

Combine Header Reduces Losses

A new air-jet header that greatly reduces shatter loss in soybean harvesting had been developed by researchers at the University of Illinois.

The header, which saves between one and two bushels per acre, was developed as part of a three-year project funded by the American Soybean Association (ASA) Research Foundation and

conducted by USDA Agricultural Engineer Dr. Ralph Nave.

The foundation receives money for research funding from soybean growers who participate in check-off programs in 13 states.

"The air-jet header will pay for itself in one season, even on a small farm," said Harold Kuehn of DuQuoin, president of the ASA

Research Foundation.

He explained that average soybean harvest loss is 10 percent, or four bushels per acre on a 40 bushel yield. Use of the floating cutterbar has been shown to reduce this loss by 26 percent, saving one bushel out of the four. The new air-jet header, said Kuehn, cuts the remaining loss in half, saving an additional 1½ bushels per acre.

"At \$7 per bushel, the air-jet header will earn a farmer an additional \$10.50 per acre," Kuehn said. "This will quickly pay for the cost of the header and begin increasing the farmer's profits."

Now that the basic engineering research is completed, Kuehn said, the technology is ready to be channeled to industry and put into production on commercial combines.

Kuehn explained that the search for a header that could reduce shatter loss began when researchers found the floating cutterbar effective only in reducing stubble loss and stalk loss.

In 1970, Dr. Nave and his associate at the University of Illinois, Dr. R.R. Yoerger, began testing an experimental air conveyor header designed to reduce shatter loss. This model did not prove to be highly effective, due to the fact that most shattered soybeans fell to the ground in front of the airstream.

Laboratory studies were initiated in 1971 to develop a system that would correct this problem by ejecting air through nozzles located about six inches forward of the cutterbar. Although effective, the first model developed would have required about 40 additional horsepower. A more efficient model was developed in 1972 requiring only 15 to 20 additional horsepower.

According to Kuehn, tests on the final model show the air-jet header reduces harvest loss by 49 percent on 30-inch wide rows and by 67 percent on 8-inch wide rows. Higher performance on 8-inch rows is due to the fact that plants in the narrow

Sperry Engineers Receive Licenses

Nineteen Sperry New Holland engineers have received their professional engineer's license.

Professional engineer's licenses in agricultural engineering were granted to Dale A. Ashcroft, 548 W. Conestoga St., New Holland, senior design engineer; Edward A. Blakeslee, 409 Edgewood Dr., New Holland, design engineer; Leroy A.

Crawford, RD2 New Holland, project engineer; Phillip J. Ehrhart, 1637 Rothsville Rd., Rothsville, senior design engineer; Joseph J. Lehman, 547 W. Conestoga St., New Holland, research engineer; Irwin D. McIlwain, 454 Whitman Dr., Lancaster, senior design engineer; Kenneth W. McLean, 548 548 Westfield Dr., New Holland, senior design engineer; Edward H. Pripke, RD2 Stevens, senior design engineer; Richard A. Pucher, 57 Melvin Dr., Leola, senior design engineer; Ernest A. Schoeneberger, 14 N. Hershey Ave., Leola, senior design engineer; Joseph E. Shriver, RD1 East Earl, senior design engineer; Kenneth E. Smith, 880 Hornig Rd., Lancaster, senior design engineer; Louis R. Thomas, RD2, New Holland, design engineer and David F. Wolf, RD2, New Holland research engineer. The license in mechanical engineering went to Earl A. Hudson, 11 Circleview Dr., Leola, project engineer; Shaun A. Seymour, RD2, New Holland, project engineer and Thomas L. Stiefvater, RD2, New Holland, senior design engineer.

Barry Schmidt, RD2, New Holland, industrial engineer and Douglas Bechtel, 1327 Broadway Blvd., Reading, production control coordinator, received the professional engineer's license in industrial engineering.

To be licensed, the person must have a Bachelor of Science degree in engineering or have passed a state-administered engineering-in-training examination and must have had four or more years of responsible engineering experience.

Seventeen of the Sperry New Holland engineers recently completed a course conducted one night each week for 28 weeks in the company's Education Center.

The two in industrial engineering took a 16-week course presented by the Lancaster, Pa., chapter of the American Institute of Industrial Engineers.

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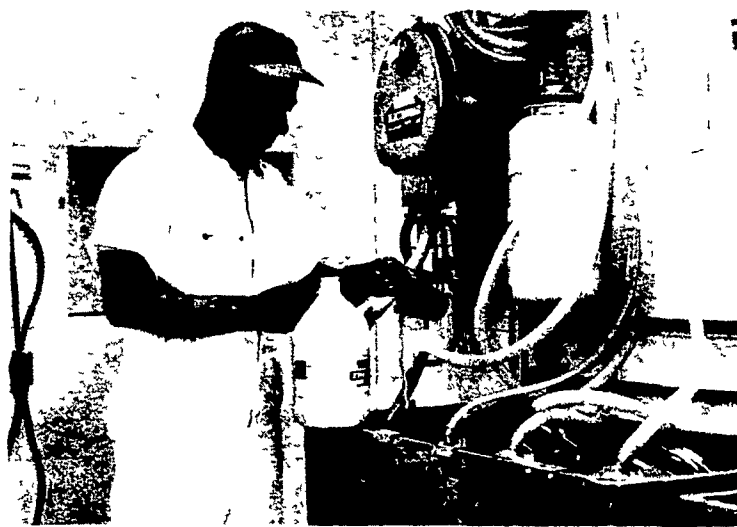
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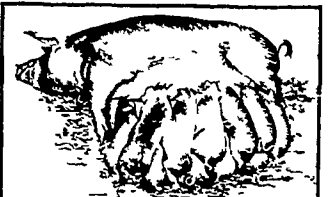
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