

# TEND WITH CARE

## the Soil that Cares for You!

### THE HELPING HAND SOIL CONDITIONER

UNIVERSITY and FIELD TESTS SHOW:

- Reduced water run-off & erosion
- Reduced wet spots
- Reduced cloddiness or stickiness
- Reduced compaction of soils
- Increased aeration of soils
- Increased effectiveness of fertilizer



THIS SOIL CONDITIONER is an organic material which improves soil texture so that water, fertilizer, and air can reach the root system. In this way, it assists the growth of healthier, more vigorous plants with stronger and deeper root systems.

Since SOIL CONDITIONER improves soil texture and water penetration, root development also improves. Root growth goes deeper into the subsoil for stored moisture and minerals. Roots produce more fine roots and root hairs, which allows roots more places to take up nutrients in the soil.

The now available nutrients in the soil are due in part to increased soil life. Because SOIL CONDITIONER has helped to cause an increase in soil life, there are now more available nutrients in the soil. Let SOIL CONDITIONER LEND "a helping hand" in your soil and water management.

AEROBIC RESEARCH & MARKETING, INC. SOIL CONDITIONER University test plots, independent research, and farmers' observations have shown that Ammonium Laureth Sulfate (Ammonium Alkyl Ether Sulfate) greatly improves soil and water management.

LEARN MORE ABOUT OUR PRODUCT AT THE FOLLOWING MEETINGS:

|   |   |
|---|---|
| ★ FULTON GRANGE HALL ★<br>Wakefield, PA<br>★ TUES., JAN. 24 - 7:30 PM ★ | ★ GOODVILLE FIRE HALL ★<br>Goodville, PA<br>★ WED., JAN. 25 - 7:30 PM ★ |
| ★ MARTIN HOOVER'S ★<br>Denver, PA<br>★ WED., JAN. 25 - 2:00 PM ★        | ★ PENRYN FIRE HALL ★<br>Penryn, PA<br>★ THURS., JAN. 26 - 7:30 PM ★     |

## New swine confinement

(Continued from Page 12)

Fowler characterizes the changes these developments brought to the industry with the fact that swine farmers have now gone into year-round production. Since many swine producers used to let their sows farrow only during the spring after planting and during the fall after harvest, the result was an unbalanced — and unprofitable — economic situation.

"There was a depressed market at sale time and an elevated market for the rest of the year," says Fowler. "Producers now break down production into year-round farrowing, by breeding sows throughout the year and weaning at an earlier age."

One of the techniques Fowler and Lowe will be using at the new swine unit to get the sows to come into heat is to switch them around into different pens. Since sows always establish a pecking order within each pen, each time they are regrouped they will fight until a leader has been established. Fighting and stress will usually induce the estrus-or-heat-cycle.

Taking the hogs out of their natural, outdoor environment creates more problems within the swine community than were originally expected. Whereas in nature the pigs can obtain enough iron from rooting around in the soil to keep them healthy, pigs raised in confinement have no way of getting that iron. Thus, another experiment conducted at the swine unit, according to Lowe, will be that of giving the newborn pigs iron by oral and injected dosages and then comparing the results.

Artificial insemination is another problem to be considered. Though artificial insemination would be as great a boost to the swine industry as it has been to the cattle industry, there

have been problems in perfecting this technique, largely due to the fact that boar semen will not freeze well. In addition to increasing breeding control and maintaining better disease control, artificial insemination would eliminate the problem of getting hogs to breed in the unnatural setting of a concrete building.

"We also hope to experiment with cross-breeding," says Lowe, who was raised on a Sussex County farm. "Duroc, York and Hampshires are the major swine breeds and each is noted for a different quality...Yorks for their mothering ability, Durocs for their growth and feed conversion, and Hampshires for their carcass quality. By cross-breeding these varieties, we hope to develop a gilt which is better adapted to confinement life."

Lowe and Fowler will also be considering the problem of estrus synchronization, or breeding all gilts at the same time to make the farrowing operation easier. In addition, they will always double breed the sows as research shows they can get one extra pig per litter by so doing.

"One of the first projects we will be conducting is on a product called dichlorovos which is fed to sows for deworming," says Fowler. "It has been discovered that if this substance is fed to sows at low levels during late gestation for a continual period of time, it will increase litter sizes."

Experiments with dichlorovos and most of the other subjects to be considered at the Substation swine unit have already been conducted in many of the bigger hog-producing midwestern states. But Fowler feels these techniques should be localized and demonstrated under Delaware conditions.

The Delaware Swine

Advisory Committee will be assisting with the planning of many of the programs conducted at the unit and it is their hope that the unit will serve as a focal point for pork meetings and swine short courses. Since Wednesday will be designated as Visiting Day at the unit, Fowler expects the same farmers to come back several times each year for advice.

"The increase of swine production in Delaware can be attributed to the fact that farmers who were already raising hogs are expanding their facilities rather than new farmers going into the industry," explains Fowler. "Now our job is to help them iron out the problems they might be having with the new facilities."

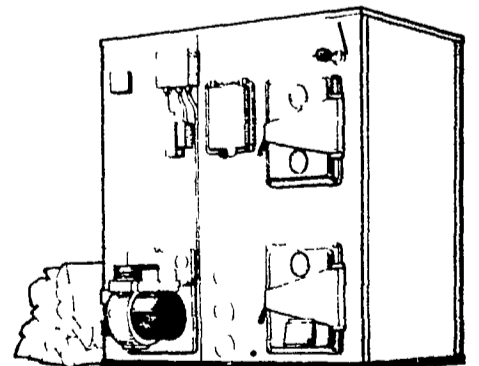
With a total annual production of 100,000 hogs and a gross annual income of \$4 million, Delaware swine production already plays a significant role in the state's overall agricultural picture. But the establishment of the unit and the dedication of the Extension swine specialists to the task of solving the problems of the confinement system can only serve to improve the swine industry's status in Delaware.



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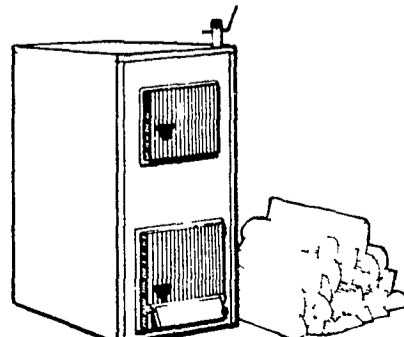
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The HS Tarm Type OT

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### The Tasso A-3



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