



# How To Comply Fertilizer Manual



# Introduction

The fertilizer industry in Florida is vital in support of an agricultural community that contributes over \$7 Billion annually to Florida's economy, second only to tourism. **In the Fiscal Year 2015 - 2016, Florida fertilizer licensees report distributing** over 1.9 million tons of fertilizer annually.

The regulation of fertilizer in Florida has an established history with deep roots that can be traced back to 1889. It was then that the Florida Legislature passed the state's first fertilizer law which created the department's Division of Chemistry and appointed the first State Chemist to oversee the inspection and testing of fertilizer products.

Today, the fertilizer regulatory program in Florida is administered by the Florida Department of Agriculture and Consumer Services (FDACS), Division of Agricultural Environmental Services (AES). The program is authorized to conduct activities under Chapter 576, Florida Statutes and Chapter 5E-1, Florida Administrative Code. In addition to fertilizer, the division regulates other agricultural products such as pesticides, animal feed and agricultural seed. The division maintains a laboratory capable of performing analytical services necessary to support each of the programs. Revenue collected from tonnage and licensing is used to maintain all functions related to administration of the program.

The regulation of fertilizer is critical to provide a level playing field for all licensees and ensure adequate protections for consumers. Because the manufacture, sale and distribution of fertilizer is a complex and dynamic process, the regulations designed to enforce the laws and rules related to these activities can also be complex. This manual is designed to outline the requirements that companies must follow to comply with the provisions of laws and rules that regulate fertilizer in Florida.

Additional information including the statute and rules that regulate fertilizer in Florida can be found at <http://www.flaes.org>

Contact the department's Bureau of Licensing and Enforcement for additional information.

Bureau of Licensing and Enforcement  
Division of Agricultural Environmental Services  
Florida Department of Agriculture and Consumer Services  
3125 Conner Boulevard, Building #8  
Tallahassee, Florida 32399-1650  
Telephone Number: (850) - 617-7860

## Table of Contents

	Page No.
PART 1 – Getting Started:	
Fertilizer Defined.....	1
Who needs a Fertilizer License?.....	1
Where to submit an Application for Fertilizer License.....	1
What are the Database Requirements needed to submit Applications.....	1
What is a Fertilizer Label?.....	1
What are the basic label components of a fertilizer label?.....	2
What are the definitions of label components that make up a guaranteed tag?.....	2
Guaranteed Analysis Basics.....	3
What are the Specialty Fertilizer product registration requirements?.....	3
What are the minimum nutrient guarantee for Specialty Fertilizer.....	3
What are the Chlorine guarantee requirements in fertilizer?.....	4
How do you Calculate Chlorine Guarantees in Fertilizer?.....	4
What are the label requirements for Slowly Available Nutrient Guarantees?.....	5
Basic Labeling of a Slow or Controlled Release Product.....	5
What is a Soil Amendment, Soil Conditioner or Soil Additive?.....	6
What is the label format for a Soil Amendment, Soil Conditioner or Soil Additive?...	6
Microbial Products as Soil Amendments, Soil Conditioners or Soil Additives.....	6
What is the label format for a Microbial Product?.....	7
Label format for a Beneficial Substance Product?.....	7
What are Beneficial Substances?.....	7
Label format for a Beneficial Substance Product?.....	7
What is “Organic Fertilizer” under Florida’s Fertilizer Law?.....	8
Label example for “Organic Fertilizer?.....	8
Label options not meeting “Organic Fertilizer” requirements.....	9
Label example of an “Organic Input Product”?.....	9
What are Liming Materials?.....	10
What are the minimum guarantees for Liming Materials? .....	10
What is Gypsum and the minimum guarantees?.....	11
How to label Gypsum?.....	11

Low Analysis Fertilizer.....	11
Pesticide in fertilizer.....	11
Pesticides authorized for blending with fertilizer.....	12
Establishment registration.....	12
Classification and definition of fertilizer- pesticide blends.....	13
Labeling requirements.....	13
Information required to be furnished a purchaser of custom blends .....	14
Transportation requirements.....	14
Reporting fertilizer tonnage and paying inspection fees.....	14
Inspection (Tonnage) fees.....	15
Tonnage reporting penalties.....	15
Florida’s urban turf rule 5E-1.003(2).....	16
Urban turf labeling requirements.....	16
The Annual Fertilization Guidelines (Table).....	18
Part 2-	
Fertilizer License Requirements.....	19
Fertilizer sample Inspections and penalty assessments.....	20
Fertilizer Sample –Referee request.....	20
Substitute labeling.....	21
What is a certified net weight .....	22
What is a consumer request sample?.....	22
Who to contact for methods of analysis.....	23
Who to contact for commercial fertilizer test?.....	23
Part 3-	
Appendix A	
Labeling guidelines.....	26
Appendix B	
Guarantees for fertilizer material.....	27

## **Part 1 – Getting Started**

### **Fertilizer Defined:**

Fertilizer is defined as any substance which contains one or more recognized plant nutrients and promotes plant growth or controls soil acidity or alkalinity or provides soil enrichment or other corrective measures to the soil. This would include products such as mixed fertilizer, liming materials, gypsum, soil conditioners, soil amendments and soil additives. Fertilizer does not include unmanipulated animal or vegetable manures, peat, or compost which makes no claims as described above. Any company distributing only these products would be exempt from having to obtain a fertilizer license.

The state of Florida also provides a definition for specialty fertilizer. Specialty fertilizer is defined as any fertilizer packaged, marketed and distributed for home and garden use and packaged in containers or bags such that the net weight is 49 pounds or less. Fertilizer not meeting this definition is considered to be agricultural, commercial, golf course or athletic field products.

### **Who needs a Fertilizer License:**

A person whose name appears upon a label and who guarantees a fertilizer may not distribute that fertilizer to a no-licensee until a license to distribute has been obtained by that person from the department upon payment of a \$200 fee. All licenses shall expire on June 30 each year.

### **Where to submit an Application for Fertilizer License:**

New applicants would need to enter the Department's regulatory website at <http://lims.flaes.org>, click on the box "Fertilizer" and submit an Application for Fertilizer License online. Once the Application is submitted, you will receive a message that says "Congratulations!"

### **What are the Database Requirements needed to submit Applications:**

The database system will work with Internet Explorer, Firefox, Safari, Google, and Chrome.

Once the application has been approved, the applicant will receive an invoice for payment. Once the payment is submitted and processed, the applicant will receive login credentials and Fertilizer License Certificate.

### **What is a Fertilizer Label?**

The fertilizer label is a display of written, printed, or graphic matter upon the immediate container of any fertilizer or accompanying any fertilizer when shipped in bulk. The label

provides the consumer a written guarantee and provides a minimum guarantee of the nutrients claimed.

## **What are the basic label components of a fertilizer label?**

The fertilizer label contains these basic elements. (1) The brand and grade. For example: Bluebird Fertilizer 16-4-8. (2) The guaranteed analysis which consists of nutrient guarantees depending on the category of fertilizer being sold. For example: Liming Material, Soil Amendments, Mixed Fertilizer, Fertilizer Materials, etc. (3) The name and address of the licensee who guarantees the content of the product being sold. (4) The net weight. (5) The sources from which the nitrogen, phosphorus, and potassium are derived from (6) The sources of secondary plant nutrients and micro plant nutrients (Iron, Zinc, Copper, Manganese, Boron, Molybdenum, Calcium, etc.), when guaranteed, claimed, or advertised. (7) The Fertilizer License Number assigned to the fertilizer company. This number should appear in close proximity to the brand or guaranteed

## **What are the definitions of label components that make up a guaranteed tag?**

The basic label components consist of a brand, grade of fertilizer being sold (if any), the guaranteed analysis and percents being claimed, the licensee name and address registered with the Department, the net weight, the primary or secondary plant nutrients and finally the derived from section of the label denoting the source materials formulated in the product.

To better help you understand each component of a fertilizer label, they are defined as follows:

**The Brand** means a term, design, or trademark used in connection with one or several grades of fertilizer. For example: Bluebird Turf Fertilizer For Lawns

**The Grade** means the percentages in fertilizer of total nitrogen expressed as N, available phosphorus expressed as  $P_2O_5$ , and soluble potassium expressed as  $K_2O$ , stated in whole numbers in that order. The grade should not include any nutrients other than Total Nitrogen, Available Phosphate, and Soluble Potash. For example: 16-4-8

**The Guaranteed Analysis** means the percentage of plant nutrients or measures of neutralizing capability claimed to be present in a fertilizer. (See Rule 5E-1.003 FAC)

**The Licensee** means a company name and address that guarantees the fertilizer and receives a license to distribute fertilizer under the provisions of this chapter.

