AAPFCO
Product Label Guide

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Introduction

Association of American Plant Food Control Officials (AAPFCO) is an organization of fertilizer control officials from each state in the United States, from Canada and from Puerto Rico who are actively engaged in the administration of fertilizer laws and regulations; and, research workers employed by these governments who are engaged in any investigation concerning mixed fertilizers, fertilizer materials, their effect, and/or their component parts.

The Association works to create guidance for members and industry by developing standards through consensus. Although individual states may choose not to adopt AAPFCO guidance in full, or may adopt additional standards, the guidance in this, and other AAPFCO documents, can be considered as a minimum standard for all products and the official policy of the Association.

This AAPFCO Label Guide is a summary of the label standards contained in the AAPFCO Official Publication No. 71 (2018). Although this guide describes AAPFCO label standards, the laws of each state are the final standard for labeling, licensing, and registration requirements. The AAPFCO Official Publication is available for purchase at www.aapfco.org

Note: Other standards also apply to product labels. This document includes — ***Additional Notes*** — which refer to the standards of the National Institute of Standards and Technology (NIST) used by many state weights and measures programs, and the Federal Trade Commission (FTC), which oversees advertising in interstate commerce. Following these standards can make multi-state registration quicker and easier.

Label Defined

The term **label** is all of the written, printed, or graphic matter on the immediate container, or a statement accompanying a fertilizer. [AAPFCO Uniform State Fertilizer Bill, Section 4(n)]

Each product container must have a label that is clearly legible and conspicuous, and that provides the basic information, as described in the following document, for the product.

For bulk shipments, the label will be a separate document accompanying the delivery and supplied to the purchaser at the time of delivery.

The term **labeling** means any advertising, promotional, or promotion of any fertilizer including but not limited to all written, printed, graphic, or electronic communication used in promoting the sale of such fertilizer. [AAPFCO Uniform State Fertilizer Bill, Section 4(o)] (Official WA 2017)

Fertilizers

General Requirements

All fertilizers, including specialty fertilizers, must be registered and/or licensed before being distributed in the State. [AAPFCO Uniform State Fertilizer Bill Section 5]

Types of Fertilizers

Fertilizer. A fertilizer is a substance containing one or more recognized plant nutrients, and used for its plant nutrient content. [AAPFCO Uniform State Fertilizer Bill, Section 4(a)]

Fertilizer Material. A fertilizer that contains important quantities of only one primary nutrient (total nitrogen, available phosphate, or soluble potash), or has 85% or more of its plant nutrient content as a single chemical compound, or is derived from plant or animal residue or by-product, or a natural material deposit that has not had its nutrient content materially altered by processing. [AAPFCO Uniform State Fertilizer Bill, Section 4(a)(1)]

Mixed Fertilizer. A mixed fertilizer is a fertilizer containing a mixture of fertilizer materials (ingredients). [AAPFCO Uniform State Fertilizer Bill, Section 4(a)(2)]

Specialty Fertilizer. A fertilizer distributed for non-farm use, such as a lawn fertilizer. [AAPFCO Uniform State Fertilizer Bill, Section 4(a)(3)]

Bulk Fertilizer. A fertilizer distributed in a non-packaged form, such as; truckload shipments. [AAPFCO Uniform State Fertilizer Bill, Section 4(a)(4)]

Synthetic Fertilizer. Any fertilizer manufactured from one or more synthetic materials containing no animal parts, animal byproducts, manures, or renderings. (AAPFCO Official Terms, T-61)

Organic Fertilizer. A material containing carbon and one or more elements other than hydrogen and oxygen essential for plant growth. (AAPFCO Official Terms, T-12)

Natural Fertilizer. A substance composed only of natural organic and/or natural inorganic fertilizer materials and natural fillers. (AAPFCO Official Terms, T-36)

Natural Organic Fertilizer. Materials derived from either plant or animal products containing one or more elements (other than carbon, hydrogen, and oxygen) which are essential for plant growth. These materials may be subjected to biological degradation processes under normal conditions of aging, rainfall, sun-curing, air drying, composting, rotting, enzymatic, or anaerobic/aerobic bacterial action, or any combination of these. These materials shall not be mixed with synthetic materials or changed in any physical or chemical manner from their initial state except by manipulations such as drying, cooking, chopping, grinding, shredding, hydrolysis, or pelleting. (AAPFCO Official Terms, T-13)

Natural Inorganic Fertilizer. A mineral nutrient source that exists in or is produced by nature and may be altered from its original state only by physical manipulation. (AAPFCO Official Terms, T-35)

Natural Base Fertilizer. A mixed fertilizer where more than half of the fertilizer materials is natural and where more than half of the sum of the guaranteed primary nutrient percentages is derived from natural materials. (AAPFCO Official Terms, T-38)

Organic Base Fertilizer. A mixed fertilizer where more than half of the fertilizer materials is organic and where more than one half of the sum of the guaranteed primary nutrient percentages is derived from organic materials. (AAPFCO Official Terms, T-39)

Basic Label Components

All fertilizer labels must have five basic elements: brand and grade, guaranteed analysis, directions for use, name and address of registrant, and net weight. [AAPFCO Uniform State Fertilizer Bill, Section 6]

For bulk shipments, this information must accompany the delivery as a written or printed form and shall be supplied to the purchaser at the time of delivery. [Uniform State Fertilizer Bill, Section 6(a)]

A fertilizer formulated according to specifications which are furnished by or for a consumer prior to mixing (custom blend) shall be labeled to show the net weight, the guaranteed analysis, and the name and address of the distributor or registrant/licensee. [Uniform State Fertilizer Bill, Section 6(b)]

A fertilizer formulated according to specifications which are furnished by or for an end user prior to mixing and intended to be applied using variable rate technology shall be accompanied by a plainly written statement which shows the guaranteed analysis and net weight of each material used in the formulation, the name and address of the distributor or registrant/licensee and the end user, and the global positioning system (GPS) coordinates of the field location on which the material was applied. [Uniform State Fertilizer Bill, Section 6(c)]

Brand
The brand is a term, design or trademark used in connection with one or several grades of fertilizer. The brand must not be misleading. Any numerals used in the brand must not be misleading. [AAPFCO Uniform State Fertilizer Bill, Section 4(b)] An example of an acceptable brand would be "SuperGro Supreme."

Grade
The grade is the percentage of Total Nitrogen (N), Available Phosphate (P_2O_5) and Soluble Potash (K_2O) in the same terms, order, and percentages as in the guaranteed analysis. The grade should not include any nutrients other than Total Nitrogen, Available Phosphate, and Soluble Potash. [AAPFCO Uniform State Fertilizer Bill, Section 4(d) and Statements of Uniform Interpretation and Policy (1)]

The grade statement for mixed fertilizers must be in whole numbers, such as 10-20-10. [AAPFCO Uniform State Fertilizer Bill, Section 4(d)]

The grade statement for specialty fertilizers may be guaranteed in fractional units of less than one percent of Total Nitrogen (N), Available Phosphate (P_2O_5), and Soluble Potash (K_2O). [AAPFCO Uniform State Fertilizer Bill, Section 4(d)]

The grade statement for fertilizer materials such as bone meal, manure, or ammonium nitrate may also be guaranteed in fractional units. [AAPFCO Uniform State Fertilizer Bill, Section 4(d)]

Guaranteed Analysis
The Guaranteed Analysis is the manufacturer's guarantee for minimum percentage of nutrients claimed for the product. [AAPFCO Uniform State Fertilizer Bill, Section 4(c)] In a Guaranteed Analysis the nutrients are listed in a specific order and format. [AAPFCO Rules and Regulations-Fertilizer 1] For more information, see the section titled, “Guaranteed Analysis Basics” (page 4).

Directions for Use
Any fertilizer delivered to an end user shall include directions for use. The minimum directions must include either a general statement, such as “Use in accordance with the recommendations of a qualified individual or institution or according to an approved nutrient management plan,” or provide detailed directions for use. [AAPFCO Rules and Regulations-Fertilizer 2(h)]

Name and Address of Registrant
The name and address of the person or company responsible for the guarantees on the label must be listed on the label. [AAPFCO Uniform State Fertilizer Bill, Section 5(a)(3)]

Additional Notes–*The NIST packaging standards require the name of the person or company responsible for the product be conspicuously displayed on any package. (NIST Consumer Packaging Label Guide, SP 1020-1, 2005, p. 14)*

Net Weight
All fertilizer labels (bag, bulk or liquid) must include a statement of net weight. [AAPFCO Rules and Regulations-Fertilizer 2(a)] As all guarantees for plant nutrients are made as a percentage of weight, all products must be labeled and sold by net weight stated in U.S. and Metric Units.

Additional Notes–*NIST Handbook 130, Uniform Packaging and Labeling Regulation, 2009, Section 6(6.3) also requires all packages to declare a net quantity.*

The NIST packaging standards require the net weight statement to be bold, clear and conspicuous, in a color that contrasts with the background, and parallel to the base of the package in the lower 30% of the principal display panel. Words or phrases that qualify the amount, such as "approximately," are not allowed. (NIST Consumer Packaging Label Guide SP 1020-1, 2005, p. 15)

Derivation Statement
The *derivation statement* lists the sources for the nutrients in the guaranteed analysis. This statement is not required by the AAPFCO Uniform State Fertilizer Bill, but when it is provided, it must be listed below the guaranteed analysis. [AAPFCO Rules and Regulations-Fertilizer 2(e)]

Guaranteed Analysis Basics

The Guaranteed Analysis is the guarantee of the minimum percentage of nutrients claimed for the product. These claims must be made in a specific order and format, as shown in Example Label #1 (page 5).

