

Understanding Organic Fertilizer Labels



LEARNING CENTER

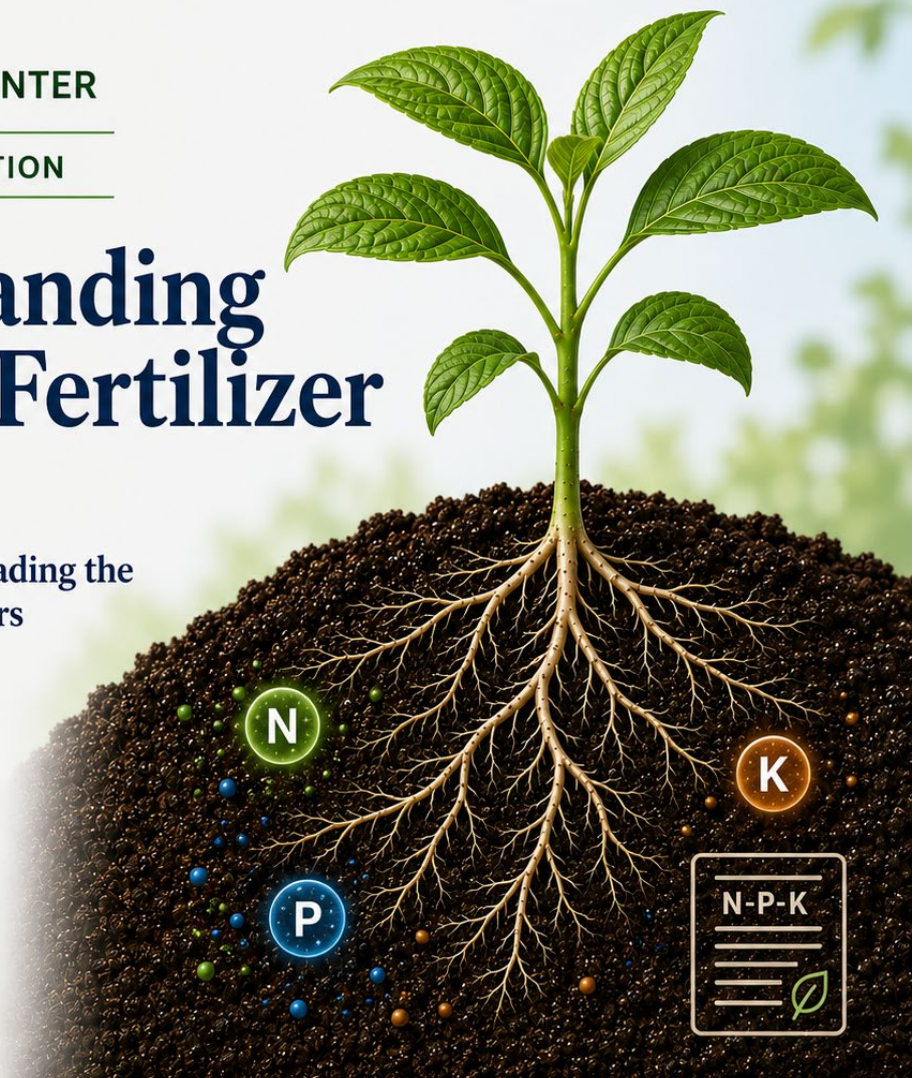
FERTILIZER EDUCATION

Understanding Organic Fertilizer Labels

A Practical Guide to Reading the Information That Matters



READ THE LABEL.
CHOOSE WITH CONFIDENCE.



GUARANTEED ANALYSIS

Shows the nutrient percentages



NUTRIENT SOURCES

Explains where nutrients come from



OMRI & CDFA

Check organic input status



DIRECTIONS FOR USE

Apply the product as labeled

A fertilizer label contains much more information than a product name and three numbers.

For growers, gardeners, agricultural professionals, and retailers, understanding how to read that label makes it easier to compare products, determine what nutrients are being supplied, evaluate whether a fertilizer is appropriate for organic production, and apply it correctly.