### **The Net Weight**

All fertilizer labels (bag, bulk or liquid) must include a statement of net weight.

**The Primary Plant Nutrient** is Total Nitrogen (N), Available Phosphorus ( $P_2O_5$ ), and Soluble Potassium ( $K_2O$ ), or any combination of these substances.

**The Secondary Plant Nutrient** and **Micro Plant Nutrient** are those nutrients other than the primary plant nutrients that are essential for the normal growth of plants and have been added to the fertilizer.

**The Derived From Section:**

The derived from section of the label is located below the guaranteed analysis of the nutrients claimed. Only recognized plant food source materials may appear in this section to represent the nutrient guarantees. Commercial, registered or copyrighted brand or trade names shall not be permitted in guarantees or listing of source materials.

**Guaranteed Analysis Basics**

The Guaranteed Analysis is the guarantee of the minimum percentage of nutrients claimed in the product. Guarantees may change dependent on fertilizer source materials. (For examples see appendix 1).

**What are the Specialty Fertilizer product registration requirements?**

Agricultural, Commercial/Professional, Golf Course and Athletic Field fertilizer distributed in Florida does not require registration with the Department. The company name and address appearing on the label must obtain a Fertilizer License, label the product correctly in accordance with Rule 5E-1.003 FAC, report the monthly tonnage and pay monthly tonnage fees.

Fertilizer that does require product registration is “Specialty Fertilizer”.

“Specialty fertilizer” is any fertilizer packaged, marketed, and distributed for home and garden use **and** packaged in containers or bags such that the net weight is 49 pounds or less. Fertilizer not meeting this definition is considered Agricultural, Commercial/Professional, Golf Course or Athletic Field.

Each Specialty Fertilizer product registered online with the Department is subject to a \$200 per product registration fee that expires on June 30 of each year.

**What are the minimum nutrient guarantees for Specialty Fertilizer**

---

All fertilizer nutrients guaranteed shall be expressed in elemental form, with the exception of phosphate (P<sub>2</sub>O<sub>5</sub>) and potash (K<sub>2</sub>O).

Nutrients, other than primary nutrients, that are essential to the normal growth of plants are as follows: **Secondary** plant nutrients include calcium, magnesium, and sulfur. **Micro plant** nutrients include boron, chlorine, cobalt, copper, iron, manganese, molybdenum, nickel, sodium and zinc.

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 soils, the minimum percentages of secondary nutrients and micronutrients accepted for registration are as follows:

Calcium (Ca)	0.50%
Magnesium Mg)	0.10%
Sulfur (S)	1.00%
Boron (B)	0.02%
Cobalt (Co)	0.0005%
Copper (Cu)	0.02%
Iron (Fe)	0.02%
Manganese (Mn)	0.02%
Molybdenum (Mo)	0.0005%
Nickel (Ni)	0.0010%
Sodium (Na)	0.1000%
Zinc (Zn)	0.02%

## What are the Chlorine guarantee requirements in fertilizer?

Chlorine is guaranteed as to maximum percentage content, when applicable, in agricultural fertilizer. "Specialty Fertilizer" is exempt from chlorine guarantees.

The maximum chlorine shall be guaranteed in all brands which contain one percent (1%) or more, or in which potassium chloride or other materials bearing substantial amounts of chlorine are present.

The maximum chlorine guarantees shall be reasonably accurate and not misleading, and consistent with source materials present. Two percent (2%) shall be the maximum permissible guarantee in fertilizers, except where potassium chloride, fish emulsion, or other high chlorine materials are present.

## How do you Calculate Chlorine Guarantees in Fertilizer?

The maximum chlorine guarantee must be reasonably accurate; it should not be purposely inflated without regard to actual content of source materials represented. The determination of the appropriateness of chlorine guarantee should be predicated on the known or expected constituency of plant nutrient materials present in the mixture.

Potash guarantee derived from muriate only: The chlorine guarantee must be at least 75% and not more than 100% of the potash guarantee.

Potash guarantee derived from sources other than muriate, i.e., sulfate of potash, sulfate of potash magnesia, nitrate of potash: The maximum chlorine guarantee shall be 2% or a value calculated according to the AAPFCO recommendation,  $(K_2O \text{ guarantee} \times 0.05) + .5 = \text{chlorine value}$ . A value of zero (0) may be used provided the theoretical value is less than 1%.

In determining the potash to be considered as derived from sulfate of potash magnesia and muriate, we will assume a 1:1  $K_2O:MgO$  (or 1.66:1  $K_2O:Mg$ ) ratio.



Potash guarantee 8%, of which 6% is derived from muriate and 2% from sources other than muriate. 100% of chlorine derived from muriate = 6%.  $(6\% \times .75) + (2\% \times .05) + .5 =$  chlorine derived from muriate and other source = 5.1%

## What are the label requirements for Slowly Available Nutrient Guarantees?

Slow or controlled release fertilizer means a fertilizer that contains a plant nutrient in a form which delays its availability for plant uptake and use after application, or which extends its

availability to the plant significantly longer than a referenced "rapidly available nutrient fertilizer" such as ammonium nitrate or urea, ammonium phosphate or potassium chloride.

No guarantee, claim or advertisement can be made or required when a slow or controlled release, stabilized nitrogen or enhanced efficiency nutrient is less than 15 percent of the total guarantee for that nutrient.

## Basic Labeling of a Slow or Controlled Release Product

X-X-X	
GUARANTEED ANALYSIS	
Total Nitrogen (N)* .....	x% *
x% Ammoniacal Nitrogen	
x% Nitrate Nitrogen	
x% Urea Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> )* .....	x% *
Soluble Potash (K <sub>2</sub> O)* .....	x% *
Derived From: Sulfur Coated Urea, Polymer Coated Ammonium Nitrate, Polymer Coated Urea, Polymer Coated Triple Superphosphate, Polymer Coated Potassium Nitrate.	
*The nitrogen, phosphate and potash in this product have been coated to provide x% slow release nitrogen (N), x% slow release available phosphate (P <sub>2</sub> O <sub>5</sub> ) and x% slow release potash. F00XXXX	
Licensee Name Address City, State and Zip	

## What is a Soil Amendment, Soil Conditioner or Soil Additive?

"Soil amendment," "soil conditioner," or "soil additive" means any substance or mixture of substances sold or offered for sale for soil enriching or corrective purposes, intended or claimed to be effective in promoting or stimulating plant growth, increasing soil or plant productivity, improving the quality of crops, or producing any chemical or physical change in the soil, except amendments, conditioners, additives, and related products that are derived solely from inorganic sources and that contain no recognized plant nutrients.

Soil Amendments are normally sold for agricultural and professional use. The department may require proof of beneficial claims made before registering a soil additive, soil conditioner and soil amendment.

## What is the label format for a Soil Amendment, Soil Conditioner or Soil Additive?

Brand
Guaranteed Analysis:
<u>Soil Amending Ingredients:</u>
Name of ingredient.....%
Total Other Ingredients
Purpose of product.
Directions for application
F00XXXX
Licensee Name, Address, City, State and Zip

## Microbial Products as Soil Amendments, Soil Conditioners or Soil Additives

Microbial Products sold interstate are being labeled as Soil Amendments, Soil Conditioners or Soil Additives in lieu of being called inoculants. If the microbial products are labeled as an inoculant and no plant growth implications are implied, they are exempt from the fertilizer law.

"Microbe(s)" means any microbiological organism or mixture of microbiological organisms intended to product any physical, chemical, biochemical, biological, or other change in the soil. AAPFCO Publication, page 67.

Labeling Guarantees Recommended: 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( $\text{cm}^3$ ); and Expiration date; and Storage and handling instructions.

## What is the label format for a Microbial Product?

BlueBird Microbe Soil Amendment

### Soil Amending Ingredients:

Genus species.....CFU

Genus species.....CFU

Purpose Statement:

Expiration date:

Directions for use:

Storage and Handling instructions:

Licensee name:

Address, City, State and Zip

Net Weight: \_\_\_Lbs.

License number FXXXXXX

## What are Beneficial Substances?

Florida's Commercial Fertilizer Law, Chapter 576 FS and Chapter 5E-1 FAC does not specifically address Beneficial Substances. However, Florida follows the AAPFCO Guidelines for labeling purposes to allow interstate sales.

