FARM SHOW

For everyone in agriculture interested in latest new products.

Vol. 1 No. 5, 1977

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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 Maskinfabrken 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.

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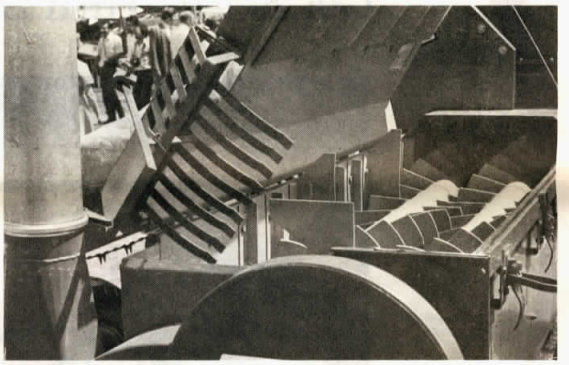
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FARM SHOW attempts to verify product claims in editorial reports and adheres to rigid standards. However, the publisher assumes no responsibility for accuracy and validity of claims.
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The Farmhand 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, Maskinfabriken Taarup A/S, 5300 Kerteminde, Denmark.

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"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.

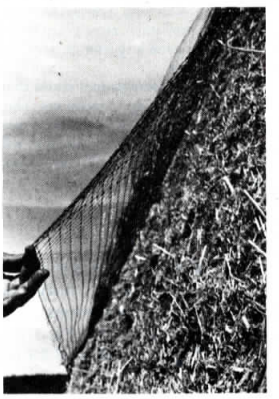
He manufactures and markets the Hanson Dry Chop system which tows behind a forage chopper to stack dry chopped hay or roughage as it's harvested. "Even stacks of straw, milo or cornstalks — which generally are the worst to blow — stay put when they're protected with this netting," says Hanson.

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 typing 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, Wolverton, 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-heat 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 Technotec for queries on woodworking. He found that a group of woodworkers in Caracus, 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.

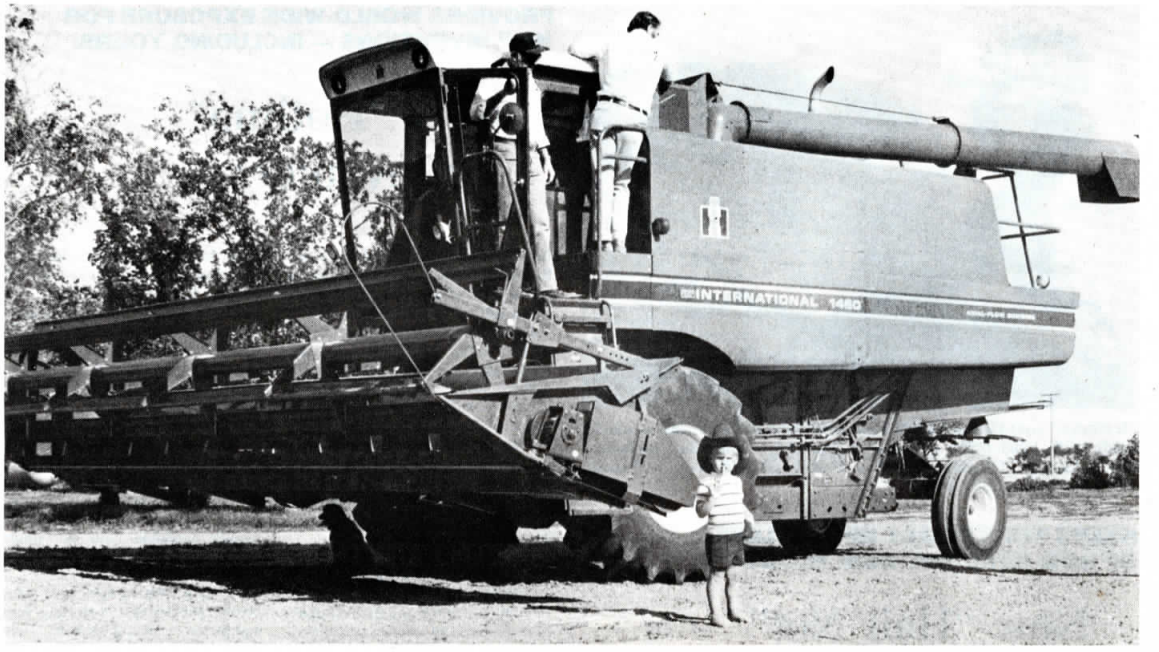
A company or individual searching Technotec for new inventions would use one or more of these same code words to "intercept" and learn about your new idea.

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.

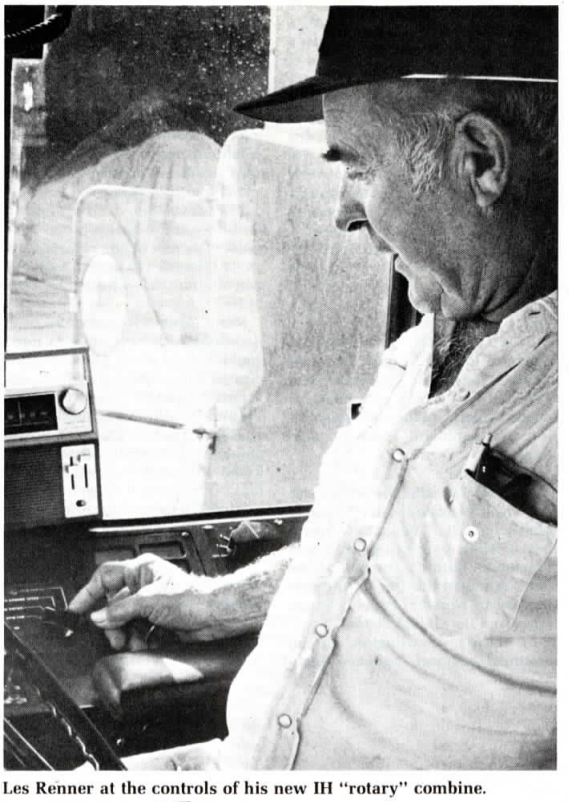
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Les Renner reports that his new IH "rotary" has no cylinder or straw walkers.

Photos by Pennington County Courant

Owner Reports on New IH "Rotary"



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

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.

FARM SHOW

Smörgåsbord



Harold Johnson
Editor

"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 Scanamatic 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 Weslyan 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 roundabout, 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, Elberta; *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.

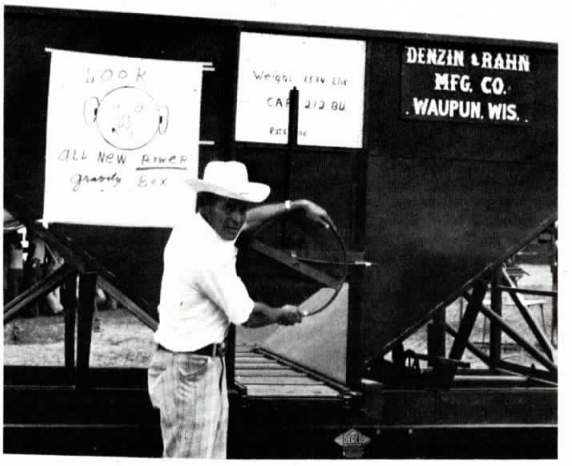
National Farm Machinery Show, Feb. 15-18, Louisville, Kty.; *National Western Stock Show*, Jan. 13-21, Denver, Colo.; *Northern Farm Show*, Jan. 19-21, Minneapolis, Minn.; *Ohio Farm Science Review*, Sept. 2-22, Columbus; *Pennsylvania Farm Show*, Jan. 9-13, Harrisburg; *Ohio Power Show*, Jan. 21-22, 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 Vernona*, Mar. 12-19, Verona, Italy; *International Agricultural Machinery Exhibit*, Mar. 5-12, Paris, France; *International Agricultural Show*, May, 1978, Frankfort, 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 Frankfort 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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Exclusive cross conveyor and uniformly sloping sides (37°) unload ground high moisture ear corn, high moisture shelled corn and other "sticky" materials without bridging. Shown is Erwin Denzin, manufacturer.

HANDLES EAR CORN OR HIGH MOISTURE GRAINS WITHOUT BRIDGING

Power Gravity Box First of Its Kind

You've never seen anything like it — a first-of-its-kind power gravity box that handles high moisture shelled corn, ear corn and other "sticky" grains without the usual bridging problems. What's more, it's designed so all four wheels carry an equal amount of weight, making a fully-loaded wagon less apt to tip on rolling ground than conventional "high side" gravity wagons.

The key exclusive feature of the new-style Derco gravity box is a bottom cross conveyor. The wagon's 37° sloping sides gravity feed ear corn or grain into the 19½ in. wide horizontal apron which, in turn, powers it out the discharge chute in a matter of seconds.

"In testing the prototypes, we used them to haul high moisture ear corn right from the picker. "We had no bridging problems whatsoever with regular high moisture ear corn, or ground high moisture corn," reports Erwin Denzin, designer and manufacturer. "We haven't tried it with finely ground oats or barley but I believe it will handle even this type of feed without bothersome bridging problems. It works great for handling high moisture ground corn as it comes out of the silo. You can load from the silo directly into the wagon, then use the cross conveyor and discharge chute to unload into a feeder auger or directly into a low-slung fenceline bunk."

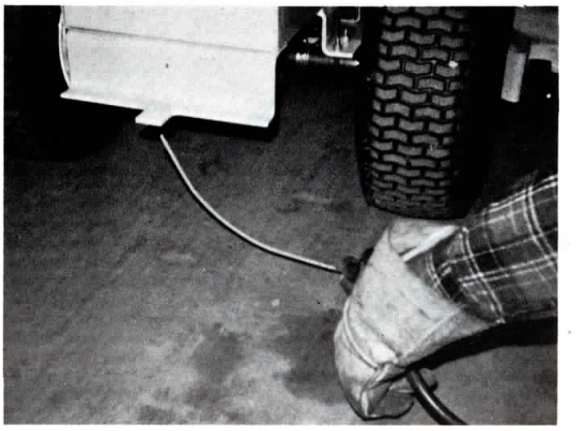
A control handle on the cross conveyer, which operates off a combination pto and belt drive, can be flipped on and off to gradually "inch" the load. Or, the apron can be put in grear and the entire load discharged in a matter of seconds.

The box is made of 12 gauge steel and measures 7 ft. wide, 10 ft. long and 5 ft. deep. It holds 212 bu. and weighs 1,534 lbs., which figures out to about 7½ lbs. of box weight per bu. of capacity (without sideboards). "That's heavier than any other steel wagon box on the market that we know of," says Denzin. He notes that the top side comes with built-in stake pockets if you want to add sideboards.

The pto-driven cross conveyor is available with standard right hand discharge — (units with left hand discharge and front-mounted pto drive are available on special order).

The new-style power gravity box retails for $995.

For more details, contact: FARM SHOW Followup, Denzin and Rahn Mfg. Co., Hwy. 151 N., Waupum, Wis. 53963 (ph. 414 324-5794).



WELD ANY GRADE OF STEEL OR CAST IRON

You'll Like These New Welding Rods

Special electrodes designed to make easy work out of tough welding jobs are now available in a new Coordi-Pak kit from Coordinated Industries.

Unlike ordinary electrodes, the Cordi-Pak rods have coatings that contain a high percentage of powder metal alloys, providing an easy to strike and easily maintained arc for welding in any position, even overhead.

Here's a rundown of the three types of rods contained in the kit:

Coor-Alloy Super 1000: Once amperage is set, this electrode can be used with the drag technique in any position without changing amperage. It has a high strength (83,000 psi) and welds right through grease, paint and rust. You can bend it to reach tight places without cracking the flux coating. It can be used on any welding machine, even the smallest. You can use it to weld thin body metal without danger of burn-through. Produces perfect bead contours, regardless of the welding technique used, and welds without spatter, according to the manufacturer. The kit contains 1½ lbs. of this rod in 3/32 in. dia., and 2 lbs. in 1/8 in. dia.

Coor-Alloy 101: This nickel electrode rod has a dual flow coating which provides a soft brazing-type arc for welding cast iron — without having to preheat the base metal. It'll weld thin beads at low amperage settings, reducing shrinking and cracking. Rated at up to 50,000 psi tensil strength. Kit contains 1/2 lb. of this rod in 1/8 in. dia.

Coor-Alloy 300: It works well with all steels where extra stress, strain and crack resistance is required. Rated at 112,000 psi tensil strength. Kit contains ½ lb. of this rod in 3/32 in. dia.

Cost of the Cordi-Pak Kit is $24.50.

For more details, contact: FARM SHOW Followup, Co-ordinated Industries, Flaugherty Run Road, Corapolis, Pa. 15108 (ph. 412 457-6600).

"Quick-Link" Chain Repair

No tools are required to repair chains of virtually all sizes and shapes with new Quick Link connectors from Peerless Chain Co. The zinc plated screw-on connectors are available in sizes from ⅛ in. to ½ in. Specifications of the largest size are 19/32 in. mouth opening, 4400 lb. working load limit, 3-3/16 in. inside length, and 15/16 in. inside width. Packed 10 per carton.

For more details, contact: FARM SHOW Followup, Paul Swanson, Customer Service, Peerless Chain Co., Winona, Minn. 55987 (ph. 507 452-2376).

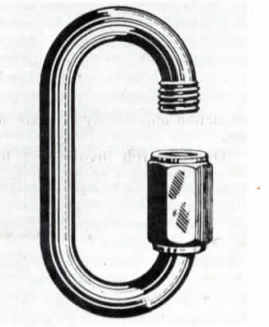


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COST 20 to 25% LESS TO OPERATE THAN GASOLINE

GMC Introduces New Diesel-Powered Pickups

"They're capable of producing fuel savings of as much as 20 to 25% over comparable size gasoline engines," says GMC of its new diesel-powered pickups for 1978.

The new GM V8 diesel engine, which develops approximately 120 net hp at a relatively high 3600 rpm, is being offered in half ton (C10) two-wheel drive, two-door Fleetside and Stepside pickups for '78.

In addition to fuel economy, the new diesel engine offers the ability to withstand long periods of idling more efficiently. It has low exhaust emission levels, enabling it to meet federal air pollution standards without a catalytic converter, GMC points out. Bore is 4.06 in., stroke 3.39 in. and compression ratio is 22 to 1. It is a naturally aspirated, four cycle engine with the four cycles being similar to those of a gasoline engine. The combustion chamber design includes a combustion pre-chamber where fuel ignition begins before spreading to the piston area, providing a quieter running, more economical engine with less exhaust smoke than a conventional diesel engine with an open chamber design. The design also includes glow plugs extending into each pre-chamber. The ignition system activates the glow plugs and, after a brief wait, the engine can be started. Glow plugs stay activated until the engine reaches normal operating temperature.

In addition to the engine, the "diesel package" includes an engine oil cooler, thermostatic fan drive, dual exhaust system, two 4000-watt heavy duty batteries connected in parallel for starting, a 63 ampere Delcotron alternator, engine block heater, hood and front and rear floor noise insulation, added spray deadener on cowl sides, power brakes, power steering, automatic transmission and a special instrument cluster.

For price and other details, see your local Chevrolet dealer or contact: FARM SHOW Followup, Public Relations Dept., Chevrolet Motor Division, General Motors Corp., General Motors Building, Detroit, Mich. 48202 (ph. 313 556-5937).



Chevrolet is offering, for the first time in '78, the new GM V8 diesel engine in the half-ton (C10) two-wheel drive Fleetside and Stepside pickups. It develops 120 hp at 3600 rpm and has a compression ratio of 22 to 1.

AVAILABLE "OVER THE COUNTER" OR THROUGH VETERINARIANS

New Mastitis Product for Treating Dry Cows

One of the biggest breakthroughs in mastitis control since the FDA's crackdown four years ago was announced by the Upjohn Co., headquartered at Kalamazoo, Mich., as this issue of FARM SHOW went to press.

The FDA has approved the company's new formulation for dry cow mastitis control which is available as Biodry (sold over the counter) or Drygard (sold through veterinarians). Both products contain 400 mg. of the antibiotic novobiocin in an oil suspension and both control the two most common matitis-causing organisms — streptococcus agalactiae and staphylococcus aureus.

"Our research involving 2,300 dairy cows in five geographic locations shows novobiocin to be very effective in treating mastitis in dry cows," explains Dr. G. H. Swenson, Upjohn researcher.

The National Mastitis Council recommends that dry cow mastitis products be used to treat all four quarters of all cows as they're dried off. With Biodry or Drygard, you infuse the contents of one tube in each quarter after the last milking prior to initiation of the dry period. Massage the udder after treatment to distribute the product throughout the quarters, then dip all teats following treatment with a suitable teat dip.

Biodry and Drygard are not to be used less than 30 days prior to calving. There is no milk discard requirement if used as recommended.

In addition to the Upjohn (Drygard) and Tuco (Biodry) labels, the new dry cow mastitis formulation is being private labeled by four different suppliers — Agway, Ralston-Purina, Central Soya and Allied Mills. Suggested retail of the new product sold "over the counter" is $10.50 for a box of 12 10ML plastet syringes, enough to treat all four quarters of three cows.

For more details, contact your local animal health supplier or veterinarian, or contact: FARM SHOW Followup, The Upjohn Co., Public Relations, The Upjohn Co., Building 190, Kalamazoo, Mich. 49001.

Reader Letters

I enjoy your magazine and have more than paid for the subscription price with new ideas.

Verdun Schauer
Sterling, N.D.

Really enjoy your magazine. I'm sending names of nine friends who might also like to subscribe, although some of them might have been Charter Subscribers as myself.

I really enjoy your "Farmers Nominate Best, Worst Buys" section and refer to it as the "Brag and Bellyache Page" when I tell friends about it.

Doug Cling
Maple Lawn Farm
Mediapolis, Iowa

Will take this chance to compliment you on a fine job. I sure enjoy reading the magazine. Thanks for the health quiz on "going to church."

Lee Hinds
Bismarck, N.D.

Just a short note to say thank you for developing a farm magazine like this. I've been looking for such a magazine for years and couldn't fine one.

Jerry Otahal
Baytown, Tex.

Your FARM SHOW is one of the few ag publications that I really look forward to getting. I've showed it to some people and I know of three orders that I've gotten them to send in for.

Robert Fahlberg
Lincoln, Neb.

I am very happy with your magazine. Have found out about many things of interest to me that I would otherwise have never known about. I look forward to the coming of it in the mail every time.

Terence Blanchette
Porter, Minn.

FARM SHOW magazine has been needed for a long time. Keep up the good work!

Russell W. Frerichs
Niagara Falls, N.Y. 14304

You have a good publication. Hope you can get to publish it monthly.

E. J. Pesut
R 1
Albia, Iowa 52531

Thanks for your report on Alumi-Nu in FARM SHOW. We would like to emphasize that Alumi-Nu is a special alloyed repair rod for repairing aluminum or aluminum alloys. All you need for making the repair is a piece of sandpaper or a wire brush to remove the oxidation, and a common torch that will heat the base metal up to 728° so the rod flows when it is rubbed vigorously on the heated area. You do not heat the rod — just the base metal. There are many types of torches one may use, oxy. acety., oxy. propane, blow torch, Prest-O-Lite, butane and many others.