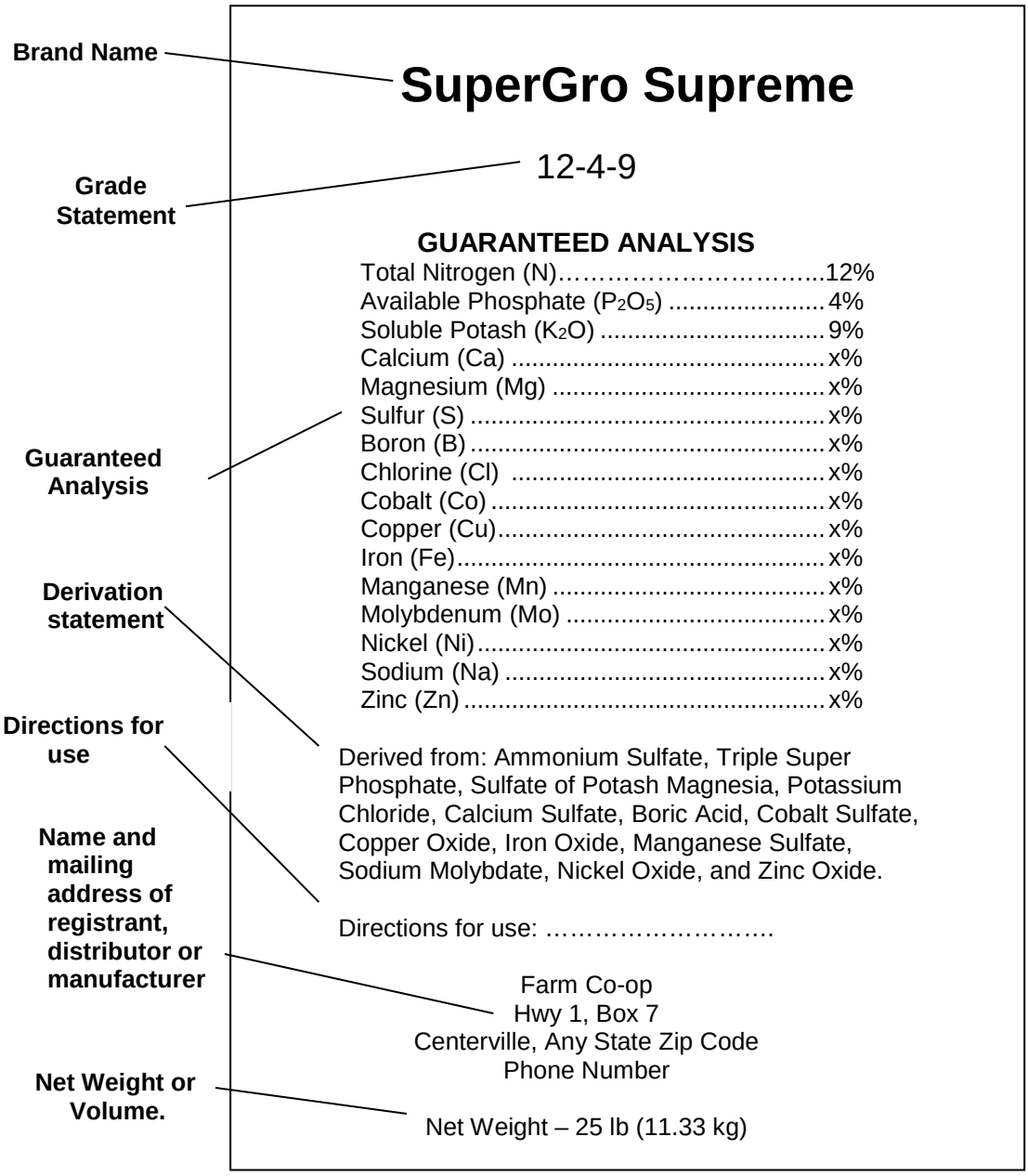
Any primary nutrients claimed must be reported as Total Nitrogen (N), Available Phosphate (P_2O_5), and Soluble Potash (K_2O), in that order. [AAPFCO Uniform State Fertilizer Bill, Section 4(c)(1)]

The guarantees for all other nutrients must be made on an elemental basis and in the order shown in Example Label #1 (page 5). [AAPFCO Rules and Regulations-Fertilizer 1]

Zero (0) guarantees should not be made and shall not appear in guaranteed analysis statement, except in nutrient guarantee breakdowns. [AAPFCO Rules and Regulations-Fertilizer 2(d)] (See page 6)

The term of "percentage" by symbol or word, when used on a fertilizer label shall represent only the amount of individual plant nutrients in relation to the total product by weight. [AAPFCO Uniform State Fertilizer Bill, Section 4(h), Rules and Regulations-Fertilizer 5] For example, the statement a product "contains 50% slowly available nitrogen" would mean the product would have a grade statement of at least 50-0-0, and a 50 lb bag would contain 25 lbs. of slowly available nitrogen.

Label 1: Basic Elements of a Fertilizer Label



Nitrogen Guarantees

In the guaranteed analysis, nitrogen must be guaranteed as Total Nitrogen (N).

If chemical forms of nitrogen are claimed or required, then, as shown below, the forms must be shown in the Guaranteed Analysis. No particular order of forms of nitrogen is required. [AAPFCO Rules and Regulations-Fertilizer 2(d)]

GUARANTEED ANALYSIS
Total Nitrogen (N)*……x%
x% Ammoniacal Nitrogen
x% Nitrate Nitrogen
x% Water Insoluble Nitrogen
x% Urea Nitrogen
x% (Other recognized and determinable forms of nitrogen)
Available Phosphate (P_2O_5)……x%
Soluble Potash (K_2O) ……x%
(Other nutrients, elemental basis)*.....x%
*As prescribed by Regulation No. 1 (see page 7)

Forms of Nitrogen
Ammoniacal Nitrogen (NH_4^+) is one of only two forms of nitrogen taken up by plants. Sources include but are not limited to monoammonium phosphate (MAP), diammonium phosphate (DAP), ammonium sulfate, ammonium nitrate, urea ammonium nitrate (UAN), ammonium polyphosphate, calcium ammonium nitrate (CAN), and ammonium thiosulfate.

Nitrate Nitrogen (NO_3^-) is one of only two forms of nitrogen taken up by plants. Sources include but are not limited to UAN, ammonium nitrate (NH_4NO_3), potassium nitrate (KNO_3), calcium nitrate $[Ca(NO_3)]_2$ and sodium nitrate ($NaNO_3$).

Urea Nitrogen [$CO(NH_2)_2$] can come from sources that include, but are not limited to, UAN, urea, urea triazone, sulfur coated urea, and polymer coated urea.

Other Water Soluble Nitrogen can come from sources that include, but are not limited to, methylene urea, urea triazone, methylene diurea (MDU), dimethylenetriurea (DMTU), dicyandiamide, triazone, ureaform, and urea-formaldehyde.

Slowly Available Water Soluble Nitrogen can come from sources that include, but are not limited to, methylene urea, urea triazone, methylene diurea (MDU), dimethylenetriurea (DMTU), dicyandiamide, triazone, ureaform, and urea-formaldehyde. (AAPFCO Statement of Uniform Interpretation of Policy 21)

SLOW FERTILIZER 20-0-0
Guaranteed Analysis
Total Nitrogen……20%
8% Urea Nitrogen
2% Other Water Soluble Nitrogen
2.9% Slowly Available Water Soluble Nitrogen*
7.1% Water Insoluble Nitrogen

*Slowly available nitrogen from (list source).

Water Insoluble Nitrogen (WIN) can come from sources that include, but are not limited to, ureaform, isobutylidene diurea, urea-formaldehyde, feather meal, blood meal, corn gluten meal, and other natural organic materials.

Available Phosphate Guarantees

Available Phosphate (P_2O_5) is the sum of the water soluble and the citrate soluble phosphate in a product. (AAPFCO Official Fertilizer Definition P-2) This is also the amount of pentavalent phosphorus P^{+5} present in the material. [Uniform State Fertilizer Bill, Section 4(c)(2) and AAPFCO Official Fertilizer Definition P-1]

Some sources of phosphate include: diammonium phosphate (DAP), monoammonium phosphate (MAP), single super phosphate, triple superphosphate, (TSP), magnesium ammonium phosphate,

magnesium potassium phosphate, monopotassium phosphate, dipotassium phosphate, rock phosphate, bone meal, and tripotassium phosphate.

Definitions

No Phosphate Fertilizer means fertilizer products with phosphate levels below 0.5% intended for established urban turf or lawns. (AAPFCO Official Terms T-76)

Low Phosphate Fertilizer means products intended for new or established urban turf or lawns, with available phosphate levels equal to or above 0.5% P_2O_5 and an application rate not to exceed 0.25 lb. P_2O_5/1000 sq. ft./application and 0.5 lb P_2O_5/1000 sq. ft./year. (AAPFCO Official Terms T-77)

Soluble Potash Guarantees

Soluble Potash (K_2O) is the portion of the potash soluble in aqueous ammonium oxalate, aqueous ammonium citrate or water. (AAPFCO Official Fertilizer Definitions K-2)

Some sources of soluble potash include: sulfate of potash, muriate of potash, potassium sulfate, kelp, and sulfate of potash-magnesia.

Secondary and Micro Nutrient Guarantees

All fertilizer nutrients, with the exception of phosphate (P_2O_5) and potash (K_2O), if guaranteed, shall be stated in terms of the elements. [AAPFCO Rules and Regulations-Fertilizer 1 and AAPFCO Statements of Uniform Interpretation and Policy 2]

Nutrients, other than primary nutrients, that are essential to the normal growth of plants may need to be added to the growth medium. Secondary plant nutrients include calcium, magnesium and sulfur; micro plant nutrients include boron, chlorine, cobalt, copper, iron, manganese, molybdenum, nickel, sodium and zinc. (AAPFCO Official Terms T-9)

Except for those water soluble nutrients labeled for ready to use foliar fertilizers, ready to use specialty liquid fertilizers, hydroponic or continuous liquid feed programs and guarantees for potting, garden, and lawn soils, the minimum percentages of secondary nutrients and micronutrients accepted for registration are as follows:

Calcium (Ca)	1.0000%
Magnesium Mg)	0.5000%
Sulfur (S)	1.0000%
Boron (B)	0.0200%
Chlorine (Cl)	0.1000%
Cobalt (Co)	0.0005%
Copper (Cu)	0.0500%
Iron (Fe)	0.1000%
Manganese (Mn)	0.0500%
Molybdenum (Mo)	0.0005%
Nickel (Ni)	0.0010%
Sodium (Na)	0.1000%
Zinc (Zn)	0.0500%

Guarantees or claims for the above listed plant nutrients are the only ones which will be accepted. Guarantees for any of the above listed elements shall appear in the order listed, immediately following guarantees for primary nutrients of Total Nitrogen, Available Phosphate, and Soluble Potash. [AAPFCO Rules and Regulations-Fertilizer 1]

Chelated and Complexed Plant Nutrient Guarantees

When plant nutrients are chelated or complexed the chelating or complexing agent shall be listed in the derived from statement and guaranteed as follows:

Guaranteed Analysis
Copper (Cu)……...10%
8% Water Soluble Copper (Cu)
Iron (Fe)……10%
10% Chelated Iron (Fe)
Derived from: Copper Amino Acid Complex and Iron EDTA

Warning and Caution Statements

Warning or caution statements may be required for some water soluble forms of micronutrients, such as boron or molybdenum, when present in excess of a state-defined level. [AAPFCO Rules and Regulations-Fertilizer 1 (a)-(e)] (Refer to Appendix A) Example of a warning statement is included in Sample Label 2 (page 11). Substitutions may be made in the Caution or Warning statements for nutrient hazards. Acceptable substitutions would include Attention, Notice, or any other term/phrase deemed appropriate by the department and not in conflict with other federal or state labeling laws.