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 to the plant or soil (Official AAPFCOTerms 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 [Uniform State Fertilizer Bill, Rules and Regulations (2) (f)].

## Label format for a Beneficial Substance Product?

### *Beneficial Substances Example*

Contains Beneficial Substances

Beneficial substance ..... % (or other acceptable units)

Purpose Statement:

### *Silicon Guarantee Example*

Contains Beneficial Substances

Available Silicon (Si)..... %

(Or other acceptable units)

Purpose Statement:

The amount of beneficial substance or compound is generally guaranteed by percentage by weight.

## What is “Organic Fertilizer” under Florida’s Fertilizer Law?

For a product to be deemed as Organic fertilizer under Florida’s Commercial Fertilizer Law, Chapter 576 FS and Chapter 5E-1 FAC, there is a certain formulation criteria that must be satisfied. When the term “organic” is used in the label, labeling, or advertisement of any fertilizer, the water insoluble nitrogen must not be less than 60% of the total guaranteed nitrogen so designated.

### Label example for “Organic Fertilizer?”

**All Natural Bluebird Organic Fertilizer**

**12-4-9**

**GUARANTEED ANALYSIS**

Total Nitrogen (N).....	12%
2.00 % Water Soluble Nitrogen	
10.00 % Water Insoluble Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ).....	4%
Soluble Potash (K <sub>2</sub> O).....	9%

Derived from: Biosolids, Feather Meal and Poultry Manure.  
F00XXXX

Licensee Name  
Address  
City, State and Zip

Net Weight – 25 lbs.

**Note: The percentage of Water Insoluble Nitrogen is guaranteed at least 60% of the Total Nitrogen. Therefore, ORGANIC may be used in the labeling or advertisement of fertilizer.**

## Label options not meeting “Organic Fertilizer” requirements:

Fertilizer products that contain less than 60% of the Total Nitrogen as water insoluble nitrogen may advertise to be suitable for Organic Farming or suitable for Organic Production without stating the product is organic fertilizer. This would be considered an Organic Input Product in accordance with the AAPFCO Association of American Plant Food Control Publication, No. 68.

If the products are consistent with the rules of the National Organic Program (NOP) and are intended for use as organic inputs may make statements on the product label that affirm that the product is in accord NOP rules, such as “**suitable for organic farming,**” “**acceptable for use in organic production,**” or “**meets the National Organic Program requirements for organic production.**”

Fertilizer products not meeting this criterion may make statements on the label in accordance with AAPFCO Labeling of Organic Input as indicated in AAPFCO Statement of Uniform Interpretation of Policy #28.

Organic input products that have been recognized as consistent with the rules of NOP by an NOP Accredited Certifying Agency (ACA), may use the logos issued by these agencies, such as OMRI (Organic Materials Review Institute), state organic programs, or other recognized certifying agencies or organic input listing services, may use the logos supplied by these agencies. Such statements are exempt from requirements pertaining to organic labeling under the fertilizer law (AAPFCO Statement of Uniform Interpretation of Policy #28)

## Label example of an “Organic Input Product”?

<b>All Natural Bluebird Fertilizer</b>	
<b>*SUITABLE FOR ORGANIC PRODUCTION*</b> <b>*SUITABLE FOR ORGANIC FARMING*</b>	
12-4-9	
<b>GUARANTEED ANALYSIS</b>	
Total Nitrogen (N).....	12%
5.50 % Water Soluble Nitrogen	
6.50 % Water Insoluble Nitrogen	
Available Phosphate (P <sub>2</sub> O <sub>5</sub> ).....	4%
Soluble Potash (K <sub>2</sub> O).....	9%
Derived from: Biosolids, Feather Meal and Poultry Manure. F00XXXX	
Licensee Name, Address, City, State and Zip	Net Weight – 25 lbs.

## What are Liming Materials?

Liming material is a soil additive made from crushed limestone dug out of the ground. The primary ingredient in liming materials is Calcium carbonate as ( $\text{CaCO}_3$ ) and Magnesium carbonate ( $\text{MgCO}_3$ ). It depends if the material is calcitic limestone or dolomitic limestone.

The primary purpose of lime is to correct the high levels of acidity in soil. The quality of the limestone is dependent on how finely the stone is ground and the amount of Calcium Carbonate as ( $\text{CaCO}_3$ ) and Magnesium Carbonate ( $\text{MgCO}_3$ ) in the material. In accordance with Rule 5E-1.001 FAC, Liming materials are guaranteed by various categories depending on the chemical makeup of the materials.

## What are the minimum guarantees for Liming Materials?

### Liming Material Categories With Minimum Guarantees:

Standard liming material shall have a minimum neutralizing value of 90% calcium carbonate equivalence (CCE), classified as follows:

**Standard Calcitic Liming Material:** contain a minimum of 86% calcium carbonate expressed as  $\text{CaCO}_3$ . Any additional CCE required to meet the minimum 90% shall be magnesium carbonate expressed as  $\text{MgCO}_3$ .

**Standard Dolomitic Liming Material:** contain a minimum of 36% magnesium carbonate expressed as  $\text{MgCO}_3$ . Any additional CCE required to meet the minimum 90% shall be calcium carbonate expressed as  $\text{CaCO}_3$ .

**Standard Calcium-Magnesium Liming Materials:** those materials not meeting the above specifications, but with a minimum of 90% CCE derived from calcium carbonate and magnesium carbonate, expressed as  $\text{CaCO}_3$ , and  $\text{MgCO}_3$ .

**Liming Material Not Qualifying as "Standard":** a minimum neutralizing value of 75% calcium carbonate equivalence (CCE), classified as follows:

**Calcitic Liming Material:** contain a minimum of 70% calcium expressed as  $\text{CaCO}_3$ . Any additional CCE required to meet the minimum 75% shall be magnesium expressed as  $\text{MgCO}_3$ .

**Dolomitic Liming Material:** contain a minimum of 30% magnesium expressed as  $\text{MgCO}_3$ . Any additional CCE required to meet the minimum 75% shall be calcium expressed as  $\text{CaCO}_3$ .

**Calcium-Magnesium Liming Materials** shall be those not meeting the above specifications, but with a minimum of 75% CCE derived from calcium and magnesium, expressed as  $\text{CaCO}_3$  and  $\text{MgCO}_3$ . All liming materials shall bear on the application for specialty registration, labeling, and any advertising, the statements:

“Neutralizing value \_\_\_% calcium carbonate equivalence.”

“This product requires \_\_\_ tons (pounds) to be equal to one ton of standard liming material.”

Hydrated lime shall contain a minimum of 90% calcium hydroxide.

**Particle Size** :Calcitic and dolomitic limestones, except pelletized fertilizer, shall be ground so that:

Not less than 90% passes an 8 mesh sieve.

Not less than 80% passes a 20 mesh sieve.

Not less than 50% passes a 50 mesh sieve.

**Moisture Content** : Calcitic and dolomitic limestones shall contain a maximum of 15% moisture.

### What is Gypsum and the minimum guarantees?

Gypsum is a soft sulfate mineral composed of calcium sulfate. The guarantee on a Gypsum product label is the amount of calcium sulphate content without the two molecules of water. Gypsum, calcium sulphate, or land plaster shall contain a minimum of 60% calcium sulphate expressed as  $CaSO_4$ .

To ease product distribution interstate, Florida would permit the label guarantees to be expressed as Calcium sulfate ( $CaSO_4$ ) and Calcium sulfate dehydrate ( $CaSO_4 \cdot 2H_2O$ ).

### How to label Gypsum?

<b>BLUEBIRD GYPSUM</b>	
Calcium Sulfate ( $CaSO_4$ ) .....	___%
Derived from: Gypsum	
FXXXX	
Guaranteed By:	
Licensee Name Address	
City, State and Zip	

### LOW Analysis Fertilizer

The term “low analysis fertilizer” shall apply to fertilizer which contains less than 16% total primary

plant nutrients Nitrogen, Phosphate and Potash added together.

The label of any low analysis fertilizer shall contain the grade in close proximity to the product name, e.g., "African Violet Plant Food 2-1-1".

Low analysis mixed fertilizer containing less than 5% total primary plant nutrients may be guaranteed in other than whole percentages; however, each primary plant nutrient claimed shall be no less than 0.5%.

There are no minimum primary plant nutrient guarantees for ready-to-use spray fertilizer products. Potting soils and mulch products for above ground use may be guaranteed in other than whole percentages. There are no minimum NPK guarantees for potting soils plus fertilizer, mulch plus fertilizer, growing medium (soil) plus fertilizer.

