

2 VAC 5-400, RULES AND REGULATIONS FOR THE ENFORCEMENT OF THE  
VIRGINIA FERTILIZER LAW

Statutory Authority: §3.1-106.4 of the Code of Virginia.

This regulation modifies and supersedes the version of Rules and Regulations for the Enforcement of the Virginia Fertilizer Law which appeared as a final regulation in the Virginia Register of Regulations on May 26, 1986, beginning on page 1663.

2VAC5-400-10. Definitions.

A. Except as the board designates otherwise in specific cases, the names and definitions for commercial fertilizer shall be those adopted as official by the Association of American Plant Food Control Officials.

B. The following words and terms, when used in this chapter, shall have the following meaning, unless the context clearly indicates otherwise:

"Commissioner" means the Commissioner of the Virginia Department of Agriculture and Consumer Services.

"Fertilizer Law" means Chapter ~~10 (§§3.1-74 et seq.)~~ 10.1 (§3.1-106.1 et seq.) of Title 3.1 of the Code of Virginia, known as the Virginia Fertilizer ~~Law~~ Act.

"Pesticide Law" means Chapter ~~14 (§3.1-189 et seq.)~~ 14.1 (§3.1-249.27 et seq.) of Title 3.1 of the Code of Virginia, known as the Virginia Pesticide ~~Law~~ Control Act.

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2VAC5-400-20. Plant nutrients in addition to nitrogen, phosphorus and potassium.

Other plant nutrients, when claimed in any written, printed, or graphic matter, shall be registered

and guaranteed on the package; or if in bulk, on the accompanying invoice or delivery slip.

Guarantees shall be made on the elemental basis. Sources of the guaranteed elements and proof

of their availability shall be provided to the commissioner upon request. Except guarantees 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 horticultural

growing media, The the minimum percentages which that will be accepted as guarantees or for

registration are as follows:

<u>Element</u>	<u>%</u>
A. <u>1.</u> Calcium (Ca)	1.00
B. <u>2.</u> Magnesium (Mg)	0.50
C. <u>3.</u> Sulfur (S)	1.00
D. <u>4.</u> Boron (B)	0.02
E. <u>5.</u> Chlorine (Cl)	0.10
F. <u>6.</u> Cobalt (Co)	0.0005

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G. <u>7.</u> Copper (Cu)	0.05
H. <u>8.</u> Iron (Fe)	0.10
I. <u>9.</u> Manganese (Mn)	0.05
J. <u>10.</u> Molybdenum (Mo)	0.0005
K. <u>11.</u> Sodium (Na)	0.10
L. <u>12.</u> Zinc (Zn)	0.05

Proposed labels and directions for use of the fertilizer shall be furnished ~~upon request~~ with the application for registration. Warning or caution statements are required on the label for any product which contains 0.001% or more of molybdenum. Any of the above listed elements which are guaranteed shall appear in the order listed, immediately following guarantees for the primary nutrients nitrogen, phosphorous, and potassium.

2VAC5-400-30. ~~Speciality~~ Specialty fertilizer labels.

A. The following information, if not appearing on the face or display side in a readable and conspicuous form, shall occupy at least the upper third of a side of the container, and shall be considered the label. (With the exception of "~~net weight~~ quantity statement," which must always appear on the display panel of the package or container.)

1. Net Weight Quantity statement

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1 2. Brand name.

2 3. Grade.

4. Guaranteed Analysis: \*

Total Nitrogen (N) .....%

.....% Ammoniacal Nitrogen\*\*\*

.....% Nitrate Nitrogen\*\*\*

.....% Water Insoluble Nitrogen\*\*

.....% Urea Nitrogen\*\*\*

.....% (Other recognized and determinable forms of N)\*\*\*

Available Phosphoric Acid (P<sub>2</sub>O<sub>5</sub>) .....%

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

Additional Plant Nutrients as prescribed by regulation.

\*\* Potential Acidity or Basicity .....% or ..... lbs.

Calcium Carbonate Equivalent per ton.

5. Sources of nutrients, when shown on the label, shall be listed below the completed guaranteed

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analysis statement.

6. Name and address of registrant.

NOTES:

\*Zero (0) guarantees should not be made and may not appear in statement except in nutrient  
guarantee breakdowns.

\* \*\* If claimed or the statement "organic" or slow acting nitrogen is used on the label.

\*\* \*\*\* If claimed or required.

B. Slowly available or slowly released plant nutrients.

1. No fertilizer label shall bear a statement that connotes or implies the presence of a slowly  
available or slowly released plant nutrient unless the nutrient or nutrients are identified and  
guaranteed at a level of at least 15% of the total guarantee for that nutrient or nutrients.