Chlorine

The chlorine content of mixed fertilizers in which the potash is claimed in a form other than chloride shall not exceed one-half of one percent (0.5%) more than five percent (5%) of the potash content found (Calculate as follows: 0.05 times the percentage of potash found plus 0.5). (AAPFCO Statements of Uniform Interpretation and Policy 10)

Slowly Available Nutrient Guarantees

When a fertilizer contains recognized and determinable forms of nutrients with slowly available properties, including coated or occluded materials and a slowly available claim is made; then the guarantee should be shown as a footnote, rather than as a component in the guaranteed analysis. [AAPFCO Rules and Regulations-Fertilizer 3] (AAPFCO Statements of Uniform Interpretation and Policy 17)

Guarantee for One Slowly Available Nutrient

GUARANTEED ANALYSIS
Total Nitrogen (N) x%
x% Nitrate Nitrogen
x% Urea Nitrogen*
x% Ammoniacal Nitrogen

*x% Slowly available urea nitrogen from _____ (list source material).

****

Guarantee for All Materials of One Nutrient Slowly Available

GUARANTEED ANALYSIS
Total Nitrogen (N)* x%
x% Ammoniacal Nitrogen
x% Urea Nitrogen
x% Nitrate Nitrogen

*x% Slowly available nitrogen from _____ (list source material).

****

Guarantee for Two Slowly Available Materials

GUARANTEED ANALYSIS
Total Nitrogen (N) x%
x% Ammoniacal Nitrogen
x% Nitrate Nitrogen
x% Urea Nitrogen*
Available Phosphate (P_2O_5)** x%

*x% Slowly available urea nitrogen from _____ (list source material).
**x% Slowly available phosphate from _____ (list source material).

****

Guarantee for Two Coated Materials

GUARANTEED ANALYSIS
Total Nitrogen (N)* x%
x% Ammoniacal Nitrogen
x% Nitrate Nitrogen
x% Urea Nitrogen
Available Phosphate (P_2O_5)* x%

*The nitrogen and phosphate in this product have been coated to provide x% coated slow release nitrogen (N) and x% coated slow release available phosphate (P_2O_5).

Other Label Requirements

Specialty Fertilizers

Specialty fertilizers are products intended for non-farm use. Any product coming under the fertilizer law shall not carry labels to emphasize that dilutions will make so many gallons of fertilizer. Specific claims, such as "contents of this package will make ___ gallons of fertilizer" should be prohibited. The labels shall not carry any extravagant and misleading advertising and claims. (AAPFCO Statement of Uniform Interpretation and Policy 9)
Specialty fertilizer labels must include directions for use, including recommended application rates, application timing and minimum intervals, and the statement "Apply Only as Directed," or similar statement. [AAPFCO Rules and Regulations-Fertilizer 2(h)(1)]

Beneficial Substances

Beneficial substances or compounds are any substance or compound other than primary, secondary, and micro plant nutrients that can be demonstrated by scientific research to be beneficial to one or more species of plants, when applied exogenously to the plant or soil. (AAPFCO Official Terms T-73)

When claimed or advertised, beneficial substances or compounds must be guaranteed on the product label. This guarantee shall appear under the heading "Contains Beneficial Substances" or "Contains Beneficial Compounds". [AAPFCO Rules and Regulations-Fertilizer 2(f)]

Guarantee for Beneficial Substances

Contains Beneficial Substances
Beneficial substance……__ %
(or acceptable units)
Purpose Statement:

Or

Contains Beneficial Compounds
Beneficial Compound……..__%
(or acceptable units)
Purpose Statement:

Examples

Contains Beneficial Substances
Soluble Silicon (Si)……...__%
Derived from: (i.e. Calcium Silicate, Calcium Magnesium Silicate)
Purpose: ……..

Or

Contains Beneficial Compounds
Soluble Silicon (Si)……__%
Derived from: (i.e. Calcium Silicate, Calcium Magnesium Silicate)
Purpose: ……

The amount of beneficial substance or compound is generally guaranteed by the weight of the substance or compound as a percentage of the net weight of the product. When more appropriate; certain substances or compounds may be guaranteed in other units.

Labeling of Organic Input Products

Products intended for use as organic inputs may make statements on the product's label that affirm that the product is in accord with the National Organics Program (NOP) (e.g. "suitable for organic farming", "acceptable for use in organic production", or "meets National Organic Program requirements for organic production") and may use the logos issued by the recognized agencies such as OMRI (Organic Materials Review Institute), certifying agencies, state programs, or other recognized organic input listing services. Such statements are exempt from requirements pertaining to organic labeling under the fertilizer law. (AAPFCO Statement of Uniform Interpretation and Policy 28)

Organic Fertilizers whose label or labeling includes statements regarding the presence of organic matter and claims consistent with established agronomic benefits that organic matter imparts on soils need not be dual-registered as a soil amendment provided that the product is registered as a fertilizer. (AAPFCO Statements of Uniform Interpretation and Policy 29)

Organic Nitrogen can be used, when appropriate, to describe a portion of the nitrogen in the nitrogen breakdown. However, if an amount of nitrogen is designated as organic then the water insoluble nitrogen or the slow release nitrogen guarantee must not be less than 60% of the nitrogen so designated. Coated urea shall not be included in meeting the 60% requirement. [AAPFCO Rules and Regulations-Fertilizer 9]

Labeling and Misbranding

In essence, "labeling" means any advertising, promotional, or promotion of any fertilizer including but not limited to all written, printed, graphic, or electronic communication used in promoting the sale of such fertilizer. [AAPFCO Uniform State Fertilizer Bill, Section 4(o)] (Revised 2016) It can be attached to the product, accompany the product, or be entirely separate from the product.

A fertilizer shall be deemed misbranded if:

- its labeling is false or misleading
- it is distributed under the name of another fertilizer product
- it is not labeled as required and in accordance with regulations
- any plant nutrient or fertilizer claimed or guaranteed does not conform to the definition of identity, if any, prescribed by regulation of the state; in adopting such regulations the state shall give due regard to commonly accepted definitions and official fertilizer terms such as those issued by AAPFCO.

No person shall distribute a misbranded fertilizer product. [AAPFCO Uniform State Fertilizer Bill Section 12]

Additional Notes — The Federal Trade Commission (FTC) requires that any claims made in product advertising must:

- be truthful and non-deceptive, and
- have evidence to back up any claims, prior to making the claim.

The simple rule to avoid misbranding:

If you claim it,
you must guarantee it.

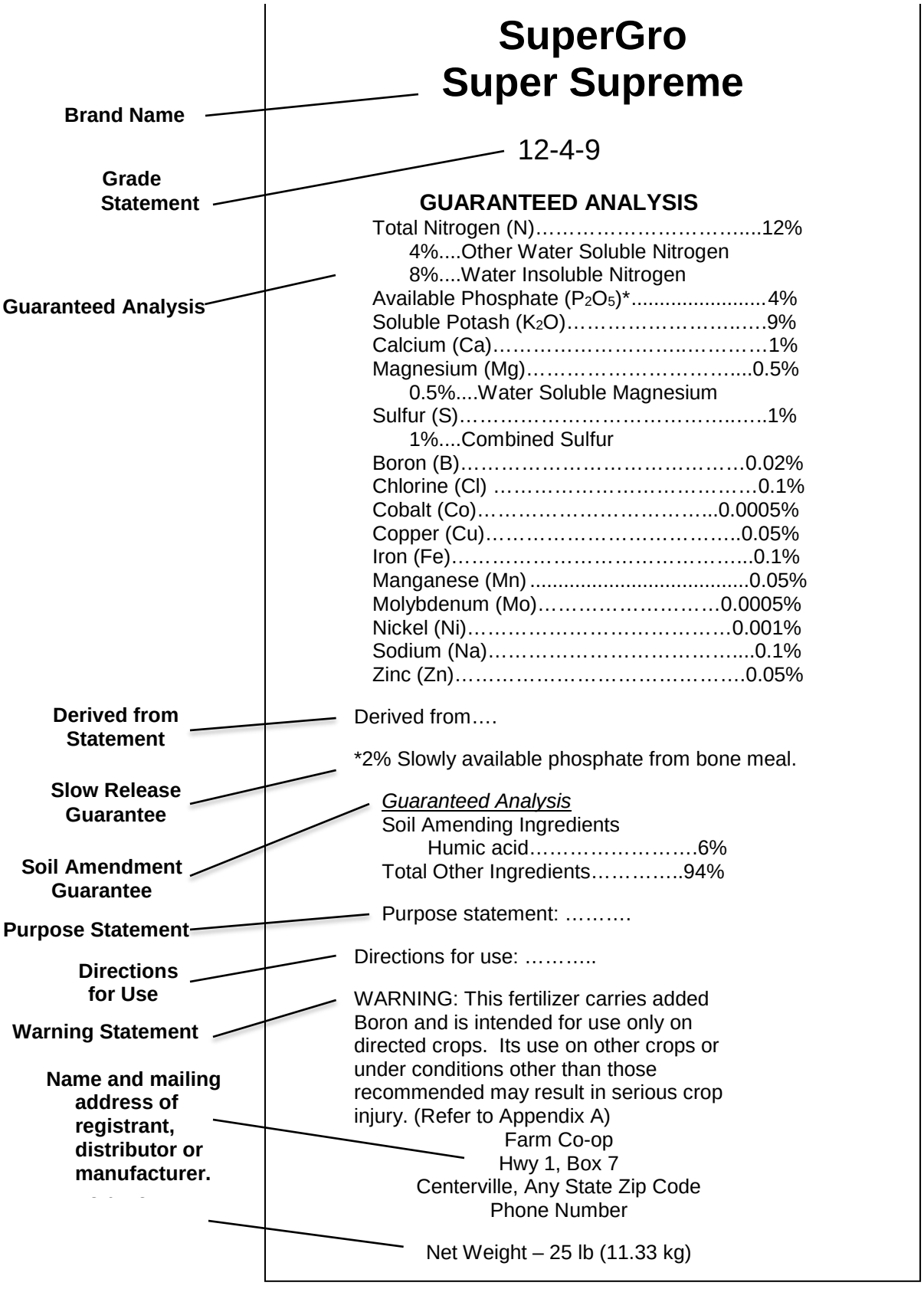
Adulteration

A fertilizer is adulterated if:

- it contains any harmful or deleterious substance in sufficient amounts to render it injurious to beneficial plant life, humans, aquatic life, soil or water when applied as directed;
- adequate warning statements and directions for use which are necessary for safe use are not shown on the label,
- its composition is less than purported; or
- it contains unwanted crop or weed seed

No person shall distribute an adulterated fertilizer. [Uniform State Fertilizer Bill Section 13]

Label 2: A Fertilizer Label with Additional Claims



Bulk Compost

Rules and Regulations for bulk (unpackaged) compost are in addition to the Uniform State Fertilizer Bill. States are encouraged to add the Rules and Regulations for Bulk Compost to their State Fertilizer Bill. If added, these Rules and Regulations should be inserted after AAPFCO Uniform State Fertilizer Bill, Rules and Regulations – Fertilizer 2(i).

