

Fine-Tune Production For Cheaper, Leaner Pork

COLLEGE PARK, Md. — More than \$13 million worth of hogs and pigs were produced in Maryland in 1991 on the more than 1,000 farms. Because consumers are increasingly concerned about dietary fat, this industry has experienced growing pressure to produce leaner and cheaper meat. It is responding with research.

"Maryland is a net exporter of feeder pigs," said Tom Hartsock, of the University of Maryland

College Park. Many of the swine raised here are grown to feeder size — not quite market weight, but ready to leave the nursery — and then sold. Raising pigs to market weight takes much more time, space and feed than raising piglets to feeder size. With funds from the Maryland Agricultural Experiment Station and other sources, Hartsock and Mark Estienne of the University of Maryland Eastern Shore (UMES) are fine-tuning

this segment of the pork production system.

"We are making pork farmers more efficient and competitive with other meat farmers and with foreign competition," Hartsock said, "which can ultimately result in cheaper pork for consumers."

Most of UMES' swine facility research is "geared toward the early stages of the production cycle," Hartsock said. "We are slanting our research toward what is being

done" in Maryland.

Because heavy feeding during pregnancy increases the chances of miscarriage, farmers normally breed young pigs when they are bigger, after their second or third estrus cycle. "If you breed a sow at first estrus," Hartsock said, "she is still a young girl and still growing." She still needs to eat a lot.

However, the use of vitamin A may change this practice. There is evidence that vitamin A reduces

embryo mortality. Estienne and Hartsock are trying to see if it can counteract embryo death in an overfed young pig who became pregnant in her first cycle. If it works, then "we can breed the sow at first estrus, give her an injection of vitamin A, and still feed her heavily."

To take this line of research one step further, Estienne and Hartsock are trying to induce puberty at an earlier age. Scientists have

shown that injections of various hormones stimulate the pituitary gland to secrete luteinizing hormone (LH). LH is responsible for maturing follicles so that they release eggs, or ovulate. Estienne found that n-methyl-aspartate (NMA), a simple protein, also increases the LH level. He and Hartsock are trying to see if they can use NMA to induce early puberty.

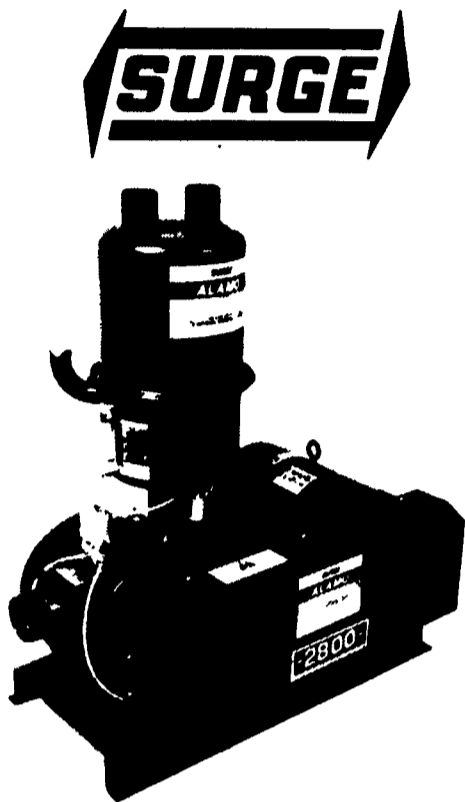
Normally, sows are bred after they arrive in the breeding pens. If both of these techniques work — inducing early puberty and injecting vitamin A — then using them in combination would allow farmers to get a head start on the production cycle. Sows could be pregnant before they arrive in the breeding pens.

About 20 to 30 percent of each newborn litter dies, usually the pigs born in the latter half of the litter. If farmers knew when a sow was going to give birth, they could be there to assist the birth, thus preventing some of these deaths.

Hartsock and Estienne are trying to discover both hormonal and behavioral clues to when a sow will give birth. "The sow gives a clue somewhere around 18 hours before farrowing and another at about four or five hours," Hartsock said. "The further you know ahead of time, the more time you have to make the decision to assist the birth or not."

Once the pigs are born, the key is getting them to grow strong and healthy. Estienne and Hartsock are using probiotics to see if they will increase the survival and growth rates of young pigs. "Probiotics are things that either introduce or encourage the growth of good bacteria," Hartsock said.

NMA has also proven helpful here. Not only can it be used to induce puberty, but it seems to increase muscle and reduce fat production. "You get more pounds of meat with less fat," Hartsock said.



