

SWINE EVALUATION STATION TEST

Swine Evaluation Station Test - Oklahoma

The Process

A **BYO-GON PX-109**® test project at the Oklahoma Swine Breeders Association Evaluation Station was initiated on September 2 by Edwards Environmental Corporation under the direction of Dr. William G. Luce, Swine Specialist in the Department of Animal Science. A visual inspection of the two lagoons or waste holding pits, located under the two swine holding buildings, was made. Also, water samples were drawn from the pits and sent to Standard Testing in Oklahoma City for analysis. Targeted areas of concern were:

- Odors
- Large chunks of grease from an expired animal
- Excessive sludge and wood chips build-up

The swine lagoons are approximately 125 feet long, 7 feet wide and 3 feet deep. The lagoon under building #2 was selected for treatment with **BYO-GON PX-109**®. At the first visit there was approximately two feet (2') of sludge and wood chips throughout the lagoon. It was calculated to contain 13,090 gallons of sludge (125' x 7' x 2' x 7.48). The entire volume of the lagoon was estimated to be 19,635 gallons. The sludge and wood shavings comprised an estimated 67% of the lagoon.

The initial shock dosage was distributed in selected sites over the length of the lagoon. A suction pump was set at the North end of the lagoon where sludge is normally pumped out. 125 feet of hose was attached in order to circulate the lagoon. The lagoon was circulated thirty minutes to one hour per day with a daily dosage of **BYO-GON PX-109**® added at the time of circulation. Additional product was added approximately seven days after the initial shock.

Results:

On October 13, forty-two (42) days after treatment was begun, a second sample was taken for analysis and the lagoon was checked for average sludge depth. At this time there was approximately 9" of sludge, or a calculated volume of 4,908.75 gallons (125' x 7' x .75' x 7.48). This equates to **62.5% reduction in the sludge volume**. It is speculated that the majority of the remaining sludge is comprised of wood shavings. The test results indicate that a biological decomposition is still taking place as indicated by a drop in the volatile solids portion from 78% in the initial test to 64% in the test dated October 14. There are no longer any chunks of grease from the expired animal and there is a significant reduction in odors.