Organic fertilizer labels can appear complicated at first, but most contain the same basic types of information.

Once you know what to look for, the label becomes a valuable tool for making informed fertilizer decisions.

Start With the Guaranteed Analysis

One of the most important sections on any fertilizer label is the **Guaranteed Analysis**.

The guaranteed analysis identifies the plant nutrients guaranteed by the product and the percentage of each nutrient claimed on the label.

The three primary plant nutrients are generally listed as:

- Total Nitrogen (N)
- Available Phosphoric Acid (P_2O_5)
- Soluble Potash (K_2O)

These are the same nutrients represented by the familiar NPK numbers found prominently on many fertilizer labels.

For example, a fertilizer labeled:

5-1-1

guarantees:

- 5% total nitrogen
- 1% available phosphoric acid
- 1% soluble potash

Those numbers represent percentages by weight.

A 5-1-1 fertilizer therefore contains the equivalent of 5 pounds of total nitrogen, 1 pound of available phosphoric acid, and 1 pound of soluble potash per 100 pounds of product.

The guaranteed analysis may also include secondary nutrients and micronutrients such as calcium, magnesium, sulfur, iron, manganese, zinc, copper, or boron when those nutrients are claimed and meet applicable labeling requirements.

State fertilizer regulations establish how these guarantees must be presented. California, for example, specifies the required guaranteed-analysis format for fertilizing materials, including products registered as Organic Input Materials.

What Do the NPK Numbers Tell You?

The NPK numbers provide a useful starting point, but they do not tell the entire story.

A fertilizer with higher numbers is not automatically a better fertilizer.

The analysis tells you the concentration of the three primary guaranteed nutrients. It does not tell you whether the product is the right choice for a particular crop, soil condition, application method, or fertility program.

Consider two products:

5-1-1

and

10-2-2

Both have the same nutrient ratio of 5:1:1.

However, the 10-2-2 fertilizer contains twice the concentration of each primary nutrient.

That difference can significantly affect application rates and the amount of product needed to supply a specific quantity of nutrients.

When comparing fertilizers, consider both the analysis and the recommended application rate rather than simply choosing the product with the largest numbers.

Look at Where the Nutrients Come From

Another important part of a fertilizer label is the **derivation statement**.

The derivation statement identifies the ingredient sources from which the guaranteed nutrients are derived.

Depending on the formulation, nutrient sources might include materials such as:

- Fish or fish-derived materials
- Fish meal

- Feather meal
- Blood meal
- Bone meal
- Kelp
- Plant-derived materials
- Animal-derived materials
- Mineral sources
- Other permitted fertilizer ingredients

For California fertilizing materials, the derivation statement follows the nutrient guarantees and identifies the sources of those guarantees.

The nutrient source matters because different materials behave differently once applied.

Some organic nutrient sources must be broken down by soil microorganisms before much of their nutrient content becomes plant-available. Others may contain forms of nutrients that become available more quickly.

The guaranteed analysis tells you **how much nutrient is guaranteed**.

The derivation statement tells you **where those nutrients come from**.

Both are important when evaluating a fertilizer.

What Does "Organic" Mean on a Fertilizer Label?

The terminology surrounding organic fertilizers can be confusing.

A fertilizer intended for use in organic crop production is not "USDA Certified Organic" in the same sense as certified organic produce, livestock, or other agricultural products.

The USDA National Organic Program establishes and enforces national standards governing organic agricultural production and handling. ([AMS](#))

Those standards also govern which materials certified organic operations may use.

In general, nonsynthetic substances may be used unless specifically prohibited, while synthetic substances are prohibited unless specifically allowed under the USDA organic regulations.

Because of those requirements, certified organic growers need to evaluate fertilizer inputs based on their actual regulatory status, not simply on marketing terms such as "natural," "biological," or "organic."

Understanding the OMRI Listed® Seal

One of the most widely recognized markings on agricultural inputs used in organic production is the **OMRI Listed®** seal.

