

THIS ARTICLE IS ABOUT...

RIGHT SOURCE RIGHT RATE RIGHT TIME RIGHT PLACE

Highlights

- How do new genetics affect nutrient content in grain?
- What is the best way to collect grain samples?
- Where can you find "book values" of nutrient removal rates?

The Role of Grain Nutrient Analysis in Fertility Management

Proven technology exists that can tell you the nutrient content of your grain. Soil testing and plant analysis labs always offered these tests as a service. Yet, few people take advantage of them or make full use of the information they provide. However, there are powerful reasons why grain nutrient analyses can be extremely valuable information.

First, there's sustainability. Sustainability usually encompasses managing land responsibly so that it remains productive for generations to come. Nutrients are an important part of that vision. If you don't put back the nutrients you take out, soil fertility declines, leading to a host of problems if it gets too low. Knowing how much of each nutrient is removed in the grain is the first step in calculating how much to put back.

The gene pool keeps changing. If you've ever wondered why specific nutritional needs of hybrids or varieties aren't studied more at universities, you need only reflect on how long a specific genetic offering stays on the market. By the time a solid university investigation has taken place, the hybrid or variety has been replaced by the next generation. Is the nutrient content in the grain changing if there is more starch and less protein? Is drought tolerance affecting more than just yield? You can answer these questions for yourself just by taking a few samples and sending them to a quality lab.

Interested in grabbing a grain sample? Make sure it's done correctly. There are many university Extension publications with good advice. If you want a resource that can help you earn some Certified Crop Adviser (CCA) continuing education units for reading, go to <https://www.certifiedcropadviser.org/>. Look for the self study quiz "Measuring Nutrient Removal, Calculating Nutrient Budgets."

Become familiar with published nutrient removal rates. These are commonly referred to as “book values.” They are average numbers that can be used when you don’t have sample analyses of your own. The same university publications that provide nutrient recommendations often have these numbers in them. If you can't find them, go to <http://nanc.ipni.net/articles/NANC0005-EN>. Average “book values” have been assembled there.



The
**Fertilizer
Institute**

Nourish, Replenish, Grow

Contact Information:

The Fertilizer Institute
425 Third St., S.W., Ste. 950
Washington, DC 20024
202-962-0490
www.tfi.org

The information presented here is mostly general and conceptual. For more specific information regarding safe rates of in-furrow fertilization for specific crops and conditions, one should refer to university extension resources, and/or consult a knowledgeable and experienced crop advisor or industry professional. Also, an Excel decision support tool is available online. Visit the IPNI website www.ipni.net/toolbox.

Author

Dr. T. Scott Murrell,
Northcentral Director, IPNI
International Plant Nutrition
Institute

Source Material

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Murell, Northcentral Director, IPNI
www.ipni.org