Thanks to FARM SHOW and other magazines, we have been able to increase our sales and therefore are passing this saving on to our customers with a reduction in cost. Our AL-5 package (5 rods in a package with literature) now sells for $8.98. The AL-2 package (2 rods in a package with literature) has been reduced to $4.98.

Larrie D. Smith, Gen. Mgr.
A.I.M., Inc.
Jeffco Airport-Exec Bldg.
Broomfield, Colo.

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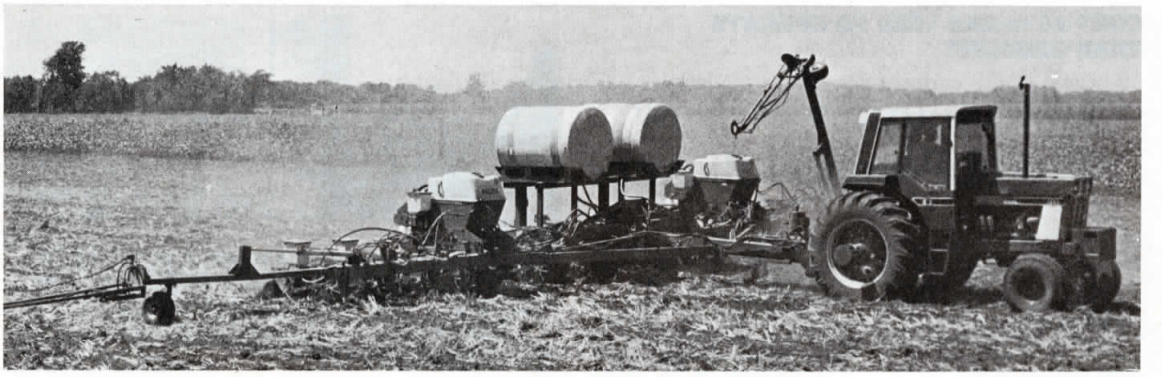


Photo shows Shoup planter frame equipped with 16 Cylco planter units spaced 36 in. apart. It flexes in three sections and has 5 planter units on the outer sections, and 6 on the center section.

FOLDS IN 2 MIN. TO TRANSPORT WIDTH OF UNDER 14 FT.

Planter Frame Folds Forward for Transport

An innovator from Illinois has uncorked a new concept in corn planter design. You've never seen anything quite like it — a front folding planter frame available in widths from 30 to 60 ft. In two minutes, it folds forward to less than 14 ft. for road transport.

"We think it has some key advantages over rear-folding and other type toolbars," Gene Shoup, inventor, told FARM SHOW. His own Shoup Manufacturing Plant, at Bonfield, Ill., expects to have about 50 of the new front-folding planter frames off the assembly line prior to the 1978 spring planting season.

"One advantage with front folding is that it allows fertilizer tanks to be mounted on the planter frame," he points out. The frame flexes in three sections, allowing it to follow the ground contour with greater precision. The entire frame can be lifted as a unit, or either the right or left wing can be lifted individually while the planter is in motion, allowing the operator to plant one-half of the frame's width. Each wing has its outer end supported by two wheels which serve as both lift and drive wheels.

The new-style planter frame is designed to accept individual units and other parts from new or used 500 Cylco, or Deere 7000 or 7100 Max Emerge planters. "For farmers who already have one or more planters, the drives, lift wheels, hubs, markers and portions of the frame can be used to help reduce cost," Shoup points out. He notes that no caster wheels are used in the planting position, or for road transport. Four center wheels support the planter in the rear, and your 3-pt. hitch lifts the front.

The planter is pulled from the 3-pt. hitch in both field and road positions. Wheels used to lift the wings also serve to drive the planter units.

"We recommend that tractors equipped with dual wheels be used to pull the planter," says Shoup. "We'll assemble planter units on the frames, or modify frames to the customers' specifications. Prices of our basic frames are competitive with others on the market."

The front-fold frame design makes folding and transporting the unit a simple, one-man operation. The entire process takes less than two minutes. The tractor moves forward to elongate the tongue in converting the unit to transport position. Forward movement of the tractor, plus hydraulic power, folds the frame. Once the wings come together, they automatically interlock with one another. The 3-pt. hitch then lifts the front of the planter for transport. The planter is pulled from the 3 pt. hitch at all times, even though the planter is a pull type. Four center wheels on the planter frame support the rear during transport, and support the center of the frame while in the field or working position.

"All that's required to fold the frame is the simple removal of three pins," explains Shoup. "The frame can be made up to 60 ft. wide and still have a transport width of less than 14 ft. The frame has a short tongue to give it a shorter turning radius than on other planter frames or toolbars on the market," he points out.

Shoup expects to have a similar front-fold rotary hoe on the market early next year. It uses hoes of a toolbar design and will be available in a maximum width of 60 ft. Slated for introduction yet this year is a 50 ft. front-fold anhydrous applicator which does not require that the nurse tank be unhooked to fold the unit for transport.

For more details, contact: FARM SHOW Followup, Shoup Manufacturing, Box 121, Bonfield, Ill. 60913 (ph. 815 932-5605).



The tractor moves forward and the tongue elongates to fold the planter wings forward for transport. Frame, available in 30 to 60 ft. widths, accommodates new or used planter units, wheels, drives, lift mechanism, frame and marker from 500 Cylco or Deere 7000 or 7100 planters. Said to turn shorter than any other planter toolbar on the market and flexes in three sections. Note how planter is pulled from 3-pt. hitch in both field and road position. There are no hydraulic lines to disconnect in folding or unfolding the unit.

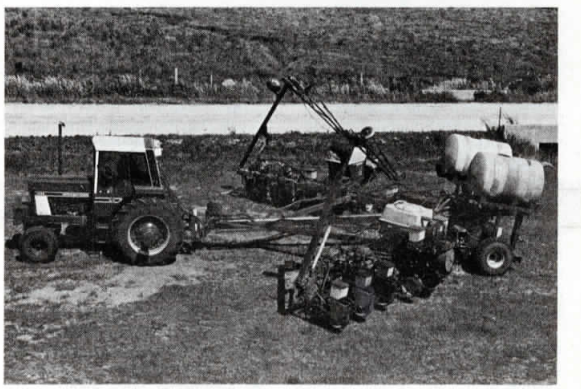


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RAKE HAY, PLOW, DISK OR CULTIVATE TO RIGHT OR LEFT AT FLICK OF LEVER

Many Uses for New Reversible Toolbar

You can rake hay, plow, disk or cultivate to the right or left of the direction of travel with a revolutionary reversible toolbar, said to be the first of its kind in the world.

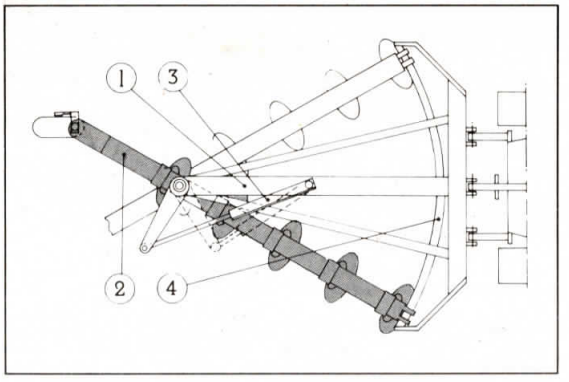
"The flood of inquiries from all parts of the world has been a great encouragement to us," Peter Sillars, told FARM SHOW. He's general manager of Pettit, the English-based firm which developed and holds the patent on this new twist in toolbar design.

Sellers says the company eventually plans to offer the toolbar in several different forms for various applications and operating conditions. Used in conjunction with a disk-type plow, for example, the reversible toolbar allows for an infinite range of operating angles to either the left or right of the direction of travel. It's equally applicable to raking hay, chiseling, land leveling or operations which can make use of the reversing mechanism.

"There is no reason why the toolbar should not also be used with one-way attachments, such as a chisel plow where being able to vary the angle and width of cut according to conditions can be very advantageous," Sillers points out. "In conditions which have long favored disc plows rather than the moldboard plow, the Pettit machine offers the advantages of a reversible implement without incurring the cost penalty of a double set of bodies. The fact that the same discs rotate in opposite directions on each run means that they wear evenly, as do the bearings, to achieve optimum life."

Sillers says various alternatives are being explored for marketing the new machine in the U.S. "It seems likely we shall take up one or more of the many proposals we have received for local manufacture/assembly under license," he told FARM SHOW. "We have modified the original model to operate at up to 45° rather than only 30°. The 16 disc model is now semi-mounted with a double acting hydraulic ram controlling a tail wheel for depth. A fully mounted version will be produced with only 10 or 12 discs. The discs in our latest reversible plow are suspended direct from the main toolbar instead of on a secondary beam."

For more details, contact: FARM SHOW Followup, F. W. Pettit Division, Geest Industrial Group Ltd., Moulton Spalding Lincolnshire, England PE12 6QP.



By activating the hydraulic ram, the toolbar is swung to the left or right around the pivot point. The front end of the toolbar runs on rollers along the curved rail, the extremeties of which produce an operating angle of up to 45°.

The four basic components of the reversible toolbar are: The main frame (1); the toolbar (2); the double-acting hydraulic ram and pivot arm (3) and the curved rail (4).





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BUYING TIPS YOU CAN USE

We asked randomly selected farmers to "tell it like it is" in nominating their "best" and "worst" buys in the past 12 months.

by Harold M. Johnson
Editor

Farmers Nominate Best, Worst Buys

Tractors were mentioned most frequently in this issue's FARM SHOW survey of "best" and "worst" buys.

Here's what randomly selected readers from throughout the U.S. like or don't like about their tractors and other recently-purchased inputs:

"This tractor is one of the few new pieces of equipment we have bought in the last few years that really exceeded our expectations," says Harry Tuma, Cut Bank, Mont., of his new Steiger Turbo Tiger. "Our down time has been almost nil." Also high on Harry's "best buy" list is a Harley rock picker, manufactured at Clarissa, Minn. He's disappointed, however, in Goodyear innertubes used in his Steiger tractor and a '76 Chevrolet pickup, pointing out that "the seams on the tubes are faulty. Even though they give an adjustment on the tubes, it doesn't begin to help pay for the chloride in the tires, or the service calls."

A new Case 2670 tractor earned a "best buy" vote from Dick Rasmussen, Ostrander, Minn. "The best thing I like about it is that it has so much power we never found all of it. You could keep putting the 2670 in higher gears and still pull the implement. It is very quiet, comfortable, has good vision and handles extremely well. Last but not least, it's a lot cheaper than J.D., which I used to have."

Ronald Whitlock, Carrollton, Ill., says his Deere 4230 diesel tractor, purchased new in '74, "has a good motor, transmission and final drives but it has the worst hydraulics I've ever seen. It's been in our dealer's shop about five months out of the last three years just for hydraulic trouble. And it's still not right," reports Ronald, who adds that his new Deere 7000 planter (8 30-in rows) is "the best corn planter I've ever seen. We got a beautiful stand of corn with it this year. The soybean metering units leave a lot to be desired, however. They are not very accurate. Too much guesswork and scratching and digging."

Here's how other randomly selected readers size up their recent tractor purchases:

Randy Hobbs, Princeton, Mo.: "My Massey Ferguson 2800 is the best tractor I've ever owned. This is the only tractor I have ever had that has power to spare. Operator convenience on all controls is excellent. New glass cab is the quietest I have been in. Probably the most impressive thing about this tractor is that it is big enough to pull 20 ft. implements and uses less than 8 gal. of fuel per hour."

Don Reynolds, Farnhamville, Iowa: He's well pleased with his Massey Ferguson 1155 tractor, with M and W turbo, but doesn't like the way it rides: "The turbo is real nice and makes the tractor 180 hp. The spring mounting under the seat is very poor. I've ordered an air base to put under the seat. It was in the Charter Issue of FARM SHOW. I called the company and found a dealer near us."

Vernon Virgin, Lebanon, Ill.: "We examined specs on several 4-wheel drives and chose Allis Chalmers (model 7580) because of dealer availability and price. Most pleased with first 100 hrs. performance and the dealer's cooperation when problems did develop."

Vernon registered strong disappointment with his "Big Dooley" Chevrolet series 30 truck with crew cab and 454 motor: "Chevrolet truck division does not help solve engineering problems involved with poor performance and oil consumption of the 454 cu. in. engine. They give the impression I'm the only one having the problem. I know better."

Earl Youngblut, LaPorte City, Iowa: He's happy with his 8630 Deere tractor ("performance has been very good to this point; costs are high but dealer service and warranty very good") but faults Deere for a series of problems with a newly-purchased, 1977 model 7700 combine: "In less than one hour field time, it lost all the hydraulic oil. Very disappointing. Wiring is still poor. Seat still needs improving in regards to leg rest height and accessibility to service the area below."

Albert Meyer, Jr., Gaylord, Minn.: "It has given good performance and has a very good cab and is easy to service," says Albert of his "best buy" Deere 8630 tractor, purchased in 1975. "I bought it from a dealer that gives good service and from a company that stands behind their products."

He thinks his IH 700 plow (nine 18-in bottoms) "could have some improvements to it. The land wheel should be in a better place to give the plow better stability. If I were to buy a new plow, I'd get the 800 flex frame plow instead."

Larry Dykstra, Bigelow, Minn.: He's well pleased with his new International 1086 tractor. "I really like the quiet ride in the cab and good visibility. I get the best of service out of my dealer." He's also happy with his new IH V-chisel subsoiler with automatic reset. "Does a nice job and there are no shear pins with the automatic reset," he points out.

Bob Clements, Boonville, Ind.: "I have an International Harvester 2-wheel drive 1066 diesel tractor. Even though I bought this tractor three years ago, it has been a headache from the beginning. It uses two quarts of oil in an 8-hour run; it's

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hard to get in gear without gears clashing; the brakes were never any good, which makes the tractor hard to turn; the fuel tank is too small; back wheels wobble when driving down the road, which makes the tractor sway from side to side; front tires had air seep in between the plys, and had to be replaced; seals in the back main crankshaft bearing have been replaced three or four times and still leak; after seals were replaced, the tractor still consumed two quarts of oil in eight hours; lights do not function properly."

"It was only half put together — nothing but a big pain."

Clayton Berg, Hendrum, Minn.: "I got a new 8430 John Deere. It does everything I planned for it to do. The Fargo Implement, Fargo, N. Dak., gives the best service for parts and repairs. I have been very satisfied with them."

An Illinois reader reports that in the past 12 months he has purchased "a used IHC 966 diesel tractor, used New Holland 469 Haybine and a new IHC 480 disc: No problems. Everything and everyone performed as expected."

Another reader cites his Big Bud tractor, from Northern Mfg., Havre, Mont., as his "best" buy: "A quality made tractor with very good service." A Wisconsin reader who didn't sign his name nominated a White 2105 tract· · as his "best" buy.

As in previous FARM SHOW buying surveys, sloppy workmanship at the factory was a frequently mentioned complaint.

"The workmanship was lousy," says Louis Herdegen, Birdtail Ranch, Chinook, Mont., of his 1855 White tractor which he purchased new. "It was only half put together and was nothing but one big pain."

Louis is well pleased with two Ban-A-Fly electronic f'y control units from the Schlueter Co.: "Have two in the farrowing house and they really are flashing and popping all the time. They surely seem to be doing their jobs of getting rid of flies."

Roger Kopp, Maiden Rock, Wis., says his 3200 IH Skid Steer loader "has leaked hydraulic oil somewhere from the first day I bought it. This leak has never been found by the dealer or company."

Heading his "best buy" list is an Ashland scraper for a 4-wheel drive tractor: "I build my own waterways and ditches. I had my doubts if I could pull it or not but it's no problem at all. The scraper holds 8 yds. heaped and 6 yds. level full. One set of hydraulic hoses is all that is needed for operation. It goes from load-haul-dump and back to load in one complete cylinder cycle."

Sloppy engineering prompted these comments from Thomas Small, Walton, Ind., regarding his recently purchased IH 1650 Hydro Cadet which he notes is "heavily built and does a nice job."

"A machine with a price tag this high should be close to perfect when leaving the factory. One little part — a metal depth regulator — stripped its thread the first time it was used. Such a shame to taint a good machine with one little cheap part. The steering linkage was set at the factory about 1/3 to the right. Changing it was nothing difficult but was aggravating on a brand new machine. The belt tightener has never worked good and never will with its design. We have ruined two belts already," Thomas explains.

He compliments Kewanee on their model 88 15-ft. cultimulcher: "It's heavily built. The transport wheels and linkage are superb. In the field, the mulcher flexes and yet, in transport position, it is rigid and does little flapping. Can be towed at 20-30 mph. Clearance between teeth and rear wheels is great — much more than other brands. This is about the fifth or sixth cultimulcher we have used, and this is the first that really did a great job. Many fields could have been prepared with one trip over."

Workmanship at the factory is very poor on this machine," says Randy Hobbs, Princeton, Mo., of his Deere 7700 combine. "I have had several welds break loose and nuts come off, causing a lot of down time. The thing that disappoints me most about the 7700 is that capacity is not big enough to handle the 8-row head well in all conditions. I have trouble putting grain over the back on hill ground unless I creep along."

Gerald Peinig, Portsmouth Iowa, likes the work his 11 ft. Crust Buster chisel plow does but faults the manufacturer's selection of three joint pins: "They're too light and bend in a few hours. You can't get the machine off the tractor. They need to be twice as heavy." Gerald's well pleased with his new Deere 7000 8-row Max Emerge Corn planter. "It's one of the best implements I've ever owned. Has good depth control and produces an even stand of corn and beans."

His "best buy" nomination is a new 21 ft. 330 Deere wheel disc which he describes as "just great. Super penetration. Level job. Very good herbicide incorporator. Gets under deep-rooted weeds such as milkweed. It was more expensive than other brands but well worth it."

"Corn planters and planter monitors showed up on buying surveys we received from the following FARM SHOW readers:

Marvin Hengelfelt, Stromsburg, Neb.: He reports that his Deere Max-Emerge planter (6 row) "fulfilled all expectations with the exception of a need for attachments to incorporate insecticide for rootworm control which I will have to add to the planter for next year as I had some rootworm damage this year.

Ralph Weems, Jr., West Point, Miss.: He's well pleased with a 12 row folding Deere toolbar frame which he equipped with 386 IH planter units: "I purchased the toolbar knowing that it had to be extended. By cutting the center section and welding in 24 in. of toolbar, this made a unit that was perfect for 12 34-in. rows. The bar was for 12 30-in. rows. We installed a Dickey-john monitor on the planter and didn't miss a row in 1700 acres." Ralph also put in a plug for his new 12-row IH 133 Vibra-Shank cultivator: "It's an excellent cultivating tool — no down time at all in two trips on 1700 acres."

Gary Ashburn, Blue Mound, Ill.: He notes that his IH 500 Cyclo 12-row planter "has three moving sections of 4 rows each. The four middle rows won't plant the same depth as the four outside rows on each side." Gary faults his Flowtron electronic fly killer, noting that it won't last more than 3 weeks until the transformer burns itself out." He's pleased with a new 490 IH flex wing disk ("does a real nice job for a 32 ft. disk") and a Glencoe Soil Saver chisel plow ("covers the trash, doesn't plug up and opens the ground to stop erosion").