Bulk compost claiming to contain nutrients must be registered as fertilizers.

Packaged composts are regulated under the Uniform Soil Amendment Bill.

Compost registered as a fertilizer is exempt from registration under the Soil Amendment Bill.

Definitions

Annual Production means the quantity of compost produced by a composting facility. [AAPFCO Rules and Regulations–Bulk Compost 1(a)]

Batch means a specified volume or quantity of compost. The term "batch" may mean:
(1) the volume of a windrow or stockpile, or
(2) the compost produced within a certain period of time, determined by the testing frequency. This frequency is determined by the production volume of the facility.

- For facilities with an annual production of 1-6,250 tons of compost, testing frequency must be no less than once per quarter.
- For facilities with an annual production of 6,251-17,500 tons of compost, testing frequency must be no less than once per two (2) months.
- For facilities with an annual production of more than 17,501 tons of compost, testing frequency must be at least once per month.

[AAPFCO Rules and Regulations–Bulk Compost, Section 1(b)]

Bulk compost is unpackaged compost. [AAPFCO Rules and Regulations–Bulk Compost 1(c)]

Compost is a biologically stable material derived from the composting process. [AAPFCO Rules and Regulations–Bulk Compost 1(d)]

Composting is the biological decomposition of organic matter by mixing and piling in such a way to promote aerobic and/or anaerobic decay. The process inhibits pathogens, viable weed seeds and odors. [AAPFCO Rules and Regulations–Bulk Compost 1(e)]

Feedstock is source material used to produce a compost. [AAPFCO Rules and Regulations–Bulk Compost 1(f)]

Lot means an identifiable quantity of compost that can be sampled officially up to and including a freight car load or 50 tons maximum, or that amount contained in a single vehicle, or that amount delivered under a single invoice. [AAPFCO Rules and Regulations–Bulk Compost 1(g)]

Quantity Statement means net weight or net volume. [AAPFCO Rules and Regulations–Bulk Compost 1(h)]

Label Requirements

When a bulk compost product is registered under the Uniform State Fertilizer Bill the product label *must* include:

- net weight
- a list of the feedstocks used to make the product,
- nutrient guarantees, and
- a list of the sources of the nutrients.

Net Weight
The label of a bulk compost must include a statement of the net weight. Quantity statements based on volume may be used only if:

- A weight conversion is provided elsewhere on the product label (e.g., 2 cubic yards = 1 ton); *or*
- A weight scale ticket accompanies delivery and is supplied to the purchaser at time of delivery. [AAPFCO Rules and Regulations–Bulk Compost 2]

List of Feedstocks
The label must contain a list of feedstock from which the compost was derived. [AAPFCO Rules and Regulations–Bulk Compost 5]

Nutrient Guarantees

a. Bulk compost registered as a fertilizer must include nutrient guarantees. These guarantees must be made on a wet ("as is") basis. However, for compost stored in environmental conditions that may result in variable moisture content in the compost, guarantees may be determined and guaranteed at a specific moisture level, provided that the moisture value shall be stated on the label. Provided that the _____ (lab) determines the moisture level to be in excess of the stated value, the nutrient guarantees shall be adjusted accordingly.
b. Each batch of bulk compost may be tested for nutrient content and such test results may constitute a guarantee:
   (1.) Except that Total Phosphate (P_2O_5) may be guaranteed in addition to Available Phosphate (P_2O_5) and Total Potash (K_2O) may be guaranteed in addition to Soluble Potash (K_2O);
   (2.) And such test results shall accompany each batch of bulk compost.
c. Guarantees for Total Nitrogen (N), Available Phosphate (P_2O_5), Total Phosphate (P_2O_5), Soluble Potash (K_2O) and Total Potash (K_2O) may be guaranteed in fractional units of less than one percent, regardless if whether the compost is sold as a specialty or agricultural fertilizer. [AAPFCO Rules and Regulations–Bulk Compost 4]

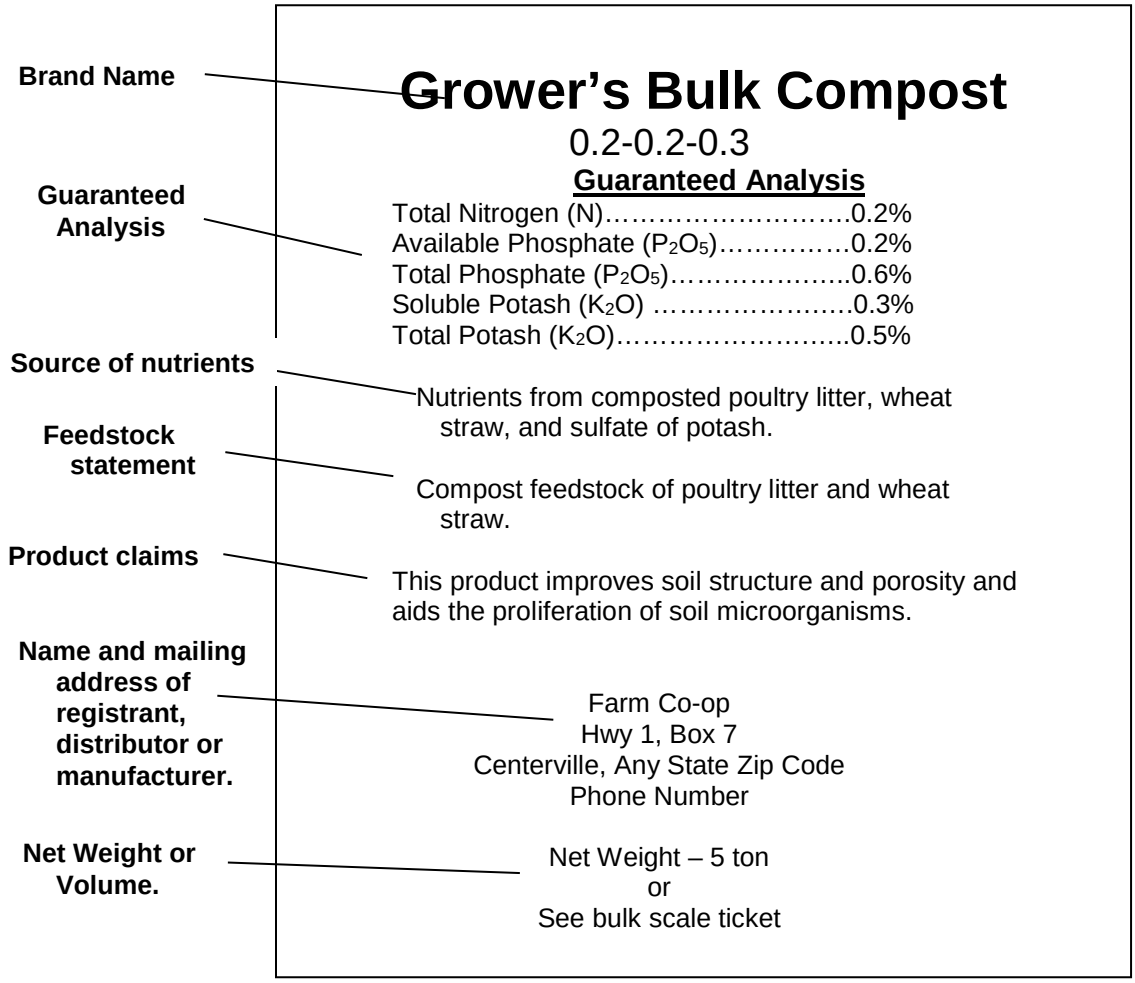
Sources of Nutrients
When shown on the label, the sources of nutrients shall be listed below the completed guaranteed analysis statement. The statement shall include any additional sources of nutrients that have been added to the compost. [AAPFCO Rules and Regulations–Bulk Compost 6]

Product Claims

Compost labels and labeling may state the product is intended solely for use of one or more of the following purposes without registration as a fertilizer:

a. Improves soil structure and porosity – creating a better plant root environment;
b. Increase moisture infiltration and permeability, and reduces bulk density of heavy soils – improving moisture infiltration rates and reducing erosion and runoff;
c. Improves the moisture holding capacity of light soils – reducing water loss and nutrient leaching, and improving moisture retention;
d. Improves the cation exchange capacity (CEC) of soils;
e. Supplies organic matter;
f. Aids the proliferation of soil microorganisms;
g. Supplies beneficial microorganisms to soils and growing media;
h. Encourages vigorous root growth;
i. Allows plants to more effectively utilize nutrients, while reducing nutrient loss by leaching;
j. Enables soils to retain nutrients longer;
k. Contains humus – assisting in soil aggregation and making nutrients more available for plant uptake;
l. Buffers soil pH. [AAPFCO Rules and Regulations–Bulk Compost 3]

Label 3: Basic Elements of a Bulk Compost Label



If no plant nutrients are guaranteed, see Soil and Plant Amendment section.

Horticultural Growing Media

Rules and Regulations for horticultural growing media (HGM) are an addition to the Uniform State Fertilizer Bill. States may choose to add the Rules and Regulations for HGM to their State Fertilizer Bill. If added, these Rules and Regulations should be inserted after AAPFCO Uniform State Fertilizer Bill, Rules and Regulations.

Horticultural Growing Media products claiming to contain nutrients may need registered as fertilizers.

Definitions

Aged means exposed to weathering and/or natural decay.

Brand or Product Name is a specific designation applied to an individual horticultural growing medium.

Processed means deliberately treated or manipulated to modify or transform physical, chemical or biological characteristics of the natural state of the substance.

Raw means in the natural state, and not prepared, modified or manipulated for use.

Registration Document is the information required by the _____ for registering a horticultural growing medium for distribution into or with (State). The Registration Document may be made available by the registrant to the purchaser upon request, but shall not be part of the product label or labeling.

