheel slip, ground speed or engine hours exceed preset limits.

Also new from Dickey-john, headquartered at Auburn, Ill., (ph. 217 483-6181) is a Radar Sensor, billed as "the most advanced method ever devised for measuring true ground speed of ag equipment", and the Scamatic R, a new complete planter performance monitor. It automatically scans the populations being planted in each row and has a new, exclusive feature — it has a built-in acreage counter and keeps track of the area planted. Also new is a bin temperature monitor which automatically keeps tabs on the condition of stored grain.

A group of former key employees of what used to be Trojan Seed Co., Olivia, Minn., has started their own Keltgen Seed Co., headed by Keith Keltgen, president, who for the past 17 years has been Trojan's director of research. Things changed for Keltgen and a number of other veteran management-level staffers when Trojan was purchased by Pfizer Genetics. So, they decided to pool some 101 years of combined seed and industry experience and run their own show.

Board members are Keith Keltgen, president and general manager; Tom Mack, vice president of research and development; Bob Bauman, vice president of production; Darwin Keltgen, Northern Division sales manager; Jim Sheaffer, southern Division sales manager; and Pat Erickson, Corporate Secretary-Treasurer.

The new company's primary sales territory is the Dakotas, Minnesota, Montana, Idaho, Nebraska, Kansas, Colorado and Texas. Bookings of Keltgen Hybrids for planting in '78 are already underway.

Twenty five hybrids, ranging from 80 to 120 day maturity, are being offered, along with grain sorghum hybrids, a forage sorghum hybrid and a sorghum-sudan hybrid.

For the past 17 years, Keltgen has demonstrated an uncanny knack for being "firstest with the mostest." His credits include TX 68, the world's earliest dent hybrid; TXS 102, the hybrid that virtually put Trojan on the Corn Belt map by winning 12 state and one national championship in the national corn yield contest; and the first commercial introduction of high lysine corn.

That impressive record is reflected in the fact the new company is off to a running start. Soon after word got out, unsolicited applications from veteran seed corn dealers started coming in. The company, hoping to have 200 dealers signed up by the end of the year, had reached their quota by the end of August.

In searching through some papers the other day, I ran across a clipping from a column written by Marv Russell, former editor of The Nebraska Farmer. He tells a hilarious story of pioneer days.

"As the people of pioneer times were wont to do, the people he tells about carried on one of their rare get-together parties into the wee hours. As the children got sleepy, they were piled into a bedroom to sleep.

"Some teen-agers, still wide awake, decided to have some fun. They switched the outer clothing of the sleeping children. When it came time to break up the party, parents collected their children, depending on clothing for identification.

"Lo and behold, when daylight dawned at home, the wrong children were with the right parents — or vice versa. But getting the children sorted out and returned wasn't simple. A horse-and-buggy trip to the proper home often found that home deserted, for the parents were off on a trip of their own to return the children they had ended up with.

"It was weeks before everything was straightened out," Russell relates.

He notes that the story originally was told by Mrs. Berna Chrisman, of Scottsbluff, Neb., in "Pioneer Stories of Custer County Nebraska." It's also in the book "Sod Walls," written by Roger Welsch, a Nebraska Wesleyan University professor.

I learned a good lesson on "secret warranties" a while back. Our 1976 Pinto, on which the regular stated warranty had already expired at 25,000 miles, developed a clicking engine noise at about 26,000 miles. Since it was out of regular warranty, I took it to a local mechanic rather than back to the dealer. Figured it was only something minor anyhow, like maybe a stuck valve.

Come to find out, the pistons were shot and the cylinder walls scored. Total cost of the complete overhaul, including parts and labor, was right at \$282. The mechanic called a half dozen places and had to wait almost a week to get the pistons. "Seems a lot of Pinto owners are having piston problems. They're hard to get," he told me.

Soon as it was fixed, I drove to the Ford dealer. Only then did I learn about Ford's "secret warranty" on Pintos, apparently prompted by faulty design of the splash system. Particularly in cold weather, it doesn't "splash" enough oil to properly lubricate the pistons.

Ford paid the tab for the complete overhaul — which I like. What I don't like is that I had to find out about the "secret" warranty in such a round-about, happenstance way.

Chevrolet has a similar "secret warranty" under which some Vega owners got new engines to replace original ones which overheated.

