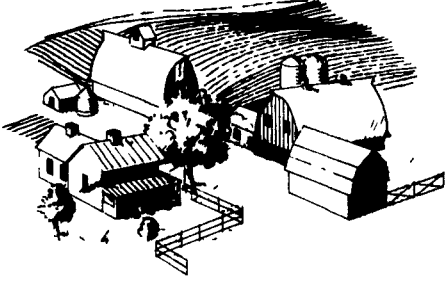


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**MANAGEMENT**

Roland P. Freund  
Regional Farm Management Agent  
Penn State Cooperative Extension

**How Far Haul Dung?**

This is not part of a Confucian puzzle. It's a very legitimate question to ask as the crops come off, and manure storages must be emptied before winter, or before the hunting season-whichever comes first.

**"Can't afford to haul it far!"**

This is what most people say. Since time is critical, many operators are anxious to get rid of that smelly stuff quickly, so anything which delays this process is considered to be not affordable. Hence the natural tendency is to concentrate the manure on or near the "home 40". These fields become saturated with nutrients, while the rented fields down the road often remain deficient.

**Wait a minute!**

If manure nutrients are spread on a saturated field, they will produce no crop growth response. In fact, they are far more likely to cause pollution of our water supplies. Unfortunately too much of our manure finishes up in such a situation. If the same nutrients can be spread on deficient soil they will give us something in return. This will be in the form of crop growth and/or savings in chemical fertilizer cost.

**What's a load of manure worth?**

- Theoretically it's worth as much as the total value of its nutrients which can be taken up by a crop. So this will depend upon where it is spread.

- On the saturated "home 40" that means it would most likely be worth zero.

- On a low fertility field where all available nutrients can be used by crops, it can be worth as much as \$10 per 100 gallons. A typical liquid-stored dairy situation, hauling 3,000 gallon loads calculated out at 130 pounds of Nitrogen, 42 of P<sub>2</sub>O<sub>5</sub>, and 84 pounds of Potash per load. Valuing these nutrients per pound at 17, 18, and 15 cents respectively, and assuming that with incorporation half of the nitrogen is available, we get a load value of \$31.

- On the same type of field but not incorporating the manure within 48 hours reduces the available nitrogen to one fifth, and the value of the above load to \$25.

**What does it cost to haul a load?**

In the situation outlined above, the 105 horsepower tractor con-

sumed 5 gallons of diesel per hour. Assuming fuel and lubrication cost of \$5, repair cost of \$4, and driver's labor at \$5 per hour we have a total cash cost of \$14 per hour.

Timing the hauling (not including the filling and spreading time) and empty return trips revealed that this rig could haul a distance of 7 miles and return in one hour. This means that it cost \$2.00 per mile to move those nutrients down the road and farm lanes.

In these calculations we are not including spreader loading and field spreading costs nor time taken on those tasks. These activities have to be performed anyway, regardless of where we ultimately dispose of the manure. So we use a partial budget approach to look at costs and benefits from hauling.

**How far can we afford to haul?**

It is economical to haul those nutrients until the hauling cost is greater than the value of the manure to the crop. This means that with these hauling costs our break-even distance for incorporated manure is 3 1/2 or 15.5 miles.

If the manure is not incorporated it is 25/2 or 12.5 miles. These distances are ONE WAY. So the answer to our original question is that you can probably afford to haul your manure about 10 miles farther than you thought!

**But we can't spend that much time at the job.**

As a manager of your operation you may have many pressing demands on your time. These calculations illustrate that you can hire someone for \$5 per hour to give the extra time to haul the manure, and still be money ahead.

One case in which this type of calculation was applied to a specific field situation revealed a potential saving of \$40 per acre, after the 7 mile hauling costs were computed. Sure it took time to haul 75 loads with the tanker truck, but that manager figured that the \$2000 savings in the cash-flow was quite worth the time and effort.

**Do your own figuring- you might get a pleasant surprise!**

Every situation is different. Each manager needs to know the analysis of the manure being applied, and the nutrient requirements of the fields where the nutrients could be spread. These are the most significant factors. So, getting soil and manure samples tested is critical to the management of these valuable nutrients.

With more concentrated manures such as poultry there is already some trade and longer distance hauling. Checking out the nutrient value and hauling cost of most barnyard manures will demonstrate that they can be hauled profitably and supply needed nutrients much further down the road than current practice would suggest.

**Need a worksheet?**

Contact:

Penn State Extension York County  
112 Pleasant Acres Road, York, 17402  
717-757-9657

and request a copy of "Manure Hauling Worksheet". This gives an example (as used to illustrate this article) and the format to help managers push the pencil and calculate their own break-even hauling distance. There is also a sheet to evaluate spreading options on a field with a known crop fertility requirement.

**Deer Hunters Encouraged To Get Bonus Tags**

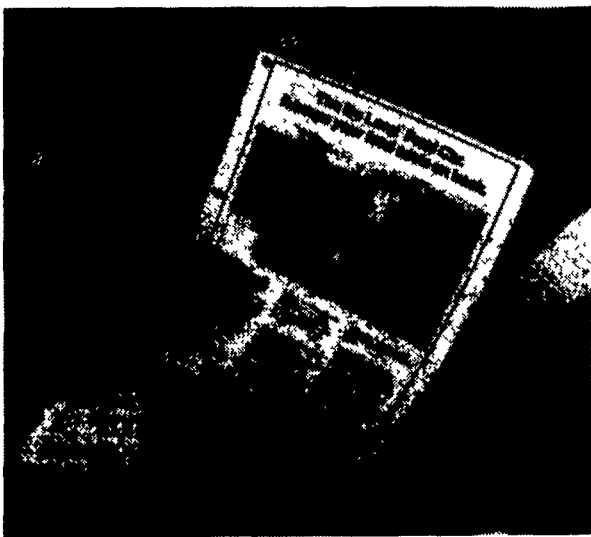
CAMP HILL — The Pennsylvania Farmers' Association (PFA) is calling on sportsmen to take advantage of Pennsylvania's first statewide bonus tag program for antlerless deer. County court-houses will begin offering unsold antlerless licenses as bonus tags to hunters on October 24th. Bonus tags can be used during the regular antlerless season, December 12 - 14, and/or during the December 26 - January 7 season if a hunter also holds a archery or muzzle-loader license.

Keith Eckel of Lackawanna County, president of the statewide farm organization, said, "According to Game Commission statistics, Pennsylvania has too many deer. Game Commission figures show deer populations per square mile exceed the carrying capacity of woodland in all but nine counties. The excess population faces the possibility of starvation if we get a hard winter. The bonus tag program, which our organization supports, is designed to bring the state's deer herd back to a manageable level."

The PFA farm leader said the state's large deer herd also causes problems for farmers. Eckel noted that Penn State researchers have estimated deer damage to farmers' crops to be as high as \$31 million each year. "That's a big loss which cuts directly into farmers' pocketbooks," Eckel said.

Hunters can purchase a bonus tag from county treasures over the counter or by mail. They're available to county resident and non-resident hunters alike. It's not necessary to have a regular antlerless license before purchasing a bonus tag. "There should be plenty of bonus tags available," Eckel said, "Last year Pennsylvania had nearly 158,000 unsold antlerless deer licenses as of October 23rd. We hope sportsmen will take advantage of this unique opportunity".

**RATIONAL DECISION.**



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