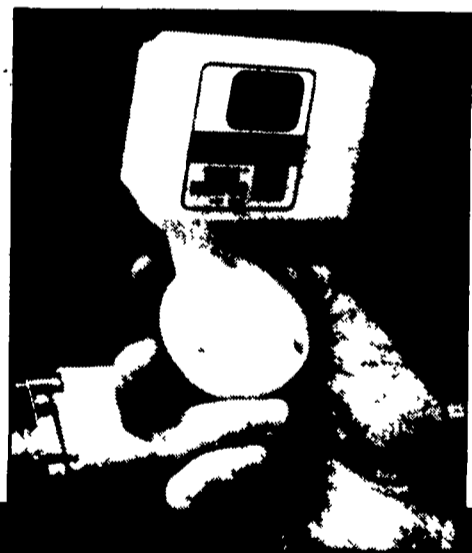
Shown: Surge Alamo Belt-Drive 2800 Pump Package Complete With L-3 Oiler

Part or parcel... you'll save money with a Surge Alamo belt-drive vacuum pump.

Buy only the capacity you need now and expand your CFM as your requirements change. The Surge Alamo Vacuum Pump model 1400 PLUS produces 50 CFM (ASME) and can be converted to a model 2200 PLUS that delivers 78 CFM, or a model 2800 rated at 100 CFM by changing the motor and belt-drive package. Muffler and air filter are optional equipment.

Whichever model you choose, with these belt-drive pumps, you get quiet, smooth-running performance at a lower cost per CFM. That's Alamo reliability and Surge value.

For larger capacity vacuum systems, Surge Alamo direct-drive vacuum pumps offer CFM output ranging from 82 to 200 (ASME). Whatever size milking system you have, we can supply the proper vacuum system components.



THE SURGE TIMEKEEPER
END-OF-MILKING INDICATOR
puts milking efficiency in the palm of your hand!

Signals when the cow is milked out.

Helps prevent overmilking for better udder health.

Shows actual milk-flow time.

Can reflect a change in a cow's condition or the milking system's performance.

Records total elapsed time. Helps improve milking routines.

Call Us For A Free Demonstration!



EXPECT MORE.

See These Dealers For Details...

PENNSYLVANIA

FORSHEY'S, INC.
110 Forshey St.
Martinsburg, PA
814-793-3791

HOSTETTER SURGE
Rd. 2, Box 749
Annville, PA
717-867-2896

SHARTLESVILLE FARM SERVICE
Rd. 1 Box 1392
Hamburg, PA
215-488-1025

BRANDT'S FARM SUPPLY
601 E. High St.
Elizabethtown, PA
717-367-1221

LONGACRE ELECTRICAL SERVICE, INC.
Bally, PA
215-845-2261

CHUCK PLACE SURGE
Sales & Service
Rd. 1 Box 176
Laceyville, PA
717-869-1564

JIM'S SURGE SALES & SERVICE
215 Oak Bottom Rd.
Quarryville, PA
717-786-1533

MARYLAND

PINDER SERVICE CO.
PO Box 7
Kennedyville, MD
301-348-5263

SHANK SURGE
Hagerstown, MD
301-790-1226
301-447-MILK
(Emmitburg)

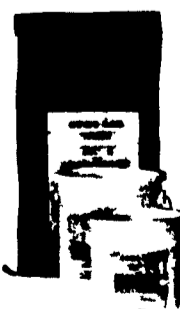
SYMO-O-O-O



MORE DAIRY COWS ASK FOR IT. SYMO-LAC.

Symo-Lac is a vitamin-mineral fermentation product for supplementing the diets of dairy cows. With high levels of digestive bacteria, enzymes, essential vitamins, minerals and electrolytes, Symo-Lac will help herds meet optimum performance requirements.

Symo-Lac is formulated to be used from pre-freshening to breeding and whenever health or performance problems occur. It will improve appetite, feed efficiency and feed utilization. It can be used to increase milk production and butterfat test. Plus, it will effectively combat mastitis condition.



Available in 10 lb. or 25 lb. pail or 40 lb. bag

With Symo-Lac, it's easier to have a contented cow. Contains no drugs or antibiotics.

To get started on the Symo-Life Nutrition Program or for more information, call or write



Symo-Life, Inc.
3507 US 62
Millersburg, Ohio 44654

Telephone (216) 883-2732
Toll Free 1-800-544-7122
(In Ohio)
Toll Free 1-800-388-8882
(Outside Ohio)
FAX (216) 883-3317