By Penn State Scientist

# Faculty Visits Farms On Twin Valley Tour Hybrid Barley Developed

Approximately 50 teachers from the Twin Valley High School participated in an In-Service Day tour of five local farms in an attempt to gain a better understanding of modern agriculture on Monday, October 23. The tours were arranged by the Twin Valley FFA.

First stop on the tour was Caernarvon Farms, operated by Mr. and Mrs. Andrew D. Stoltzfus. Andy explained many of the aspects of management of his 80cow Registered Holstein herd to the teachers including animal registration, computation of feeding rations and decisions involved in breeding and crop management. Many of the teachers were impressed by the complexity of the records which a dairyman must keep.

The teachers toured Andy's 80stanchion barn and facilities. Twin Valley FFA president Nevin Mast showed the teachers the electrically operated selfpropelled silage cart and the calf raising facilities. Following this

teachers were given an opportunity to hand milk a cow if they had never done so before. Taking advantage of this opportunity were Miss Kathy Schwebel, Mr. Art Harms, Mrs. Holly Clevely, Mrs. Joyce Zajac, Mrs. Dale Werner, and Mr. Robert Moyer, assistant principal. While at the farm teachers saw the Dutchman bull which was bred by Mr. Stoltzfus. Before leaving everyone enjoyed a milk and orange juice punch prepared by Mrs. Stoltzfus.

The second stop on the tour was the 100-cow dairy farm of Mr. and Mrs. Paul Brubaker Jr. Here the faculty members toured the double-six herringbone milking parlor, free stall cow and heifer barn and farm shop. Mr. Brubaker also discussed farm finances and pricing of farm products. Before leaving the farmstead the educators were able to see corn silage being blown into one of the three poured concrete silos. On the way to the next stop they were able to see

the Brubaker's two-row, selfpropelled corn silage chopper in operation.

A picnic lunch was served at the home of Mr. and Mrs. Robert Kirk, the third stop on the tour. Lunch was courtesy of the FFA and the Kirk's.

The teachers were able to tour the Kirk's remodeled Colonial home, tour their automated 200head beef finishing facilities and, if they so desired, enjoy the view from the top of the 80-foot con-

Fourth stop for the day was the beef and hog farm of Mr. and Mrs. Omar Beam. The swine farrowing house, swine breeding herd and automated beef finishing facilities were the main points of interest here. Several city-bred teachers were also able to lead one of the Beam childrens 4-H steers.

Final stop on the tour was the home of state FFA vicepresident, Frank Stoltzfus. Frank guided the teachers through the two hog houses, explaining the management and operation and economics of the buildings and of swine fattening. The Twin Valley educators were also allowed to tour the 460-foot pullet house which contained 13,000 three-dayold chicks.

The participating faculty members received much insight into the management, operation and finances of a modern farm. They were also exposed to some of the more inticate aspects of farm management, such as the use of foot baths to control diseases in poultry houses.

The Twin Valley FFA would like to thank everyone who helped make the In-Service Day tour a success - Twin Valley administrators, participating farmers, fellow members and the bus driver, Martin Hassler.

A practical method for producing hybrid barley, one of the first such developments in the nation, was announced this week by Penn State Scientists during national meetings of crop scientists in Miami Beach, Fla.

Further development of such hybrid barley, if successful, could lead to growth of a new hybrid barley seed industry similar to those producing hybrid seen corn and hybrid sorghum.

Heading up this hybrid barley rosearch is Dr. Robert P. Pfeifer of Penn State. Pfeifer addressed joint annual meetings of the American Society of Agronomy, Crop Science Society of America, and Soil Science Society of America. He made the first public announcement of this breakthrough by scientists with the Agricultural Experiment Station at Penn State.

The method uses two genetic systems, Pfeifer said. A system of maternal inheritance is used to transfer male or pollen sterility from generation to generation to make hybrid seed. Then a system of genes is used to restore male fertility so that hybrid barley plants produce grain.

The two systems discovered by crossing winter barley with spring barley in such a way that male sterile plants were found and reproduced. An intensive study of the inheritance of the system showed they could be used to make hybrid barley seed.

Letters of patent have been filed by Penn State officials through the Research Corporation of New York City on behalf of the corporation, The Pennsylvania State University, and the discoverer, Dr. Pfeifer.

Pfeifer indicated he and fellow scientists are working to perfect the new method to produce hybrid barley for livestock and

poultry feed as well as for hybrid malting barley. He indicated the malting barley industry is looking for ways to increase yields as well as to expand the number of regions where such barley can be grown.

Malt experts estimate the consumption of barley for malt will be 230 million bushels in the U.S. by 1985. This figure will almost double the present use of barley for malt. Of all barley grown today in the U.S., about 1 out of 3.2 bushels goes into malt.

Thus far the new hybrid barley is a product of laboratory and greenhouse experiments. The next step, Pfeifer said, is to produce seed in field proportions.

### Two Witmer Cows Complete Records

Two registered Guernsey cows in the herd of Raymond F. and Louise A. Witmer, Willow Street, have recently completed top official DHIR actual production records, according to the American Guernsey Cattle Club.

Penn Del Hercules Jill, a twoyear-old, produced 10,570 pounds of milk and 521 pounds of fat in 305 days, and Penn Del Boy's Juliet, a two-year-old, produced 11,370 pounds of milk and 505 pounds of fat in 305 days.

All cows were milked twice a day. The testing was supervised by Pennsylvania State Univer-

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