## **Pesticide in fertilizer**

### **Pesticides authorized for blending with fertilizer**

Any pesticide registered with the department and the United States Environmental Protection Agency shall be authorized, subject to the conditions set forth in Chapter 5E-1.007 FAC, for blending with a fertilizer provided blending with a fertilizer is not prohibited in the labeling of the pesticide. The blending of more than one pesticide in fertilizer shall be authorized, provided the label of one or more of the pesticides does not prohibit the blending of the pesticide with another pesticide.

## **Establishment registration**

Each manufacturing establishment in Florida producing fertilizer-pesticide blends shall be registered with the United States Environmental Protection Agency according to Section 7, Federal Insecticide, Fungicide and Rodenticide Act (1988). Custom blenders providing the service of mixing pesticides to a customer's specifications are excluded from this requirement.

## **Classification and definition of fertilizer- pesticide blends**

**Inventoried Blend** means a fertilizer-pesticide mixture manufactured, packaged and held for future sale. Inventoried blends shall be registered with the United States Environmental Protection Agency as a pesticide product and with the department as both a fertilizer and a pesticide product before being manufactured for sale, offered for sale or sold in the state.



These mixtures shall be packaged in containers so fabricated as to prevent leakage or dusting when shipped, stored or handled.

**Custom Blend** means a fertilizer-pesticide mixture manufactured at the request of and to the specifications of a purchaser, for his immediate and exclusive use. These blends shall not be offered for sale or sold by the purchaser. The manufacturer of custom blends shall require the signature of the exclusive purchaser or his agent on the manufacturer's order or delivery form for a custom blend.

### **Labeling requirements**

Custom blends – The label of a custom blend shall have, in addition to the requirements set forth in Rule 5E-1.003, F.A.C., the following information:

Name of the pesticide.

Guarantee of the actual pesticide contained in the blend, expressed as percent by weight.

Pounds of active ingredient per ton.

The Words **“CAUTION – CONTAINS PESTICIDE”** conspicuously on the face of the tag in bold red lettering. Custom blends transported in bulk shall be accompanied by no less than 2 labels which are attached to the delivery ticket and shall be furnished the purchaser at time of delivery. Blends containing restricted use pesticides defined in Chapter 487, Florida Statutes, shall be manufactured only for a consumer licensed to purchase and use restricted use pesticides.

Inventoried blends – The labeling requirements shall be those required for registration of the product in Florida and with the United States Environmental Protection Agency's, regulations, 40 C.F.R. § 156 (1991), which shall include but shall not be limited to all required guarantees, caution statements, signal words, directions for use, registration numbers, establishment numbers, guarantor identification and use classification (general or restricted), if appropriate.

### **Information required to be furnished a purchaser of custom blends**

In addition to the label, each purchaser of a custom blend shall be furnished at time of delivery:

A copy of the label of the pesticide used in the blend.

Directions for application which are calculated by the manufacturer so that the application rate of the pesticidal component per acre is equivalent to the application rate per acre recommended in the label of the pesticide used. Blends containing more than one pesticide shall be blended and have directions for application which result in an application rate per acre equivalent to the label recommendation for each pesticidal component.

### **Transportation requirements**

#### **Bulk or open bags.**

The transport vehicle shall have a tight-fitting body with a well-fitted tarpaulin or other suitable cover to prevent spillage, dusting or loss of the blend en route to its destination.

The transport vehicle shall have attached to each side of the vehicle a placard in accordance with section 49 CFR.

MATERIALS. The following materials are hereby incorporated by reference. These materials may be obtained from the Division of Agricultural Environmental Services, Bureau of Inspection and Incident report, 3125 Conner Boulevard, Tallahassee, Florida 32399-1650, (850) 617-7996

(a) 40 C.F.R. § 156 (1991).

(b) Federal Insecticide, Fungicide and Rodenticide Act, § 7 (1988).

## **Reporting fertilizer tonnage and paying inspection fees**

Once the Licensee receives their login credential's and fertilizer license certificate, they will be required to report their quarterly tonnage sales online using Florida's Fertilizer Regulatory Database and pay the required tonnage fees in accordance with Section 576.041 FS, 576.045 (2) and Rule 5E-1.012 FAC. Instructions may be obtained thru the Bureau of Licensing and Enforcement, Fertilizer Section at (850) 617-7860.

### **“Report Quarterly Tonnage Sales”**

This report is associated with the inspection fees paid to the state on all tonnage sales distributed in Florida. If the licensee sells less than 1 ton during the reporting period, they submit a zero tonnage report denoting no sales.

### **“Report Monthly Tonnage Details”**

The monthly tonnage details report captures the fertilizer sold in bag, bulk, liquid, farm and non-farm. If the licensee sells less than 1 ton during the reporting period, they submit a zero tonnage report denoting no sales.

## **Inspection (Tonnage) fees**

All registered Fertilizer Licensees will pay to the department an inspection fee in the amount of \$1 per ton for fertilizer sold in the state. If the same fertilizer contains Nitrogen or Phosphate, the licensee will pay an additional \$0.50 cents per ton.

Raw ground phosphate rock, soft phosphate, colloidal phosphate, phosphatic clays and all other untreated phosphatic materials, gypsum, hydrated lime, limestone, and dolomite when sold or used for agricultural purposes, the inspection fee shall be 30 cents per ton. It is the licensee's responsibility to maintain records and a bookkeeping system that will accurately indicate the tonnage of fertilizer sold in Florida.

## **Tonnage reporting penalties**

Quarterly tonnage reports and fees must be processed within 30 days after the close of the reporting period for the preceding quarter's sales. If a licensee fails to meet this statutory timeline, the penalty is 1.5 percent for each month or part of a month that the fee or portion of the fee is not paid.

If the report is not filed and the inspection fee is not paid on the date due, or if the report of tonnage is false, the amount of the inspection fee due is subject to a penalty of 10 percent or \$25, whichever is greater.

## **UNDERSTANDING FLORIDA'S URBAN TURF RULE 5E-1.003(2)**



Florida's Urban Turf Rule was adopted in December of 2007 to regulate fertilizer products labeled for Lawns or Turf. The purpose of the rule was to reduce the amount of nitrogen and phosphate in fertilizers applied to homeowner lawns.

On January 8, 2015, the Department adopted changes to the statewide Urban Turf Fertilizer Rule 5E-1.003 F.A.C. The changes were in response to the culmination of 8 years of turf

research conducted by the University of Florida, Institute of Food and Agricultural Sciences turf scientists. This research was funded by the Florida Department of Environmental Protection.

There are specific labeling requirements for Specialty Fertilizer labeled for lawns and turf. "Specialty Fertilizer" is fertilizer packaged in 49 pounds or less and distributed for home & garden use.

## **URBAN TURF LABELING REQUIREMENTS:**

These labeling requirements are applicable to only Specialty Fertilizer that is registered with the Department labeled for Lawns and Turf. These labeling requirements are not applicable to non-specialty fertilizer such as Professional Lawn Care, Golf Courses and Athletic Fields.

**The Nitrogen Content:** Nitrogen shall not be applied at an application rate greater than 0.7 lbs of readily available nitrogen per 1000 sq. ft. at any one time based on the soluble fraction of formulated fertilizer.

Not more than 2 lbs. of total nitrogen per 1000 sq. ft. per application may be applied during the spring or summer.

Not more than 1 lb total nitrogen per 1000 sq. ft. per application may be applied during the fall or winter. No application of nitrogen in the winter months in North Florida.

If a total controlled release product is applied, not more than 35 percent of the nitrogen in the controlled release fertilizer can be released within the first 7 days after application.

**The Phosphate Content:** Fertilizers labeled as low phosphate shall have use directions that do not exceed an application rate of 0.25 lbs  $P_2O_5$ /1000 sq. ft. and not to exceed 0.50 lbs  $P_2O_5$ /1000 sq. ft. per year.

**Starter Fertilizer:** Fertilizers labeled as, or formulated for use as, starter fertilizer shall have use directions that do not exceed an application rate of 1.0 lb of P<sub>2</sub>O<sub>5</sub>/1,000 sq. ft. and that subsequent applications shall be made with products meeting the definition of Low or No Phosphate fertilizers. The term “starter fertilizer” shall be part of the brand name.

**Caution Statement:** This language should appear conspicuously on bags of fertilizer sold at retail and is not applicable to liquid fertilizer. If the product is a fertilizer-pesticide mixture, the EPA Caution/Warning statement supersedes this requirement.