Milton Boline, Centerville, S. Dak.: He nominates his IH 400 Cyclo planter and the monitor that came with it as his "best" buy: "The monitor relieved me of the worry that the planter wasn't planting. As soon as one of the rows would plug the buzzer would go on and indicate which row wasn't planting. And, when I came to the end and raised the planter, the buzzer would sound so I would know it was working."

"Such a shame to taint a good machine with one little cheap part."

Milton adds that "there really wasn't any product that I was dissatisfied with. My wife is unhappy with Shout — says it doesn't do the job they advertise in removing spots from clothing."

Larry Johnson, Cologne, Minn.: "This machine gave me a perfect stand of corn and beans in one trip over last year's corn stubble, saving me time and expense, and conserving moisture," says Larry of the Buffalo Till Planter he bought new last March.

Jerry Grady, of Grady Farms, Syracuse, Ind.: He had problems with Demco fertilizer placement shoes on a new 7100 Deere Max-Emerge folding toolbar planter. "Due to the fact that they had to be installed between the seed placement disks, they placed the liquid starter fertilizer too close to the seed and, as the roots began to grow, the fertilizer burned the roots off. As a result, we had 300 acres of corn to replant. We have several neighbors who had the same condition and also know of several other farmers in this area with the same problem."

Jerry is well pleased with a Deere 5400 self-propelled forage chopper: "We have had very good performance with a minimum of repairs and down time. The company has been very good about updating all weak and problem areas. The machine has excellent capacity and handles very nice."

Various types of haying equipment were the subject of buying reports from the following FARM SHOW readers:

Turner Ranch, Moore, Mont.: New Scotch Brand ATP-200 baler twine from the 3-M Co. didn't live up to his expectations: "This plastic twine just won't work in a New Holland SP 1282 baler," Kenneth Turner reports. "It shreads as it's pulled around the bale and then breaks."

On the plus side, Kenneth lists a Speed King 8 in. by 46 ft. pto-driven grain auger as a "best buy": "This auger has worked real nice and can unload a big load of grain into a tall bin in a hurry. It is built strong and should last a long time."

Patrick Birgen, Alcester, S. Dak.: "It took one year to the day when it ran right," says Patrick of his Deere 200 Stackwagon. "The thing was supposed to be new, but the way it ran and the service we got was terrible. Everything that went wrong, almost, was blamed by the company on the person who was running it." Patrick is well pleased with products and services from the Murphy Feed Co. "I tried their product several years ago and it is astounding the way they have progressed according to other companies. The service is also out of this world," says Patrick.

Norman Trost, Ronan, Mont.: "He reports "excellent results" with his New Holland hydrostatic self-propelled model 1112 swather: "The twin sickles allow me to cut much faster than my previous single sickle machine. The cab is comfortable, dust free and quiet with the exception of the hydrostatic whine." Norman is disappointed with his Deere baler model 466: "Since I've had it, the main pitman and shaft have had to be replaced. The cluster gear popped a tooth, allowing it to go out of time which broke both needles and split one knotter in half. The needle lift frame has had to be taken off and straightened, and several sealed bearings have gone out already."

Byron Boddy, Lovington, Ill.: He's unhappy with his Dodge W-300 truck: "This is a one-ton, 4-wheel drive, dual rear wheel model. The motor overheats. It has all the extra coolers etc. but gets hot. In fact, so hot the automatic fluid boils and the truck stops pulling. Dealer pats my head and shakes his but doesn't do anything. Factory doesn't know me. It also shimmies — but same answers."

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Metron Marker loaded with special ink will write on plants, fabric, bees, plastic or rusty or grease-covered metal. Also available with invisible ink which requires black light to read.

WRITE ON ANYTHING, INCLUDING PLANTS

Many Uses for New Markers

For less than $3, you can buy a new-style marking pen that writes with invisible ink for putting "hidden" codes on pesticide containers and other property. Or, you can buy the same type of marker filled with a new waterproof fluorescent ink that leaves a highly visible mark on virtually any surface, including plants, plastic materials, oil or grease covered parts, or on rusty machinery and equipment.

For making invisible or "hidden" marks, Metron Optics, Solana Beach, Calif., fills its new Metron Marker pen with Transflor, a new transparent ink that's visible only when exposed to a black (ultraviolet) light. It leaves a clear, colorless mark that's virtually undetectable in sunlight or normal electric lights.

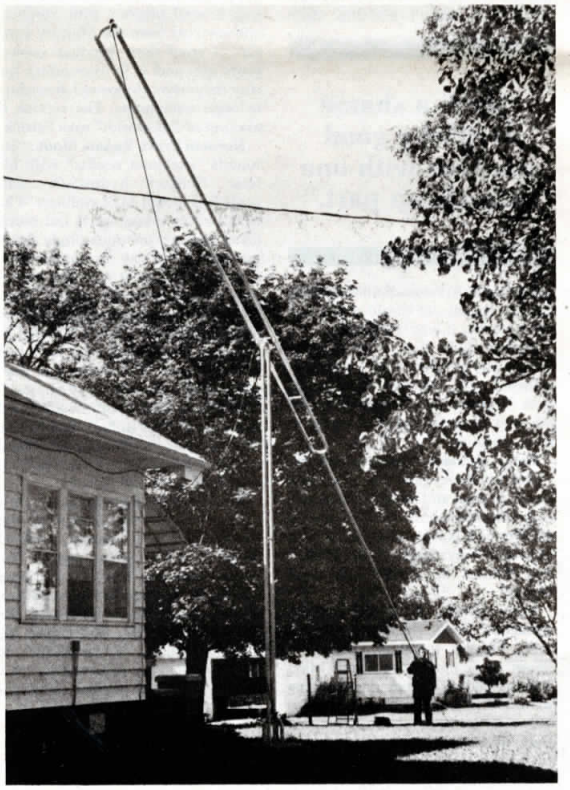
Possible uses for the invisible marker include marking metal or plastic pesticide containers, or feed or seed corn sacks for positive identification in case they're stolen and recovered. In industry, the "invisible" ink marker has been used to inconspicuously mark warranty dates on equipment, or for discrete marking, such as on rejected parts returned to a vendor suspected of returning the same parts at a later date.

FARM SHOW tested this marker, putting several dots of the invisible ink on the top of a metal container. The dots were invisible to the naked eye but showed up readily under a "black light" purchased in a local store for only $1.

Metron Optics also offers Metron Markers loaded with a permanent marking ink which writes in your choice of 10 different fluorescent colors. The special ink is water proof and flexible when dry, and will write on oil or grease-covered metal, on plants, fabric and most any other material. The fluorescent ink leaves a permanent mark which, unlike the "invisible" Transflor ink, doesn't require a special "black light" to be read. Researchers use it to code plants and even to mark bees for study purposes. By marking the queen bee, for example, she becomes readily visible and the marking doesn't bother or abuse her in any way.

Cost of the Metron Marker pens, loaded with either transflor ink or permanent fluorescent ink, is $2.95 each.

For more details, contact: FARM SHOW Followup, Metron Optics, Paul Kempf, President, Box 690, Solana Beach, Ca. 97075 (ph. 714 755-4477).



Self-standing tower is hinged and counter-balanced for easy, one-man operation. It requires no guy wires and lets you install, service or adjust antennas or other fixtures at the very top without having to climb a single step. Top swings down to ground level.

TOP SWINGS DOWN TO GROUND LEVEL

Counter-Balanced Tower Eliminates Climbing

"It's the first and only patented counter-balanced hinged tower in the U.S.," says Michael Bauer, inventor and manufacturer of the new-style tower that lets you install or service TV, CB, or AM-FM antennas right from the ground. You simply tilt the counter-balanced tower — available in 40 or 50 ft. models — so the very top end swings down to ground level. When you've made the installation, adjustment or repair, you swing the tower back to the vertical position. Because it's counter-balanced, it swings effortlessly.

The hinged tower can also be used as a flag pole, for bird houses, as a light pole or for other uses.

To install, you pour approximately 1¼ yards of concrete footing around the base of the pole. It's made of welded steel pipe construction and is shipped in 3 pieces. Shipping weight of the 40 ft. tower is 350 lbs. (21 ft. shipping length). The 50 ft. tower weighs 400 lbs. and has a shipping length of 31 ft.

For more details, contact: FARM SHOW Followup, Bauer, Mfg., Rt. 2, Box 23, Mapleton, Minn. 56065 (ph. 507 462-3599).

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OPENS AND CLOSES AUTOMATICALLY FROM DRIVER'S SEAT

Side Dump Box Works Great for Silage

If you store silage in a trench or bunker silo, you'll be interested in side dump boxes which can be opened or closed automatically right from the driver's seat.

"They've caught on fast in Colorado and other states for filling horizontal silos," says Mel Brown, president of Mobile Farm Supply, which has just introduced a new electric controlled, hydraulically operated sideboard latch. With it, the driver never has to leave the cab to close or unlatch the sideboard.

"There are very few rear dump trucks used in pit silos in this area," explains Brown. "Most farmers prefer to drive through the silo because it helps pack the silage. Rear-dump trucks are more apt to tip and, in general, more inconvenient. At the large Monfort feedlots, for example, they put up several thousand acres of corn into pits using 16 to 20 cutters and 80 to 100 side dump trucks. We work very close with them as they use a mechanical latch on their own side dump trucks that we make and sell."

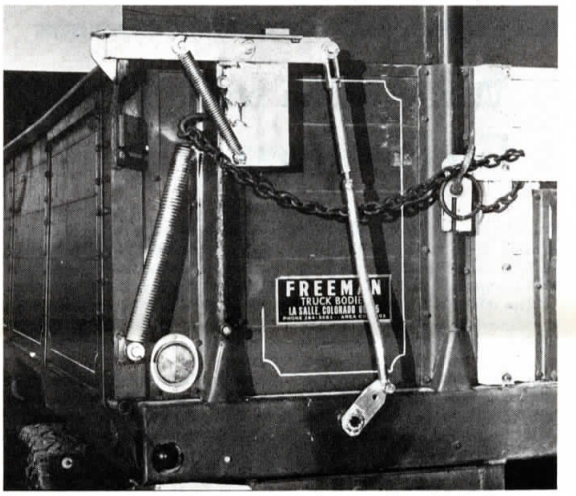
Brown, who every year puts about 600 acres of corn into his own silage pit, has found that a side-dump truck equipped with automatic opening and closing gains a minute and a half every load over rear-dump trucks: "Drivers don't have to stop. After they dump the load, they keep right on going and close the sideboard while on the move. With the automatic latch, you can use women or others capable of driving a truck but not able to wrestle with heavy, manually-operated sideboards."

To operate the latches and hoist, you first pull the lever to raise the bed. The small 2 in. cylinder controlling the sideboard has less resistance than the large hoist that raises the bed so the hydraulic latch operates before the bed starts to raise, allowing the sideboard to drop and swing freely.

The manual control sells for $456; the electric, hydraulically operated control for $584. "Both systems are being marketed in a do-it-yourself package the average farmer can install in about four hours of shop time," says Brown. Most of his new sideboard latching systems have gone on Freeman side-dump boxes but will fit other makes, he points out. Brown's company also offers automatic end gate latches, either mechanical or hydraulic, for rear dump trucks.

For more details, contact: FARM SHOW Followup, Mel Brown, Mobile Farm Supply, Box 580, Johnstown, Colo. 80534 (ph. 303 667-8988).





Electrically-controlled, hydraulically operated sideboard swings freely and can be closed any time while moving. Automatic latching system adapts to all makes of side-dump boxes.

IMPROVES PALATABILITY, ELIMINATES WASTE

Baled Hay Slicer Catching on Fast

"It improves palatability and virtually eliminates the waste you get with loose or ground hay," says Tom Hirtle, general manager of the H. L. Crose Co., Tulare, Calif., manufacturer of a portable hay bale slicer that has caught on fast since it was introduced in California several years ago.

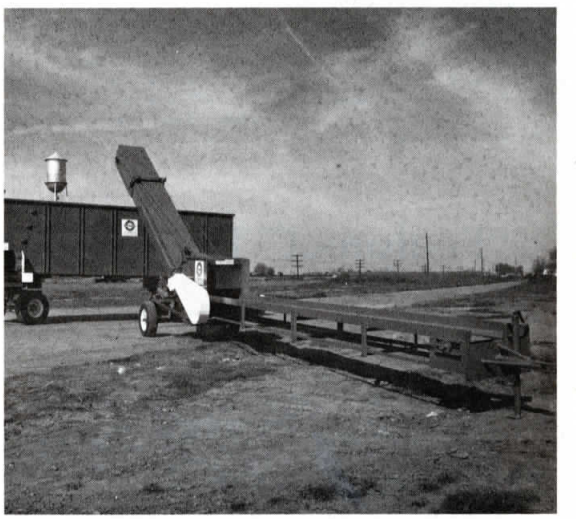
"Our primary marketing area is still in the California-Nevada-Arizona area but we've recently sold machines all the way from Michigan to Hawaii and from Mexcio to Idaho," Hirtle told FARM SHOW.

He points out that the machine can be moved from stack to stack with a minimum of set-up labor. Standard unit is pto-driven and operates with a 60 hp or larger tractor. Stationary engines and electric motor drives are also available. Three different cylinders (7, 9, or 11 blade) are offered to provide coarse or fine cut hay to match your specifications. Standard water spray bar permits addition of moisture to freshly-sliced hay, enhancing the aroma and palatability of the hay.

The machine's conveyor is hydrostatically controlled for variable speed in both forward and reverse. Feeds two-wire and three-wire bales at 1 to 5 per minute. Adjustable discharge elevator will clear highest truck or feed wagon.

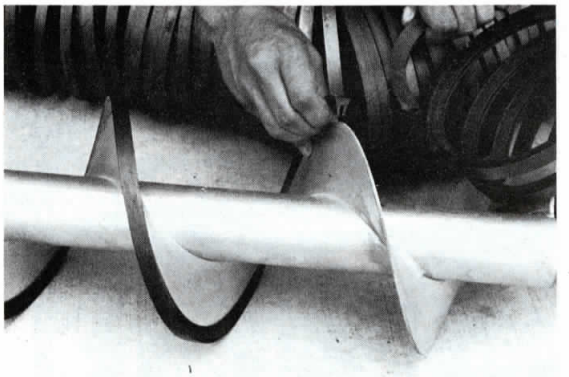
Standard model (2 to 2½ in. cut) sells for $7,700. It's equipped with the same heavy duty knives used in the company's stationary baled hay slicer.

For more details, contact: FARM SHOW Followup, H. L. Crose Co., 1478 North "J" St., Box 87, Tulare, Ca. 93274 (ph. 209 686-1571).



A water applicator is standard on the Crose portable baled hay slicer. Molasses applicator and pump are optional.

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Nylatron wear strip comes already coiled and preformed to easily snap onto augers.

ELIMINATES NEED FOR HANGAR BEARINGS

Wear Strip for Grain Augers

You can extend the life of new or existing grain augers with a new snap-on wear strip introduced by the Eiler Company.

"The efficiency and wear life of any screw-type auger can be dramatically increased with our Nylatron wear strip," Wayne Everson, sales engineer, told FARM SHOW. "What's more, the relatively inexpensive strip eliminates the need for hangar bearings," he points out.

Nylatron is a patented material combining long-wearing nylon and molybdenum disulphide, a dry lubricant. The strip comes with a standard ⅛ in. wide slot and is easily snapped onto auger flighting ranging from 5 to 10 in. or more in diameter. (Special strips made with a 3/16 or a ¼ in. wide slot are availalbe on special order). The strip comes coiled and "form fitted" to snap onto your diameter auger, and can be fastened on with epoxy adhesive, or with a bolt or rivet at each end of a wear strip section.

Everson recommends putting a wear strip on the entire length of shorter augers. On augers over 5 ft. or so in length, a section of wear strip at each end, and at various spacings along the trough to evenly distribute the weight of the auger, can be used. A minimum length of 3 coils is recommended for each section of wear strip.

"If the flighting edge is worn too thin to press snugly into the slot of the wear strip, we recommend chiseling perpendicular notches about 2 or 3 in. apart into the flighting edge to create a 'bite' for the strip, then applying epoxy adhesive to help hold it securely in place," says Everson.

Retail cost of the wear strip, priced by the coiled foot, is $1.56 per ft. for 100 ft. or less, $1.22 for 100 to 249 ft., and 76 cents for 500 to 999 ft.

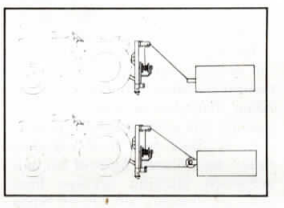
For more details, including a free brochure which tells how to compute the footage required for various diameter augers, contact: FARM SHOW Followup, The Eiler Company, 1107 South Second St., Minneapolis, Minn. 55415 (ph. 612 339-9226).

PACKS UP TO 20,000 LBS. PULLING POWER

Rescue Winch for Stuck Equipment

"Large tractors or combines hopelessly mired in mud up to their axles are pulled out with ease using the Farmi rescue winch," reports Rainer Langstedt, of Northeast Implement Corp., marketer of the Finnish-made Farmi winch.

"Our large model JL 45 can be used to pull out most any farm machinery, tractors, combines or farm trucks," explains Langstedt. "Used with an auxiliary pulley (see drawing) the unit has a pulling capacity of up to 20,000 lbs., which means it will lift 20,000 lbs. straight up. Thus, it will move much heavier equipment which is standing on the ground."



The Farmi winch is equipped with a set of legs which rest on the ground when the 3-pt. linkage is lowered. The legs allow the unit to operate independent of the rescue tractor's wheel traction. Because the pulling point is high, mired machinery is "lifted" during the pull.

Model JL 45, designed for use with a 60 hp or large rescue tractor, retails for $1,650. A smaller model (JL 30) has up to 13,200 lbs. pulling capacity and (with the auxiliary pulley) retails for $1,090. It comes with 165 ft. of ⅜ in. cable on the drum. Model JL 45 uses 165 ft. of ½ in. cable.

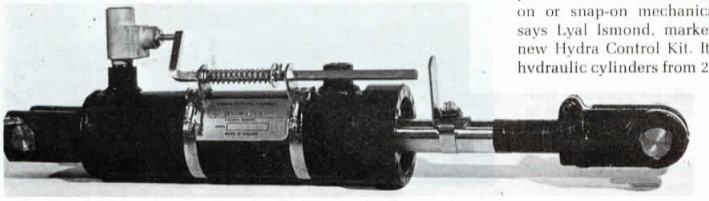
Both models can be operated from the driver's seat, or from the side of the unit.

For more details, contact: FARM SHOW Followup, Northeast Implement Corp., Walpole, New Hampshire 03608 (ph. 603 756-3779).



Pulling capacity of the Farmi winch is usually sufficient to pull out a stuck tractor or combine with straight line pull. Heavier objects can be moved with an auxiliary pulley shown in drawings.

"Foolproof" Depth Control for Hydraulic Cylinders



"It's virtually foolproof and more dependable than conventional screw-on or snap-on mechanical stops," says Lyal Ismond, marketer of the new Hydra Control Kit. It fits most hydraulic cylinders from 2 to 5 in. in dia. with an 8 to 16 in. stroke. Optional push rods are available for shorter or longer cylinders.

