

Thinking About Building New Facility?

HUNTINGDON (Huntingdon Co.) — Livestock and poultry managers should calculate nutrient management requirements before building a new facility for expansion, say two Penn State agronomists.

"Before proposing a new facility as part of a business plan, it's prudent to evaluate the costs and returns of the facility under different sets of nutrient management conditions," said Dr. Les Lanyon, associate professor of agronomy. "Different conditions require different manure application practices and perhaps alternative methods of dealing with manure."

For livestock and poultry managers who wish to make their own

calculations, the local Penn State Cooperative Extension office or conservation district office can assist. Private consultants and companies also can handle these calculations.

Livestock and poultry managers should first estimate the available nutrients in the manure and compare that to the requirements of their crops. Since the availability of nitrogen in manure varies with how it is handled and applied, calculations for different periods before incorporation will result in different acreages required to balance the supply with the crop needs. "For example, there is less than half as much available N in unincorporated manure than in

manure that is incorporated immediately," said Lanyon.

A nutrient management plan based on nitrogen will require more than twice as many acres when manure is incorporated immediately than when manure is unincorporated.

"Even though a nutrient management plan may call for applying manure but not plowing it under, nutrients might still be incorporated into the soil by rainfall," said Dr. Douglas Beegle, associate professor of agronomy.

Incorporation of manure and increased availability of the nitrogen will occur with one-half inch of rain within 3 to 4 days of manure application. This amount of rain is

very likely in the early spring when manure is being spread.

Calculating the available nitrogen with no incorporation followed by another estimate of the nitrogen with incorporation after three days can illustrate the range in nitrogen that likely will be available to crops under different conditions. This figure can help in deciding how many acres will be routinely required to manage nutrients for crop production and environmental protection.

Another preliminary calculation would be to estimate the balance between the phosphorus in the manure and the phosphorus requirements of the crops to be grown. "Losses of phosphorus

during manure handling and spreading are generally much less than for nitrogen," said Lanyon. "The area required for phosphorus application can be several times greater than the area required to supply the nitrogen needed by crops."

There's also a possibility of unexpected costs. The requirements for nitrogen and phosphorus management may change during the life of the mortgage or loan on a new facility. Additional acres may be required for manure application at additional cost, or alternatives to land application at the site of the new facility may need to be developed.

It's also important to get an accurate estimate of nutrients in a planned manure storage. Estimating the actual nutrients to be excreted by the animals is a good starting point to evaluate a proposal for a new livestock or poultry facility. This calculation will indicate the maximum amount of nutrients that will have to be managed.

Manure samples from comparable manure storages can be used to estimate the nutrients that will be available to be applied to crops. But if the samples are unrepresentative of the manure actually in the storage, then estimates of the area required for manure application may be misleading. "Truly representative samples are difficult to collect from some types of manure storage structures," said Lanyon.

If there is a large difference between the estimate of nutrients produced and the estimate of nutrients coming out of a proposed storage, the proposed storage and handling system should be evaluated in more detail. The source of the difference between the nutrients produced and the estimated removal from a storage may be in the estimates of manure production, losses unaccounted during handling, or in the difficulty in sampling comparable storages.

If the problem is in sampling, that may signal potential management problems. There may actually be more manure nutrients to manage than are estimated by the samples. Manure solids that are difficult to agitate can accumulate in some storages. The nutrients in these solids will need to be handled in a safe way as will the rest of the nutrients. Problems in sampling also can mean that the nutrient content of the manure removed from the storage varies widely.

Delivering a dependable amount of nutrients to the crop fields, even when the necessary number of acres is available, will be difficult when this happens. In either case, more effort will be required to manage nutrients for crop production and environmental protection. These management demands should be considered before the project is begun.

Finally, different projected crop yields can be used in the calculations. "Projected yields should rarely exceed by more than 20 to 25 percent the average yields for the last five years," said Beegle. It's also important to do additional calculations to estimate the different acreages required at average and below average crop yields.