Wood is the hard, fibrous material located beneath the bark, which constitutes the greatest part of the stems of trees and shrubs.

Label Requirements

A horticultural growing media product label must include:

- The **brand** or product name as registered.
- The **volume** of the product in quarts, cubic feet, yards, and metric volumes, or the weight of the product in ounces, pounds, and metric weights, as registered.
- A list of all **physical components,** whether organic or inorganic, must be listed in order of decreasing amount by volume if they comprise at least 3% or more of total volume of the product.
- **Intended use** statements such as general recommendations for product use. If cautionary warnings or uses not recommended are made, they should be stated in this section of the label.
- **General fertilization recommendations** for use with the product. An acceptable minimum recommendation would indicate at what time after planting the product required the addition of fertilizer, whether the product required the addition of fertilizer, or recognize product as not being a fertilizer and contains minimum nutrients to sustain initial plant growth.
- An **address** where further product information may be obtained and a telephone number available during normal business hours for further product information.
- For products intended for use by commercial growers, the **date of manufacture**, or the month and year of manufacture, stated at any location on the bag. If the date or month and year of manufacture is coded, sufficient information must be provided to determine the date or month and year of manufacture from the code.

Description of the Physical Components

- Bark products should be described as raw, aged, processed, or composted. Bark should also be specified as pine or softwood or hardwood, and may include no more than 15% wood by volume.
- Peat Products should be described in accordance with ASTM standards as to whether they are sphagnum, hypnum, reed-sedge, humus, or other peat.
- Wood Products should be described as raw, aged, processed, or composted.
- Readily degradable organic substances should be listed and described as raw, aged, processed or composted.
- The base material(s) for any other composted product should be described or listed.

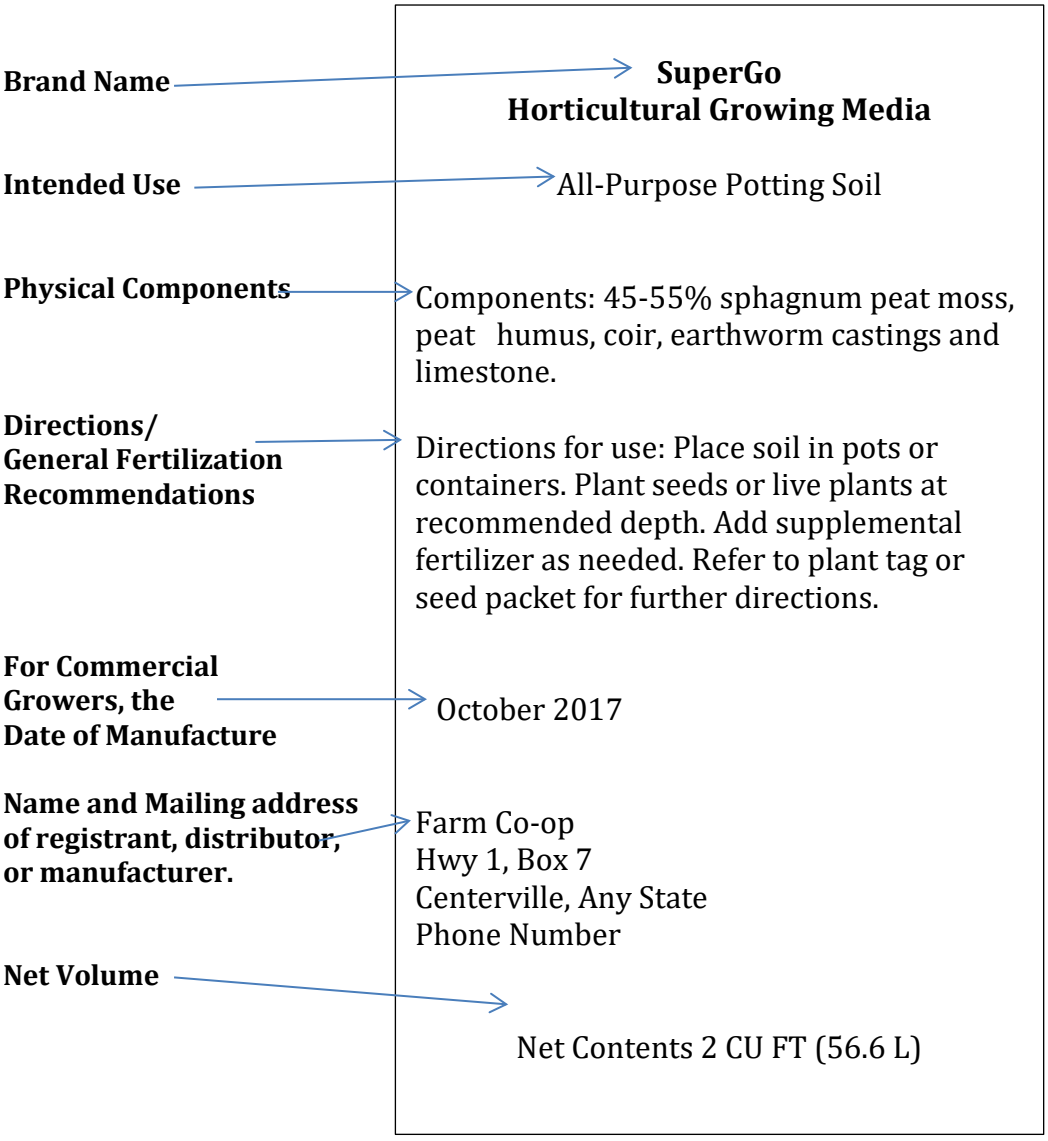
Exemptions

- HGM planted with live plant material
- Custom media prepared for a single end user
- HGM containing less than 3% plant nutrients

HGM Verification of Label Claims Document

The first time a product is registered, a verification of label claims document must be provided by the registrant for each named horticulture growing medium. This document is to be submitted along with the registration. Subsequent registrations of the same approved medium do not require the re-submission of the label claim verification document. The purpose of the document is to show, in a practical as opposed to a theoretical way, the verification of label claims.

Label 4: Basic Elements of a Horticultural Growing Media Label



Soil and Plant Amendments

Both soil amendments and plant amendments are included in the AAPFCO Uniform Soil Amendment Bill and Rules and Regulations.

Definitions

Soil amendment. Any substance, or a mixture of substances, intended to improve the physical, chemical, biochemical, biological or other characteristics of the soil, except fertilizers, agricultural liming materials, unmanipulated animal manures, unmanipulated vegetable manures, pesticides and other material exempted from regulation. [Uniform Soil Amendment Bill Section 3(a) and T-91] (See Sample Label 5, page 21)

Plant amendment. Any substance applied to plants or seeds which is intended to improve growth, yield, product quality, reproduction, flavor or other desirable characteristics of plants, except fertilizer, soil amendments, agricultural liming materials, animal and vegetable manures, pesticides, plant regulators and other materials that may be exempted from regulation. [Uniform Soil Amendment Bill Section 16, Note No. 4 and T-93] An example would be a microbial inoculum for legumes (see Sample Label 10, page 26).

Label Requirements

All soil amendment labels must have six basic elements:

- **Net Weight** - the weight of the material as offered for sale.
- **Brand Name** – the term, designation, trade mark, product name or other specific designation under which individual soil amendments are offered for sale.
- **Guaranteed Analysis** –
  Soil Amending Ingredients
  "name of ingredient"….__%
  (identify and list all)
  Total Other Ingredients...__%
- **Purpose of Product**
- **Directions for Application**
- **Name and Address of Registrant**

[Uniform Soil Amendment Bill, Section 4(a)] For an example of how a soil amendment label might appear, please see Sample Label 5 (page 21).

For bulk shipments, this information must accompany the delivery as a written or printed form and shall be supplied to the purchaser at the time of delivery. [Uniform Soil Amendment Bill, Section 4(a)]

No information or statement shall appear on any package, label, delivery slip, or advertising material which is false or misleading to the purchaser as to the use, value, quality, analysis, type or composition of the soil amendment. [Uniform Soil Amendment Bill, Section 4(b)]

The state may require proof of claims for any soil amendment. If no claims are made the State may require proof of usefulness and value of the soil amendment. [Uniform Soil Amendment Bill, Section 4(c)]

No soil amending ingredient may be listed or guaranteed on labels or labeling without the permission of the state agency responsible for the registration or licensing of soil amendments. [Uniform Soil Amendment Bill, Section 4(d)]

For soil amendments, the state agency responsible for the registration or licensing of soil amendments may allow labeling by volume rather than weight. [Uniform Soil Amendment Bill, Section 4(e)]

When soil amending ingredients are claimed, all ingredients not listed by identity and amount are considered as other ingredients, as shown in Sample Label 5 (page 21).

When an ingredient statement is used it means a collective and continuous listing of the ingredients of which the soil amendment is composed. Such ingredients shall be listed in descending order by their predominance by volume or weight as appropriate in non-quantitative terms. [Rules and Regulations – Soil Amendments 1(c)] Sample Label 6 (page 22)

In lieu of a guarantee expressed as a percentage, a product that claims the presence of a microbe(s) shall guarantee the microbe(s) as follows:

- Minimum number of each claimed viable organism at the genus and species level in colony forming units (CFU), spores, or propagules per gram or milliliter (cm^3).
- Expiration date.
- Storage and handling instructions.

[Rules and Regulations-Soil Amendment 2(d)]. Sample Labels 8 and 9 (pages 24 and 25).

Registrants of products that contain live microorganism(s) as active ingredients shall provide proof of the taxonomic identity of the organism(s) to the genus and species level and provide strain when known. Microorganisms that are listed as Risk Group Level 2 by the American Biological Safety Association (ABSA) on at least 3 of 9 reporting agencies or Biosafety Level 2 as defined by the American Type Culture Collection (ATCC) shall include the following precautionary statement on the label UNLESS sufficient safety information is provided by the registrant to waive the requirement or elements specified therein:

"This product contains live microorganisms and may cause adverse effects to persons with a compromised immune system. Avoid contact with eyes, mouth, and broken skin. Do not inhale product. Wear eye and skin protection when handling. Wash hands after using." (AAPFCO Statements of Uniform Interpretation and Policy 31) See flowchart Evaluation Framework for Products Containing Viable Microorganisms (page 20)

Each separately identified product shall be registered before being distributed in the State. [Uniform Soil Amendment Bill Section 5]

Labeling and Misbranding

Labeling means any advertising, promotional, or promotion of any fertilizer including but not limited to all written, printed, graphic, or electronic communication used in promoting the sale of such soil or plant amendment. [Uniform Soil Amendment Bill Section 3 (i)]

It can be attached to the product, accompany the product, or be entirely separate from the product.