It's easily installed, easily adjusted and provides full range control, according to Ismond. It replaces mechanical stops and relieves pressure on the tractor spool.

Suggested list is $39.95. Dealer and distributor inquires welcome.

For more details, contact, FARM SHOW Followup, HydraTurn Corp., 504 36th Ave. SE, Calgary, Alberta, Can. T2G IW4 (ph. 403 243-6005).

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Drill's three 10 ft. sections float independently on uneven ground. It lifts for folding or unfolding.



Driver folds the drill hydraulically to narrow 15½ ft. width for road transport.

DRIVES OFF GAUGE WHEELS

New Grain Drill Folds Forward for Transport

Just about everything you've wanted in a wide, rugged folding grain drill has been incorporated into the new Great Plains drill designed and being manufactured by Ray Applequist, Salina, Kan.

"We asked several hundred farmers about their needs for an improved grain drill, then designed it accordingly," Ray told FARM SHOW. The 30 ft. wide unit is made up of three 10 ft. sections which float independently on uneven ground. The two outside sections fold forward to a narrow 15½ ft. width for road transport.

"The drill lifts hydraulically before it folds, allowing it to be easily folded even in loose ground and with the grain boxes fully loaded," explains Applequist. "We've developed a truly revolutionary folding mechanism that's both rugged and dependable. It roads beautifully, much like a two wheel trailer."

Another exclusive feature is the "problem free" drive mechanism. "During our testing program, we never had a single problem with it," says Applequist. "We drive off the gauge wheels instead of the press wheels. The roller chains and sprockets are up out of the dirt and in front of the openers. Since our gauge wheel stays in a fixed position to the seed box, we don't need any spring tighteners. Gauge wheels are positioned in the center of each section, allowing you to plant as close to the edges of the field as you like. You also don't leave any wheel tracks in the field."

Here's how Applequist describes other key features:

Rugged construction: "We use 6 by 4 by ¼ in. wall rectangular steel tubing for the main frame and tongue. The main sections of the drill are welded together in close tolerance jigs to insure an accurate yet rugged machine. Because of this, it can easily be folded and moved with a full box of seed."

10 in. row spacing: "Farmers we querried wanted row spacings of from 8 to 12 in. Since it wasn't feasible to build all of these kinds the first year, we're offering a 10 in. disc drill and a 10 in. hoe drill. Planting depth is controlled by a manual lever."

Other features include adjustable disc marker; vacuum sealed acre meter; simple seeding rate adjustment; sight glasses in each box to show seed levels; rubber sealed lids on the seed boxes; and double pitch roller chain and cut sprockets.

The 30 ft. hoe drill retails for $10,800, the disc drill for $400 more. Neither model is available with a fertilizer attachment.

For more details, contact: FARM SHOW Followup, Great Plains Manufacturing, 921 Bishop, Salina, Kan. 67401 (ph 913 825-7758).

HAULS 470 GAL. OF FUEL

New Field Service Trailer Keeps Equipment Rolling

You can take enough fuel to the field to last all day with the Snow Company's new Field Service Trailer.

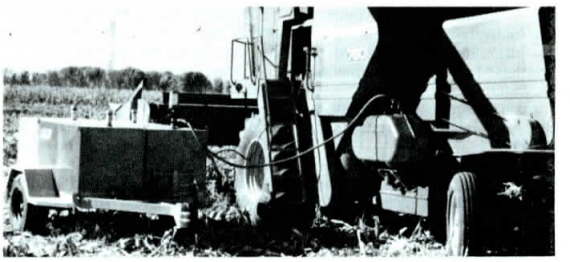
It's equipped with two 235 gal. tanks for 470 gal. total fuel capacity, and a 36.1 cu. ft. "accessory box" which can be loaded with a 30 gal. oil drum, grease, grease guns and a supply of replacement parts.

"Because it handles a big supply of fuel, most farmers could probably have it loaded in town, if necessary, for the same discount on fuel bulk delivered to their farms," says Dale Jooms, sales manager. He notes that "hauling fuel in reserve tanks for pickups poses a greater safety problem, and most of them don't hold enough to run several pieces of equipment all day."

The new Snoco trailer, rated at 7,000 lbs. capacity, comes with hydraulic brakes, 11L by 15 flotation tires, prior spring axle, a fire extinguisher, the two fuel tanks and rear storage compartment, hitch, tongue jack, lights, "no smoking" and other danger decals, and a 6 by 10 ft. bed. The tanks and storage compartments are easily removed if there's a need to use the trailer as a flatbed.

Suggested list price is $2,695. You can buy an optional 12 volt electric fuel transfer pump (14 gpm) with hose and nozzle, or equip it with your choice of transfer pump.

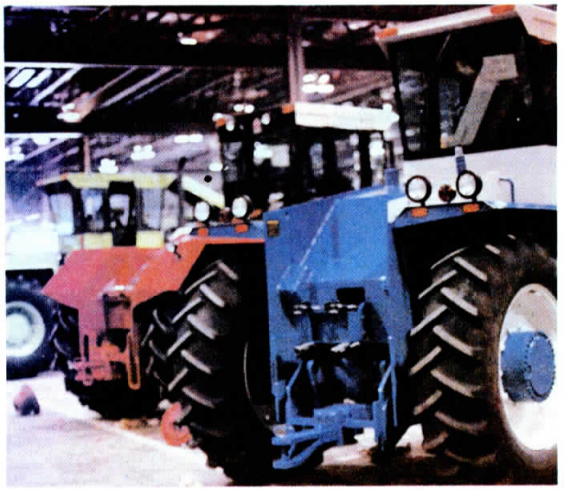
For more details, contact: FARM SHOW Followup, the Snow Corp., 4494 McKinley, Omaha, Neb. 68112 (ph. 402 453-2200).





Twin tanks, both ventilated and baffled, hold 235 gal. each. Trailer deck measures 6 by 10 ft. Accessory box in rear has 36.1 cu. ft. of space for oil and grease drums and other parts and accessories.

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Steiger builds two models for IH, four for Ford.

COMPARABLE SIZE MODELS COME IN RED BLUE AND GREEN. WHO SELLS WHAT?

"Sorting Out" the New Steiger-Built Tractors

Your local Ford, International Harvester and Steiger dealers all sell comparable size 4-wheel drive tractors built by Steiger.

Steiger offers 13 models of 4-wheel drive tractors, including the new Tiger ST-450 with 450 engine hp — billed as the world's most powerful mass-produced farm tractor — and also offers three new "PT" tractors in the 225 to 350 hp range equipped with hydrostatically powered, electronically-controlled power take-offs. Steiger also builds "4 wheelers" for Ford and International Harvester.

In what respects are these Steiger-built tractors similar? How do they differ?

To find out, FARM SHOW compared specs and features on comparable size models being sold by Steiger, IH and Ford. Here's a rundown on who sells what:

Comparing Steiger-built IH tractors with comparable size Steiger tractors:

Steiger builds two models for IH — the 4386 (230 engine hp) and the 4586 (300 engine hp). Comparable size Steiger models are the ST-210 (210 hp) and the ST-310 (310 hp).

Here's how they compare:

Engines: Steiger uses a Caterpiller V-8 engine in the ST-210 and a Cummins 6 cyl. engine in the ST-310. IH uses their own engines — an 8 cyl. in the 4586, and a 6 cyl. in the 4386.

Steiger literatures cite high torque rise (24% in the ST-210 and 15% in the ST-310) as a key feature of the engines they use.

Here's how the engines compare in cu. in displacement: Steiger ST-210 (636 cu. in); IH 4386 (466 cu. in); Steiger ST-310 (855 cu. in.) and the IH 4586 (800 cu. in.).

Frames: The frames of International Harvester tractors built by Steiger are made of 3/8 in. steel. Frames of comparable size Steiger tractors are made of 1/2 in. steel. Listed shipping weight of the respective models is: 18,800 lbs. for the Steiger ST-210; 19,300 lbs. for the IH 4386; 26,000 lbs. for the ST-310 and 21,500 lbs. for the IH 4586.

Axles: The Steiger-built IH tractors are equipped with IH "inboard" planetary axles. Steiger tractors now rolling off the assembly line are equipped with Steiger-built "outboard" planetary axles.

Cab: The IH "4-wheelers" built by Steiger are equipped with a cab similar to one formerly used on Steiger tractors. Steiger tractors come equipped with the company's new Safari cab which, according to Nebraska tests, is one of the quietest in the industry at under 80 decibels.

Power Take-Off: No pto is available on either of the two Steiger-built IH models. Steiger, on the other hand, now offers a just-introduced hydrostatically-operated, electronically-controlled pto on three new "PT" tractors in the 225 to 350 hp range.

Transmissions: Steiger offers 20 speeds forward and 4 in reverse. IH models have 10 forward speeds, 2 in reverse.

Comparing Steiger tractors with comparable size Steiger-built 4-wheel tractors just introduced by Ford.

Everything is essentially the same except for the color of paint and the type of engine used.

Ford offers four Steiger-built "4 wheelers": The FW-60 (335 engine hp); the FW-40 (295 hp), the FW-30 (265 hp) and the FW-20 (210 engine hp). Steiger's ST-310 (at 310 engine hp) is between Ford's FW-60 and FW-40.

Ford uses the same 8 cyl. Cummins (903) diesel engine in the top three models. They get more hp out of the same engine by using a turbocharger, different exhaust valves and different rings and fuel settings. Steiger, on the other hand, uses a turbo-charged 6 cyl. Cummins engine (855) in the ST-310.

In most other respects — including cab, seat, frame, transmission, hydrostatic pto and axles — comparable size Steiger tractors and the Steiger-built Ford tractors are essentially the same except for the color of paint.

HORIZONTAL WIRES EXCEPT BOTTOM STRAND ARE "HOT"

Electric Netting Comes Complete With Posts

Latest new wrinkle in fencing is Flexinet, an electric netting that comes complete with built-in plastic posts spaced 12 ft. apart.

Developed in England, it's marketed in the U.S. by Live Wire Products, Grass Valley, Calif.

All the horizontal strands, made of polythene twine, are interwoven with stainless steel wire and are "hot", except for the bottom horizontal strand. It and all vertical strands carry no electrical charge. The "hot" horizontal strands are permanently linked together at each end of a length of netting to ensure continued electrification even if a wire is cut or broken. If a wire breaks, the ends can be retied in a knot, or clamped together.

Steel tips on the posts make them easy to set by hand. Once strung out, the netting can be easily tensioned by hand. If the fence becomes loose after use, the posts can be hand set in zigzag fashion to take up the slack.

Flexinet measures 33 in. high and comes in 50 yd. rolls. It sells for $50 per roll and, according to the manufacturer, can be used to contain cattle, hogs, sheep or horses.

For more details, contact: FARM SHOW Follow up, Live Wire Products, Jack Henderson, Pres., Box 150, Grass Valley, Calif. 95945 (ph. 916 273-9397).



Any conventional electric charger used for regular single-wire electric fence can be used to "charge" Flexinet electric netting.

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PRODUCES TIGHTLY-WRAPPED HAY AROUND A "SOFT CORE" CENTER

New Idea Adds Round Baler

Avco New Idea has boarded the round baler bandwagon. The model pictured was one of the company's top new attractions at the recent Farm Progress show in Wisconsin.

Closely resembling a similar round baler marketed in the U.S. and Canada by McKee, headquartered in Elmira, Ontario, Canada, it's described in New Idea's literature as "not just another round baler but a unique machine designed to meet the needs and climatic conditions encountered by farmers in humid as well as dry areas. The finished bale has a soft core with a solid, high density outer shell. This type of bale formation makes it less prone to spoilage from within and highly rain resistant."

The baler makes approximately 6 ft. dia. hay bales measuring about 5 ft. wide and weighing 1,100 to 1,800 lbs. each. It makes straw bales weighing 600 to 1,100 lbs.

Here's New Idea's explanation of how bales are formed:

"The pickup feeds material directly into the large fixed position bale chamber. At a fast, continuous speed, material is fed into the chamber where it's rolled by parallel-running flat belts. The continuous flow of material builds the bale from the outside, compacting the center while building a high density outer shell. After the tying operation, you simply open the tailgate with the tractor hydraulic control valve and the finished bale rolls gently out the rear."

For more details, see your local dealer or contact: FARM SHOW Followup, Avco New Idea, Coldwater, Ohio.



New Idea baler makes 6 ft. dia. hay bales measuring about 5 ft. wide and weighing about 1,800 lbs.

NEW GRASS HOUSE SOLVES PROBLEMS WITH PREVIOUS SYSTEMS, SAYS MANUFACTURER

Hydroponics Hits Comeback Trail

That "on-again, off-again" hydroponic system of growing "spring fresh" green grass the year around without soil is on again.

Latest new system is the Grass House, available in models that produce from 200 to more than 4,000 lbs. of grass per day.

Until now, hydroponics — despite repeated attempts — hasn't caught on with beef, dairy or hog farmers. College and University researchers generally have remained skeptical and unimpressed.

So now comes the Grass House from New Era Enterprises, Marion, Iowa, and with it the obvious questions:

Is it simply another attempt to ride a dead horse? Or, does it indeed represent a breakthrough design which overcomes problems which caused previous systems to lose favor with dairy, beef or hog farmers?

"It's a brand new ball game entirely," Gary McGowan, national sales manager, told FARM SHOW. "This system is new and different. We know it works."

For openers, the company is offering a "buy back" contract: "If the system doesn't perform up to the owner's expectations, we'll buy it back," says McGowan. He points out that high labor requirements hurt previous systems. "We've reduced it to only a few minutes per day."

Another major improvement, according to McGowan, is replacement of galvanized trays, in which the seed was proviously soaked, with corrosion-proof fiber glass trays, and a new method of foliar spraying nutrients onto the growing grass rather than soaking the roots. "We've also developed newer and better nutrient solutions, and improved the environment within the unit," explains McGowan.

Cost of the smallest Grass House (200 to 400 lbs. per day output) is right at $4,600. "We work right with the new owner the first few weeks. Once he's experienced in managing it, he or his family can handle the labor chores in only about 15 min. per day," McGowan points out. Each tray, seeded with about 7 lbs. of oats or barley kernels, provides 45 to 55 lbs. of green grass in seven days. The biggest unit (4,000 lbs. daily capacity) is housed in a self contained building and sells for about $40,000.



Gary McGowan, national sales manager, displays grass from the Grass House seven days after the trays were seeded with oats. Units available to produce from 200 to more than 4,000 lbs. of grass per day.

Company literature describing the new Grass House presents many of the same general arguments and claims which have accompanied previously-introduced hydroponic systems over the past 15 or 20 years.

". . . In our lifetime, we will see hydroponics come into this era with astronomical leaps and bounds — the population explosion and land shortage will invariabley bring this about."

. . . "They don't make land anymore, but we can give you the equivalent feeding production of approximately 100 acres on your farm from one 24 by 32 ft. Grass House."

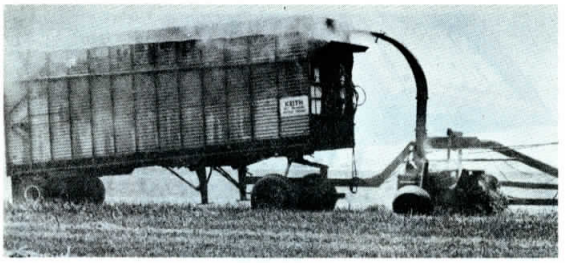
. . . "The 'X Factor' in succulent grass juices cannot be identified by science; however, the results are overwhelming and now it can be a part of your farm program."

. . . "As if high quality feed (producing greater profits) wasn't enough, the Grass House can save you as much as 50% in your feeding costs."

. . . "University studies proved hydroponic grass fed animals had 23% more gain . . . on 25% less feed . . . in 14% less time."

For more details, including the names of hog, beef or dairy farmers using the system if you'd like to pay them a visit, contact: FARM SHOW Followup, The Grass House, New Era Enterprises, 900 50th St., Marion, Iowa 52302 (ph. 319 377-8211).

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Keith Mfg.'s Chopper Dolly allows semi trailers to be towed right behind the chopper.

ALLOWS LARGE SEMI-TRAILERS TO BE TOWED IN THE FIELD BEHIND TRACTORS

Can You Use A Chopper Dolly?

Latest new wrinkle in high capacity grain, hay and forage harvesting is a couple of related new developments FARM SHOW has learned about called the Chopper Dolly or Self-Elevating Bogey.

They're using them in Western states and Canada behind high-capacity forage choppers. The devices allow large semi-trailers or wagons to be towed in the field right behind the chopper, or behind a regular farm tractor. By using your 100-plus hp tractor to load large semi-trailers or other wagons right in the field, it frees up expensive semi trucks which, instead of having to be driven in the field, can be kept busy on the highway hauling ready-filled trailers.

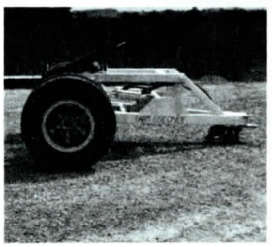
The Chopper Dolly, developed by Keith Mfg., Madras, Oregon, hitches right behind large-capacity field choppers, or it can be towed with a 100 hp or larger tractor.

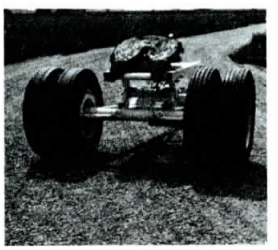
From Canada comes a similar device called the Self-Elevating Bogey. It's a do-it-yourself hookup which you can pull behind your 100 hp tractor to tow semi-trailers in the field. For example, you can spot trailers at various points in the field where combines can pull up and unload into them. When filled, you use your tractor to pull the loaded trailer to the road where a regular semi-truck/tractor hooks onto it and takes off down the road.

"We suggest that anyone interested in developing our type of self-elevating bogey simply copy our design and take it from there. There are no patents," explains Ralph Gray, project engineer for Grayco, at Heidelberg, Ont., Canada. The firm specializes in potato harvesting equipment. Gray points out that the bogey can be made from salvaged semi-truck 5th wheel axle assemblies and can be equipped with air brakes, or hydraulic brakes, operating off the tractor's hydraulic system.

Although Grayco has shelved plans to produce their self-elevating bogey commercially, they do have experience in building them from used 5th wheel and axles assemblies salvaged from semi trucks. "What is needed is legislation forbidding the use of huge farm wagons without brakes. The whole situation involving farm wagons behind farm tractors is out of hand. When farmers are compelled to use safe, road legal trailers, then we have the products they will need," he points out. The company's address, if you'd like to compare notes with them on how to build a self-elevating bogey, is: Grayco Potato Harvesters Ltd., Heidelberg, Ont., Canada (ph. 699-5372).

For more details on the commercially available Chopper Dolly, contact: FARM SHOW Followup, Keith Manufacturing, Box 1, Madras, Oregon 97741 (ph. 503 475-3802).





Grayco's self-elevating bogey allows you to use your 100-plus hp tractor to pull loaded semi-trailers in the field.

STEIGER, FORD, HYDRATIL TRACTORS FIRST TO OFFER POPULAR NEW FEATURE

Hydrostatic Pto's Run in Reverse

Last January, FARM SHOW reported on the all-hydrostatic Hydratil tractor that featured a fistfull of industry firsts, including the first hydrostatically powered power take-off.