The final projected crop area for manure application probably will be a compromise between all the different calculations. After making these calculations, it may be necessary to modify the business plan for the proposed livestock or poultry facility to cover costs of manure application on a larger number of acres, to develop a management strategy to enhance potential crop yields, or to find an alternative way to deal with the manure produced.

If these calculations are done before building the facility, the livestock or poultry manager will know the most demanding case from the outset. A contingency plan then can be made in case of changing on-farm decisions or new governmental policies.

GARDEN KICK-OFF AT GT

3.5 Horsepower

99⁹⁹

12 Horsepower

839⁹⁹

20" Rotary Mower

- 2-year warranty
- 20" side discharge
- Powder painted deck for long life

Model 1B101
23079-258

Dynamark® 39" Riding Mower

- Overhead valve, cast iron sleeve engine

Model D3912-040
24021-258

Shown with optional Rear Bagger, **169.99**
23614-258

2 YEAR MFR. WARRANTY ON ALL MOWERS

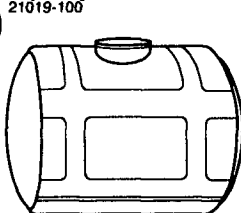
34⁹⁹

Universal Riding Lawnmower Seat

Reg 38.99, SAVE 4.00
• Black vinyl all-weather cushion
11316-064

37⁹⁹

14 Gallon Poly Sprayer Tank



21019-100

4⁹⁹

Reg 6.49, SAVE 1.50 Garden Tools

- Round Point Shovel 17965-125
- 14 Tooth Bow Rake 17972-125
- Garden Hoe 17980-125
- Long Handle Square Point Shovel 18495-125
- Garden Spade 18522-125
- D-Handle Round Point Shovel 19111-125

17⁰⁰

Case of 25 68¢ Each 14 Oz. Lithium Grease Cartridge

13999-272
35 lbs. Lithium Grease, **SALE 26.99**
13998-272

2⁹⁹

13 Oz. Aerosol Implement & Tractor Enamel

Reg 3.19, SAVE 20¢
• Variety of colors available for most tractors
1 Gallon size, **SALE 16.99**
Reg 17.99, SAVE 1.00 060 series

9⁹⁹

2 Gallon CT Lube Universal Hydraulic Oil

14082-272
5 Gallon Size, **22.99**
13983-272

49⁹⁹

2' x 2' x 4' Water Tank

• 20 gauge galvanized steel construction
22076-176
2' x 2' x 6', **67.99**
22077-176
2' x 3', **39.99**
23292 176

94⁹⁹

330 Ft. 39" Field Fence

• Model #939-611
24678-282
330 Ft. 47" Field Fence, **109.99**
#1047-611 24681-282
330 Ft. 39" Field Fence, **74.99**
#939-612-1/2 24706-282
330 Ft. 47" Field Fence, **84.99**
#1047-612-1/2 24707-282

5¹⁹ to 26⁹⁹

Heat Treated Plain & Notched Disc Blades

	Plain	Notched
16" 3 0 mm 11 ga	5.19	5.19
18" 3 0 mm 11 ga	7.49	7.29
18" 3 5 mm 9 ga	8.99	9.19
20" 3 5 mm 9 ga	10.19	10.19
20" 4 5 mm 7 ga	10.99	12.49
22" 4 5 mm 7 ga	13.99	14.29
24" x 1/4"	26.99	26.99

261 series

CT HAS AN EXTENSIVE INVENTORY OF NEW, USED & REBUILT TRACTOR PARTS. CALL OR VISIT OUR STORE FOR DETAILS!

GT FARM & FAMILY CENTER®

1570 Manheim Pike, Hwy. 72 North, Lancaster, PA 17601 • (717) 569-0111
STORE HOURS: 8:30 to 5:30 Mon. thru Thur. • 8:30 to 8 Fri. • 8:30 to 5 Sat. • 12 to 5 Sun.
Enjoy these savings NOW through Sunday, May 2, 1993

WE CAN SHIP UPS

ROPE IN SOME EXTRA CASH!

Advertise With A Lancaster Farming CLASSIFIED AD...

Phone: 717-394-3047 or 717-626-1164

