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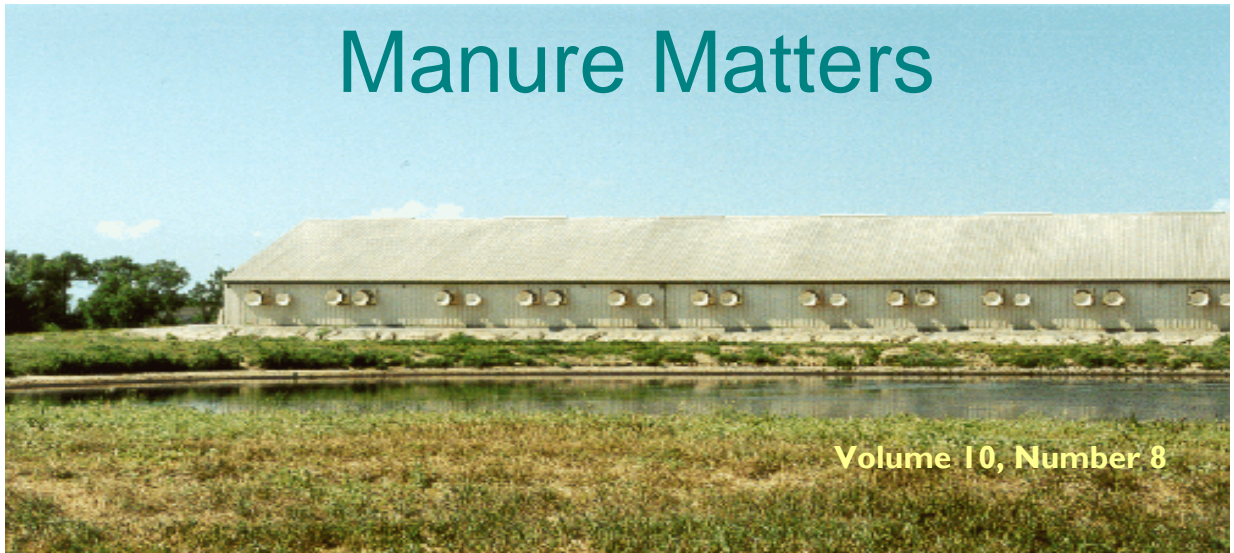
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The Value of Manure for Crop Production

By Charles S. Wortman

Manure has value for crop production when it provides nutrients or soil amendments needed for optimal crop yields. Crop producers can in many cases justify paying animal feeding operations to apply manure to their land. A recent extension publication “*Calculating the Value of Manure for Crop Production*,” University of Nebraska Cooperative Extension G03-1519-A <http://ianrpubs.unl.edu/wastemgt/g1519.htm> provides criteria and guidelines to determination of the value of manure for a particular field. The complementary spreadsheet tool “The Nebraska Manure Value Calculator Version 1.2” is available at the website <http://cnmp.unl.edu/Nebraska%20Manure%20Value%20Calculator%201.2.xls>

Several criteria need to be considered in determining the value of manure for a particular field.

1. Is soil nutrient availability below the levels needed for optimal crop growth?
2. Will the manure be applied to a crop that needs the nitrogen? While much N may be released during the years following manure application, the greatest N availability is to the first crop following application. If the first is a legume such as soybean or alfalfa, the nitrogen that becomes available to that crop will have little value.
3. Is there value in building-up soil nutrient availability to much above the level of sufficiency

for optimal crop growth? Nutrients applied for this purpose may be given a lesser value than nutrients applied to meet immediate crop needs.

4. Will the organic matter in manure improve soil productivity beyond what is achieved with fertilizer alone? The value of this varies with the soil conditions for a field. However, typical yield increases are around 7 bu of corn or 2 bu of soybean per solid or slurry manure application, but can be zero or much more.
5. Are there environmental or odor concerns associated with manure use that may decrease its value?
6. Are there other costs in manure use that need to be considered?

Manure tests results are essential to good determination of the value of manure. Also, the application equipment should be well calibrated to ensure application at the desired rate.

The extension publication addresses these points in more detail. It has a worksheet, as well as a sample worksheet, for consideration of the above criteria in calculation of the value of manure.

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