“Apply only to actively growing turf. Do not apply near water, storm drains or drainage ditches. Do not apply if heavy rain is expected. Apply this product only to your lawn, and sweep any product that lands in the driveway, sidewalk, or street, back onto your lawn. Check with your local Cooperative Extension Agency to obtain specific information on local turf best management practices. Check with your county or city government to determine if there are local regulations for fertilizer use.”

**Rates:** The coverage area per container or bag should be displayed prominently on the Front of the container or bag. Examples: This product covers 5000 square feet; this bag feeds 4,000 sq. ft.

**Existing Stock:** Licensees are permitted to sell or distribute products that do not meet the label requirements of the rule for one and one-half years after the effective date of January 8, 2015 which is July 1, 2016. Products at the retail level on or after the effective date of the rule are permitted to be offered for sale.

Annual Fertilization Guidelines for Established Turfgrass Lawns in Three Regions of Florida					
Nitrogen Recommendations (lbs N per 1000 sq. ft)*					
Species	Bahiagrass	Bermuda	Centipede	St. Augustine	Zoysia
North*					
Timing of Application :	Only Apply to Actively Growing Turf				
	Maximum Pounds N per Application				
Spring or Summer	2	2	2	2	2
Fall	1	1	1	1	1
Maximum Annual Pounds	2-3	3-5	1-2	2-4	2-3
Central*					
Timing of Application	Only Apply to Actively Growing Turf				
	Maximum Pounds N per Application				
Spring or Summer	2	2	2	2	2
Fall or Winter	1	1	1	1	1
Maximum Annual Pounds	2-4	4-6	2-3	2-5	2-4
South*					
Timing of Application	Only Apply to Actively Growing Turf				
	Maximum Pounds N per Application				
Spring or Summer	2	2	2	2	2
Fall or Winter	1	1	1	1	1
Maximum Annual Pounds	2-4	5-7	2-3	4-6	2.5-4.5
*North Florida is defined as north of a line extending from Cedar Key to Daytona Beach. Central Florida is defined as south of the line extending from Cedar Key to Daytona Beach to a line extending from Tampa to Vero Beach. South Florida includes the remaining southern portion of the state.					

## Part 2 - Fertilizer License Requirements

Who is required to obtain a Fertilizer License?

Any person or company who distributes fertilizer in Florida and whose name and address appears on the label as the guarantor is responsible for obtaining a license. A license is not required if that person or company sells the fertilizer only to an importer, manufacturer or other licensee.

The cost for obtaining a fertilizer license is \$200 and must be renewed annually. All licenses expire on June 30<sup>th</sup> of each year. For companies that obtain a license for less than a full year, there is no provision for a prorated license fee.

### Reporting Fertilizer Tonnage

Licensees are required to report sales of fertilizer to the department on a monthly basis. The fees associated with tonnage reporting (inspection fees) are \$1.00 per ton of fertilizer sold in the state and an additional \$0.50 per ton if the fertilizer contains nitrogen or phosphorous. For materials such as raw ground phosphate rock, soft phosphate, colloidal phosphate, phosphatic clays and all other untreated phosphatic materials such as gypsum, hydrated lime, limestone and dolomite, the fee is \$0.30 per ton when they are sold or used for agricultural purposes. If tonnage reports and the associated fees are not received by the 15<sup>th</sup> of each month, a late penalty fee of \$25 or 10% whichever is greater, will be assessed. In addition to the inspection fee penalty, a penalty of 1.5 % will be assessed for each part of the month that the fee or portion of the fee is not paid.

A zero tonnage report shall be submitted even when there are no sales. Non-reporting will result in a late penalty fee.

If a month's sales do not exceed one ton, a zero report will be made by the Licensee for that month's tonnage. The unreported tonnage, less than one ton, shall be combined with subsequent months' tonnages until such time as the cumulative total exceeds one ton at which time it shall be reported on the next month's report.

## **Fertilizer sample Inspections and penalty assessments**

### Fertilizer sample inspections

The Department is responsible for the collection and analysis of fertilizer samples to determine compliance with label guarantees and state standards. The objective of collecting samples for analysis is to ensure consumers receive quality products, and provide a level playing field for all fertilizer licensees doing business in the State of Florida.

Routine inspections are performed at bulk fertilizer plants, dealers' and at the consumer level to effectively regulate the overall fertilizer industry. Each fiscal year, field staff collects an average of 3,000 fertilizer samples to be analyzed by the Bureau of Agricultural Environmental Laboratories. On the average 600 samples are found deficient in one or more nutrients guaranteed on the tag or label.

### Fertilizer penalty assessment

When a fertilizer sample is deficient, the purchaser of the fertilizer is entitled to compensation for the deficiency found in the nutrients guaranteed by the licensee. The penalty assessment is at the rate of three times the commercial value times three times the tonnage represented by the

sample. Within 60 days from the date of issuance of a fertilizer analysis report from the department and the notice of penalties assessed under the provisions of the Florida Commercial Fertilizer Law, the licensee shall make payment in full to the consumer, in cash, or by credit memo if and to the extent the consumer is indebted to the licensee.

If the licensee desires to challenge the state of Florida findings by analysis, and want an analysis of the official check sample by a referee chemist; the 60-day settlement will be temporarily suspended pending a final determination. Once the final and binding analysis has been established, it shall be the responsibility of the Department to determine the amount of penalty, if any, due to the consumer and notify the licensee and consumer of the final determination.

## **FERTILIZER SAMPLE - REFEREE REQUEST**

When the Department has reported that a fertilizer sample does not comply with the guaranteed plant nutrients listed on the label in accordance with Chapter 576.051 FS, the licensee has the right to request a referee sample and contest the Department's findings. A written request must be filed within 60 days from the date of the fertilizer analysis report, with Ms. Patricia A. Lucas, Chief, Bureau of Agricultural Environmental Laboratories, 3125 Conner Boulevard, Building #7, Tallahassee, Florida 32399-1650, Tel: (850) 617-7830. Unless a request for a referee sample is received by the Department within the 60-day period, the right to the referee sample shall be deemed waived and the Department will dispose of this matter in accordance with Chapter 576, Florida Statutes.

Section 576.051(3), Florida Statutes, states in part that the Department, before making the official sample analysis shall take a sufficient portion from the official sample for check analysis and place that portion in a bottle sealed and identified by number, date and preparer's initials. The official check sample shall be kept until the analysis of the official sample is completed. If the official analysis does not conform with the provisions of this law, the official check sample shall be retained for a period of 60 days from the date of the fertilizer analysis report of the official sample.

The licensee of the fertilizer from whom the official sample was taken may make a written demand for analysis of the official check sample by a referee chemist who is mutually acceptable to the Department and the licensee with such analysis at the expense of the licensee. The referee chemist, upon completion of the analysis, shall forward to the Department and to the licensee a fertilizer analysis report bearing a proper identification mark or number; and the fertilizer analysis report shall be verified by an affidavit of the person making the analysis. If the results reported on the fertilizer analysis report agree within the matching criteria defined in department rule with the department's analysis on each element for which analysis was made, the mean average of the two analyses shall be accepted as final and binding on all concerned. However, if the referee's fertilizer analysis report results do not agree within the matching criteria defined in department rule with the department's analysis in any one or more elements for which an analysis was made, upon demand of either the department or the licensee from whom the official sample was taken, a portion of the official check sample sufficient for analysis shall be submitted to a second referee chemist who is mutually acceptable to the department and to the licensee from whom the official sample was taken, at the expense of the party or parties requesting the referee analysis. If no demand is made for an analysis by a second referee chemist, the department's fertilizer analysis report shall be accepted as final and binding on all concerned. The second referee chemist, upon completion of the analysis, shall



make a fertilizer analysis report as provided in this subsection for the first referee chemist. The mean average of the two analyses nearest in conformity to each other shall be accepted as final and binding on all concerned.

## **SUBSTITUTE LABELING**

Fertilizer Licensees occasionally make mistakes on their guaranteed analysis tags/labels accompanying a load of fertilizer to the customer purchasing the fertilizer. When this occurs, the licensee may provide the department a substitute label to replace the original label with revised nutrient guarantees that accompanied the lot of fertilizer sampled. The following criteria must be met to provide a substitute label.

Such labels and pertinent documents are submitted to the department within 21 days of the date of issuance of the fertilizer analysis report and a review of those documents confirms that a labeling error has occurred. Pertinent documents may include the customer order, batch sheets, delivery tickets, invoices, analysis tags and registrations. Provided further that the affected consumer agrees in writing to accept the proposed substitute labels within 15 days of date of notice by the department. In the event the consumer fails to accept the substitute labels as provided herein, the official fertilizer analysis report shall be based upon the original labels as furnished to the consumer with the delivery.

