



Case Study

Odor Control

IOWA STATE UNIVERSITY

12 Month Odor Study

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STUDY ENVIRONMENT

One of the top hog producers in the county contracted with Dr. Dwaine Bundy at Iowa State University to conduct a 12-month field test at 12 separate sites. Testing began in March 1999. Four sites remained untreated and were used as the control group. Two sites each were chosen to test four different pit additives. All sites had two buildings. Both pull plug and deep pit buildings were tested. All measurements were taken inside the buildings.

ODOR MEASUREMENT APPROACH

Single gas measurements for hydrogen sulfide and ammonia were taken in the traditional fashion. In addition, "Odor Threshold Measurements" were also taken. This odor measuring technique has gained significant emphasis, backed by Dr. Bundy, Dr. Al Heber, Purdue University and Dr. Mike Williams at North Carolina State. Testing is conducted by a specially trained panel, determining how many units of fresh air need to be mixed with a unit of air from the building before the odor is no longer detectable.

The reason this odor measurement approach is gaining broad support over single gas measurements is that the human nose detects over 200 gases emitted from a swine unit. Reduction of only one or two gases does not guarantee odor reduction

IN CONCLUSION

The control units had Odor Threshold measurements 99% higher than units treated with *PitCharger*. Likewise, the other treated units as a group had Odor Threshold measurements 73% higher than the units treated with *PitCharger*. *PitCharger* significantly reduced the odors neighbors smell.

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