

Manure management

(Continued from Page A33)

varies according to storage, handling and application, said Beegle. Anything that increases the surface area of the manure

allows for loss of nitrogen through volatilization of ammonia nitrogen.

Robert Graves, Penn State agricultural engineer, spoke on

comparing costs and nutrient retention of manure systems.

"Nutrient retention is an important part of any handling and storage system," said Graves. "A good system with good management and coordination with cropping program can

recover a high percentage of the manure nutrients."

"Nutrients can become more or less available to crops due to how manure is stored and handled from cow to crop. Losses can be categorized as follows: physical,

leaching, volatilization, chemical, and retained."

Physical losses are when manure is eroded and carried away by water from piles or land spreading, or that spill from spreaders onto roadways or lanes.

"Leaching losses occur when manure nutrients are dissolved in water and then carried away from the manure. Nitrate nitrogen forms are the most easily leached."

Volatile losses occur from evaporation of nutrients into the air, the loss of gaseous materials. This only involves loss of nitrogen. The amount of nitrogen lost is proportional to the size of manure surfaces in contact with the air and duration, according to Graves.

"Agitation and application methods that spray small particles of manure through the air can be expected to have high nitrogen losses. The longer manure is exposed to the air the higher the loss," said Graves.

Chemical losses occur when nutrients are unavailable to the plant because of a change in chemical form. Chemical form may vary between fresh, stored and treated manure.

Retained losses refer to nutrients which are retained in a storage facility because of incomplete agitation or cleanout. Phosphorus and Potassium tend to accumulate in the bottom sludges.

Graves presented a table that compared annual value of manure, according to nutrients, from various manure systems. The table showed that a semi-solid storage system had the highest value to crops, followed by dry-stack and earth storage. The lowest value of nutrients resulted from a lagoon flush system. Daily haul was also rated poorly.

William Bowers, agricultural engineer with the Soil Conservation Service, spoke on storage and handling systems. He cautioned farmers before constructing a new system, to consult the county SCS office because of ordinances restricting manure storage facilities. Some townships are now establishing their own ordinances as well.

A booklet entitled "Manure Management for Environmental Protection" is available from the Department of Environmental Resources. The booklet gives information, guidelines and recommendations on a variety of manure systems

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Invite You To A Meeting And Luncheon

on

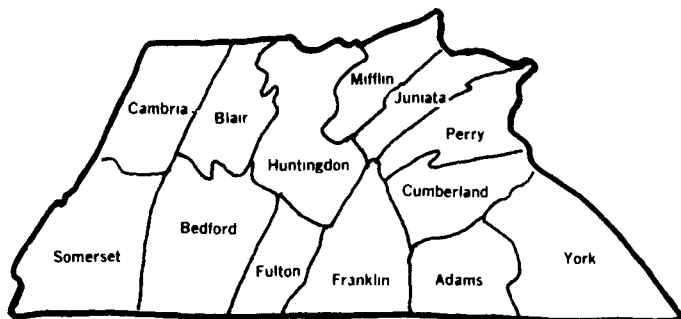
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From 10 AM to 2 PM

At The Chambersburg Holiday Inn

If you are considering glass-lined storage in the near future, this meeting will be most informative and profitable.

The meeting will be directed toward the counties listed on the map.



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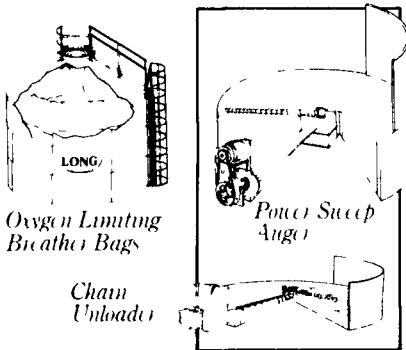
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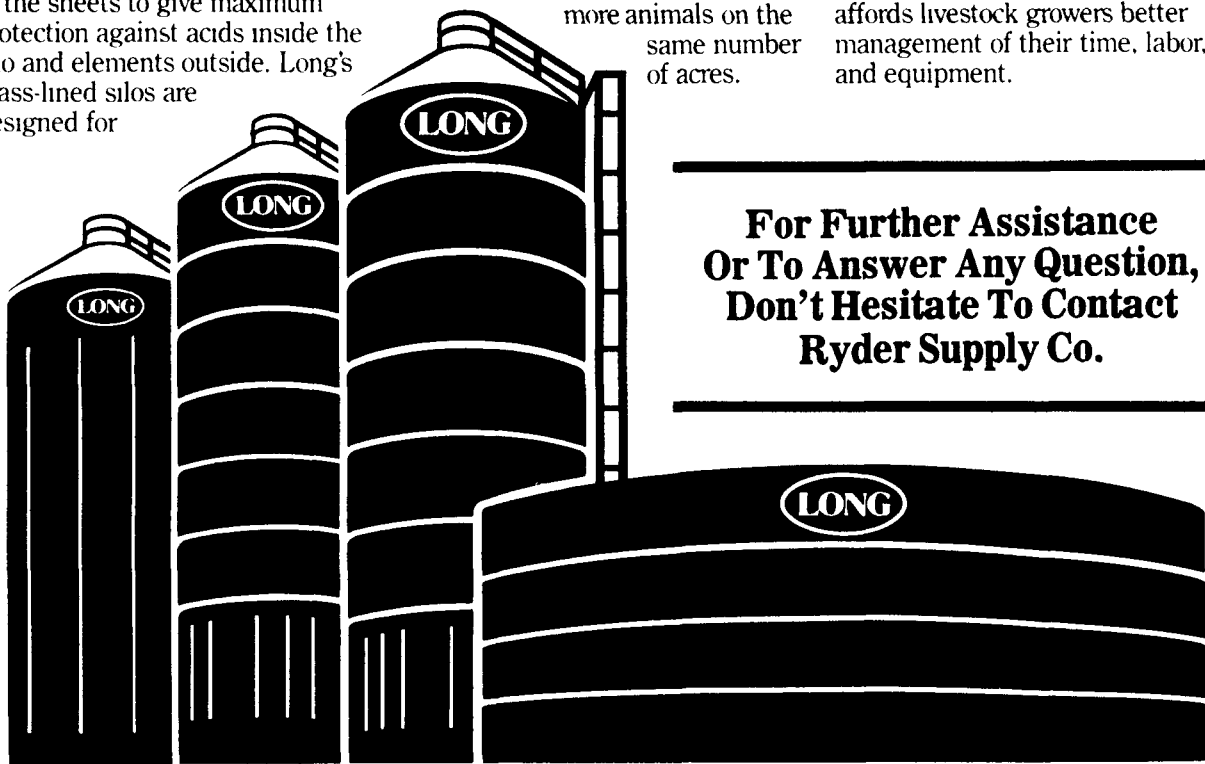


(3) STOR-LIX™ LIQUID MANURE STORAGE SYSTEMS:

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