If one or more consumers who have shared in the purchase of a lot of fertilizer declines to accept substitute labeling, or part of a lot of fertilizer has been sold to purchasers not identified, the department may issue two fertilizer analysis reports. Each report will represent proportionate amounts of the lot based on the original and substitute labeling. The original official sample shall be the basis for both fertilizer analysis reports.

When a corrected fertilizer analysis report does not require additional analyses to be reported, the date of the report shall be the same as the date of the original report. When acceptance of substitute labeling requires additional analyses to be reported, the date of the fertilizer analysis report shall be the date of completion of the additional analyses.

## **WHAT IS A CERTIFIED NET WEIGHT**

Bulk fertilizers shipped in Florida are required to have accompanied the shipment with a certified net weight. This requirement is in Rule 5E-1.1.019 FAC.

As stated, the term "certified net weight" means the net weight of a bulk lot of fertilizer determined

by weighing the transport vehicle or container on a weighing system which meets the requirements of the department, as specified in Rule 5F-5.001, F.A.C. In the case of fluid fertilizer, the container may be one from which the product is dispensed directly into the delivery vehicle. If portions of a bulk lot of fertilizer are sold by a dealer other than the registrant, the weights of those portions may be determined by means other than weighing the transport vehicle or container, provided the consumer is willing to accept such weight.

A certified net weight ticket shall be attached to and become a part of the required delivery documents. In the case of fluid fertilizer, the container may be one from which the product is dispensed directly into the delivery vehicle.

## **WHAT IS A CONSUMER REQUEST SAMPLE?**

Consumers purchasing fertilizer in the State of Florida may request the Department to sample their fertilizer purchased and verify the nutrient content guaranteed by the licensee. The protocol is for the consumer to contact the Bureau of Inspection and Incident Response, Tel: (850) 617- 7996 and provide the pertinent manufacturing information, delivery time and name of fertilizer facility needed to arrange for an inspection.

Rule 5E-1.009 Sampling states:

A consumer is defined as an individual, a corporate entity, or a distinct farming operation. Each consumer shall be entitled to request samples sufficient to represent up to 250 tons during each July 1 to June 30 period, without payment of a fee. A consumer who purchases in excess of 250 tons shall be subject to the payment fee provided below. Each sample found deficient shall entitle a consumer to an additional request sample without fee payment.

A consumer requesting samples in addition to those provided for above, shall pay to the department a fee of one hundred fifty dollars per sample, to be deposited in the General Inspection Trust Fund.

The departments response to consumer request samples shall be contingent upon its capability to effectively regulate the overall fertilizer market.

Once the sample is collected, it will be shipped to the Bureau Of Agricultural Environmental Laboratories to be analyzed. The consumer will receive the results within 30 days after the analyses has been completed.

## **WHO TO CONTACT FOR METHODS OF ANALYSES?**

All methods of analyses shall be those in the State of Florida, Department of Agriculture and Consumer Services, Fertilizer Laboratory Methods Manual, (Eff. 5/20/03), which is hereby incorporated by reference. Copies may be obtained from the Division of Agricultural

Environmental Services, Bureau of Agricultural Environmental Laboratories,  
Tel: (850) 617-7830, 3125 Conner Boulevard, Building 7, Tallahassee, Florida 32399-1650.

## WHO TO CONTACT FOR COMMERCIAL FERTILIZER TEST?

### 5E-1.024 Commercial Fertilizer Tests.

(1) The department will perform, upon request, laboratory assays of fertilizers when the Division of Agricultural Environmental Services determines the requested assay will not interfere with the prescribed duties of the department. Fertilizers submitted for analyses shall be accompanied by a completed form entitled, "Florida Commercial Fertilizer Collection Form (FDACS-13409, Rev. 10/13), which is hereby adopted and incorporated by reference and available online at <http://www.flrules.org/Gateway/reference.asp?No=Ref-03361>. Requested assays will be completed upon payment of the charges listed below:

(2) Assay	Fee
(a) Total Nitrogen	50.00
(b) Nitrate Nitrogen	10.00
(c) Ammoniacal Nitrogen	10.00
(d) Water Soluble Nitrogen	10.00
(e) Water Insoluble Nitrogen	34.00
(f) Available Phosphorus ( $P_2O_5$ )	40.00
(g) Total Phosphorus ( $P_2O_5$ )	45.00
(h) Soluble Potassium	34.00
(i) Chlorine	34.00
(j) Total Magnesium	34.00
(k) Water Soluble Magnesium	34.00
(l) Total Manganese	44.00
(m) Soluble Manganese	25.00
(n) Chelated Manganese	34.00
(o) Total Copper	44.00
(p) Soluble Copper	25.00
(q) Chelated Copper	34.00
(r) Total Iron	44.00
(s) Soluble Iron	25.00
(t) Chelated Iron	34.00
(u) Total Zinc	44.00
(v) Soluble Zinc	25.00
(w) Chelated Zinc	34.00
(x) Aluminum	44.00
(y) Boron	34.00
(z) Calcium	44.00
(aa) Cobalt	44.00
(bb) Molybdenum	44.00
(cc) Sulfur (combined)	50.00
(dd) Sulfur (free)	75.00
(ee) Non-Nutritive Metals (Pass/Fail Florida Standard)	50.00
(ff) Non-Nutritive Metals (Reported in ppm)	100.00
(gg) Moisture	25.00
(hh) Calcium Carbonate	50.00
(ii) Calcium Sulfate	50.00

(jj) Magnesium Carbonate

50.00

**Appendix A:**

**LABELING MIXED FERTILIZER AND/OR FERTILIZER MATERIALS**

Brand Name  
Grade  
Guaranteed Analysis:

\*\*Total Nitrogen (N)..... \_\_\_\_%

\_\_\_\_% Nitrate Nitrogen

\_\_\_\_% Ammoniacal Nitrogen

\_\_\_\_% Water Soluble Nitrogen

\_\_\_\_% Urea Nitrogen

\_\_\_\_% Water Insoluble Nitrogen

Available Phosphate as ( $P_2O_5$ )..... \_\_\_\_%

Soluble Potassium as ( $K_2O$ ) ..... \_\_\_\_%

Chlorine, Not more than ..... \_\_\_\_%

Magnesium as (Mg) ..... \_\_\_\_%

\_\_\_\_% Water Soluble Magnesium (Mg)

\_\_\_\_% Chelated Magnesium (Mg)

Manganese as (Mn) ..... \_\_\_\_%

\_\_\_\_% Soluble Manganese (Mn)

\_\_\_\_% Chelated Manganese

Copper as (Cu) ..... \_\_\_\_%

\_\_\_\_% Soluble Copper (Cu)

\_\_\_\_% Chelated Copper

Sulfur as (S)..... \_\_\_\_%

\_\_\_\_% Combined Sulfur (S)

\_\_\_\_% Free Sulfur (S)

Iron as (Fe) ..... \_\_\_\_%

\_\_\_\_% Soluble Iron (Fe)

\_\_\_\_% Chelated Iron (Fe)

Zinc as(Zn)..... \_\_\_\_%

\_\_\_\_% Soluble Zinc (Zn)

\_\_\_\_% Chelated Zinc

Derived From: PLANT FOOD SOURCE MATERIALS GO HERE

\*\* This product contains \_\_\_\_\_ % slow or controlled release nitrogen.

FXXXX

## LABELING SECONDARY AND MICRO PLANT NUTRIENT MIXTURE

Brand Name

Guaranteed Analysis:

Magnesium as (Mg) ..... \_\_\_\_%

\_\_\_\_% Water Soluble Magnesium (Mg)

\_\_\_\_% Chelated Magnesium (Mg)

Manganese as (Mn) ..... \_\_\_\_%

\_\_\_\_% Soluble Manganese (Mn)

\_\_\_\_% Chelated Manganese

Copper as (Cu) ..... \_\_\_\_%

\_\_\_\_% Soluble Copper (Cu)

\_\_\_\_% Chelated Copper

Sulfur as (S) ..... \_\_\_\_%

\_\_\_\_% Combined Sulfur (S)

\_\_\_\_% Free Sulfur (S)

Iron as (Fe) ..... \_\_\_\_%

\_\_\_\_% Soluble Iron (Fe)

\_\_\_\_% Chelated Iron (Fe)

Zinc as (Zn) ..... \_\_\_\_%

\_\_\_\_% Soluble Zinc (Zn)

\_\_\_\_% Chelated Zinc

Derived from: (List actual materials used, e.g. Copper Sulfate, Copper Oxide, Copper EDTA, Manganese Sulfate, Manganese Oxide, Manganese HEDTA, etc.