Manufacturers don't widely advertise these "secret warranties". You have to hit on them by accident or get tipped off by a friendly mechanic, like I did. The mechanic notes that another "secret warranty" most car owners don't know about is the 5-year or 50,000 mile coverage on all emission control parts. If they go bad, the factory is required by the EPA to fix them.

Almost every day, we get calls or letters from FARM SHOW readers asking for the dates and locations of major farm shows and expositions. In many cases, readers tell us they're planning a vacation or business trip and want to take in a particular show while in the area.

Here, in alphabetical order, is a listing of some of the larger shows throughout the U.S., Canada and Europe to be held yet this year, and in 1978:

AG Expo — Jan. 17-19, Spokane, Wash.; **American Pork Congress** — Mar. 8-10, Kansas City, Mo.; **American Royal** — Nov. 8-19, Kansas City, Mo.; **California Farm Show** — Feb. 14-16, Tulare; **Canada Western Farm and Ranch Show** — Mar. 27-Apr. 1, Edmonton, Alberta; **Dixie National Livestock Show**, Feb. 3-19, Jackson, Miss.; **Empire Farm Days**, August 8-10, Seneca Castle, N.Y.; **Farm Progress Show**, Sept. 27-29 near Washington, Iowa and, in 1978, on Sept. 26-28 near Taylorville, Ill.; **High Plains Agribusiness Exposition**, Sept. 8-10, Lubbock, Texas; **National Dairy Cattle Congress**, Sept. 24-Oct. 2, Waterloo, Iowa.

National Farm Machinery Show, Feb. 15-18, Louisville, Ky.; **National Western Stock Show**, Jan. 13-21, Denver, Colo.; **Northern Farm Show**, Jan. 19-21, Minneapolis, Minn.; **Ohio Farm Science Review**, Sept. 2-22, Columbus; **Pennsylvania Farm Show**, Jan. 9-13, Harrisburg; **Ohio Power Show**, Jan. 21-22, Columbus; **Southern Farm Show**, Mar. 10-12, Ft. Worth, Tex.; **3-I Show**, April 27-30, Great Bend, Kan.; **Triumph of Agriculture Show**, Mar. 14-15, Omaha, Neb.; **Western Farm Show**, Feb. 26-Mar. 1, Kansas City, Mo.; **Wisconsin Farm Progress Days**, Aug. 1-3, near Clintonville; **World Dairy Expo**, Oct. 4-8 Madison, Wis.

Major European farm shows include: **International Exhibition of Farm Machinery**, Nov. 9-13, Bologna, Italy; **International Agricultural Machinery Fair**, April 8-16, Zaragoza, Spain; **International Agricultural Fair of Verona**, Mar. 12-19, Verona, Italy; **International Agricultural Machinery Exhibit**, Mar. 5-12, Paris, France; **International Agricultural Show**, May, 1978, Frankfurt, Germany; **Royal Agricultural Show**, July 3-6, Kenilworth, Warwickshire, England.

Of all the above shows, the International Machinery Show in France, to be held in Paris March 5-12, is the largest. Billed as the largest in the world, it attracts about one million exhibitors of machinery, livestock, poultry and agricultural products. If you'd like to go, there's still space available on a special tour being planned by Allied Farm Tours. You'd depart March 2 from Chicago or New York, tour the Frankfurt and Heidelberg areas of Germany and arrive in Paris Mar. 4 for the big show. The tour departs Paris on March 7 for Brussels, then swings over to Amsterdam. Cost, including meals, lodging and transportation, is right at \$950 from New York. \$1,075 from Chicago. For more details, contact FARM SHOW Followup, Allied Farm Tours, 800 Oak St., Winnetka, Ill. 60093

Worth repeating: "It's not the critic who counts, nor the man who points out how the strong man stumbled, or where the doer of deeds could have done them better. The credit belongs to the man who is actually in the arena, whose face is marred by dust and sweat and blood, who strives valiantly, who errs and who comes short again and again, who knows the great enthusiasms, the great devotions and spends himself in a worthy cause, who at the best knows the triumphs of high achievements, and who at the worst, if he fails, at least fails while daring greatly, so that his place shall never be among those cold and timid souls who know neither pity nor defeat."—Theodore Roosevelt

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