Developed by Hydra-Pow'r, Denver, Colo., the revolutionary pto features infinitely variable speeds up to 1,000 rpm, and the ability to run in reverse to unclog a jammed combine or forage chopper. It also maintains a constant speed even though engine speed may vary.

These and other features have been incorporated into a just-announced hydrostatically-powered, electrically-controlled power take-off developed by Steiger Tractor, Fargo, N. Dak. It's available in three Steiger models and the four 4-wheel drive tractors which Steiger builds for Ford.

From Steiger, the new-style hydrostatic pto is offered in models PT-225, PT-270 and PT-350 (the numbers refer to engine horsepower).

From Ford, the new-style pto is optional in the company's just introduced FW-60 (335 engine hp); FW-40 (295 hp); FW-30 (265 hp) and the FW-20 (210 engine hp).

"The combination of hydrostatic power and electronic controls makes this the power take-off unit with a brain," says Jack Johnson, president of Steiger Tractor.

Here, according to Steiger engineers, are key features which the new pto's on Steiger tractors and Steiger-built Ford tractors offer over conventional pto's:

Infinitely variable RPM speed: Since the pto is powered by a hydrostatic motor, and not directly by the tractor engine, it can operate at any speed up to 1000 rpms. A digital meter tells you just how fast the pto is turning over. This means you can choose the most efficient pto speed to operate a particular implement or machine.

Governed pto speed: The Steiger engineered pto can maintain constant speed while the engine varies. On the Steiger PT-225 and PT-270 models, for example, pto speed remains constant while engine speed varies from 2200 to 1600 rpm. This means you can slow down to pick up downed corn stalks, for example, while maintaining full pto speed.

Electronic controls: A pto rated power light in the cab activates when the pto is putting out a full 105 hp or more at the pto shaft. The pto will operate up to 125 hp, however. When it's forced to put out 125 hp, a buzzer sounds and a red light flashes. The unit will then put out 125 hp for six seconds before shutting itself off to avoid overload stress.

The electronic controls include temperature and pressure warning lights as well. Should a temperature or pressure problem arise, the unit automatically shuts off.

Tilt-up control console: For easy operation, the pto control console is convenient to the operator's right hand. It swings up for easy entry and exit.

Slow reverse pto: The Steiger-engineered hydrostatic pto can run in slow reverse, allowing you to unclog a jammed combine or forage chopper, without leaving the cab.

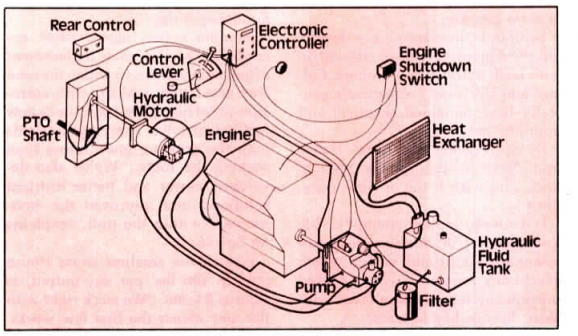
Braked safety shutdown: The new pto is braked so it stops instantly, unlike many other conventional pto's that flywheel to a stop. It can be turned off from the cab, from behind the tractor, or from a 20-ft. long remote control cord.

For more details, see your Steiger or Ford dealer, or contact the respective manufacturers direct.

Steiger Tractor Inc., 3101 1st Ave. No., Fargo, N. Dak. 58102 (ph. 701 293-4400).

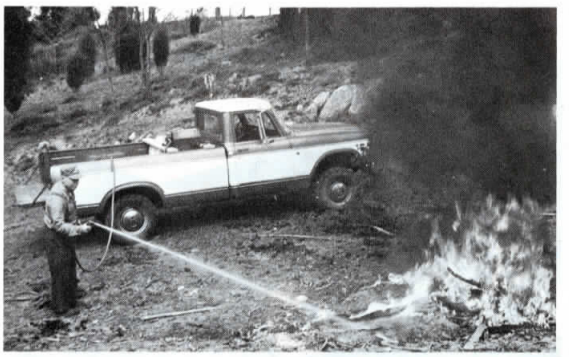
Ford Tractor Operations, 2500 E. Maple Rd., Troy, Mich. 48084 (ph. 313 643-2764).

Hydr-Pow'r, Robert Klepper, Pres., 4975 Jackson St., Denver, Colo. 80216 (ph. 303 399-5157).



Variable displacement motor provides constant flow and pressure under varying gear settings and engine speeds. Fluid flow is electronically controlled through electro-hydraulic control unit built into pump, and pressure transducer on the motor. Infinitely variable speed control lets you ease in torque load during implement start-up. Pto-speed remains constant over wide range of engine speeds.

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Fighting fires is one of many uses for the battery-driven Aqua-Duk pumping-spraying system.

USE IT FOR SPRAYING CROPS OR LIVESTOCK, FIGHTING FIRES, OR WASHING BUILDINGS

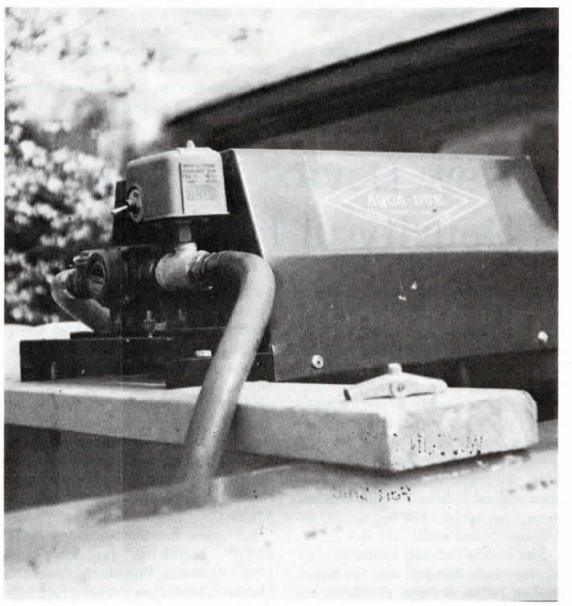
"Go Anywhere" Pump is Battery Operated

Many spraying or pumping jobs can be handled with the new Aqua-Duk, an automatic battery-operated pumping system that goes anywhere a pickup can go.

Aqua-Duk's capacity is up to 200 lbs. psi pressure and up to 20 gal. per min. It runs off the battery of the vehicle and is available in 12, 24 or 36 volt models. All that's required to run the unit is a good battery, a No. 4 welding type cable and a ground wire of the same size, says Paul Wilson, inventor and marketer. He points out that water, liquid fertilizer, herbicides, insecticides, wettable powders under suspension, or fungicides can be pumped with the system. It also handles fuels and can be used for cleaning and washing down buildings, animal pens and machinery.

The unit weighs only 60 lbs. and is easily loaded in or out of a pickup or other vehicle. Handles up to 475 "head feet" and retails for $495.

For more details, contact: FARM SHOW Followup, The Automatic Aqua-Duk Corp., Box 6442, 4801 S. 29th St., Fort Smith, Ark. 72906.



Pump delivers up to 20 gal. per min.; and up to 200 lbs. psi.

SHOCKS ONLY WHEN FENCE IS TOUCHED

Fence Controller First of Its Kind

They're calling it "The fence controller with a brain — the first and only one of its kind on the market.

Unlike ordinary fence controllers which keep the line charged continuously, the new Sens-O-Matic, developed and manufactured by The Tomann-Wagg Co., Albert City, Iowa, is completely at rest until an animal touches it. The "brain" immediately responds by sending out a shock and continues shocking until the animal is off the fence.

"Because it's completely at rest most of the time, there is scarcely any wear or tear on the unit and operating costs are reduced considerably," says Jim Weems of the Weems Group, Cedar Rapids, Iowa, national marketer of the Sens-O-Matic. "Animals, being creatures of habit, soon learn to respect the electric fence and, before you know it, you'll be operating at up to 100% saving compared to ordinary fence systems."

Scattered weeds growing up to touch the fence don't bother the Sens-O-Matic, says Weems. "They don't offer enough resistance to trigger the unit's brain. When an animal touches the fence, it shocks right through the weeds. Because the unit doesn't activate to 'chop' weeds as they grow tall enough to touch the fence, it poses less danger of fire than conventional systems."

'A switch on the Sens-O-Matic allows it to be operated automatically (no shock until the fence is touched) or manually like a conventional charger (one shock every second).

Suggested retail is $64.95. Currently available in a 100V. electric model. A battery model will be introduced late this year or early next.

For more details, contact: FARM SHOW Followup, the Weems Group, 411 First Ave. S.E., First Ave. Bldg., Suite 201, Cedar Rapids, Iowa 52401 (ph. 319 365-5244).



Sens-O-Matic controller senses when an animal touches the fence and only then sends out a "charge".

WON'T ROT OR RUST AND NEVER NEED PAINTING

Plastic Posts Last Forever

Everlasting fence posts that never rot or rust and never need painting are new from Lone Star Plastic Fence Posts, Louisville, Ky.

They're round (2½ in. in dia.) and come in standard 6½ ft. lengths. The ends are pointed so you can drive them with a hand driver, or with a hydraulic post driver, says Paul Stogner, national sales manager.

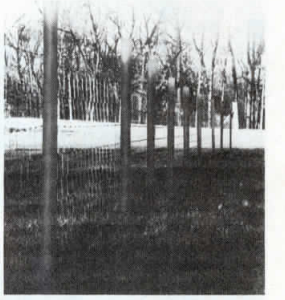
He points out that the posts are stable in extreme cold or hot temperatures. No anchor plate is required for stability.

"We feel they're definitely superior to wood or steel posts," says Stogner. "What's more, they're environmentally safe to livestock, a point of increasing concern in light of recent reports of problems with penta-treated wood posts."

The black plastic round posts can be sawed, if needed, like wood. They reportedly hold staples driven into them better than wood and, because they're made of non-conductive plastic, no insulators are needed for electric fence. They're also chemically fire retardant and will resist brush fires, according to the manufacturer.

Suggested retail is $2.75 per 6½ ft. post.

For the name of your nearest dealer and other details, contact: FARM SHOW Followup, Lone Star Plastic Fence Posts, 4026 Produce Road, Louisville, Ky. 40218 (ph 502 968-6261).

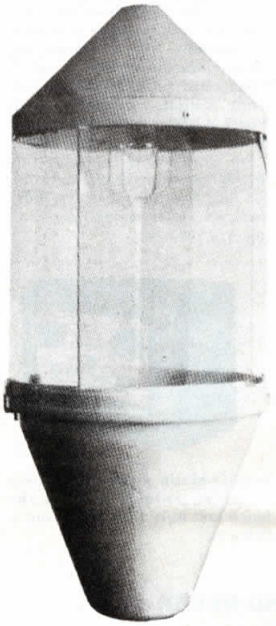


Lone Star black plastic fence posts hold staples better than woodposts and are more attractive, says the manufacturer.

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NEW "MOTH WATCH" PINPOINTS TIME TO SPRAY

Bad News for Brother Borer



Daily count of 4 or 5 dead moths in bottom of "Moth Watch" unit is signal to be ready to spray in 5 to 8 days.

A new device for pinpointing the best time to spray for corn borers appears to have passed extensive first year tests with flying colors.

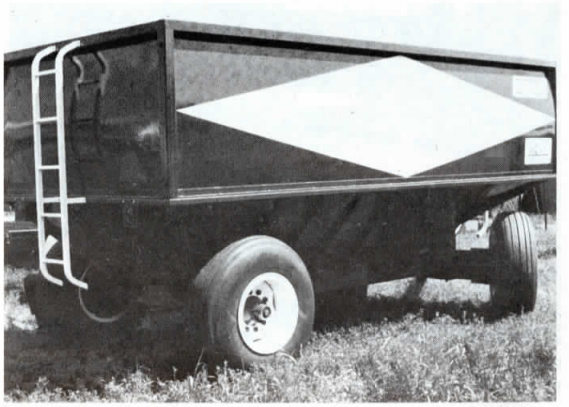
"We're still evaluating overall performance but results so far look promising," reports Joe Hunter, of Genesceo, Kan., inventor of the Moth Watch light trap. "There's a lot of interest among aerial custom spray operators."

Moth watch is equipped with a battery-operated replaceable bulb which attracts corn borer moths. One Moth Watch light trap takes care of a 160 acre corn field. You mount the light on a post about 4 ft. high in the center of the field and place ½ teaspoon of cyanide crystals, or a 2 in. strip of Shell's No-Pest strip, in the bottom of the trap. The insecticide kills moths as they enter the trap, allowing for easy identification and daily counting to monitor their flight. A daily count of 4 or 5 dead corn borer moths is your signal to be ready to spray for corn borer control in 8 to 10 days.

"Kansas State College specialists report that the only way to effectively control the corn borer is to monitor the moth flight," explains Hunter. "When economic levels occur, the date should be noted and spraying should take place from the 8th to 10th day, and again on the 20th day if flight continues."

Moth Watch, which corn growers throughout Kansas used this past summer to keep tabs on both European and Southwestern corn borers, sells for $29.95.

For more details, contact: FARM SHOW Followup, Joe Hunter Enterprises, Genesceo, Kan. 67444 (ph. 316 824-6398).



Truckwagon steers 60° right or left and has heavy duty surge brakes on the rear axle.

HOLDS 725 BU.: UNLOADS IN 60 SECONDS

Kingsize Wagon Built with Truck Components

New from Crysteel Mfg. is a kingsize farm wagon built with truck equipment components.

Called the Truckwagon, it holds 725 bu. with 14 in. extension sides (600 bu. without). Its "super duty" understructure, conservatively rated at 20 tons capacity, features semi-trailer type spindles and hubs with bearings running in an oil bath. The oscillating front axle eliminates twisting of the body while traveling over uneven ground. Extremely maneuverable for its size, the Truckwagon steers 60° right or left. It has heavy duty automatic surge brakes on the rear axle.

Dimensions of the box are 16½ ft. long, 96 in. wide and 103 in. high (117 in. with extensions). Thanks to a new "butterfly valve" bottom dump, the load can be unloaded at just a trickle or, with the control wide open, a full 725 bu. load will unload in less than a minute.

Other features include: Small, side mounted grain doors for unloading into augers, ladders front and rear, telescoping tongue for easier hookups, 46 by 16 in. aircraft tires, optional center divider and optional rear lights.

Model TW-1 (600 bu.) sells for about $6,450. Model TW-1X (with 14 in. side extension which boost capacity to 725 bu.) sells for right at $6,620. Both models available in red and white, or green and yellow.

For more details, contact: FARM SHOW Followup, Crysteel Mfg., Highway 60 East, Lake Crystal, Minn. 56055 (ph. 507 726-2728).



LP tanks are used to supply air pressure to the Densamatic. The device automatically controls density of individual bales.

New Device Controls Density of Hay Bales

"I decided there had to be a better way," says Owen Holman inventor of the Densamatic, an automatic bale density controller manufactured by Hay-Pak, the Company he heads at Corpus Christi, Texas.

"I've field tested it myself for more than 5 years and have had other prototypes operating in various parts of the country for the same length of time. All work very well and have been of great help to the people using them," he told FARM SHOW. "Custom hay balers really like it."

The device virtually elimates variation in bale density, and the usual broken twine or wire problems resulting from bales being too loose or too tight, explains Holman. He claims the Densamatic will "run circles around hydraulic systems for controlling bale density and costs about half as much." His invention uses air pressure to determine density. Simply turning a valve to change air pressure changes bale density. Air pressure (60 to 70 lbs.) is supplied by portable LP gas tanks.

The unit is self-contained and can easily be adapted to most conventional rectangular balers. It sells for $195.

For more details, contact: FARM SHOW Followup, Hay-Pak Inc., Owen Holman, President, Box 993, Corpus Christi, Texas 78403 (ph. 512 883-6645 or 884-3261).

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MAKES OVERHAUL JOBS FASTER, EASIER

Specialized Equipment for Your Farm Shop

They call it the Mechanical Man, a utility stand that allows one man to do safer, quicker and easier complete overhauls on tractors, combines and other big equipment.

"If you don't agree it's the best stand you ever bought, return it in 60 days for a full refund of your money," says Bob Cofer, of Cofer Sales and Manufacturing, Dodge City, Kan. The utility stand, one of many specialized pieces of shop equipment the company has introduced, is tailor-made for tearing down tractors and combines. It has up to 3,000 lbs. capacity and handles a wide variety of jobs, including taking off heavy oil pans, handling heavy and awkward transmissions, taking front ends off tractors, handling axles assemblies, and for use as a splitting stand for tractors. The stand adjusts from 12 in. in the low position to 36 in. in the high position. Its table tilts up to a 75° angle. When not in use, the stand tips up on one end to cut down on space needed to store it. It's equipped with a replaceable 8-ton mechanical jack and retails for right at $445.

Cofer also offers other specialized shop equipment, including:

Single tire adapter: It helps support the axle assembly when bringing it out in one piece with the tire. With the use of one hydraulic jack and telescoping adjustments, you can tilt the tire, if needed, to line up the axle assembly when putting it back together.

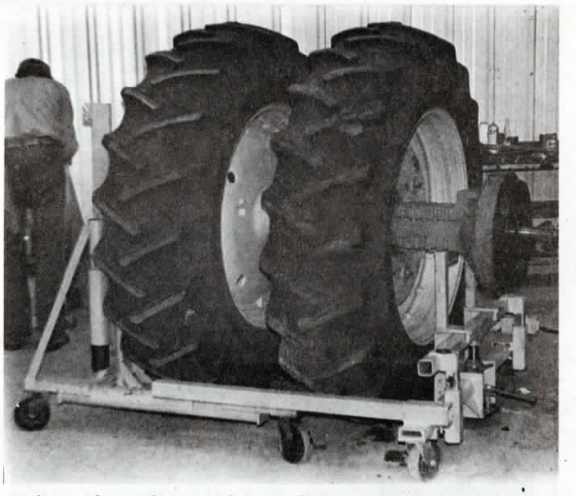
Tire cart: It's designed to handle wheels, weights and axle assemblies. Handles all tires. Cabs and fenders don't hamper use of the cart.

Dual tire adapter: It fits on Cofer's single tire cart. One man can quickly attach the adaptor to the tire cart and be ready to take off a set of duals with the final drive housing. Rated at 8,000 lbs. capacity.

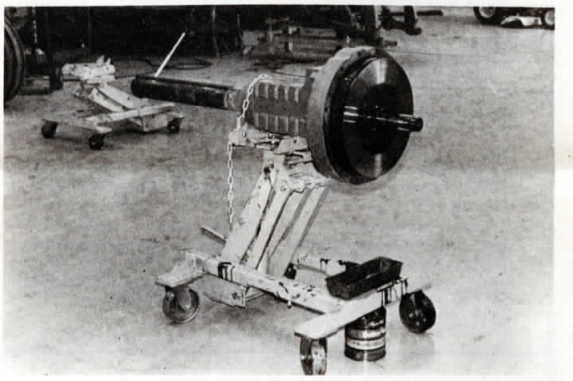
Shop crane: Rated at 2,000 lbs. capacity, it makes it possible for one man to handle seat assemblies, motors, blocks, heads, setting up machinery and many other jobs around a shop. The 6 in. stroke of the built-in 12½ ton jack moves the boom from 2 to 9 ft. high. The boom and legs are adjustable for more support and stability.