2. ~~When a fertilizer label implies or connotes that the nitrogen is slowly available through the  
use of "organic," "organic nitrogen," "ureaform," "long lasting, or similar terms, the guaranteed  
analysis must indicate the percentage of water insoluble or slowly available nitrogen in the  
material.~~ Types of products with slow release properties recognized are (i) water insoluble, such

as natural organics, ureaform materials, urea-formaldehyde products, isobutylidene diurea,

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oxamide, etc., (ii) coated slow release, such as sulfur coated urea and other encapsulated soluble fertilizers, (iii) occluded slow release, where fertilizers or fertilizer materials are mixed with waxes, resins, or other inert materials and formed into particles and (iv) products containing water soluble nitrogen such as ureaform materials, urea-formaldehyde products, methylenediurea (MDU), dimethylenetriurea (DMTU), dicyanodiamide (DCD), etc. The terms "water insoluble", "coated slow release", "slow release", "controlled release", "slowly available water soluble", and "occluded slow release" are accepted as descriptive of these products, provided the manufacturer can show a testing program substantiating the claim (testing under guidance of Experiment Station personnel or a recognized independent researcher acceptable to the commissioner). A laboratory procedure, acceptable to the commissioner for evaluating the release characteristics of the product must also be provided by the manufacturer upon request of the commissioner.

3. If a label states the amount of organic nitrogen present in a phrase, such as "25.0% ~~of the~~ organic nitrogen from ureaformaldehyde (ureaform)," then the water insoluble nitrogen guarantee must be not less than 60.0% of the nitrogen so designated. Coated urea shall not be included in meeting the 60% requirement.

Example: 10-6-4 Rose Food

25.0% of Nitrogen is Organic

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10(Total N)X.25(% N claimed or Organic)X.60

(Average insolubility in H<sub>2</sub>O) of organic nitrogen sources = 1.5% WIN

~~4. When the water insoluble [or slowly available] nitrogen is less than 15% of the total nitrogen, the label shall bear no references to any designations such as stated in subdivision B 2 of this section.~~

~~5. The term "Coated slow release fertilizer," or "Coated slow release" shall be accepted as descriptive of products.~~

~~6. Further, the terms and phrases in subdivisions 2 and 5 of this subsection shall be allowed for any products that can show a testing program substantiating the claim. (Testing under the guidance of experiment station personnel, or a recognized reputable researcher, etc.)~~

~~7.4. Association of Official Analytical Chemist (AOAC) Method 2,047 herein referred to as AOAC International analytical methods or those adopted by the commissioner pursuant to § 3.1-106.4.B of the Virginia Fertilizer Act shall be used ~~initially~~ to substantiate the fact that "Coated-slow release" and "occluded slow release" materials are present. ~~The determination need only be modified by the elimination of sample grinding during preparation.~~~~

C. Soil amendment and Soil conditioners.

1. Each container of a soil amendment or soil conditioner shall be labeled in a legible and

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conspicuous form to show the following information:

- a. The ~~net weight of the contents~~ quantity statement;
- b. The name of the product;
- c. The guaranteed analysis, including the common or usual English name and the percentage of each active ingredient, and the name and percentage of inert ingredients;
- d. A statement of the purpose of the product, stated in terms of the claimed or beneficial effect resulting from the use of the product;
- e. Adequate directions for use, and cautions or warnings against misuse, if applicable; and
- f. The name and address of the registrant.

2. Bulk lots shall be labeled by attaching a copy of a printed label to the invoice, or by the inclusion on the invoice of all information required by subdivision C. 1. of this section. The invoice shall be given to the purchaser at the time of sale or delivery.

1. The commissioner may require proof of any claims made for any soil amendment or soil conditioner. If no claims are made, the commissioner may require proof of usefulness and value.

For evidence of proof, the commissioner may rely on experimental data, evaluations or advice from such sources as the extension service of the Virginia Polytechnic Institute and State

University and the Virginia State University. The experimental data shall relate to Virginia

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conditions for which the product is advertised or sold. The commissioner may accept or reject

other sources of proof as additional evidence in evaluating soil amendments or soil conditioners.