The Organic Materials Review Institute, commonly known as OMRI, is an independent nonprofit organization that reviews input products such as fertilizers, pest-control products, livestock health products, and processing materials against applicable organic standards.

Products that successfully complete OMRI's review and comply with the applicable standards may be designated **OMRI Listed®** and included on the OMRI Products List.

([Organic Materials Review Institute](#))

This provides growers and certifiers with an independent evaluation of an input product's ingredients, formulation, manufacturing information, and intended use.

There is an important distinction:

OMRI Listed does not mean USDA Certified Organic.

OMRI evaluates **input products used in organic production**.

USDA organic certification applies to qualifying agricultural operations and the agricultural products produced or handled under those certified systems. ([AMS](#))

An OMRI listing can therefore provide important documentation when a certified organic grower is evaluating whether a fertilizer is suitable for use in an organic production system.

Growers should still follow any restrictions associated with a product's listing and the requirements of their organic certifier.

Special Requirements for Higher-Nitrogen Liquid Fertilizers

Liquid fertilizers require additional attention under USDA organic regulations.

USDA National Organic Program guidance requires **all liquid fertilizers with a nitrogen analysis greater than 3% to be approved by a qualified material evaluation program before they may be used in organic production**. ([AMS](#))

Approved material evaluation programs include USDA-accredited organic certifying agents and OMRI. ([AMS](#))

The policy also requires additional documentation and oversight of these higher-nitrogen liquid fertilizers, including detailed ingredient and manufacturing records and an onsite audit as part of the approval process. ([AMS](#))

For growers using liquid organic fertilizers, this makes independent material review especially important.

Understanding CDFA Organic Input Material Registration

Growers may also encounter products registered through the **California Department of Food and Agriculture Organic Input Material Program**, commonly referred to as the CDFA OIM Program.

The program regulates fertilizing materials intended for use in organic crop and food production in California.

Products registered through the program are reviewed for compliance with California fertilizer laws and applicable USDA National Organic Program requirements.

CDFA OIM registration is therefore different from USDA organic certification.

It is a regulatory registration covering a fertilizing material intended for organic production.

For growers operating in California, CDFA registration provides another important source of information when evaluating fertilizer inputs.

CDFA also maintains public fertilizer information that growers can use to verify product registration and review information such as guaranteed nutrient analysis and other regulatory data.

"Natural" Does Not Automatically Mean Approved for Organic Production

Fertilizer marketing may include terms such as:

- Natural
- Naturally derived
- Sustainable
- Biological
- Plant-based
- Fish-based
- Environmentally friendly

Those descriptions may communicate something about the product or its ingredients, but they do not automatically establish that the fertilizer is permitted for use in certified organic production.

Organic production is governed by specific federal standards.

A substance being naturally occurring does not automatically make it acceptable for every organic application. Likewise, certain synthetic substances are permitted when specifically allowed under organic regulations.

For a certified organic operation, regulatory status matters more than marketing terminology.

Read the Directions for Use

The nutrient analysis tells you what nutrients the fertilizer guarantees.

The **Directions for Use** explain how the product is intended to be applied.

Depending on the fertilizer, the directions may include:

- Application rates
- Frequency of application
- Soil application instructions
- Foliar application instructions
- Fertigation rates
- Transplant applications
- Mixing instructions
- Dilution rates
- Crop recommendations
- Application timing

Application rate is particularly important.

A fertilizer cannot be properly evaluated simply by comparing NPK numbers. You also need to know how much product is being applied.

For example, a lower-analysis fertilizer applied at a higher rate may deliver more total nutrients than a higher-analysis product applied at a lower rate.

Applying more fertilizer than recommended does not necessarily improve plant performance.

Excessive fertilizer can contribute to nutrient imbalance, plant injury, nutrient losses, unnecessary expense, or environmental impacts.

The label should always be the starting point for determining how the product is intended to be used.