FXXXX

**BASIC SLAG, OPEN HEARTH SLAG. SYNTHETIC OR OTHER FORMS OF SLAG FOR AGRICULTURAL PURPOSES**

BRAND NAME

Guaranteed Analysis:

Available Phosphorus as (P<sub>2</sub>O<sub>5</sub>) ..... \_\_\_%

Phosphorus as (P<sub>2</sub>O<sub>5</sub>) ..... \_\_\_%

Magnesium as (Mg) ..... \_\_\_%

\_\_\_% Water Soluble Magnesium (Mg)

\_\_\_% Chelated Magnesium (Mg)

Manganese as (Mn) ..... \_\_\_%

\_\_\_% Soluble Manganese (Mn)

Copper as (Cu) ..... \_\_\_%

\_\_\_% Soluble Copper (Cu)

Sulfur as (S) ..... \_\_\_%

\_\_\_% Combined Sulfur (S)

\_\_\_% Free Sulfur (S)

Iron as (Fe) ..... \_\_\_%

\_\_\_% Soluble Iron (Fe)

Zinc as (Zn) ..... \_\_\_%

\_\_\_% Soluble Zinc (Zn)

Degree of fineness (passing \_\_\_ Mesh) ..... \_\_\_%

Chlorine, not more than ..... \_\_\_%

Derived from: Derived from: (The actual materials from which the above guarantees are determined must be shown, e.g.: Basic Slag, Manganese Sulfate, etc.)

FXXXX

**LABELING SECONDARY PLANT NUTRIENT**

NAME OF MATERIAL OR  
BRAND NAME  
Name and Address of Registrant  
Net Weight  
Guaranteed Analysis:

Total Magnesium as (Mg) ..... \_\_\_\_%  
\_\_\_\_% Water Soluble Magnesium (Mg)

Derived from: (Name actual material, e.g. Magnesium Sulfate and Magnesium Oxide)

FXXXX

**GROUND PHOSPHATE ROCK**

Guaranteed Analysis:

Available Phosphorus as( $P_2O_5$ ) ..... \_\_\_\_%

Phosphorus as ( $P_2O_5$ ) ..... \_\_\_\_%

Degree of Fineness (Passing \_\_\_\_\_ Mesh) ..... \_\_\_\_%

FXXXX

**LABELING CALCITIC LIMING MATERIAL**

BRAND NAME

Guaranteed Analysis:

Calcium as ( $CaCO_3$ ) ..... \_\_\_\_%

Calcium Carbonate Equivalence ..... %

Passing 8 mesh sieve, not less than ..... \_\_\_\_%

Passing 20 mesh sieve, not less than ..... \_\_\_\_%

Passing 50 mesh sieve, not less than ..... \_\_\_\_%

Moisture, not more than ..... \_\_\_\_%

This product requires \_\_\_\_\_ lbs. to be equal to 1 ton of standard liming material.

FXXXX



**CALCULATION FOR LBS = TO (1) ONE TON STANDARD LIMING MATERIAL**

In order to obtain how many pounds = to (1) one ton of standard liming material, use the formula below:

$$\frac{2000 \times 90}{\text{CCE}} = 180,000 \text{ (pounds equal to one ton std. liming material)}$$

To calculate Calcium Carbonate Equivalence:

(1) Multiply magnesium carbonate by 1.19, and then add calcium carbonate (CaCO<sub>3</sub>)

**LABELING DOLOMITE LIMING MATERIAL**

BRAND NAME

Guaranteed Analysis:

Calcium as (CaCO<sub>3</sub>) ..... %

Magnesium as (MgCO<sub>3</sub>) ..... %

Calcium Carbonate Equivalence ..... %

Passing 8 mesh sieve, not less than ..... %

Passing 20 mesh sieve, not less than ..... %

Passing 50 mesh sieve, not less than ..... %

Moisture, not more than ..... %

This product requires \_\_\_\_\_ lbs. to be equal to 1 ton of standard liming material.

FXXXX

**5.17 LABELING GYPSUM, CALCIUM SULFATE, LAND PLASTER**

**GYPSUM**

Guaranteed Analysis:

Calcium Sulfate ( $\text{CaSO}_4$ ) ..... %  
Derived from: Gypsum

**LABELING CALCIUM HYDROXIDE**

BRAND NAME

GUARANTEED ANALYSIS:

Calcium Hydroxide ( $\text{Ca}(\text{OH})_2$ ) ..... %  
Derived from: Hydrated Lime.

**LABELING COTTONSEED MEAL**

BRAND NAME

Guaranteed Analysis:

Total Nitrogen (N) ..... %  
\_\_\_% Water Soluble Nitrogen  
\_\_\_% Water Insoluble Nitrogen  
Available Phosphate as ( $\text{P}_2\text{O}_5$ ) ..... %  
Soluble Potassium as ( $\text{K}_2\text{O}$ ) ..... %

Derived From: Cottonseed Meal

FXXXX

**LABELING SOIL CONDITIONERS, SOIL ADDITIVES OR SOIL AMENDMENTS**

BRAND NAME

Guaranteed Analysis:

SOIL AMENDING INGREDIENTS:

NAME OF INGREDIENT..... %

(Identify and list all soil amending ingredients)

TOTAL OTHER INGREDIENTS..... %

FXXXX

PURPOSE OF PRODUCT:

DIRECTIONS FOR APPLICATION:

**LABELING MANURE PRODUCTS**

Brand Name

Grade

Guaranteed Analysis:

Total Nitrogen (N) ..... %

\_\_\_% Ammoniacal Nitrogen

\_\_\_% Water Soluble Nitrogen

\_\_\_% Water Insoluble Nitrogen

Available Phosphate as (P<sub>2</sub>O<sub>5</sub>) ..... %

Soluble Potassium as (K<sub>2</sub>O) ..... %

Chlorine, Not more than ..... %

Derived From: Cow Manure, Horse Manure, Chicken Manure

FXXXX

## LABELING MICRONUTRIENTS

### IRON, ZINC, COPPER, MAGNESIUM & MANGANESE

#### LABEL EXAMPLE WHEN THE FORMULATION CONTAINS INSOLUBLE AND SOLUBLE SOURCE MATERIALS:

Manganese (Mn).....2.13%  
2.00% Water Soluble Manganese (Mn)  
Derived From: Manganese Oxide, Manganese Sulfate

or

Manganese (Mn).....2.13%  
2.00% Water Soluble Manganese (Mn)  
Derived From: Manganese Oxide, Manganese Sulfate

In this case, the “Total” will always be guaranteed higher than the “Soluble” and/or “Water Soluble guarantee”. “Total” may be expressed without denoting the Total in front of the element.

#### LABEL EXAMPLE WHEN THE FORMULATION CONTAINS SOLUBLE SOURCE MATERIALS:

Manganese (Mn) .....2.00%  
2.00% Water Soluble Manganese (Mn)  
Derived From: Manganese Sulfate

Or

Manganese (Mn) .....2.00%  
2.00% Water Soluble Manganese (Mn)  
Derived From: Manganese Sulfate

Or

Water Soluble Manganese (Mn).....2.00%  
Derived From: Manganese Sulfate

In this case, the Total and Water Soluble elements must be guaranteed the same.

**LABEL EXAMPLE WHEN THE FORMULATION CONTAINS INSOLUBLE SOURCE MATERIALS:**

Manganese (Mn) .....2.00%  
Derived From: Manganese Oxide  
Or

Manganese (Mn).....2.00%  
Derived From: Manganese Oxide

**LABEL EXAMPLE WHEN THE FORMULATION CONTAINS CHELATING AGENT SOURCE MATERIALS:**

Manganese (Mn).....1.00%  
1.00% Chelated Manganese (Mn)  
Derived From: Manganese EDTA.

Or

Chelated Manganese (Mn) .....1.00%  
Derived From: Manganese EDTA.