If labeling is false or misleading in any particular way, the product is considered as misbranded. If the contents, ingredients, name, grade or claims on a product label do not match the registered label, the product is misbranded. [Uniform Soil Amendment Bill Section 9].

No person shall distribute a misbranded soil amendment. [Uniform Soil Amendment Bill Section 9]

Additional Notes—The Federal Trade Commission (FTC) requires that any claims made in product advertising must:

- be truthful and non-deceptive, and
- have evidence to back up any claims, prior to making the claim.

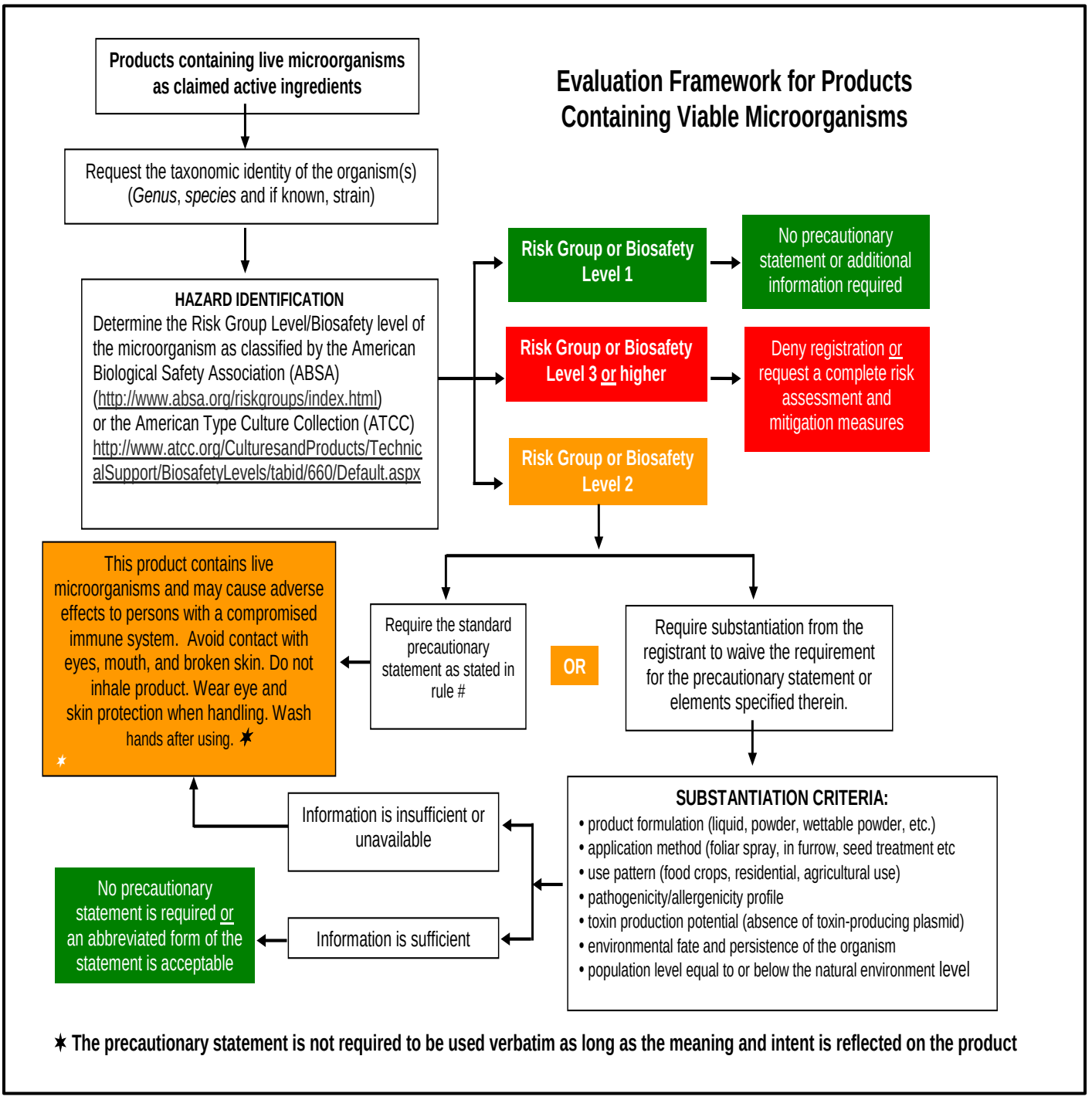
The simple rule to avoid misbranding:

If you claim it,
you must guarantee it.

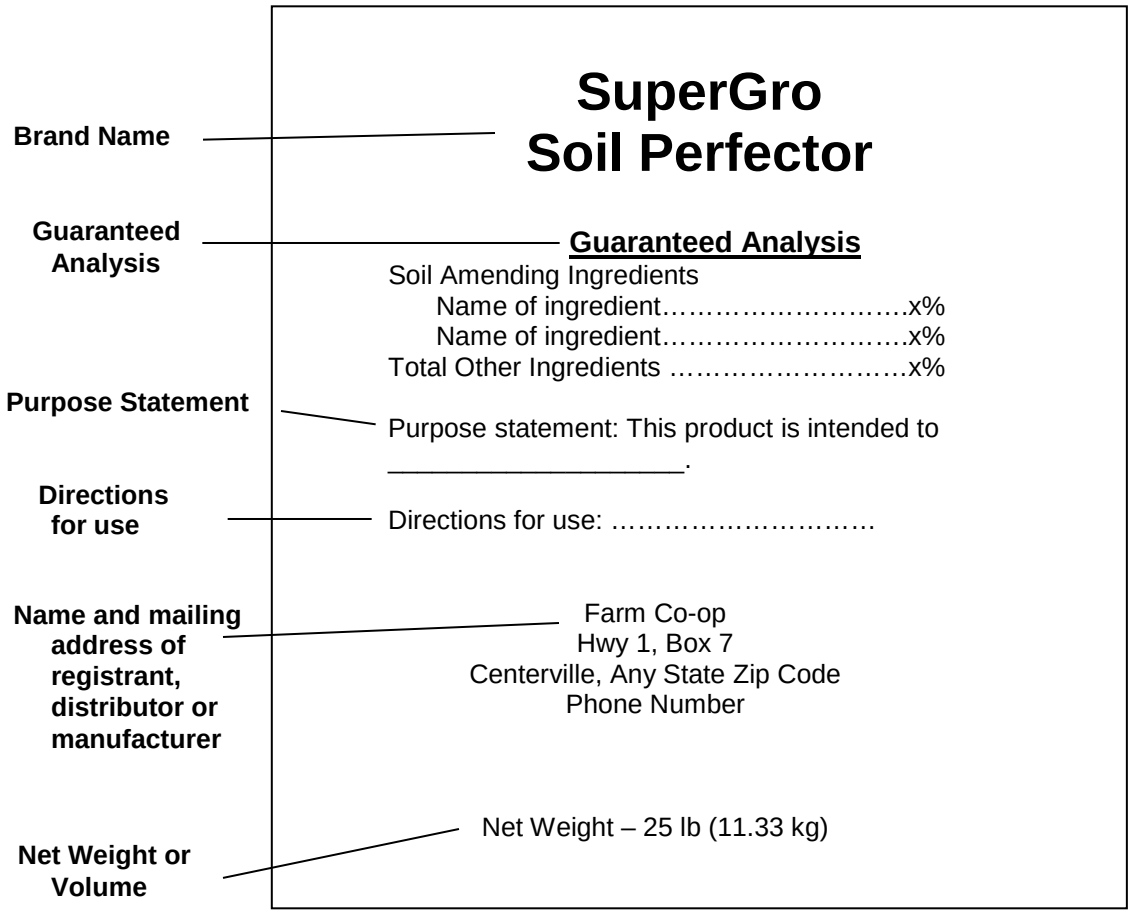
Adulteration

A soil amendment is adulterated if:

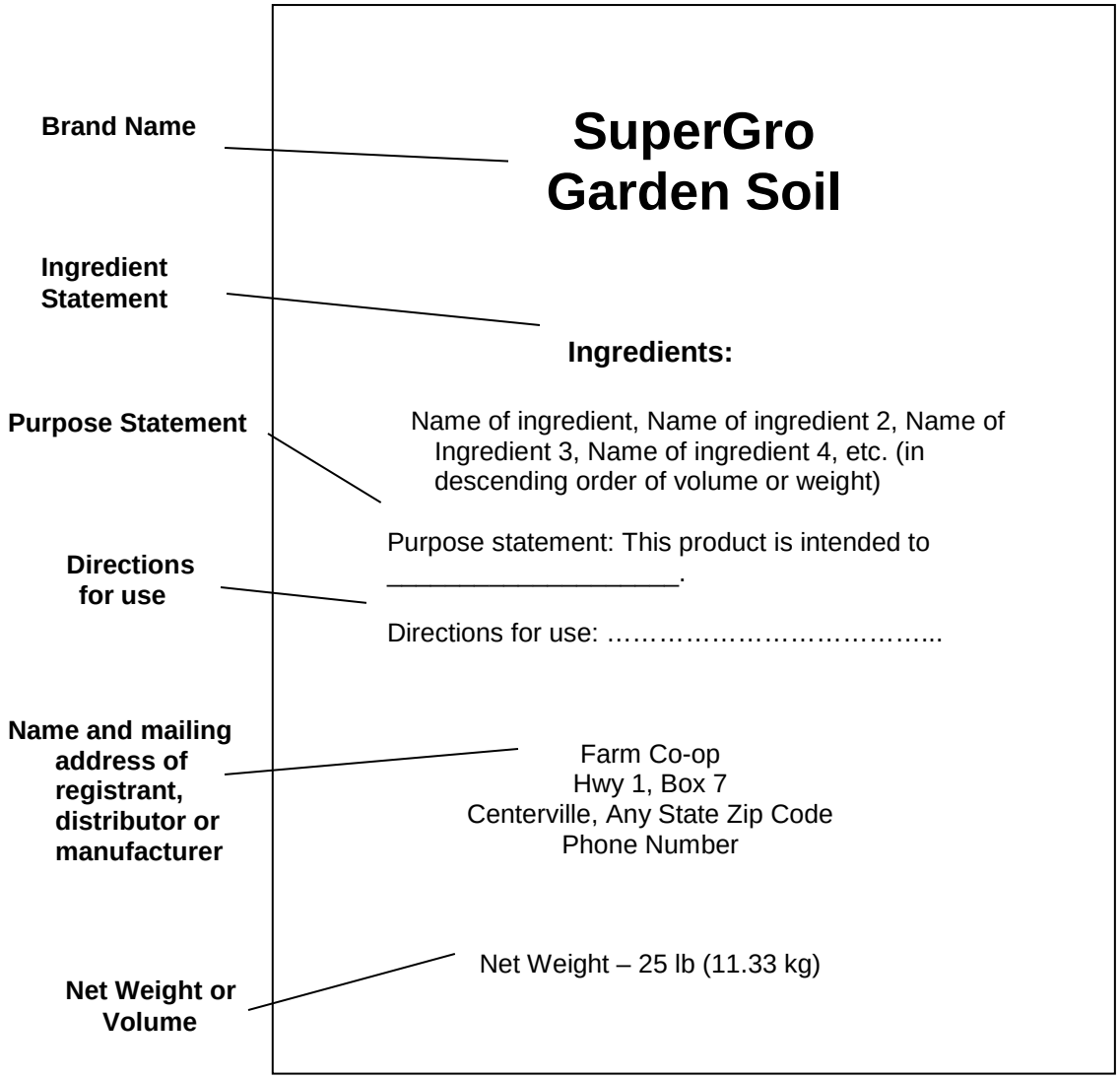
- it contains any harmful or deleterious substance in sufficient amounts to render it injurious to beneficial plant life, humans, aquatic life, soil or water when applied as directed;
- adequate warning statements and directions for use which are necessary for safe use are not shown on the label,
- its composition is less than purported; or
- it contains unwanted crop or weed seed. [Uniform Soil Amendment Bill Section 13]



