SAFETY PRECAUTIONS

1. Do not enter covered holding tank as poisonous gases can render a person unconscious in a short time. Always force air into a tank prior to entering and while people are in the tank (like in upright silos).

2. Fence all open storage areas.

3. Lagoon storage should always have a sturdy fence surrounding the lagoon.

4. Dry stacks above 30 percent moisture can generate enough heat to burn wood or post.
Managing Animal Enterprises For Odor Control

Although neither a complete understanding of odor production nor fully adequate techniques for odor control are currently available, the following managerial procedures have proven helpful.

1. Locate a livestock operation at a reasonable distance from residential areas, places of employment, institutions, and other areas frequented by persons other than the operators of the animal enterprise. Wind direction and velocity, humidity, topography, temperature, and unique meteorological conditions (such as inversions) affect odor transport and detection. Regulations and ordinances may set minimum distances from residences, wells and streams.

2. Feeding areas and animal pens should be kept as dry as possible. Keeping manure-covered and dry minimizes the primary source of odor from a livestock operation, that of anaerobic manure decomposition. Additional benefits of dry lots are control of water pollution caused by runoff, and improved control of flies and other insects.

3. Manure-management systems should be designed and operated in a manner that prevents dirty, manure-covered animals. The warm body of an animal, when covered with wet manure, promotes accelerated bacterial growth and odor production. Once produced, the odorous by-products of manure decomposition are quickly vaporized by animal heat and emitted into the air.

4. Appropriate selection of manure storage and treatment procedures can be helpful. Aerobic systems will in general reduce odor production but are expensive. Oversizing anaerobic lagoons reduces odor.

5. An orderly system for runoff collection and manure handling not only minimizes water pollution, but also promotes better drainage and reduces areas of odor production. It is important that accumulations of solids and polluted water in runoff control system be expediently removed and applied to land to limit eventual odor emission as well as to preserve the functions of the facility.

6. A clean, orderly appearance of the livestock production unit helps in suggesting a non-offensive situation.

7. Dead animal disposal requires a definite plan to avoid odors, flies, and severe health risks. Removal from the site within 24 hours is required in most areas. Pits for burial or incineration can be used or composting in the case of dead poultry. State and county regulations should be adhered to.
8. Odor control chemicals have achieved limited use in animal enterprises. Because of their expense and the lack of an effective means to evaluate their performance, odor control chemical use has been limited generally to short-term applications in particularly offensive areas, such as a manure-storage pit immediately before hauling.

9. Land application continues to be the primary method of animal waste management and utilization and is an integral part of nearly every manure handling system. Odors can be reduced by using the following procedures:

A. Apply nutrients to balance crop needs.

B. Avoid spreading when the wind would blow odors toward populated areas.

C. Avoid spreading immediately before weekends and holidays when people are likely to be engaged in nearby outdoor and recreational activities.

D. Avoid spreading near heavily traveled highways.

E. Spread in morning when air is warming and rising rather than in the late afternoon.

F. Use available weather information to best advantage. Still winds and dry conditions are best.

G. If possible, incorporate manure into the soil during or immediately after application. This can be done by 1) soil injection, or 2) plowing or disk ing the soil after application. These practices not only minimize the spreading of odor but also preserve nutrients and reduce water pollution potential.

H. Apply manure uniformly and in a layer thin enough to insure drying in five days or less and to prevent fly propagation.