Progress Toward Hog AI Reported

A method for successfully freezing boar semen brings the swine industry one step closer to artificial insemination (AI), according to a USDA report.

Frozen semen has been widely used in the cattle industry for 20 years, but freezing boar semen has met with many failures.

Although some boar sperm motility survived freezing, the main problem has been damage to the sperm's acrosome of head cap. The acrosome contains

enzymes that the sperm uses to enter and fertilize the egg. Ap-

Another problem is that billions of sperm are needed per insemination to obtain fertilization in sows. The uterus of a sow destroys sperm in great quantities so that few are available for fertilizing the eggs. The mechanism of this destruction has not been discovered.

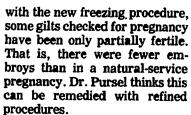
In tests at Beltsville, Md., the use of frozen semen has resulted in the birth of 72 piglets from 9 sows. Other sows, inseminated and then slaughtered, were carrying embryos. In all, AI led to sucessful fertilization in 45 of

parently, acrosome damage prevents this vital process.

With all these problems, however, ARS physiologists Vernon A. Pursel and Lawrence A. Johnson have developed a procedure for freezing semen that increases acrosome survival and sperm viability of thawed semen so that fertilization is possible. Workers at the University of Minnesota, St. Paul, and at Cambridge University in Englard have also recently reported progress in preservation of boar semen using some what different procedures.

83 gilts.

Though AI has been successful



For AI, fresh semen is collected and diluted with an extender developed at Beltsville. The extender prevents the destruction of sperm cells during freezing.

A key factor for success appears to be the addition of glycerol to the extender during cooling and its subsequent removal before the semen is acually frozen. Glycerol removal is essential for both sperm motility and acrosome integrity. With cattle semen, leaving glycerol in the extender has no harmful effects.

Cooled semen is poured into small indentations in a block of dry ice and frozen into pellets. These pellets are then collected and frozen at - 196 degrees C. The semen is thawed just before use. Thawed semen had 5 to 20 per cent motility and 28 to 54 per cent normal acrosomes.

Sows are inseminated with a long rubber tube that has a corkscrew-shaped end. One man can conduct the inseminating if a boar is kept in the pen next to the gilts. When a boar is present, a gilt in heat will remain still and can easily be inseminated.

Al could eliminate many of the problems of natural service, including the spreading of disease by the boar, the labor needed for hand or pen mating, and the injury to young gilts from older boars that are too

Problems that must be solved for AI to be commercially practical include detection of heat, determination of the fertility of thawed semen from a particular boar, and use of only one insemination per sow for economy.

While much research and refinement are yet necessary, the scientists are hopeful that their procedure will open the door to breeding genetically superior sires with large number of sows.

Return Goods **Constructively**

An often forgotten dimension of the consumer's responsibility is the art of returning goods constructively.

The responsible retailer wants and needs to know when products have not performed satisfactorily, reminds Mrs. Carol Rothermel, assistant Chester County Extension economist.

Consumers can help by returning unsatisfactory merchandise. Mrs. Rothermel suggests the following procedures when returning defective textile products:

Clearly explain the problem in writing. Be specific. Was the difficulty in shrinkage, piling, construction, color loss, or something else?

Include the date of purchase and the price. When possible, give model or style number and send copy of sales receipt with the complaint.

State length of time the item was used or worn and the approximate number of launderings and-or cleanings.

Describe briefly the laundering or cleaning procedure used, along with the names of special chemical or laundry products used for pre-treating or stain

Send or take the merchandise with accompanying letter to the manager or buyer of the appropriate department of the store where you bought the item When returning by mail, be sure to insure the parcel or send by registered mail

Include your name, address, and telephone number with the

Constructive returns made in this manner may require time and patience on the part of the consumer, says Mrs. Rothermel. But they also serve your best interests by helping the manufacturer and the retailer constantly improve the quality and value you receive for your clothing dollar.

NEW 18 CAN MILK COOLERS

- Rugged Construction
- Modern Insulation
- Better Refrigeration
- Cabinet Measurements 98" long, 51" wide 32" high including lid.

These coolers have a 1 year warranty against defects in workmanship or materials.

Thank you for your business.

LLOYD L. MARTIN

EPHRATA RD3



Wouldn't you rather keep your farm in the family than have it sold for taxes?

Planning your estate can help you avoid the unnecessary costs and heavy inheritance taxes that often require selling a farm intended for children and other heirs. But that's just one of the advantages of planning your estate to protect your family's future.

As a typical Lancaster County farmer, you're probably worth more than you realize and it's so important to plan your estate for handling by specialists. At the Friendly First, our trust officers, George Sload and Rick Ashby, are the experts who can help set up your estate for the best interests of you and your family.

Regardless of how little or how much you're worth, you'll get personal interest and plenty of time for discussion with a Friendly First trust officer. You can arrange a meeting at any of our branch offices . . . or even at your home . . . wherever and whenever it's most convenient for you.

Tragic losses can happen without proper estate planning. Don't let them happen to your estate. Call George Sload or Rick Ashby today to arrange a discussion that can be very valuable to you and your family. Call them TODAY at 397-4733.

Put your trust in the hands of the Friendly First.



LANCASTER 397-4733

WILLOW STREET 464-3421

STRASBURG 687-7617

MODERN HOGMEN ARE COST CONSCIOUS, AND THEY ARE SWITCHING TO PIONEERWAY BECAUSE . .

"IT'S THE THING



FEEDS MADE THE PIONEER WAY GIVE THESE IMPORTANT BENEFITS

- FASTER DAILY GAINS. Hogs eat more, gain more - IMPROVED FEED CONVERSION. Less feed required per pound of gain
- LESS WASTE. Each bite is right hogs get uniform protein-energy intake every time.
- RESEARCH PROVED QUALITY CONTROLLED ...



ELMER M. SHREINER

Trading as Good's Feed Mill Specializing in DAIRY & HOG FEEDS New Providence, Pa. Phone 786-2500