Hydraulic press: Its heavy duty frame handles any size jack up to 30 tons. Put a 12 ton jack in it for little jobs, like water pumps and smaller bearings, and a 20 ton or larger jack for the larger jobs. Available with jacks, or you can use your own up to 35 tons capacity.

For more details on these and other specialty pieces of farm shop equipment, contact: FARM SHOW Followup, Cofer Sales and Manufacturing Co., 1011 Central, Dodge City, Kan. 67801 (ph. 316 227-6170)



Dual tire adapter fits on Cofer's single tire cart, allowing one man to remove a set of duals with the final drive housing attached. Rated at 8,000 lbs. capacity.



Super utility stand from Cofer has 3,000 lbs. capacity. Can be used for taking off heavy oil pans, handling transmissions, tractor front ends, axle assemblies or as a splitting stand.

GETS REAR-MOUNTED IMPLEMENTS OFF THE TRACTOR

New "Load Lugger" for 4-Wheel Drive Tractors

Owners of 4-wheel drive tractors — particularly the articulated type — will be interested in new features which have been added to the Ruff Neck "Load Lugger" attachment.

Originally introduced with a rear-mounted 3-pt. hitch for carrying mounted equipment to get it off the tractor, it's been redesigned to do a variety of other jobs. For example, the new model is designed for mounting a chemical tank on the Load Lugger itself. It's also equipped with an auxiliary toolbar which accommodates coulters or other attachments. Thus, in one operation with the tractor and Load Lugger, you can spray and incorporate chemicals, cut through heavy trash and prepare the seedbed with a chisel plow or other machine.

"There are several units on the market which, like the original Load Lugger, allow you to get 3-pt. hitch mounted equipment off the tractor. But, so far as we know, ours is the only one with the auxiliary toolbar which allows you to combine several operations into a once-over trip," explains Don Schmidt, vice president of marketing.

Other key features include adjustable wheel tracks, 6 by 6 in. structural steel tubing, integral category 3 quick hitch, and heavy duty construction.

Suggested retail is right at $6,000, including the auxiliary toolbar.

For more details, contact: FARM SHOW Followup, Specialty Metal Fabricators, 1032 Chestnut, Minonk, Ill. 61760 (ph. 309 432-2586).



Ruff-Neck "Load Lugger" features 3-pt. hitch and auxiliary toolbar on which coulters or other attachments can be mounted to combine several operations into one. Chemical tank for pesticides or fertilizer can be mounted on top the unit.

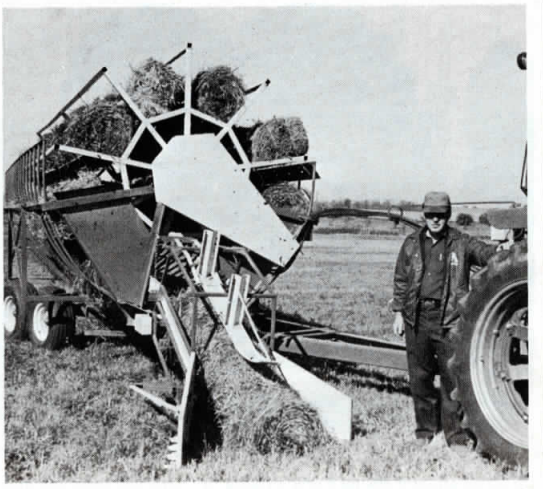
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FARM SHOW

"Made it Myself"

Some of the best new products we hear about are "made it myself" innovations born in farmers' workshops. If you've got a new invention or favorite gadget you're proud of, we'd like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so, where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors?

Harold M. Johnson, Editor



Automatic Balewagon

Iowa farmer Lavern Sunderman, of Clarinda, welcomes inquiries from manufacturers interested in putting his patented Automatic Balewagon into commercial production.

Sunderman built the first prototype in 1971 and had two improved prototypes custom built. They've been field tested with close to 100,000 bales over a wide range of conditions and different types of both square and round bales.

Each of 9 chambers hold 7 bales. When one chamber is full, the reel rotates to the next chamber. The pickup carries two bales, bringing total capacity to 65 bales.

The conveyor unloads bales into an elevator from either the front or rear of the machine. Other key features include: Automatic pickup of round or square bales whether on edge or lying flat; loads in 8 min. and unloads in 2 min.; measures under 8 ft. wide for highway transport; operates on hilly land.

For more details on the Balewagon, which is patented in the U.S., Canada and Great Britain, contact: FARM SHOW Followup, Luvern Sunderman and Sons, Ideal Farms, Rt. 3, Box 207, Clarinda, Iowa 51632 (ph. 712 542-2349).



High-Speed Hitching

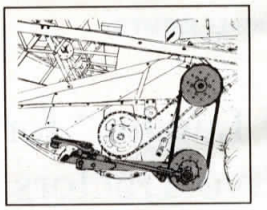
We're betting that a lot of FARM SHOW readers will be able to use the unique arch hitch developed by Ralph Christensen, of Badger, S. Dak.

Called the Vari-Pol, it allows you to do two or more jobs in one operation. The high-speed hitching rig pictured turns on a dime and, by combining drilling with disking, eliminates one tractor and one operator. For wing-type disks, a high arched Vari-Pol hitch is available to clear the wings when in the raised position.

The hookup adapts to discs, diggers, cultivators, rotary hoses and other implements, allowing you to plant or drill back and forth, or around fields. It helps prevent sliding of equipment on slopes and eliminates tractor wheel tracks. Hydraulic and other lines between the tractor and rear implement are threaded inside the hollow Vari-Pol hitch for protection.

Prices start at $385.

For more details, contact: FARM SHOW Followup, Vari-Pol, 1 Guantanamo St., Badger, S. Dak. 57214 (ph. 605 983-5324).



Over-Register Sickle System for Combines

"Most combines can be converted for less than $50," says Max Farrar, originator of the popular Farrar Over-Register Sickle System that makes for cleaner and faster harvesting.

"The effective cutting speed is actually doubled at the end of the cutting stroke," he explains. "To give our system the real test, change to it but don't change the sickle. You'll find improved performance in all crops. More than 30,000 are in use throughout the U.S. on combines cutting rice, soybeans, wheat, barley, oats, maize and dry peas. Operator after operator reports being able to double forward cutting speed without stripping the crop.

No major modifications are necessary on the combine to install most Farrar Systems. In most cases, they can be installed right in the field. John Deere combines since 1964, and all Gleaner combines and older model Oliver, White and Case combines require only the special low-cost crank to accomplish over-register, says Farrar. On combines requiring a more elaborate hookup, complete kits are available.

Farrar emphasizes that because of the many makes and models of combines, he can best answer specific questions if you send him the make and model of your combine. The kit shown is for Deere's 55, 95 and 105 model combines.

For more details, contact: FARM SHOW Followup, Farrar Corp., Max Farrar, President, Norwich, Kan. 67118 (ph. 316 478-2212).

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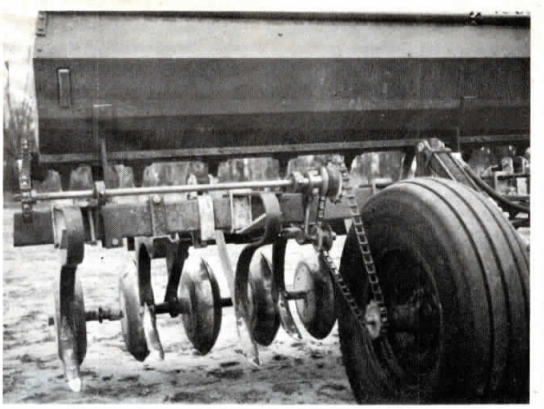
Old Baler Chops Wood

What used to be an International Harvester T-50 hay baler has been converted into a low cost wood chopper that requires very little horsepower and fuel to operate.

"It uses impact rather than a lot of power to do the splitting. Low horsepower and a low fuel requirement are its two outstanding features," says C. L. "Chris" Ahlschlarger, Minneota, Minn., inventor.

Ahlschlarger increased the diameter of the large drive wheel to 38 in. to get the proper operating speed of the push-pull plunger it drives. A 5 hp engine drives the wheel.

Ahlschlarger used plate steel and an axe blade to make the wedge at the end of the plunger which does the splitting. The "bumper" and cradle in which individual logs are placed for splitting accommodates logs up to 18 in. long and up to 16 in. in dia. The plunger moves back and forth in slow, continuous push-pull strokes. As it draws back to clear the cradle, a log is laid inside. The plunger splits it on the "push" stroke, then clears the cradle for the next log on the "pull" stroke.



Peterson Drive for Crustbuster Drills

Instead of driving their Crustbuster fold-type drill off the press wheels as it was designed, Harley Peterson and his son devised a way to drive it off the gauge wheels. It worked so well they had the idea patented and now have it in commercial production at Peterson Enterprises, Salina, Kan.

"Planting is consistent since there's no slippage regardless of ground conditions," explains Harley. The Peterson drive has a ball type clutch which is disengaged when lifting the drill out of the ground. Planting rates can be varied by the use of various sprockets. There is one chain from the wheel to the drive, and one on the opposite end of the shaft to the drill box. There is one mechanism on each wing and a spider gear which runs the center box from the right drive.

For more details, contact: FARM SHOW Followup, Peterson Enterprises, Rt. 1, Salina Kan. 67401 (ph. 913 823-8887 or 827-4054).





Corn Planter Folds Forward

"I'm pleased to share Paul's invention with your FARM SHOW readers," reports Mrs. Paul Teeter, of Fairfield, Iowa. Her husband Paul was killed accidentally shortly after his fold-forward invention won a "farm gadget" award at last year's Iowa State Fair.

Starting with an 8-row (26 ft. wide) John Deere 7000 planter, Paul equipped it with home-made joints at each end. These joints allow the two outside row planting units on each end to swing forward to a transport width of 14½ ft. The switch can be made in only 1.5 min.

A quick-release lever allows the joint to swing forward, or locks the frame into position for planting. The shaft which drives the planter also had to be jointed at the pivot points.

"Paul used it to plant 1,000 acres of corn and beans a year ago last spring and had no difficulty," Mrs. Teeter reports.

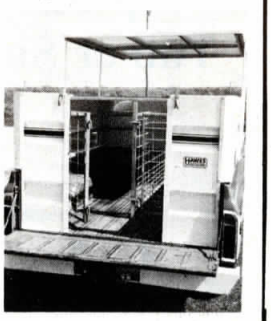


Pickup "Hauler" Handles Hogs, Cattle or Grain

You can haul livestock or grain with a new all-purpose pickup box introduced by Hawes Mfg.

Especially designed for hauling hogs, sheep or calves, it's called the Hog Hauler. Its unique design eliminates stakes, permitting one universal model to be used on most pickups.

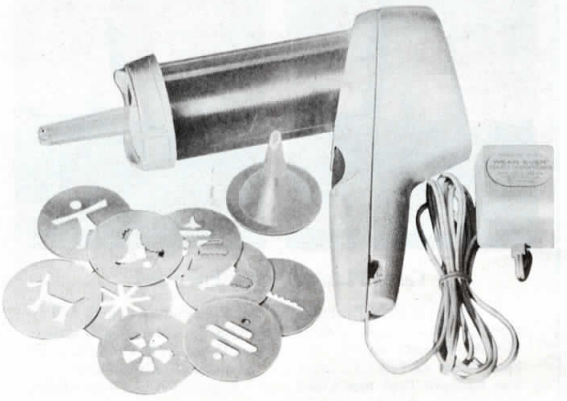
It's made from 16 ga. galvanized steel and features 7 vents (2 on each side, 2 on the front and 1 on the tailgate) which supply ample ventilation during livestock hauling. The vents come with slide-in covers which seal the box tight for hauling up to 125 bu. of grain. The cover raises up and moves forward 4 ft. to provide easy access to animals being transported. The unit can be purchased with or without divider pens which divide the box into



three pens. This option provides extra protection for individual animals being hauled to fairs, shows or to market.

For more details, contact: FARM SHOW Followup, Hawes Mfg., Beaver Creek, Minn. 56116 (ph. 507 673-2424).

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Wear-Ever's new Super Shooter electric cookie maker makes four or more dozen cookies in seconds.

FARM SHOW

For Women Only

MAKES COOKIES FASTER AND EASIER THAN EVER

"Super Shooter" Cookie Maker

It's trigger quick. Just load it — plug it in and fire away. Four to six dozen delicious cookies in seconds . . . faster than kids can eat them.

Use the new Super Shooter to rapid fire beautiful canapes minutes before guests arrive. Or, make a colorful tray of homemade candy mints for the crowd.

"You'll love it for filling deviled eggs, stuffing celery or for beautifully garnished desserts and casseroles," says the manufacturer. The Super Shooter can also be used to stuff manicotti shells, or to make bakery-perfect cream puffs, eclairs or cannoli.

It's easy to load, easy to hold and easy to clean. And fun to use!

For more details, contact: FARM SHOW Followup, Advertising Dept., Wear-Ever Aluminum, 1089 Eastern Ave., Chillicothe, Ohio 45601 (ph. 614 775-9100).

"EVERY HOUSEWIFE SHOULD HAVE ONE"

Vacuum Pump Helps Prevent Food Spoilage

"Every housewife should have one," says John Lovero, of the Poly-Commodity Corp., national marketer of a simple, easy to use vacuum pump that provides air-free packaging of foods in plastic frozen bags.

Lovero points out that air is the major spoiler of frozen foods, and any food that's frozen in a storage bag still containing trapped air deteriorates. Air trapped around frozen food draws moisture from the food, allowing ice crystals to form, resulting in a loss of color, flavor and nutritional content, with rancidity quickly developing in fatty foods, explains Lovero.

Thanks to the new Freezer Vacuum Pump, there's an easy, safe and inexpensive way to remove this trapped air from inside freezer storage bags. A few easy pumps of the cylinder is all it takes to "shrink fit" the storage bag around the food for perfect vacuum packaging. It can also be used for packaging non-frozen foods for storage. "It will do everything from retaining the fresh crunch in your breakfast cereal to neatly and compactly storing woolen sweaters and other garments without the need for moth balls," says Lovero.

The pump, available in selected stores across the country, retails for $1.99.

For more details, or if you wish to order direct by mail (add 35 cents for postage and handling), contact: FARM SHOW Followup, Poly-Commodity Corp., 1350 Avenue of the Americas, New York, N.Y. 10019 (ph. 212 541-9890).

Soap Bar Fits Tub or Shower



You simply push a button to get measured amount of soap, shampoo, lotion, etc.

One of the most-talked about new products at the 1977 Housewares Show in Chicago was Conairs new Soap Bar for tub or shower.

It ends unsightly clutter by eliminating the need for tubes and bottles. Just pushing a button gives you a measured amount of liquid soap, shampoo, conditioner, lotion, etc. Each chamber holds one pint. Level indicators tell when it's time to refill.

Unit mounts on flat wall or in a corner. Retails for $19.99, including a bottle of body cleaner and bottle of shampoo.

For more details, contact: FARM SHOW Followup, Robert Wechsler, Product Manager; Conair Corp.; 11 Executive Ave.; Edison, N.J. 08817 (ph. 201 287-4800).



A few easy pumps of the cylinder "shrink fits" the storage bag around the food for perfect vacuum packaging.

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New Ice Cream Parlor from Waring is the first and only one like it on the market, says the manufacturer.

Ice Cream Parlor for Farm Kitchens

New for farm kitchens from Waring is a new concept in ice cream makers called the Ice Cream Parlor.

Plain table salt and ice cubes from the refrigerator go around the rim of the machine, turning ingredients you put into the center core into a full half gallon of ice cream. If you prefer, you can make a variety of frozen yogurt, sherbet, parfait or fruit desserts.

The Ice Cream Parlor is base drive, with the motor on the bottom. It has a clear plastic top that lets you watch the process, if you wish. When the frozen dessert is formed, the machine stops automatically and a "ready" light goes on. Comes with a one-year warranty and retails for $39.99.

For more details, contact: FARM SHOW Followup, Ice Cream Parlor, Waring Products Div., Dynamics Corp. of America, New Hartford, Conn. 06057 (ph. 212 593-2400).



Unlined shirt jacket of sueded pigskin is from famous Jimmy Dean collection.



Smart-looking Maxi-Coat (Style 6345) is also from Jimmy Dean collection.

Look What They're Doing with Pigskin

Sueded pigskin fashions are catching on fast. You can buy them ready-made, or buy the material and sew jackets, blazers or whatever for you and your family.

Jimmy Dean International offers a popular array of suede pigskin blazers, sport jackets and coats for both men and women. They're available in a wide variety of styles, sizes and colors, ranging from 6 to 16 for ladies, and 36 to 52 for men. They're being sold in leading fashion stores. If you don't know where they're available locally, contact: FARM SHOW Followup, Jimmy Dean International, 1341 W. Mockingbird Lane, Suite 1100 E, Dallas Texas 75247 (ph. 214 638-1190).

For "sew it yourselfers", the Iowa Porkettes are offering sueded pigskin in a wide range of fashions and 15 different colors. Sales are by the whole skin, just as they come from the tannery. Individual skins range from 7 to 9 sq. ft. of pigskin. The price is $1.60 per sq. ft., plus postage and tax for Iowa residents only.

For more details, contact: FARM SHOW Followup, Iowa Porkette Association, Mrs. Clarence Ziebell, Rt. 1, Charles City, Iowa 50616 (ph. 515 228-5308).

Do Your Friends a Favor!

Put them in touch with FARM SHOW. Just send us the names of neighbors, friends or relatives you think would like to see this new magazine regularly. We'll send them a *free copy* of our Charter Issue. We'll also tell them, with your permission, that *it was you* who suggested we send them the free copy.

☐ Yes, it's okay to tell *each name below* that:
"_____ asked us to send
(Print in your name)
you this free copy of FARM SHOW magazine."

☐ Send each of them an issue but don't use my name.

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CAN ALSO BE USED TO PROVIDE HEAT FOR YOUR FARM SHOP OR OTHER BUILDINGS

Solar Collector Cuts Drying Costs

Under ideal sunlight conditions, the new Kern'L Komfort solar grain drying system collects upwards of 300,000 btu's of free heat per hour. Its maximum drying output is equivalent to 4 gals. of LP gas per hour, says Don Schmidt, vice president of marketing for Specialty Metal Fabricators, Minonk, Ill., manufacturer of the solar collector.

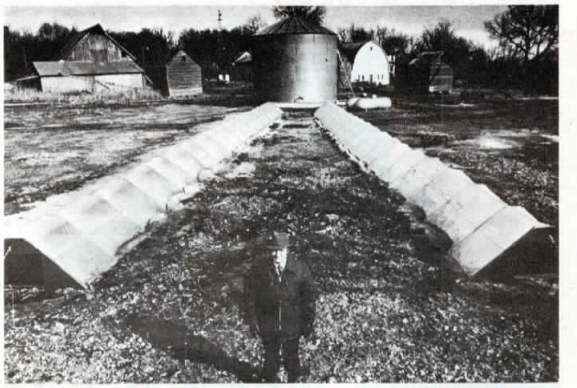
Even on overcast days it still operates at 50% or better efficiency, and also reduces rain intake through the aeration fan on rainy days, Schmidt points out. A single solar drying system handles a 10,000 to 12,000 bu. capacity storage unit. Multiple units are recommended for storage of over 12,000 bu.