4. No soil amending or soil conditioning ingredient may be listed or guaranteed on the labels or in labeling of soil amendments or soil conditioners without the commissioner's approval. The commissioner may allow a soil amending or soil conditioning ingredient to be listed or guaranteed on the label or in labeling if satisfactory supportive data is provided to substantiate the value and usefulness of the product. The commissioner may rely on outside sources such as the extension service of the Virginia Polytechnic Institute and State University and the Virginia State University for assistance in evaluating the data submitted. When a soil amending or soil conditioning ingredient is permitted to be listed and guaranteed, it must be verifiable by laboratory methods and is subject to inspection and analysis. The commissioner may prescribe methods and procedures of inspection and analysis of the soil amending or soil conditioning ingredient.

5. With the application for registration for each product the applicant shall submit a copy of the label, a copy of all advertisements and any other materials to be used in promoting the sale of the soil amendment or soil conditioner.

2VAC5-400-40. Percentages.

The term "Percentage," when used by symbol or word on a fertilizer label, shall represent only

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the amount of individual plant nutrients or other factors in relation to the total weight of the  
product.

2VAC5-400-50. Investigational allowances ~~or tolerances~~ and ~~penalties~~ assessments.

A. \*A commercial fertilizer shall be deemed deficient if the analysis of any primary nutrient is below the guaranteed analysis or grade by more than 0.30% plus 3.0% of the guarantee, or if the overall index value of the fertilizer is below 97.0%. Except when the found relative value of a sample is equal to or exceeds the guaranteed relative value, an overage in primary nutrients may compensate for a deficiency in another primary nutrient up to 10.0% of the guarantee of the deficient nutrient, not to exceed two units. No compensation will be allowed toward a deficiency unless the total percent of primary plant nutrients is equal to or greater than the percent guaranteed or if the deficiency exceeds 10.0% of the guarantee or the deficiency exceeds two units. If more than one primary nutrient is in ~~penalty~~ deficiency status, no compensation will be allowed.

B. Assessment for deficiency of nitrate nitrogen or water insoluble nitrogen.

1. Fertilizers guaranteed to contain 1.0% or less: If the nitrogen content of any commercial fertilizer is found to be 1/3; or more, less than the guaranteed minimum, the commissioner shall ~~assess a penalty~~ make an assessment against the manufacturer, dealer, or agent. This ~~penalty~~

assessment shall amount to twice the value of the deficiency.

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2. Fertilizers guaranteed to contain more than 1.0%: If the nitrogen content of any commercial fertilizer is found to be  $\frac{1}{4}$  or more, less than the guaranteed minimum, the commissioner shall ~~assess a penalty~~ make an assessment against the manufacturer, dealer, or agent. This ~~penalty~~ assessment shall amount to twice the value of the deficiency.

C. Secondary and minor elements shall be deemed deficient if any element is below the guarantee by an amount exceeding the values in the following schedule:

ELEMENT

Calcium	0.2 unit + 5.0% of guarantee
Magnesium	0.2 unit + 5.0% of guarantee
Sulfur	0.2 unit + 5.0% of guarantee
Boron	0.003 unit + 25.0% of guarantee
Cobalt	0.0001 unit + 30.0% of guarantee
Molybdenum	0.0001 unit + 30.0% of guarantee
Chlorine(except for tobacco)	0.005 unit + 10.0% of guarantee
Copper	0.005 unit + 10.0% of guarantee
Iron	0.005 unit + 10.0% of guarantee
Manganese	0.005 unit + 10.0% of guarantee
Sodium	0.005 unit + 10.0% of guarantee
Zinc	0.005 unit + 10.0% of guarantee

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The maximum allowance when calculated as above shall be one unit (1.0%).

D. ~~Penalties~~ Assessments for secondary and minor elements. For each deficiency in a secondary or micronutrient element, ~~a penalty~~ the commissioner shall make an assessment against the manufacturer, dealer or agent of \$1.00 per ton, plus ~~three~~ two times the commercial value of the shortage, which shall be paid to the ultimate user of the fertilizer. If the purchaser is not known, then the ~~penalty~~ assessment shall be paid to the State Treasury and reported to the State Comptroller, who shall credit the amount to a special fund.

E. If the guaranteed minimum chlorine content of fertilizer labeled for tobacco is exceeded by more than 0.5%, ~~a penalty~~ the commissioner shall make an assessment against the manufacturer, dealer, or agent ~~be assessed~~ equal to 10.0% of the value of the fertilizer for each 0.5% or fraction thereof of excess.

\*In applying these investigational allowances, the recommended ~~Association of Official Analytical Chemists~~ AOAC International procedures for obtaining samples, sample preparation, and analyses must be used. These are described in the ~~current~~ 17<sup>th</sup> edition of the "Official Methods of Analysis of the Association of Official Analytical Chemists" AOAC International and in subsequent issues of the "Journal of Official Analytical Chemists." ~~Averaging at least two values must be adhered to.~~ Values carried to two decimals are to be used ~~in this averaging~~, but values may be rounded to one place where preferred in reporting.

