

Establishing the Value of Fertilizer

KEY POINTS

- » **KEY POINT NUMBER 1**
There's tremendous value in "them-there" pits!
- » **KEY POINT NUMBER 2**
Crop growers invest in fertility for their crop land.
- » **KEY POINT NUMBER 3**
Consistent testing is part of a smart management plan
- » **KEY POINT NUMBER 4**
Manure adds to the sustainability of agriculture & environment.

OPPORTUNITY Point

Take a moment to figure out the opportunity in your area.



How many crop growers are using commercial fertilizer? How many might be willing to work on a system of using valuable hog manure nutrients as a fertility input? Once you've established value, develop the language to explain it!

Crop growers spend considerable dollars each year, returning fertility to their soil. Plants that grow to maturity and some – like weeds – that don't, remove nutrients from the seed bed. In order to extract the yields necessary for profitability, crop growers must give their plants the food they need to achieve their genetic potential.

According to information published by Iowa State University, each corn-on-soybeans acre required \$36.80 worth of returned nutrients in order to produce 115 bushels of corn per acre. To grow 135 bushels per acre, the field required an investment of \$42.90 and for 160 bushels of corn, the farm spent \$50.90 on fertility. (See charts below.)

Average commercial fertilizer recommendations for Iowa corn*			
Phosphorus (P)**	100-50 lbs/acre		
Potassium (K)**	120-40 lbs/acre		
Nitrogen (N)	150-200 lbs/acre (corn after corn) 100-150 lbs/acre (corn after soybeans)		
<i>*Iowa State University (no manure application) ** covering low to high soil test results and various soil types</i>			
Average commercial fertilizer recommendations for Iowa soybeans*			
Phosphorus (P)**	80-40 lbs/acre		
Potassium (K)**	90-65 lbs/acre		
<i>*Iowa State University (no manure application) ** covering low to high soil test results and various soil types</i>			
Estimated per acre fertilizer costs for Iowa 2002*			
	Nitrogen (N) \$0.21/lb	Phosphate (P source) \$0.25/lb	Potash (K source) \$0.13/lb
Corn following soybeans			
115 bu/ac	\$21.00	\$11.25	\$4.55
135 bu/ac	\$25.20	\$12.50	\$5.20
160 bu/ac	\$29.40	\$15.00	\$6.50
Soybeans following corn			
40 bu/ac	none	\$7.50	\$7.80
45 bu/ac	none	\$8.75	\$9.10
50 bu/ac	none	\$10.00	\$9.75
<i>*Iowa State University</i>			

Wait, there's more!

Not only does hog manure provide the sustainability of primary nutrients to traditional Iowa crops, it carries with it valuable micronutrients, trace minerals and organic materials.

By sampling and testing your manure supply, you can prove that your manure product is even more valuable to crop producers. See page 2 for more information on analyzing manure for agronomic application.

Manure: The fertilizer alternative

What's commercial fertilizer got that manure-based fertilizer doesn't? Easy, consistent access and analysis.

That being said, reports from the National Soil Tilth Laboratory, Ames, indicate that manure can increase the quality of the soil, enhance and stabilize crop production and be managed without imposing an environmental risk when applied at agronomic rates.

When a crop grower orders commercial fertilizer to be applied to his field, he gets information on how many fertility units will be added to the soil.

Unless a pork producer has sent samples to the lab, the crop grower doesn't know how much of each nutrient will be applied. Because the grower must monitor the amount of nutrients they apply, they must know that the fertilizer will meet crop needs.

John Torpy, technical director for Midwest Laboratories, Omaha, Neb. (www.midwestlabs.com), has been conducting manure analysis testing for pork producers for more than 25 years. He believes producers can benefit in several ways from regular, consistent testing of the manure produced by their hogs.

"There is a lot of variability in manure. A proper analysis is really important to determine the agronomic rate for a sound crop nutrient plan," Torpy says.

Typical analysis important to land use and regulatory issues include testing for nitrogen, ammonia, potassium, trace elements such as zinc, copper, iron and manganese, along with pH and percent solids.

Torpy adds that, with regulatory issues, the continued monitoring of production output, and recordkeeping for manure are important to pork producers. The regular analysis of manure supports the manure management plan and its implementation.

Cost is always a factor to consider when measuring benefits, and manure analysis comes in on the low-cost side. "A typical test from our lab costs about \$36 and discounts are available for volume," Torpy explains. "This is a small price to pay for data that becomes part of your recordkeeping and increases your knowledge about the content of the manure."

Sampling is simple; the lab will provide collection containers. Analysis results can even be emailed to the producer so they can be easily incorporated in spreadsheets and other management applications.

"This is really a simple and low-cost process that provides valuable information to substantiate the value of manure," Torpy says.

IN THE NEXT ISSUE

» TALKING TO CROP GROWERS ABOUT THE VALUE OF PORK MANURE AS A FERTILITY INPUT.



4 questions to ask your testing lab

Although testing labs may not be practicing "rocket science," it is science nonetheless, and producers need to know what to ask for when they're ordering manure analysis.

Here are four key questions as suggested by the MidWest Plan Service at Iowa State University:

1. How many years has the laboratory been performing manure analysis?

* **Best answer:** At least two years of experience in manure testing.

2. After the lab receives samples, how are they handled?

* **Best answer:** The samples should be tested immediately. If this is not possible, the samples should be refrigerated or treated to maintain their integrity until later analyzed.

3. Is the lab certified by a quality control organization?

* **Best answer:** Yes. Assures that the lab adheres to industry-sanctioned quality control standards can help validate results.

4. How long does a customer typically wait before results are returned?

* **Best answer:** A consistent and predictable amount of time. Knowing the typical turn-around time for results is important to your ability to use the manure. If you know it will take two weeks to get results, you'll be able to schedule your sampling two weeks before you need the results. A lab that can't tell you how long results will take could leave you hanging when you really need the report.

One last piece of advice: When testing manure for the first time, consider sending exactly the same samples to three different labs, or more, so you can compare results.

If results are comparable, choose the lab that gives you the most value and service for your dollar. Remember: Cheapest isn't always best. Customer service is the hallmark of a reliable lab, so make sure you consider how well the lab lived up to its promises, as well.