The Kern'l-Komfort system has a triangular shaped, solid steel rod support frame resting on black polyethylene film which is used as the collector. Clear polyethylene film, with ultra-violet light inhibitor, is used for the cover and collector enclosure. Special patented fasteners attach polyethylene to the frame. A flexible adapter is used to fit any size fan housing and a manually operated proportional airflow control is standard equipment.

The complete unit is 100 ft. long, 8 ft. wide and 26 in. tall, providing 800 sq. ft. of collector area. When not in use, the unit stores in an 8 by 8 ft. area.

Retail cost of the 100 ft. long collector is $1395. During the off season for crop drying, it can be used to provide supplemental heat for your farm shop or other buildings. Takes about 4 hours to assemble or tear down. Estimated annual cost for replacing the 100 ft. plastic cover is right at $50, according to Schmidt.

For more details, contact: FARM SHOW Followup, Specialty Metal Fabricators, 1032 Chestnut St., Minonk, Ill. 61760 (ph. 309 432-2586).



Kern'l Komfort solar collector produces upwards of 300,000 btu's of free heat per hour, which is equivalent to saving about 4 gals. of LP gas per hour.



The Torpedo (lower right) has a 10,000 lb. test axle built right through the tank. The Row Rambler handles a 500 or 1,000 gal. tank.

MANEUVERABILITY AND NO-TIP HANDLING

New Running Gears for Nurse Tanks

More maneuverability and "no tip" handling are key features of new-style running gears for nurse tanks introduced by Reinke Mfg. Co., Deshler, Neb.

Two models — the Row Rambler and the Torpedo — are both equipped with single front wheels. The Torpedo, with no exterior framework, has a 10,000 lb. test axle which is built right through the tank. Two large, easily adjusted rear tires provide extra-high crop clearance.

The Row Rambler carries either a 500 or a 1,000 lb. tank. It features heavy box beam construction, fewer stress points, roller bearings in the wheels, and a heavy-duty front pivot bearing and adjustable tread width.

For more details, contact: FARM SHOW Followup, Reinke Mfg. Co., Deshler, Neb. 68340 (ph. 402 365-7251).



Equip your tractor with the model TW 1000 and you're "tooled up" and ready to do your own and custom stump grinding. Takes a 25 in. wide cut.

CUTS BIG OR SMALL, HARD OR SOFT, NEW OR OLD STUMPS

Tractor-Mounted Stump Grinder

"We're the only manufacturer of a stump removal device that can pulverize any 2 ft. dia. stump down to 4 in. below the ground in less than one minute," says Jed Hollan, president of Levco Mfg. Co., Wynne, Ark.

The company's model TM 1000 is designed for use with tractors in the 90 to 125 hp range. It takes a 25 in. cut, is completely tractor mounted and is as maneuverable as the tractor itself, according to Hollan.

A smaller companion model (TM 540) takes a cut 13 in. wide and 10 in. deep. It will cut stumps of any diameter, same as the larger model.

"These machines operate in muddy fields and can be cutting stumps while it is too wet to do any other fieldwork," Hollan points out. Cutting teeth on both models are tungsten carbide tipped and never need sharpening. "Life of the teeth varies but most operators report that over 500 acres of stumpy ground can be covered before major tooth replacement is necessary," says Hollan.

Suggested list price is $5,295 for the large model (TM 1000) and $3,859 for the smaller model TM 540.

For more details, contact: FARM SHOW Followup, Levco Mfg., Box 72, Wynne, Ark. 72396 (ph. 501 238-8126).

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"BREAKTHROUGH" DEVELOPMENT FROM CUMMINS FEATURED IN BEST NEW BOOK ON TRACTORS WE'VE SEEN

Constant Power Tractor Engines

"Hottest new development in farm tractors for 1977 is the introduction of constant power engines from Cummins. Their impact on the tractor industry will be great. Engines have already been purchased by at least four major tractor suppliers."

So says Pierce Fulkerson, Kentucky farm equipment dealer and author of a just-published new book entitled, "Understanding the Modern Farm Tractor. The 72-page book "for those who buy and sell tractors" devotes an entire chapter to the new "constant power" engines developed by the Cummins Engine Co., headquartered at Columbus, Ind. It also discusses dash-mounted horsepower gauges, new wheel "slippage monitors" and a new "lugging power" method for comparing total performance of various makes of farm tractors.

It's one of the best new books on tractors we've seen. Here's a "sneak preview" of latest new developments it covers:

New "constant power" tractor engines from Cummins: "Available for the first time in tractors this fall, these 855 Series engines provide better performance throughout the operating range of from 70 to 100% rated engine speed than does any engine found in farm tractors currently offered for sale and Nebraska tested," says Fulkerson. He points out that the new "constant power" engines from Cummins maintain almost constant power throughout the operating range of engine speeds, as contrasted to conventional engines in farm tractors which generally lose power as engine rpm's drop under load.

A typical "constant power" Cummins engine produces, at 2100 rpm, a rated hp of 280. It produces 284 hp at 2000 rpm, 285 hp at 1900 rpm, 287 hp at 1800 rpm and, at 1700 rpm, maintains 280 hp when under load. So, in fact, horsepower rises from 280 to 287, then reverts to 280 hp in the 80 to 100% range of engine speed, Fulkerson points out. At 1600 rpm it maintains 272 hp under load.

To compare performance of the new "constant power" engines with conventional tractor engines, he used laboratory data, supplied by Cummins, on the new engines, and actual Nebraska Tests conducted on conventional farm tractors:

"There were 74 2-wheel drive models and 11 models of 4-wheel drives which had been tested and offered for sale this year. The average of these 85 tractors produced 91.03% of their maximum horsepower throughout the 70 to 100% range of operating engine speeds. By contrast, according to Cummins laboratory tests, their line of Series 855 'constant power' engines will deliver 99.36% of their rated power over the same range of engine speed levels. In other words, if the tractor is to be subjected to loads which carry the engine into the 70 through 100% speed range, then the Cummins series would produce an average over this range of 8.33% more useable power.

"The engines in 4-wheel drive tractors already offer performance closer to what Cummins offers than does the average 2-wheel drive tractor. The average for 4-wheel drive units was 94.84%, contrasted to the Cummins line of 99.36%. Individual models ranged from a low of 83.13% up to a high of 97.98% for the best conventional engine. The lowest of the new Cummins engines produces 98.75%, and the highest produces 100.22% of its power over this operating range," Fulkerson explains.

So what's a "constant power" tractor engine worth to a farmer?

"That'll depend on the nature of the soils, and the terrain on which he farms," says Fulkerson. "Farmers in the flat, sandy soils of the Gulf states may need to look only at the 100% and 90% lugging levels. Those in many other areas will probably look at the full 70 through 100% range because soil formations change so often, and there are numerous hills to be scaled," explains Fulkerson. "We've found that farmers object to having to shift down, or having to raise the tillage tool to get through a tough spot. Their only other alternative with the average conventional engine is to let the engine lug as the load increases, which results in an even greater loss of power, in most cases."

Horsepower gauges: "Cummins will be using them with their new engines. Thus, for the first time, a farmer will know what's going on. He won't have to guess how much power is being produced," says Fulkerson.

New "lugging Power" method for rating total tractor performance. Fulkerson has devised a revolutionary method for rating the "lugging power" of "constant power" and conventional tractor engines. He publishes an annual Tractor Comparison book and the 1978 edition, slated for publication next January, will rate individual tractors on "lugging power" performance.

This objective, first-of-its-kind rating system promises to turn up some real "eye openers".

For example, two competitive model tractors in the 150 to 180 hp range may show about the same rated horsepower but, when lugged down to 70% of their rated engine speed, there may be 16 hp or more difference in the two models.

Fulkerson, in his just-published book on "Understanding the Modern Farm Tractor," explains how his exclusive "lugging power" rating is arrived at:

"The data is derived from a section of the Nebraska Tests known as the "Lugging Ability in Rated Gear" tests and formerly known as the "Varying Drawbar Pull and Travel Speed with a Ballast" tests. In this series of tests, the tractor is hitched to a drawbar load and the load adjusted until the engine speed is lowered to 'rated engine speed' as recommended by the manufacturer for this model. "The drawbar horsepower, pounds pulled, travel speed in miles per hour, and the slippage rate is then recorded. Next, a heavier load is applied which brings the engine speed down to 90% of rated speed, and the same data is recorded. Subsequent tests are run at 80% maximum load, 70% maximum load, and at lower levels of engine speed to see how the engine reacts to the loads.

"To arrive at our rating, we divide the power produced at the 90, 80, and 70% levels by that produced at maximum rated engine speed. This provides us with the ratio of power that the engine produced at each lower level, to that produced at rated speed. We then multiply this ratio times the maximum PTO horsepower recorded in the 2-hour PTO test to find the "Estimated Lugging Horsepower" at the 90, 80, and 70% levels. To find average horsepower throughout the four speed levels of 70, 80, 90, and 100% rated speed, we add these four figures and divide by four.

"The only variable existing during these tests is in the slippage rate. While slip rates do vary, we find a uniform increase in this slip rate on the various models as the load is increased.

"We have advised all tractor manufacturers in the U.S. that we will be using this new rating system in 1978, and none have objected to its use. The engineers with whom we have consulted state that this is a substantially accurate method for deriving such data."

Future of farm tractors: "Slippage monitors, slated for introduction yet this year, will allow the farmer to operate tractors more efficiently in the field. As field speed of farm tractors increases, computers may handle such functions as the lifting and lowering of plows at the field ends. By pushing a button at the end of the field, computers may take over to handle many operations which occur too rapidly for an operator to respond to," predicts Fulkerson.

His new book discusses dozens of other subjects, including: Formulas for comparing tractors; tips on dealing with dealers; hydraulic systems; how to boost horsepower; how an engine works and how to select the proper size tractor.

Cost of the book is $5.00.

If you'd like a copy, send your check, made payable to Tractor Comparisons, to: FARM SHOW Followup, Tractor Comparisons, Box 117, Sonora, Ky. 42776 (ph. 502 369-2201).

Life Insurance for Livestock

You name it! Peter Ruhlen will insure it. He's vice president of the unique Rhulen Agency, Monticello, N.Y., which has become the local "Lloyd's of London" in life and other tailor-made insurance for livestock.

"Not many agents are into horse and cattle life insurance, and still fewer are willing to arrange breeding insurance for those animals. And scarcely any agents in the entire country will attempt to insure all types of animals," Rhulen told FARM SHOW.

His latest new wrinkle is insuring embryo transplant recipients. "As the transplant operation becomes perfected and the cost is made affordable by the average cattleman, you're going to see a significant turn-around in the quality of animals via this transplant medium. We, therefore, have designed a cover to protect the buyer or the owner of the host recipient, guaranteeing that it will have a live calf and that the calf will live six months."



"Most of our insurance is on horses, followed by beef cattle and exotic animals," says Peter Rhulen.

Because of the abnormally high risks involved, Rhulen takes special pains to know all he can about a particular animal and, as a result, may be one of the most knowledgeable horse and cattle breeding experts in the country.

Rhulen has client in all 50 states, 13 European countries and his own world-wide Telex number and a WATS line to keep him in touch.

In many instances, he parcels single coverage of a highly valuable single animal to a number of different underwriting companies. He also provides liability insurance for a variety of entertainment and recreation operations using animals.

Rhulen emphasizes that there are two basic types of insurance. One is accidental death and the other is full mortality. "The best program for all-around protection is full mortality coverage, such as for death of an animal by sickness, accidental injury or loss due to theft. The other form is generally written to cover accidental death, such as an animal that dies in an accident, fire, or gets struck by lightning.

For more information on insuring one or more head of cattle, hogs, horses or other animals, contact: FARM SHOW Followup, Rhulen Agency, Peter Rhulen, Vice President, 217 Broadway, Monticello, N.Y. 12701 (ph. 800 431-1270).

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MOVES UP TO 3,000 BU./HR.

Belt-Type Conveyer Reduces Dockage

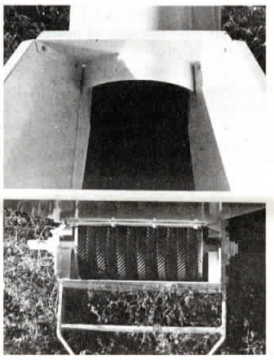
Looking for a way to move grain with minimum kernel damage and dockage? Then take a close look at the BeltVeyor tubular conveyor from Speed King Mfg., Dodge City, Kan.

Equipped with a 12 in. belt which travels at high speed through a 10 in. steel tube, it carries the material instead of pushing or forcing it. Blended materials are conveyed without separating, and fragile materials are moved without cracking or breaking. It'll handle, at a 30° incline, from 2,000 to 3,000 bu. of shelled corn per hour. "We have no specific testing data showing kernel breakage on this unit, versus our augers, but we know breakage is considerably less with the belt conveyor," reports Orland Crooks, industrial products manager at Speed King. "The BeltVeyor was originally designed for handling castor beans and other small grains but, in the last few years, the largest usage has been for handling granular free-flowing fertilizer."

Portable tubular conveyors are available in standard lengths from 20 to 60 ft. All models are available in stainless steel for handling highly corrosive materials.

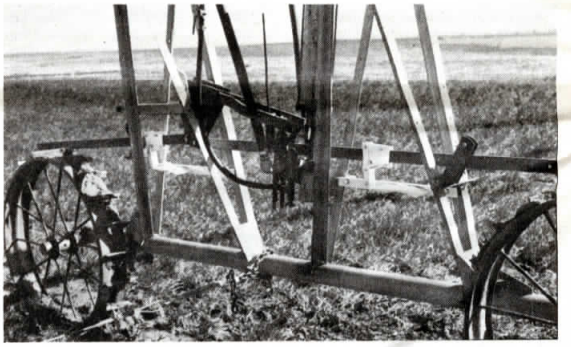
Cost varies, depending on a variety of available options, but a "ballpark" figure, according to Crooks, is $1,800 for a 30 ft. unit, and about $3,000 for a 60 ft. unit.

For more details, contact: FARM SHOW Followup, Speed King Mfg., Box 1438, Dodge City, Kan. 67801 (ph. 316 227-7106).



12-in belt moves grain without breaking or cracking the kernels. Biggest use is for granular fertilizer.

Belt conveyors (12 in. belt) available in standard lengths from 20 to 60 ft.



Lug Hopper attachment reduces wear at the high-wearing point of the lugs by eliminating the dragging of the trojan bar dogs over the wheel lugs.

REDUCES COSTLY LUG WEAR ON VALLEY AND OTHER SYSTEMS

New "Lug Hoppers" for Center Pivots

A new product designed to make lugs on Valley and other center pivot irrigation systems last longer has been introduced by Ansel Mfg., Ulysses, Kan.

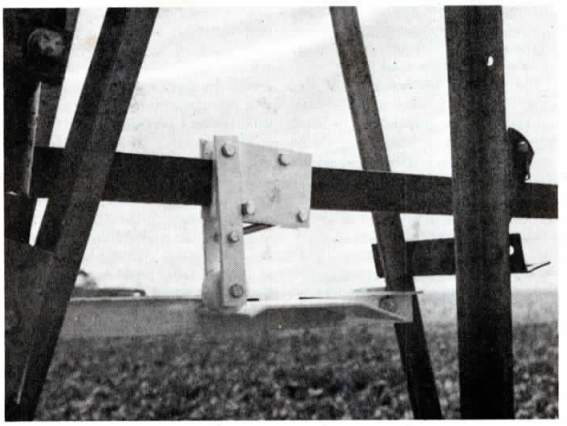
Called Lug Hoppers, the units reduce wear at the high-wearing point by eliminating dragging of the trojan bar dogs over the wheel lugs.

Lug Hoppers consist of a ramp which is bolted on the tower frame and a pivoting roller device which bolts onto the trojan bar. On the drive stroke, the roller folds upward to allow the trojan bar dog contact with the back side of the wheel lug, providing forward motion to the system.

On the return stroke, the trojan bar dog lifts rather than drags over the wheel lug, as originally designed. The roller snaps back against a stop and rides up over the ramp, lifting the trojan bar and providing clearance between the trojan bar dog and the wheel lug.

Lug Hoppers, which require no welding or drilling to install, sell for $60 per tower.

For more details, contact: FARM SHOW Followup, Ansel Mfg., 525 S. Missouri, Ulysses, Kan. 67880 (ph. 316 356-1248).



Closeup shows roller and ramp which lift the trojan bar so it won't drag over the wheel lug, causing excessive wear.

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A 300 hp engine powers the new 8550, biggest in the Allis Chalmers line.

NEW "TOP OF THE LINE" 8550 BOASTS 300 ENGINE HP

Allis Chalmers Adds Four New Tractors

FARM SHOW was in Kansas City two weeks ago with your local Allis Chalmers dealer to preview the company's just-introduced new tractors and other equipment.

If you haven't yet talked to him since he got back, here's fair warning to be prepared — he's got a lot to talk about, including four new tractors ranging from 21 to 300 engine hp.

Model 8550: Boasting 300 engine hp (250 PTO hp), this articulated 4-wheel drive diesel becomes A-C's "top of the line" tractor. It's powered by a model 6120 T company-built in-line 6 cyl. diesel. The engine has a displacement of 731 cu. in. operating at 2500 rpm rated speed, and features a "two head design" and dual turbo chargers with twin exhaust pipes.

Be sure to ask your local A-C dealer about the new 8550's exclusive 20 speed Power Director transmission. He'll tell you it offers "more forward speeds with on-the-go shift capability than any competitive tractor". A fully independent 1000 rpm PTO, with a 1-3/4 in. shaft, is standard.

Other features include a draft sensitive, 3-pt. hitch (Cat. III or IV) with quick coupler and drawbar, 75 gpm hydraulic system, new-style Acousta cab, luxury swivel seat with 10 different comfort adjustments, 170 gal. fuel tank and power shift or non-power shift wheels available with single or dual options. Duals can be axle mounted or clamp-on in sizes ranging from 18.4 to 30.5.

Model 7045: Rated at 145 PTO hp, it's the "big brother" of another new tractor, the model 7020 at 123 pto hp. Together, they fill out the company's line of "over 100 hp" two-wheel drive tractors.

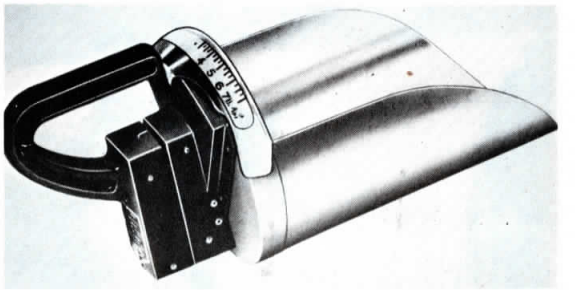
It's powered by a 426 cu. in. turbocharged, in-line 6 cyl. A-C model 670 diesel engine and is available with two transmissions — a 20 speed Power Director, and a 12 speed power shift. The Power Director provides "on-the-go" shifting between high and low ranges for maximum performance and fuel efficiency. It has 12 speed selections below 10 mph, with 8 of those in the most used working range of 2.5 to 6.5 mph.