2VAC5-400-60. Fertilizer-pesticide mixtures.

A. Specialty fertilizer-pesticide mixtures. The labeling, claims and use of all mixtures shall

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comply with and be registered under the Virginia Fertilizer Law and the Virginia Pesticide Law,  
and shall be subject to approval by the commissioner.

B. Farm crop fertilizer-pesticide mixtures.

1. General sale. When offered for general sale, bulk lots or bags of fertilizer with pesticides must  
be registered and labeled as required by the Virginia Pesticide Law prior to sale or distribution.

Although the Fertilizer Law does not require registration, labeling must meet its other  
requirements, and shall be subject to approval by the commissioner. All bulk containers and bins  
shall be labeled with a copy of the registered label, a copy of which shall accompany each  
shipment and delivery.

2. Custom mixtures. Pesticides may be mixed with fertilizers without label registration  
when the pesticide product is properly registered under the Virginia Pesticide Law, except when  
these mixtures are prohibited by the registered pesticide label; provided that the mixture is:

a. Applied to the user's property by the distributor or his authorized agent; or

b. To be applied by the user or his authorized agent. In this case, each delivery must be  
accompanied by a label, including directions for application use limitations, and sufficient

caution and warning statements; all of which shall be subject to approval by the commissioner.

2VAC5-400-70. Chlorine guarantees for tobacco fertilizer. (All commercial fertilizer labeled

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for tobacco shall show a guarantee for chlorine.)

A. The maximum chlorine guarantees permitted for tobacco plant bed fertilizers shall be:

1. One-half percent chlorine for fertilizers with nitrogen guarantees up to and including 6.0%.
2. One percent chlorine for fertilizers with a nitrogen guarantee above 6.0%.

B. The maximum chlorine guarantees permitted for field crop tobacco fertilizer shall be:

1. A maximum chlorine guarantee of 2.0% for fertilizer with nitrogen guarantees up to and including 4.0%.
2. A maximum chlorine guarantee not more than  $\frac{1}{2}$  of the respective total nitrogen guarantee for fertilizer with nitrogen guarantees greater than 4.0%.

C. The maximum chlorine guarantee permitted in tobacco top dressers shall be 2.0%.

2VAC5-400-80. Minimum plant food allowed.

A. No person shall be allowed to distribute, register, or offer for sale any mixed fertilizer, collodial phosphate or similar materials in this Commonwealth which contains less than ~~18.0%~~ 3.0% of plant food, (total nitrogen, available ~~phosphoric acid~~ phosphate and soluble or

available potash, either singly or in combination) except as provided in subsections B and C of

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this section.

~~B. There may be one grade of tobacco plant bed fertilizer in which the sum of guarantees for total nitrogen, available phosphoric acid, and soluble or available potash shall not total less than 16.0%. The commissioner may allow mixed fertilizer with a minimum of 1.5% of plant food (total nitrogen, available phosphate and soluble or available potash, either singly or in combination) to be distributed, registered, or offered for sale if the plant food is derived primarily from organic materials.~~

C. The minimum plant food requirement shall not apply to ground rock phosphate.

~~Procedures used in sample preparation and analysis for enforcement of this chapter are available from:~~

~~Association of Official Analytical Chemists~~

~~1111 North 29th Street~~

~~Suite 210~~

~~Arlington, Virginia 22209~~

2VAC5-400-90. Sampling and analysis procedures.

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Unless otherwise adopted by the commissioner pursuant to § 3.1-106.4.B of the Virginia

Fertilizer Law procedures for obtaining samples, sample preparation, and sample analysis shall

be those described in the 17th edition (2000) of the “Official Methods of Analysis of the

International Association of Official Analytical Chemists” of the AOAC International.

Procedures used in sample preparation and analysis for enforcement of this chapter are available

from:

AOAC International

481 North Frederick Avenue

Suite 500

Gaithersburg, Maryland 20877-2417

DOCUMENTS INCORPORATED BY REFERENCE

Official Methods of ~~the Association~~ Analysis of Official Analytical Chemists-AOAC

International, 17<sup>th</sup> Edition, 2000, Volumes 1 and 2.

FORMS

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Application For ~~New~~ Fertilizer Product Registration (rev. 10/01).

Adopted by the Board of Agriculture and Consumer Services on May 16, 2002. This is a full,  
true and correctly dated regulation.

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Roy E. Seward, Secretary

Board of Agriculture and Consumer Services

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Date