Pay Attention to Handling and Storage Instructions

Organic fertilizers are still agricultural products and should be stored and handled according to label directions.

A fertilizer label may include instructions concerning:

- Personal protective equipment
- Eye or skin contact
- Keeping the product away from children or animals
- Storage temperatures
- Protection from freezing
- Protection from direct sunlight
- Agitation before use
- Container handling
- Disposal
- Spill procedures

Liquid organic fertilizers may settle during storage and may require agitation before application.

Other products may have specific temperature or storage requirements that help preserve product quality and consistency.

Following those instructions helps protect both the user and the product.

Check the Manufacturer and Product Identification

A fertilizer label also identifies the company responsible for guaranteeing the product.

Depending on the product and jurisdiction, the label may also contain information such as:

- Product name
- Net weight or volume
- Manufacturer or distributor
- Business address
- Registration or license information
- Lot or batch identification
- Other required regulatory information

This information provides traceability.

If there is a question about the product, its nutrient analysis, application directions, regulatory status, or supporting documentation, the label identifies the responsible company and provides a starting point for obtaining additional information.

Organic Growers Should Verify Before Applying

Certified organic growers have an additional responsibility when selecting fertilizer inputs.

Do not rely solely on the word "organic" printed on a package.

Before applying a new material, growers should confirm that the input is acceptable under their organic production requirements.

Depending on the operation, that may include:

- Checking the current OMRI Products List
- Checking applicable state registration information
- Reviewing the product label
- Reviewing any restrictions associated with the product
- Confirming the material with the operation's organic certifier
- Maintaining required documentation as part of the Organic System Plan

OMRI's product information is maintained as a current resource for organic producers, and product status can change as formulations, standards, or listings change. ([Organic Materials Review Institute](#))

Verification before application can help prevent the use of an inappropriate input and protect the integrity of the certified organic operation.

Reading the Entire Label in Context

When evaluating an organic fertilizer, start with the NPK analysis, but do not stop there.

Look at the product as a whole.

Consider:

- The guaranteed nutrient analysis
- The sources of those nutrients
- Secondary nutrients and micronutrients
- OMRI listing status, when applicable
- State organic input registration, when applicable
- Application rate
- Application method
- Crop nutrient requirements
- Soil nutrient levels
- Soil or growing-media conditions
- Handling and storage requirements
- Organic certification requirements

Each section of the label provides another piece of information.

Together, those details provide a much clearer understanding of what the fertilizer contains, how it is intended to be used, and whether it is appropriate for the growing system.

The Bottom Line

An organic fertilizer label is much more than packaging.

It is a technical and regulatory document that explains what nutrients the product guarantees, where those nutrients come from, how the fertilizer should be used, and what organic-input reviews or registrations may apply.

Remember:

The NPK numbers tell you the concentration of the three primary guaranteed nutrients.

The guaranteed analysis provides the nutrient guarantees claimed by the product.

The derivation statement identifies the sources of those guaranteed nutrients.

OMRI Listed® means an input product has undergone independent review against applicable organic standards.

CDFA OIM registration identifies fertilizing materials registered for organic production in California.

Higher-nitrogen liquid fertilizers used in organic production are subject to additional USDA material-review requirements.

Terms such as "natural" or "organic" should never replace proper verification for a certified organic operation.

Understanding the fertilizer label makes it easier to compare products, apply nutrients responsibly, and select inputs that align with the needs of the crop and the requirements of the production system.

A few minutes spent reading the entire label can prevent costly mistakes and lead to better-informed fertilizer decisions.

Disclaimer: This material is provided for general educational purposes only. Growing conditions, soil characteristics, crop requirements, application rates, and regulatory requirements vary. Always follow product label directions as well as all governmental and safety regulations or recommendations, and consult appropriate agronomic, regulatory, or crop-management professionals when making site-specific fertilizer or soil-management decisions.

To learn more about BWF Banducci's liquid and dry organic fertilizer products, visit
BWFBanducci.com.