The new tractor is equipped with fully independent 540/1000 rpm PTO speeds, built with a reversible one-piece drive. The new Acousta cab II is standard equipment, and is a refinement of the Acousta cab which holds the distinction of being one of the quietest tractor cabs built.

Model 7020: Its power plant is a 301 cu. in. in-line 6 cyl. A-C model 649 turbocharged and intercooled diesel engine with a rated speed of 2300 rpm. Other key features include 16 or 20 forward speeds with shift on-the-go between high and low ranges, or an optional 12 speed power shift transmission. Nine of 12 speeds in the optional power shift transmission are under 10 mph in the most used working range. The power shift is specially designed to always allow one clutch pack to remain engaged while one is dropped and another added. "This feature is extremely effective in providing shock free shifting on-the-go," your local A-C dealer will tell you. It's equipped with fully independent dual 540/1000 rpm PTO speeds, a traction booster system, Cat. III or IV 3-pt. hitch and up to three remote outlets. The new Acousta II cab is standard, and the new tractor's 51 gal. fuel tank fills from ground level.

Model 5020: The first of two low horsepower tractors introduced by A-C, it's built in Japan and is powered by a 21 hp Toyosha 77 cu. in. 6 cyl. diesel engine. It has an 8-speed transmission with 2 speeds in reverse. Its PTO runs at 540 rpm. Front axle has a clearance of 12.5 in. Wheelbase is 59.8 in. Comes with hydraulic system and complete line of tailor-made plows, discs, cultivators, mowers and other attachments.

For more details on these new A-C tractors, see your local dealer or contact: FARM SHOW Followup, Allis Chalmers Corp., Box 512, Milwaukee, Wis. 53201 (ph. 414-475-4270).



No batteries are needed to operate the Scale Scoop which accurately weighs individual batches.

HOLDS UP TO 7¼ LBS. OF FEED; ALSO WEIGHS BABY PIGS

New "Scale Scoop" Weighs Each Batch

There's no guesswork about how much feed each animal or pen gets with the new Scale Scoop from Delphi Products, Delphi, Ind. It's equipped with a built-in scale mechanism which is located just below the handle.

The weight indicator needle travels in a protected, easy-to-read channel at the top of the back end of the scoop, making it easy to immediately see whether there's too little or too much feed in the scoop for the particular animal or pen being fed. The scoop holds up to 7¼ lbs. of feed at a time and can also be used for other weighing jobs, such as weighing newborn pigs. No batteries or other type of electrical power are needed to operate it.

"We're offering the Scale Scoop on an introductory basis at $29.95, postage prepaid," G. L. Underhill, director of sales, told FARM SHOW. Dealer inquiries welcome.

For more details, contact, FARM SHOW Followup, Delphi Products Co., Box 256, Delphi, Ind. 46923 (ph. 317 564-3752).

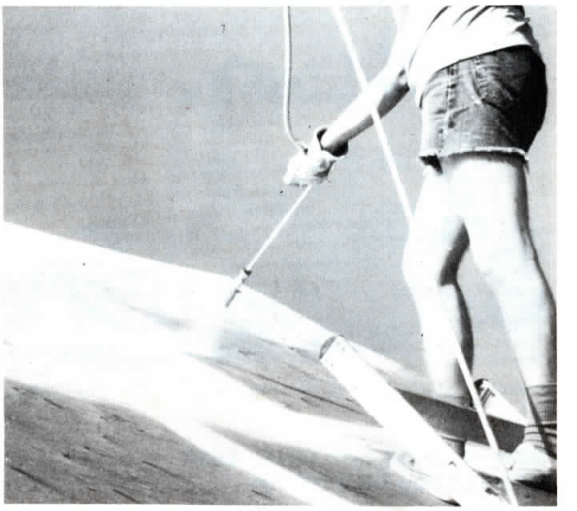


New 145 PTO hp 7045 is available with new Acousta cab II and 20 speed Power Director transmission with 2-speed shift-on-the-go capability. It's powered by a 145 hp diesel. The new 7020 has a 120 hp engine.

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Rapid Roof was applied directly over the existing, badly-worn asphalt shingles on this barn roof.



Rapid Roof can also be sprayed on. Conklin offers special Rust Not coating for use on badly rusted metal roofing or siding.

NO NEED TO EVEN REMOVE OLD SHINGLES

New Life for Old Roofs

In many cases, you don't even have to remove the old asphalt shingles or roll roofing to repair leaky roofs with Rapid Roof, a new paint-on coating developed by the Conklin Company, headquartered in Minneapolis, Minn.

"It's an exciting product," says Al Vlasak, president of A & R Sales, Montgomery Minn., and a Conklin distributor. "You can paint or spray it on yourself, or our distributors have crews available for custom application," he told FARM SHOW.

Vlasak describes it as "a rugged acrylic roof coating specially formulated to withstand the toughest punishment weather can dish out. Its non-toxic, water base formula makes for easy application by sprayer, brush or roller on new or existing roofs. Once dry, it forms an extremely elastic film." Vlasak notes that a coating of Rapid Roof, when dry, will stretch up to 300% without cracking or breaking.

Another test of its elasticity is the "mandrel bend test" in which an 18 mil film of hardened Rapid Roof coating, chilled to a -20°F, was bent around a ½ in. dia. rod without breaking or cracking.

If ice buildup along the edges causes the roof of your house to leak, a coating of Rapid Roof may be the answer. "Just apply it over the shingles as a sealant to prevent dammed-up water from backing up under the shingles," explains Vlasak.

Here's how Rapid Roof can be used on new construction: After laying down plywood sheets over the rafters, simply tape the seams and apply two coats (each about 16 mils thick) of Rapid Roof from the Conklin Co.

"The material itself is white. Special colored granules can be applied to the still-wet second coat to give it a textured appearance. Wide cracks or holes in older roofs, and the ridges and valleys, should be taped prior to applying Rapid Roof, says Vlasak.

What does it cost?

Suggested retail is $13.20 per gal. in 5 gal. lots. One gallon covers 50 sq. ft. It figures out to about 27½ cents per sq. ft. of roof area, including tape for the holes, cracks and along the ridges, the granular texture material and the material itself.

"Rapid Roof saves labor because you may not have to take time to rip off the old shingles, roll roofing or whatever material is already on the roof," explains Vlasak. "If the roof is metal and badly rusted, we recommend using another Conklin product called Rust Not. It stops rust in its tracks and can be applied right over the rusty surface after first removing any loose scales. Cost of this material is approximately 5½ cents per sq. ft."

The Conklin Company offers a limited 15 year warranty where Rapid Roof is applied by a trained and approved certified applicator. The warranty will provide 100% of the material required to repair a leaking roof during the first 5 years, 75% for the next 5 years and a 50% for approved claims filed between the 10th and 15th year after application.

For more details on Rapid Roof and other Conklin products, contact: FARM SHOW Followup, Al Vlasak, A & R Sales, Rural Route 2, Montgomery, Minn. 56069 (ph 612 364-7365).

MODEL 4840, AT 180 HP, IS BIGGEST IN 2-WHEEL DRIVE

Deere Displays New Tractors

Deere and Co. put its new line of tractors on public display as this issue of FARM SHOW went to press.

Heading the impressive new lineup of five new "40" series tractors, shown publicly for the first time at the recent Minnesota State Fair, is the model 4840, Deere's "biggest yet" in two wheel drive at 180 pto hp. Other new models which you'll be seeing at upcoming fairs and shows this fall are the 4640 at 155 pto hp (replaces the 150 hp 4630); the 4440 at 130 hp (replaces the 125 hp 4430); the 4240 at 110 hp (replaces the 100 hp 4230); and the 4040 at 90 pto hp (replaces the 80 hp 4030).

The four biggest new models (4840, 4640, 4440 and 4240) are all equipped with the same 466 cu. in engine block. (The smaller model 4040 has a 404 cu. in. engine). Turbo charging, intercooling and other features are used to boost power output from the one engine block from 110 to 180 pto hp.

"The new models aren't the old tractors with new engines," explains a Deere spokesman. "We've beefed up the transmissions in each model in proportion to the extra horsepower it produces, and made other improvements, such as extending the wheelbase, improving the cab and beefing up the rear end."

Deere also has introduced two new smaller horsepower tractors to fill the gap from 19 hp (it s biggest lawn and garden tractor — the model 400) and 40 hp (its previous smallest field-size tractor — the 2040). The new model 850 is rated at 22 pto hp, and the new 950 at 27 pto hp.

Suggested base retail cost (FOB the factory) of Deere's new 180 hp 4840 is $33,194.70 ($38,183.70 with dual wheels and tires, weights, remote cylinder and several other options). It features a 6 cyl., variable speed turbobuilt intercooled diesel engine, power differential lock, power shift transmission with 8 speeds forward and 4 in reverse, 1,000 rpm pto and brand new "big" tires (42 in. dia.).

For more details, see your local dealer or contact: Deere and Co., Advertising Dept., John Deere Road, Moline, Ill. 61265 (ph. 309 752-8000).

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It's recommended that the round bales be covered with two layers of plastic. Don't peek under the plastic until you're ready to feed the silage.



It takes a good-quality tractor loader to handle the bales which, at 50% moisture, weigh upwards of 2,000 lbs.

LOW-COST WAY TO PUT UP LIMITED AMOUNTS OF OATS OR ALFALFA SILAGE

Round Bale Silage

If you're looking for a low-cost way to put up limited amounts of silage, you may want to try making silage with your hay baler.

Here's the recipe: Start baling wilted alfalfa at about 50% moisture, stack the bales about 3 tiers high, wrap the pile in plastic and you're in business!

Making baled silage isn't quite that simple, but almost — particularly if you already own or have access to a New Holland "beltless" baler and are willing to follow all of the necessary steps.

"We think round bale silage has exciting possibilities," Orley Friesen told FARM SHOW. He's chief agricultural engineer with the Manitoba Department of Agriculture and has supervised extensive on-farm trials with both alfalfa and oats round bale silage the past year. "Works great with the right equipment," he reports. "Cattle love it and will walk away from regular corn silage to get it."

Samples of round bale silage tested by the Manitoba Department of Agriculture show baled alfalfa silage put up at 45 to 50% moisture tests right at 66% TDN and 20% crude protein (dry matter basis). Oats silage put up at about 60% moisture has tested right at 12% crude protein.

Freisen told FARM SHOW that attempts to put up alfalfa or oats silage with belt-type round balers have generally been disappointing because of the problem of getting wet material in and through the baler. Best results have been obtained with New Holland's "beltless" chain and slat type round baler.

Making slightly smaller bales for silage (about 3½ to 4 ft. in dia.) makes them lighter and easier to handle, Friesen points out. Here are the essential steps he feels must be followed to make satisfactory round bale alfalfa silage:

1. Start with good quality material. No ensiling process can improve the quality of the original material.

2. Wilt the crop to about 50% moisture.

3. Be sure to have your equipment ready before starting. You'll need a tractor of 60 HP or more for the baler. We found 60 HP to be the absolute bare minimum.

4. Make the bales about 3½ ft. in diameter. Try picking up the first one with the loader before you make the second one.

5. If the crop gets dryer than 40% moisture, let it dry completely and make hay with it.

6. Haul the bales to the storage area immediately. A concrete pad is best but any firm, well drained, smooth, level ground surface will do. Pile the bales tightly together, 3 rows high, and in piles that can be fed within a month. Try to leave only the smallest possible air space between bales. Make sure the bales are placed squarely and solidly.

7. Cover the bales immediately after piling. This must be done on the same day as they were baled. Use a 6 mil black plastic cover. A 40 x 40 ft. sheet will cover 36 bales piled in 3 rows end to end with 5 bales in each bottom row, 4 in the next and 3 on top. Place a layer of sand around the bottom of the pile on top of the plastic to hold it firmly against the ground.

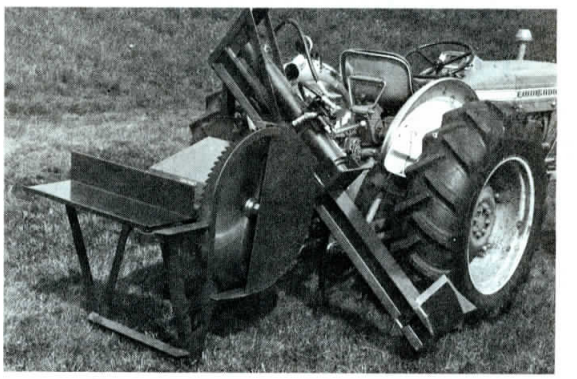
Place another protective plastic layer, preferably black, over the first one. This layer is used to protect the first one. Seal it with sand the same as the first one.

8. Place twine weighted with sand bags over the pile in both directions so that the wind can't work the plastic loose. Check the pile occasionally to make sure the plastic isn't getting loose or damaged in any way. Don't peek under it to see how things are going until you're ready to feed it.

9. When ready to feed (allow at least 3 weeks after baling) remove the top cover and store it for further use. Remove enough sand from the edges of the bottom sheet to allow you to remove a bale. Feed the bales in a good feeder so the cows don't trample on them. You probably won't be able to save the 6 mil sheet for further use but it could be worth a try. It's better to leave a plastic cover over the bales till the pile is nearly fed, to prevent rain and snow from entering the pile and causing freezing or deterioration. If there is any surface mold on the bales, it can be easily removed with a shovel or fork.

If you do experiment with Round Bale Silage, FARM SHOW would be interested to know how you make out. Thanks for keeping us posted and good luck!

Meanwhile, if you'd like to compare notes with Orley Friesen, his address is: Orley Friesen, Chief Agricultural Engineer, Technical Service Branch, 911 Norquay Building, Winnipeg, Manitoba, Can. RC3 OP8.



Saw runs off the tractor's pto and the wood splitter off the hydraulic system. Saws logs up to 12 in. in dia. and splits logs up to 26 in. long.

BOTH UNITS CAN OPERATE AT THE SAME TIME

Combination Saw and Log Splitter

New from Pockrandt Mfg., Tamaqua, Pa., is the first commercially-available cordwood saw and log splitter combination.

Both units fit category 1 or 11 3-pt. hitches and can be operated at the same time since the saw runs off the tractor's pto, and the wood splitter off the hydraulic system.

The V-belt driven saw comes with a 30 in. dia. saw blade which revolves at 1,200 rpm at a pto speed of 450 rpm. Its table (32 in. long and 12 in. wide) is adjustable and has removable rear legs. The saw can make cuts up to 12 in. deep.

The log splitter handles logs up to 26 in. long. The ram head is driven by a double acting cylinder which splits logs by driving them against an 8 in. hardened steel wedge.

The unit can be ordered in combination, or just the saw or splitter, direct from the factory. The saw sells for $625, and the splitter for $525.

To order, or for more details, contact: FARM SHOW Followup, Richard Pockrandt Mfg., Box 182, Tamaqua, Pa. 18252 (ph. 717 386-4149).

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FASTER AND EASIER THAN USING A TRACTOR

Hand Post Puller Outpulls 'Em All

You've got to see it to believe it — a hand operated steel post puller that's fast, easy to operate and pulls steel posts, regardless of how deep they're buried, without bending or twisting them.

"It'll run circles around a tractor-mounted puller," said Jack Henderson, national distributor, as he pounded a post 4 ft. into the ground to show FARM SHOW how slick the "Live Wire" puller works. In less than 8 seconds, he had the post out of the ground.

"You can't get on and off a tractor in the time it takes to pull posts by hand with this puller," he points out. "I've used it to pull posts out of asphalt. I even pounded a 7 ft. post 6 ft. into the ground once to see if the puller could take it out. Took only three minutes."

Sells for $25.95 and handles both "T" and "U" type steel posts.

For more details, contact: FARM SHOW Followup, Live Wire Product, Box 150, Grass Valley, Calif. 95945 (ph. 916 273-9397).



Jack Henderson shows how the Live Wire can take out the most stubborn steel post in less than 10 seconds.

MAINTAINS CONSTANT WATER LEVEL; STOPS STOCKTANK OVER FLOW

Automatic Valve for Stock Tanks

One of the "best buy" new products we've seen lately is a low cost valve that automatically maintains a constant water level in stock tanks ranging from 1 to 5,000 or more gallons in size.

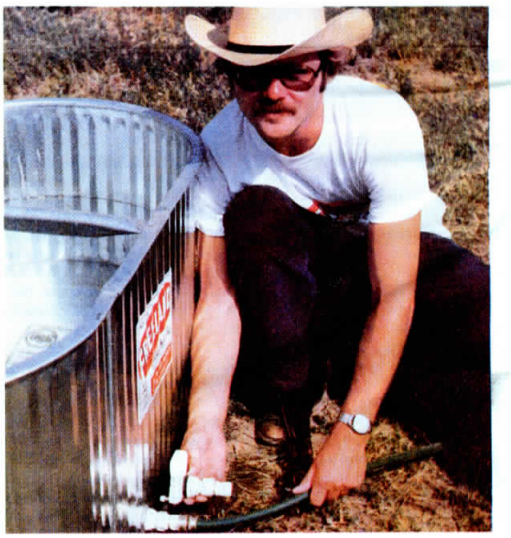
The price is right — only $6.95 — and its operation is so simple you've got to see it to believe it. Here's how it works:

Weight of the water pressing against the diaphragm of Freeland Industries' "Free-Flo" valve turns it on or off. The valve, made of ABC plastic and stainless steel internal parts, can be mounted in either the horizontal or vertical position. A simple knob adjustment allows you to set the water level anywhere from 4 to 20 i.n. above the valve. Thus, for tanks less than 20 in. deep, the unit can be installed through the bottom of the tank or through the sidewall. On tanks deeper than 20 in., the valve must be installed in the sidewall and up high enough so it's within at least 20 in. of the desired water height. The level of water being hosed under pressure into a container as small as 1 gal. can be maintained automatically with the Free-Flow valve.

To install, you simply make a 1¼ in. dia. hole in the side or bottom of the tank and, with lock washers on the valve's threaded shank, screw the valve into place. Hook up the water supply (from a garden hose, plastic or iron pipe, or copper tubing) and it's ready to go. Water hosed or piped into the tank through the valve has to be under at least 12 lbs. pressure. The unit will handle pressures as high as 125 psi and readily adapts to most types of wood, metal or plastic stock tanks.

"Because it operates below the water, it's out of the way so livestock won't play with it," explains Lynn Van Epps, sales manager, Freeland Industries. "It's completely corrosion proof and has no moving parts to wear out. We guarantee it for 2 years. It's also approved non-siphoning."

For the name of your nearest local dealer, contact: FARM SHOW Followup, Freeland Industries, Box 59, Portage, Wis. 53901 (ph 608 742-2189).



Free-Flo valve sells for $6.95 and mounts in sidewall or bottom of the tank. It automatically maintains a constant water level by sensing weight of the water column.

SAVE 20%
Special rate for NEW SUBSCRIBERS!

FARM SHOW Subscription Order

Yes! I want to be first to learn about latest new products. Please send me one full year's subscription (6 bi-monthly issues) at the special rate (20% off) for New Subscribers of $8.00 per year. I understand I can cancel after my first issue if not satisfied. Foreign subscription $15 per year.

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Make check payable to FARM SHOW. Clip and mail this coupon to: FARM SHOW, 8500 210th St., Johnson Building, Lakeville, Minn. 55044.

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