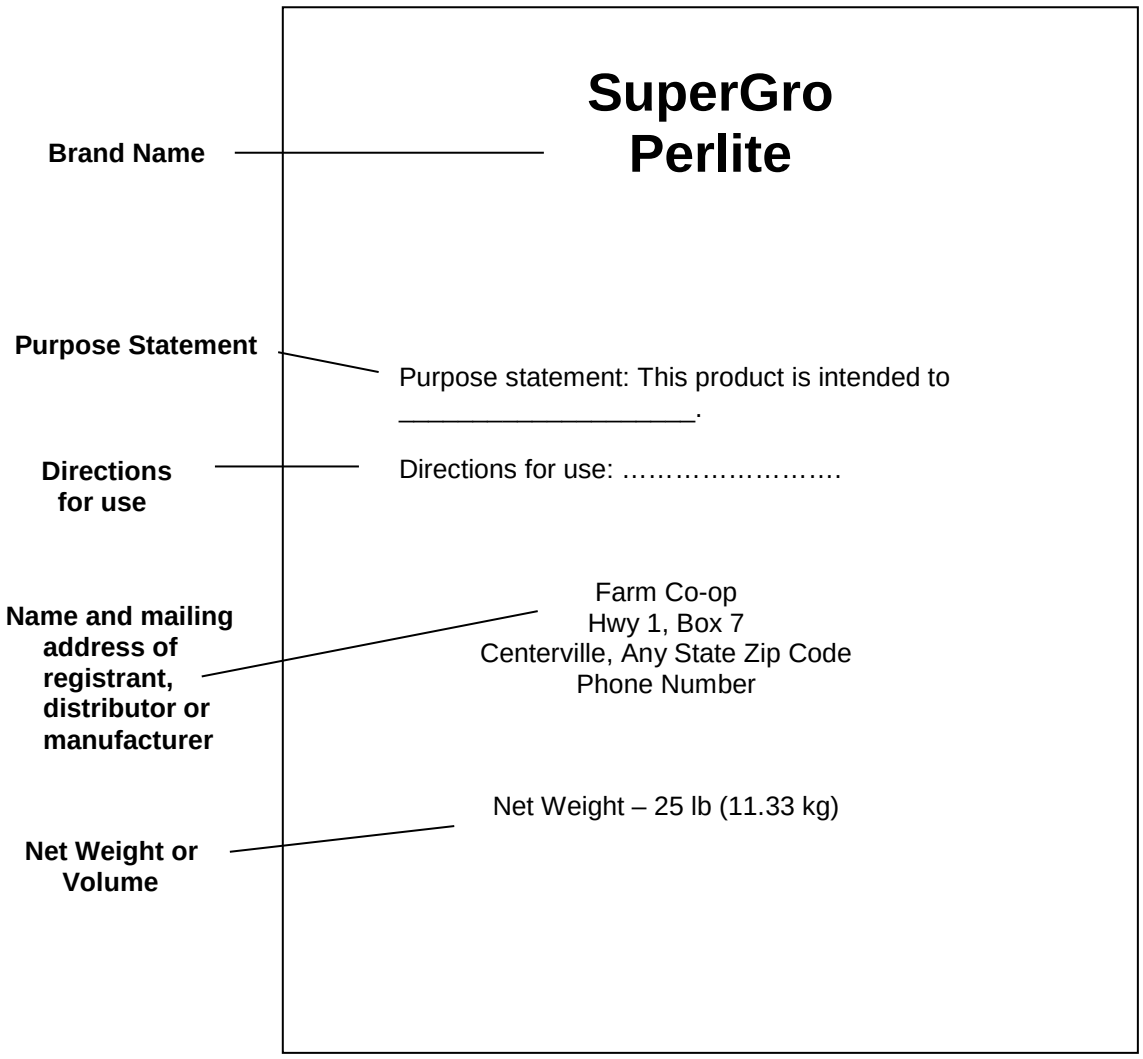
Label 5: Basic Elements of a Soil Amendment Label



