

This portable tractor lift helps Bill Gundrum, Royal Center, Ind., get on his tractor without assistance. It was manufactured by the Braun Corp.

TRACTOR LIFTS, MODIFIED CONTROLS AND OTHER SPECIAL ADAPTATIONS

They Build Equipment For Handicapped Farmers

"Many handicapped farmers never get a chance to swap experiences with others who have similar problems," says Bill Field, Purdue University ag engineer who's bringing disabled farmers together, along with engineers, companies and others interested in keeping handicapped farmers "down on the farm."

Field recently organized the first-ever conference for handicapped farmers. For two days, right at 100 farmers from across the U.S. and Canada — most of them in wheel chairs or using crutches or canes — discussed specialized equipment, such as lifts to get in and out of tractor and combine cabs, and listened to speakers discuss problems they all face. Several non-handicapped farmers brought their handicapped wives to the conference.

Field says the group decided at the meeting to publish a newsletter and form an organization, tentatively called "Disabled Farmers of North America". Since the conference, more than 1,600 farm families have requested more information.

If you'd like a free copy of the Disabled Farmers Newsletter, which Field will publish initially, or more information on the new Disabled Farmers' organization, contact:

FARM SHOW Followup, Bill Field, Extension Safety Specialist, Dept. of Ag. Engineering, Purdue University, West Lafayette, Ind. 47907 (ph 317 494-1191).

Other engineers and companies throughout the U.S. and Canada have already developed modified equipment for farmers with disabilities. These include:

Larry Linnville, Shelbyville, Ind. A farmer himself, he builds an uncomplicated electric-powered lift for tractors and combines that sells for about \$550, (more if extensive adapting is needed). He built his first lift for his father. The Linnville Lift will handle up to about 1,000 lbs. weight and mounts with just two bolts. Power comes from a 12-V winch rather than hydraulics, so the tractor doesn't have to be started to operate it.

Contact: FARM SHOW Followup,

Larry Linnville, Rt. 1, Box 278, Shelbyville, Ind. 46176 (ph 317 398-7554).

The Braun Corporation, Winamac, Ind. The company makes a number of devices for the handicapped, including van lifts, wheel chair carriers, and much more. Recently, they have begun modifying controls on farm machinery for the handicapped, and building lifts. "We're willing to work to solve nearly any problem disabled farmers face on the farm," says Tom Bonnel, who has helped develop a hydraulic platform lift for a John Deere 8430, along with several other projects.

Contact: FARM SHOW Followup, Tom Bonnel, The Braun Corporation, 1014 Monticello St., Winamac, Ind. 46996 (ph 219 946-6157).

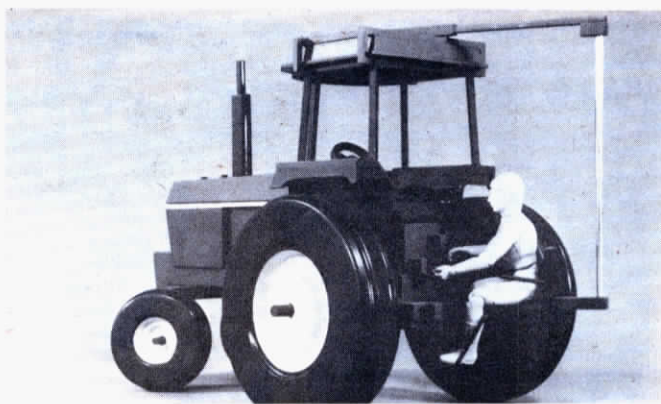
Jiri Vasa, Kingston, Ontario. A biomedical engineer at Queens University, he recently completed a project of designing an "elbow operated" skid steer loader for a farmer, paralyzed to such an extent that he could move little more on his lower body than his elbows.

Special hydraulic linkages allow the man to operate the machine normally, and to find active employment not only on the family farm but in his surrounding community. While Vasa's project was a "one shot" experiment, he is willing to visit with disabled farmers about other custom equipment modifications.

Contact: FARM SHOW Followup, Jiri J. Vasa, Biomedical Engineering, Queens University, Kingston, Ontario K7L 3N6.

Dr. Leonard Bashford, Lincoln, Nebraska. Two years ago, along with his students at the University of Nebraska, he developed a tractor lift for disabled farmer Norman Wegner, of Scribner, Neb. (featured in FARM SHOW's Vol. 4, No. 2). Plans are available from Bashford for that lift and he is willing to work with handicapped farmers on other design problems.

Contact: FARM SHOW Followup, Dr. Leonard Bashford, University of Nebraska, Dept. of Ag Engineering, Lincoln, Neb. 68583 (ph 402 472-1627).



This model of a mobile operator station, developed by Purdue University Ag Engineers, shows how disabled farmer can service tractor, enter cab and hitch up equipment using lift arm coming off cab roof.

VOLTAGE EMITTED BY PLANTS TELLS YOU WHEN TO IRRIGATE AND WHEN TO HARVEST

"Wired" Crops Transmit Wealth Of Information

You might soon begin irrigating and harvesting your crops according to data gathered by electrodes wired to a few plants in every field. Pecan and cotton crops at the University of Arizona are already "wired" and sending reports to researchers 20 miles away.

Electrical engineer Dr. William Gensler inserts thin electrodes into plants and wires them to a central control device nearby. The box contains electronic circuitry that takes readings every 15 minutes around the clock, registering environmental conditions such as sunlight, temperature, humidity, growth, and water needs.

The information is radioed via a small, solar-powered transmitter to a

mountain-top repeater station several miles away. It is then automatically relayed into a receiver in Gensler's campus office. There, the numbers flash on a TV-like computer as the data are punched into paper tape for analysis. Cotton plants show, for example, a definite electrical reaction to irrigation. "There are also preliminary indications that I can tell from the signals when the cotton is ready for harvest," says Gensler.

So far, monitoring has shown most plant growth occurs at night and that the higher the plant's electrical output, the more rapid its growth. The sensors can predict several days ahead, for example, when pecan trees will bud.

A farmer would probably have to invest about \$750 per 100 acres to install the system, and then group with other farmers to jointly buy some \$30,000 worth of computer technology for the central terminal. Each participating farmer would have a computer in his home or office connected by phone to the central station.

Current data would flash on his computer TV screen. That data could be consolidated with data from other farmers and sent anywhere in the world. "On any given day," says Gensler, "I'd like the Board of Trade in Chicago to be able to tell exactly how the corn is doing in Iowa."

Gensler hopes to have his system ready for commercial production by 1983.

For more information, contact: FARM SHOW Followup, Dr. William Gensler, Department of Electrical Engineering, University of Arizona, Tucson, Ariz.



Howard Apple, Rt. 3, Greenfield, Ind., built this lift 14 years ago for neighbor Alan Copeland.