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Value of manure nutrients

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periods of poor growing conditions or food safety issues. A stable food industry has led to relatively stable crop prices over recent decades.

By contrast, the energy industry is going through a period of monumental change, leading to uncertainty and rapid changes in supply and demand conditions. This will lead to volatile energy prices which in turn will lead to volatile grain prices.

A whole new set of factors will have a direct impact on grain prices. Crude oil pricing decisions by Saudi Arabia, Venezuela, Russia and other exporting countries will have a direct impact on U.S. grain prices. Terrorist and other crude oil supply

disruptions will impact grain prices.

Also, due to the added energy demand from countries such as China and India, the modest surpluses of the past will become even smaller or non-existent. There will be more periods of shortages.

However, in light of all of this uncertainty, one thing is certain: the proper use of risk management strategies and tools will be of critical importance to the welfare of farmers.

Next issue: Energy Agriculture – Beyond Corn Ethanol.



Value of manure nutrients

by Kelvin Leibold, kleibold@iastate.edu and Tom Olsen, tolsen@iastate.edu, Farm Management Specialists

The change in the size of livestock operations has resulted in increased interest in valuing manure and using it as a crop nutrient. Manure, especially deep pit liquid hog manure, is widely accepted as a viable source of organic nutrients. Its use as a fertilizer replacement has increased the interest in putting a value on the use of manure. In part, this interest has supported the growth of the livestock industry in recent years.

Component pricing

The most common method of valuing fertilizer is component pricing. The manure is sampled and tested to determine the nutrient content. Then this analysis is used to determine the value based on commercial fertilizer prices. There can be a considerable range in the projected prices of commercial fertilizer nutrients, depending on material type (dry, liquid, or gas), method of application, and the time of year applied. In addition, the manure would contain other components such as sulfur, iron and organic matter. This method does not take into account nitrogen losses and crop utilization.

Manure nutrient value versus a commercial fertilizer budget

Manure is a fertility package. The nutrient components as applied will not be in the same proportion as a commercial fertilizer recommendation. Value adjustments may need to be made to account for these differences. Some manure components that are in excess of crop needs may be discounted. Consideration also should be given to shortages (especially P and K) if they need to be supplemented commercially.

Bulk commodity market price

Another method used to price manure is to price it as a bulk commodity where you have sellers and buyers. If you are in an area that has an abundance of supply and limited demand, the price will be driven down. If demand outstrips supply, the price will be bid up until it balances out with the demand. The nutrients will have a different value depending on the location and local situation. Transportation and distribution costs become a factor in what the value is worth and how much the buyer can negotiate the price. If there is

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an over abundance of manure in one area and the livestock producers are faced with high transportation costs to move it out of the area, they may be willing to reduce the price in order to avoid significant transportation costs.

Limitations

Some of the concerns with using manure as a source of crop nutrients are soil compaction from application, uniformity of the product, uniformity of application, fixed analysis, impact on planting date, increased weed pressure, or increased disease pressure. The "net present value" of applying phosphorus and potassium on very high testing soils may not equal the cost of the freight. Manure is not always a uniform product. Even from year to year there are differences in manure nutrient analyses because of changing swine diets that include phytase, dried distillers grains and synthetic amino acids. Manure from these rations tends to have lower nutrient analysis, making it less valuable per gallon. This also increases the cost of application per unit of fertilizer, and this highlights the importance of having and using a good manure analysis program.

Conclusion

Manure has a lot of valuable nutrients. It can be very cost effective to haul manure to where it is needed. A producer needs to know the quantity of

manure available, the nutrient analysis of the manure, the crop needs, the current soil test results, and the handling and application costs. The use of manure may result in increased or decreased yields when compared to traditional fertilizers, depending on a number of reasons. Crop producers need to predict how well they can manage manure as a fertilizer source and what the overall impact will be over a number of years. If they can do this, they will be better able to determine the value of the manure in their farming operations.

For information on compliance regulations and application agreements, visit the Manure Management Action Group website: <http://extension.agron.iastate.edu/immag/>.

A Manure Calculator spreadsheet from the Ag Decision Maker web site can assist in calculating the value of manure. This spreadsheet is available at:

<http://www.extension.iastate.edu/agdm/livestock/xls/b1-65manurecalculator.xls>.

For more information on valuing manure, see the full version of this article in the Ag Decision Maker Information File B1-65, Value of Manure Nutrients.

Publications feature the economic impact of agriculture in Iowa counties

Agriculture is a large part of Iowa's economic structure. Now two Iowa State University (ISU) Extension specialists have developed a set of fact sheets that provide county-specific numbers on the role of agriculture plays in the economy of Iowa and each of the state's counties.

"While the statewide numbers are impressive, the report indicates that in many of the more rural parts of the state, agriculture and ag-related businesses are the major activity," said Dan Otto, ISU Extension economist and one of the authors.

"The research points out that agriculture is more than farm-level production. Related activities include inputs and services, agricultural processing and secondary spending with main street businesses. The report is a good reminder of the important relationship between rural communities and agriculture here in Iowa," he said.

The publications offer statistics on the agricultural industry in each of the state's 99 counties along with specific economic analyses of livestock, corn

Publications feature the economic impact of agriculture in Iowa counties, continued from page 5

and soybean production in comparison to the non-agriculture industry.

The analysis for these publications was drawn from a more detailed report prepared by Otto and Mark Imerman with assistance from Dave Swenson and Liesl Eathington. The report was funded by The Coalition to Support Iowa Farmers and is available at: www.econ.iastate.edu/outreach/agriculture/agri-food/.

The next U.S. Census of Agriculture will be conducted in 2007, and the economists expect to update this series of publications once the Census results are made available.

The publications are available only on the Web at www.extension.iastate.edu/store/. To go directly to the publication, enter PM2023 in the search box in

the upper right corner of the screen, then click on the red "Download in PDF format." This will bring up a map of Iowa and a list of counties. Click on the county name in the list or on the map that you are interested in and a copy of that publication will appear.

A link to these publications is available on the Related Web Sites page on Ag Decision Maker.

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Internet Updates

The following updates have been added to www.extension.iastate.edu/agdm.

Value of Manure Nutrients – B1-65

Ten Ways to Cut Cattle Feeder Costs – B1-71

Managing Family Farm Finances – C3-51

Building Equity in Your Farm Business – C3-60

Obtaining a Business Loan – C5-95

New Ways of Thinking about Your Farm Business – C6-43

Decision Tools

The following decision tool has been added to www.extension.iastate.edu/agdm.

Valuing Manure – Use this *decision tool* to analyze the value of manure nutrient components.

... and justice for all

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