**LABEL EXAMPLE WHEN THE FORMULATION CONTAINS CHELATING AGENTS,  
SOLUBLE AND INSOLUBLE SOURCE MATERIALS**

**Example Soluble Source and Chelating Agent:**

Manganese (Mn).....1.00%  
    1.00% Chelated Manganese (Mn)  
    1.00% Soluble Manganese or Water Soluble Manganese (Mn)  
Derived From: Manganese Sulfate, Manganese EDTA

**Example Soluble Source, Insoluble Source and Chelating Agent:**

Manganese (Mn).....2.50%  
    1.25% Water Soluble Manganese (Mn)  
    1.00% Chelated Manganese (Mn)  
  
Derived From: Manganese Sulfate, Manganese EDTA, Manganese Oxide

**Example of Chelating Agent Only:**

Manganese (Mn).....1.00%  
    1.00% Chelated Manganese (Mn)  
  
Derived From: Manganese EDTA.

## Appendix B:

### GUARANTEES FOR FERTILIZER MATERIALS

All forms of nitrogen to be expressed as N, phosphoric acid as  $P_2O_5$ , potash as  $K_2O$ , and secondary plant nutrients as the element, unless otherwise indicated. Guarantees should reflect plant nutrient recoverable by Official AOAC Analytical Procedures. Chlorine to be guaranteed as provided in Rule 5E-1.003 Florida Administrative Code.

#### ALUMINUM SULFATE

Total aluminum

#### ANHYDROUS AMMONIUM OR AQUA AMMONIA

Total nitrogen

Ammoniacal nitrogen

#### AMMONIUM PHOSPHATE

Total nitrogen

Ammoniacal nitrogen

#### AMMONIUM NITRATE

Total nitrogen

Nitrate nitrogen

Ammoniacal nitrogen

#### AMMONIUM NITRATE-SULFATE

Total nitrogen

Nitrate nitrogen

Ammoniacal nitrogen

#### AMMONIUM PHOSPHATE-NITRATE

Total nitrogen

Nitrate nitrogen

Ammoniacal nitrogen

Available phosphoric acid

#### AMMONIUM NITRATE-LIMESTONE

Nitrate nitrogen

Ammoniacal nitrogen

Available phosphoric acid

#### AMMONIUM SULFATE

Total nitrogen

Ammoniacal nitrogen

#### AMMONIUM SULFATE-NITRATE

Total nitrogen

Nitrate nitrogen

Ammoniacal nitrogen

AMMONIUM THIOSULFATE

Total nitrogen  
Ammoniacal nitrogen  
Combined sulfur (Optional)

DRIED BLOOD

Total nitrogen  
Water soluble nitrogen  
Water insoluble nitrogen

BONE MEAL AND BONE TANKAGE

Total nitrogen  
Ammoniacal nitrogen  
Water soluble nitrogen  
Water insoluble nitrogen  
Available phosphoric acid

BORON COMPOUNDS

Boron (B)

CALCIUM AMMONIUM NITRATE

Total nitrogen  
Nitrate nitrogen  
Ammoniacal nitrogen

CALCIUM CARBONATE (Limestone)

Calcium Carbonate Equivalence  
Calcium as  $\text{CaCO}_3$   
Passing 8 mesh sieve, not less than  
Passing 20 mesh sieve, not less than  
Passing 50 mesh sieve, not less than  
Moisture, not more than  
This product requires \_\_\_ lbs. to  
be equal to 1 ton of std. liming material

CALCIUM NITRATE

Total nitrogen  
Nitrate nitrogen

CALCIUM METAPHOSPHATE

Available phosphoric acid  
Total phosphoric acid

CALCIUM SULFATE

(Gypsum or land plaster or phospho plaster)  $\text{CaSO}_4$



CALCIUM CYANAMID  
Total nitrogen  
Water soluble nitrogen  
Water insoluble nitrogen

CASTOR POMACE  
Complete primary nutrients

CITRUS MEAL  
Complete primary nutrients

COBALT COMPOUNDS  
Total cobalt

CALCIUM HYDROXIDE  
 $\text{Ca(OH)}_2$

COMPOST, SOIL CONDITIONERS  
(See Rule 5E-1.003FAC)

COPPER COMPOUNDS  
Total copper  
Water Soluble Copper  
(If chelated, must  
be so guaranteed)

COTTON BURR ASH (Carbonate of potash)  
Soluble potash, Chlorine, maximum

COTTON SEED MEAL  
Complete primary nutrients

DOLOMITE  
Calcium Carbonate Equivalence  
Calcium as  $\text{CaCO}_3$   
Magnesium as  $\text{MgCO}_3$   
Passing 8 mesh sieve, not less than  
Passing 20 mesh sieve, not less than  
Passing 50 mesh sieve, not less than  
Moisture, not more than  
This product requires \_\_\_\_\_ lbs. to be equal to 1 ton of std. liming material.

CALCIUM (Secondary) MATERIALS  
Total calcium  
FISH TANKAGE  
Complete primary nutrients

FERROUS AMMONIUM SULFATE  
Total nitrogen  
Ammoniacal nitrogen  
Water Soluble Iron

## GUANO

Complete primary nutrients

## HARDWOOD ASHES

Soluble potash

## SYNTHETIC HARDWOOD ASHES

Soluble potash

## IRON COMPOUNDS

Total Iron

Water Soluble Iron

(If chelated, guarantee as chelated)

## ISOBUTYLENE DIUREA

Total nitrogen

Water soluble Nitrogen or urea nitrogen

Water insoluble nitrogen

## MAGNESIUM COMPOUNDS

Total magnesium

Water soluble magnesium

(If chelated, guarantee as chelated)

## MANGANESE COMPOUNDS

Total manganese

Water Soluble Manganese

(If chelated, guarantee as chelated)

## MANURES

Complete primary nutrients (NPK)

Water Soluble Nitrogen

Water Insoluble Nitrogen

## MOLYBDENUM COMPOUNDS

molybdenum

## NITRATE OF SODA

Total nitrogen

Nitrate nitrogen

NITRATE OF SODA-POTASH

Total nitrogen  
Nitrate nitrogen  
Soluble potash

NITROGEN SOLUTIONS

Total nitrogen  
Whichever forms of nitrogen  
are present

ORGANIFORM

Total nitrogen  
Water soluble nitrogen  
or urea nitrogen  
Water insoluble nitrogen

PEANUT MEAL

Complete primary nutrients

DIAMMONIUM PHOSPHATE and  
MONO-AMMONIUM PHOSPHATE

Total nitrogen  
Ammoniacal nitrogen  
Available phosphoric acid

PHOSPHORIC ACID

Available phosphoric acid

COLLOIDAL PHOSPHATE

Available phosphoric acid  
Total phosphoric acid  
Degree of fineness  
(% passing \_\_\_\_\_ mesh)

SULFUR COATED UREA

Total nitrogen  
Water soluble nitrogen  
or urea nitrogen  
Free sulfur

SUPERPHOSPHATE

Available phosphoric acid

POTASSIUM CHLORIDE

Soluble potash  
Chlorine, maximum

POTASSIUM AMMONIUM NITRATE

Total nitrogen, Nitrate Nitrogen, Ammoniacal Nitrogen, Soluble Potash

POTASSIUM NITRATE

Total nitrogen  
Nitrate nitrogen  
Soluble potash

POTASSIUM PHOSPHATE

POTASSIUM POLYPHOSPHATE & POTASSIUM METAPHOSPHATE  
Available phosphoric acid  
Soluble potash

POTASSIUM SULFATE

Soluble potash  
Total magnesium  
Water soluble magnesium

SULFATE OF POTASH MAGNESIA

Soluble potash  
Total magnesium  
Water soluble magnesium

POTASSIUM HYDROXIDE

Soluble potash

SLAG

Percentages or "none" in each space  
Degree of fineness (% passing  
\_\_\_\_\_ mesh)

SLUDGE

Complete primary nutrients

SOYBEAN MEAL

Complete primary nutrients

SULFUR

Combined or free sulfur, as  
applicable

TOBACCO

Complete primary nutrients

TUNG MEAL

Complete primary nutrients

UREA

Total nitrogen  
Water soluble nitrogen  
or urea nitrogen

UREAFORMALDEHYDE

Total nitrogen

Water soluble nitrogen

or urea nitrogen (maximum 40% of  
total nitrogen)

Water insoluble nitrogen

ZINC COMPOUNDS

Total zinc (If chelated,  
must be so guaranteed)

AMMONIATED SUPERPHOSPHATE

Total nitrogen

Nitrate nitrogen

Ammoniacal nitrogen

Water soluble nitrogen

or urea nitrogen

Available phosphoric acid

SUPERPHOSPHATE

Available phosphoric acid

TANKAGE

Total nitrogen

Water soluble nitrogen

Water insoluble nitrogen

Available phosphoric acid

Chlorine, maximum