Label 6: Basic Elements of a Soil Amendment (Compost/Garden Soil) Label

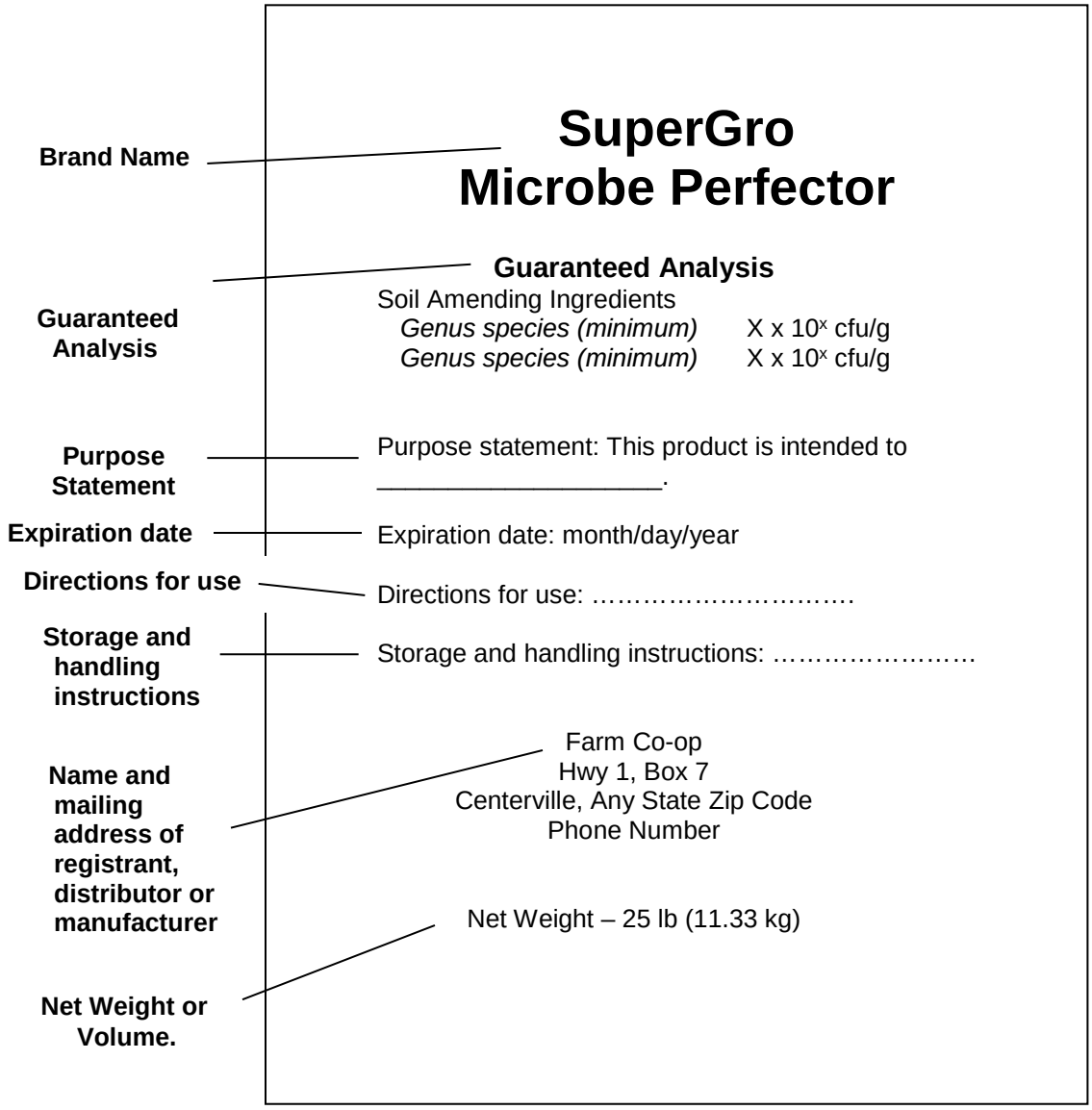


Label 7: Basic Elements of a Soil Amendment (Single Ingredient) Label



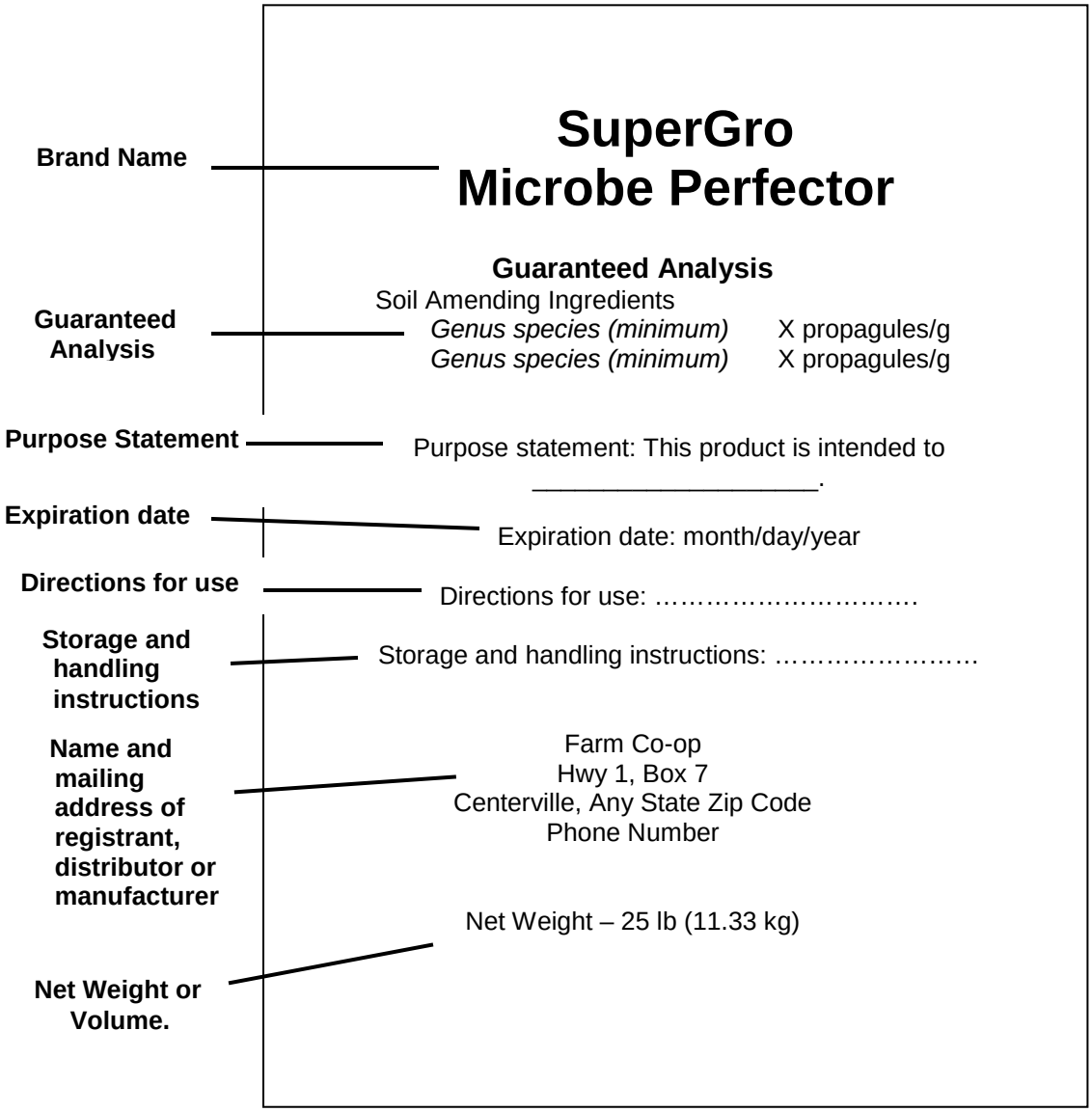
Label 8: Basic Elements of a Microbial Soil Amendment Label

Colony Forming Unit (CFU) Guarantee

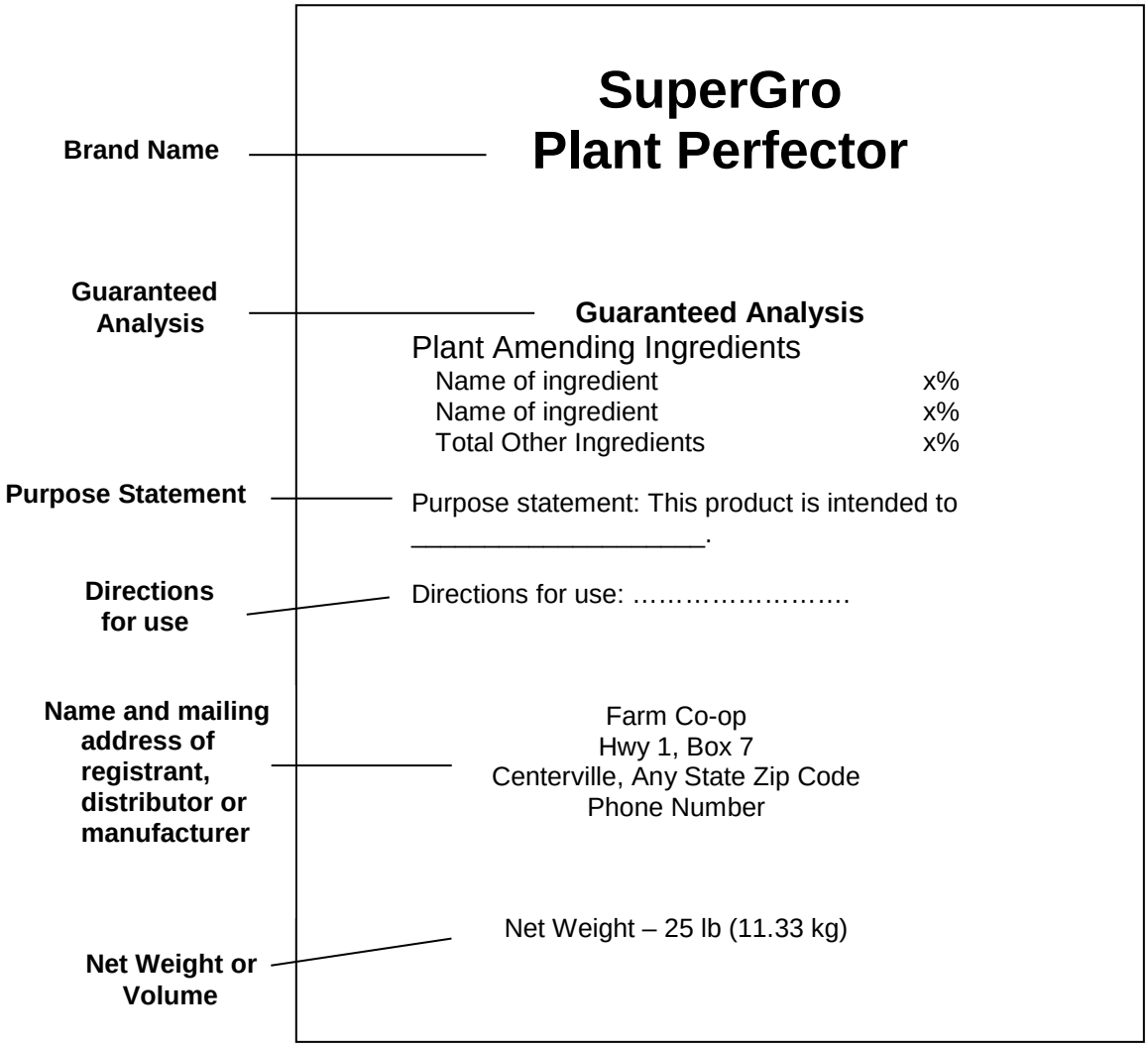


Label 9: Basic Elements of a Microbial Soil Amendment Label

Propagule Guarantee



Label 10: Basic Elements of a Plant Amendment Label



Label 11: A Complete Fertilizer Label

Super Green
17-17-17

Guaranteed Analysis

Total Nitrogen (N)	17.00%
6.66% Ammoniacal Nitrogen	
10.34% Urea Nitrogen*	
Available Phosphate (P_2O_5)	17.00%
Soluble Potash (K_2O)	17.00%
Calcium (Ca)	1.00%
Magnesium (Mg)	0.50%
0.50% Water Soluble Magnesium (Mg)	
Sulfur (S)	1.00%
1.00% Combined Sulfur (S)	
Boron (B)	0.02%
Chlorine (Cl)	0.10%
Cobalt (Co)	0.0005%
Copper (Cu)	0.05%
0.05% Water Soluble Copper (Cu)	
Iron (Fe)	0.10%
0.05% Chelated Iron (Fe)	
0.05% Water Soluble Iron (Fe)	
Manganese (Mn)	0.05%
0.04% Water Soluble Manganese (Mn)	
Molybdenum (Mo)	0.0005%
Nickel (Ni)	0.0010%
Sodium (Na)	0.10%
Zinc (Zn)	0.05%
0.05% Chelated Zinc (Zn)	

Plant Nutrients derived from: Diammonium Phosphate, Urea, Sulfur Coated Urea, Muriate of Potash, Calcium Carbonate, Magnesium Sulfate, Ammonium Sulfate, Borax, Copper Amino Acid Complex, Cobalt Sulfate, Iron Citrate, Ferrous Sulfate, Manganese Sulfate, Sodium Molybdate, Nickel Sulfate, and Zinc EDTA.

**3.4% Slowly available nitrogen from sulfur coated urea*

CAUTION: This fertilizer is to be used only on soil which responds to Molybdenum (Mo). Crops high in Molybdenum (Mo) are toxic to grazing animals (ruminants).

Directions For Use

Directions for use should include either:

- a general statement, (i.e. “Use in accordance with recommendations of a qualified individual or institution, or according to an approved nutrient management plan”) or
- detailed directions, such as recommended application rate(s) in units of weight or volume per unit of area coverage, and details of application timing and minimum intervals.

Registrant, Manufacturer, or Distributor Name
Mailing Address
City, State Zip Code
Phone Number

Net Weight-xxlb (xxKg)

“Appendix A”
Globally Harmonized System Labeling

Products which must meet the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals requirements in accordance with the Occupational Safety & Health Administration’s (OSHA) Hazard Communication Standards, may include the information required by OSHA on the fertilizer label. (AAPFCO Statements of Uniform Interpretation and Policy 33)

“Appendix B”
Frequently Asked Questions and Answers

Q: I’m only going to sell my products via the internet. Does all of this labeling and registration stuff still apply?
A: Registration and labeling requirements still apply regardless of how the products are distributed.

Q: My product is organic (or “registered with OMRI,” or “only has GRAS ingredients,” or “is USDA Bio-based,” etc.), so don’t need to register it, do I?
A: Yes, you do. Each of these programs has different purposes than fertilizer labeling and registration. Products must also be registered in each state where they will be distributed.

Q: Can products be “Certified Organic?
A: No, products are not certified organic but the individual farms are certified organic and it is up to the producer to use approved products for their certified farms.

Q: If my labels meet the guidelines in AAPFCO’s Uniform Fertilizer Bill are they ready for sale in all states?
A: No. AAPFCO guidelines are the basis for most state requirements, but individual states may have additional requirements. It’s a good idea to have labels reviewed by each state where you plan to sell the product before you print labels.

Q: Will you accept chelated instead of water soluble?
A: Some states require water soluble guarantees, so check with individual states for their specific requirements.

Q: How are products registered?
A: Each state has specific rules for registration, renewals, and fees, so check with each individual state for their specific registration process.