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**DEALING WITH SURPLUS MANURE**

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The cornerstone of manure management in the 1990s is developing a nutrient management plan.

Nutrient management simply stated is bringing nutrient flows into balance on a farm. Manure nutrients are applied at a rate calculated to meet crop needs and build adequate soil fertility.

After subtracting total crop needs from the total manure nutrients produced on a farm, one may still have a balance of nutrients remaining. Developing a plan to utilize these extra nutrients is an important step in nutrient management.

The first thing one should consider in this situation is alternative cropping patterns which will utilize more nutrients. One should view crops as nutrient consumers and look for combinations that utilize the maximum amounts of nutrients.

A typical crop on poultry farms is corn harvested as grain, which consumes 150 pounds of nitrogen (N), 35 pounds of phosphorous (P), and 60 pounds of potassium (K) per acre (150 bushel/acre yield).

A farmer may have a neighbor who is a livestock producer who may be interested in buying the crop as corn silage (22 tons/acre) double-cropped with rye. This double crop combination will consume 220N-120P-150K. Other alternatives to consider include orchardgrass hay, which consumes 240N-40P-360K if you harvest six tons per acre, or reed canarygrass

which is a heavy phosphorus consumer.

Alfalfa is a heavy consumer of all three nutrients and can be used to quickly reduce high soil levels of potash. Alfalfa also will reduce high phosphorus levels in the soil also, but not nearly as quickly as it "mines" potash.

A producer may be able to arrange a field trade with a neighbor who grows alfalfa — he grows his alfalfa in your high fertility field while you grow your corn with your manure in his lower fer-

tility field.

Another option is to increase cropping acreage by land-purchase or long-term lease. Land-purchase based on manure disposal alone could rarely be justified financially. However, it may work for your particular situation.

If a farmer plans a new operation and is counting on leased land to utilize the additional manure produced, a long-term lease is essential. The lease should be long enough to enable you to recover your investment in facilities if this is your only manure utilization option.

A third option that will be the most practical for many is direct marketing of the surplus manure to another operation. Many poultry farmers have been successful at this venture. I met one poultryman last year who told me he buys a new car each year with his profit from his poultry manure sales.

Several points should be kept in mind if one wants to market his manure to others. Keeping the manure dry is a must. The drier the product, the further one can justify

shipping it, since it has a higher value per ton.

As in all business, there is competition, and one must remember what the competition offers in order to compete successfully.

One of the advantages of commercial fertilizer is its convenience. One could increase market opportunities by making use of his manure more convenient by offering delivery or custom application service.

Twenty two percent of those responding to a manure marketing survey I conducted said they were only interested in using another's manure if application service was available. Manure testing is important to give one's customers some idea of the nutrient value of his manure. Remember, however, that the manure test is only a guideline and not a guarantee, as are the numbers on the fertilizer bag.

In order to promote manure marketing, I have been developing manure supplier and receiver lists. This list is organized by county and township and is updated and

sent out annually to participants. If you are interested in participating in this information exchange, contact me at the Lancaster County Cooperative Extension Office at (717) 394-6851.

A fourth possibility for utilizing surplus manure is processing the manure for sale in an altered form. Composting is being done successfully by some poultry producers in Pennsylvania. The primary disadvantages of composting are the investment in facilities and the time required to manage the operation. However, the process reduces flies, odor, and volume of manure as well as creates a product which has more potential markets than fresh manure. The potential for success is there for those with good marketing skills.

If after developing a nutrient management plan you determine you have more manure than you can utilize in your operation, carefully evaluate these options.

Simply going back over the same acres with the manure spreader an additional time is not an option.

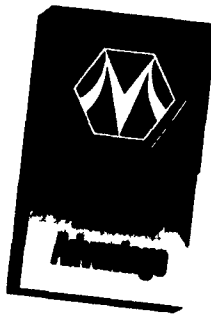
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