

VERMONT FERTILIZER AND LIME REGULATIONS

Effective: July 1, 1991

Plant Industry Section  
Vermont Department of Agriculture, Food and Markets  
120 State Street/State Office Building  
Montpelier, VT 05620  
(802) 828-2431

## TABLE OF CONTENTS

Fertilizer and Lime Regulations			<u>Page</u>
Section	I	Definitions and Terms; Exemptions	3
Section	II	Registration and Distribution	5
Section	III	Tonnage Reports and Tonnage Fees	7
Section	IV	Fertilizer Labels	7
Section	V	Plant Nutrient Guarantees	9
Section	VI	Slow Release Plant Nutrients	10
Section	VII	Commercial Value and Analytical Tolerances	11
Section	VIII	Lime Labels	13
Section	IX	Liming Materials and Calcium Carbonate Equivalent (CCE)	14
Section	X	Fineness Standards for Lime	15
Section	XI	Sampling, Analysis and Inspection	15
Section	XII	Shortweight	16
Section	XIII	Storage, Handling and Use of Fertilizer Materials	16
Section	XIV	Administrative Penalties and Appeals	17

## FERTILIZER AND LIME

### SECTION I. Definitions and Terms; Exemptions

As used in relation to the sale and analysis of fertilizer and as used in this rule:

- A. Definitions, terms and names shall be those set forth in Section 363 of the Fertilizer and Lime Law (hereinafter referred to as the "Law"). Where no such definitions, terms and names are set forth in the Law, such definitions, terms or names shall be those adopted by the Association of American Plant Food Control Officials (hereinafter referred to as "AAPFCO"), except as the Commissioner prescribes otherwise in this rule.
1. Brand means a term, design or trademark used in connection with one or more grades of fertilizer or lime.
  2. Bulk Fertilizer is a fertilizer distributed in a non-packaged form.
  3. Commissioner means the Commissioner of Agriculture, Foods and Markets of the State of Vermont or an authorized representative.
  4. Distribute means to import, consign, manufacture, produce, compound, mix or blend fertilizer or lime or to offer for sale, sell barter or otherwise supply or apply fertilizer or lime in this state.
  5. Fertilizer means any substance containing one or more recognized plant nutrients which is used for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth or health.
  6. Grade means the percentage of total nitrogen, available phosphoric acid or phosphorus and soluble potash or potassium stated in whole numbers in the same terms and order as the guaranteed analysis.
  7. Guaranteed Analysis means the minimum percentages of plant nutrients claimed by the manufacturer or distributor of a fertilizer product. In reference to

liming materials, the guaranteed analysis means the minimum percentages of elemental calcium and magnesium, calcium and magnesium oxide, calcium and magnesium carbonate and the calcium carbonate equivalent.

8. Label means the display of all written, printed or graphic material on or accompanying a fertilizer or lime.
9. Labeling means all written, printed or graphic material on or accompanying a fertilizer or lime product including advertisements, brochures, posters and television and radio announcements used in promoting the sale or use of a fertilizer or lime.
10. Lime means all products whose calcium and magnesium compounds are capable of neutralizing soil acidity and which are intended or distributed for agricultural or plant propagation purposes. For the purposes of this regulation, the terms agricultural lime, lime or liming material shall have the same meaning and includes industrial wastes or by-products which contain calcium, magnesium and/or potassium compounds capable of neutralizing soil acidity.
10. Natural Organic Fertilizer means materials derived from 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 bacterial action, or any combination of these processes. These materials shall not be mixed with synthetic materials or changed in any physical or chemical manner from their initial state except by physical manipulations such as drying, cooking, chopping, grinding, shredding or pelleting.
11. Organic Fertilizer means a fertilizer material containing carbon and one or more elements other than hydrogen and oxygen essential for plant growth.
12. Person means any individual, company, partnership, association, corporation or organization of persons whether incorporated or not, including any federal agency, municipality, state or subdivision of any state.
13. Primary Plant Nutrients include nitrogen, available phosphoric acid or phosphorus and soluble potash or potassium.

14. Registrant means any person who registers fertilizer or lime under the provisions of this chapter.
  15. Specialty Fertilizer means a fertilizer distributed for non-farm use. Specialty fertilizers and fertilizer materials may be guaranteed in fractional terms.
  16. Use includes all purposes for which a fertilizer or lime is applied.
- B. The following commodities are hereby exempt from the definitions of "fertilizer" as set forth in the Law: unmanipulated animal and vegetable manures, wood ashes and gypsum.

## SECTION II. Registration and Distribution

- A. Each brand or grade of fertilizer or lime shall be registered in the name of the person whose name appears on the label before being distributed in this State.
- B. Custom mix fertilizers or limes formulated according to specifications furnished by the consumer prior to mixing are exempt from the registration requirements of this section. Custom mix fertilizers are required to be included in all tonnage reporting and fees.
- C. Fertilizer or lime that is purchased from a registrant or distributor and is altered so that the guaranteed analysis is different from that of the original product shall be considered a new product and must be registered prior to distribution.
- D. The registration year for fertilizer and lime as required by Section 364 of the Law shall be the calendar year. Applications for such registration shall be made and all annual fees required by the Law shall be paid on or before the first day of January for the calendar year.
- E. The Commissioner may cancel or suspend the registration of any fertilizer or lime or refuse a registration application if he or she finds that the provisions of 6 V.S.A. Chapter 28 or this rule have been violated. Any registrant subject to a cancellation, suspension or refusal of a registration shall be provided an opportunity for a hearing before the commissioner.

- F. In accordance with 6 V.S.A. Sections 368 and 369, no person shall distribute a misbranded or adulterated fertilizer or lime product in this State.
1. A fertilizer or lime shall be deemed to be misbranded if its labeling is false or misleading, distributed under the name of another product, not labeled as required by this rule or labeled to contain a plant nutrient which does not conform to the standard of identity established by AAPFCO.
  2. A fertilizer or lime shall be deemed to be adulterated if it contains harmful or deleterious ingredients in sufficient amounts to be injurious to beneficial plant life when used according to label directions, if its composition falls below or differs from its labeling or if it contains crop or weed seeds.
- G. The Commissioner may issue a withdrawal from distribution (stop sale) order when he or she has reasonable cause to believe that any lot of fertilizer or lime is distributed in violation of 6 V.S.A. Chapter 28 or these rules. The Commissioner may also issue and order requiring a distributor not to dispose of a lot of fertilizer or lime in any manner until written permission is received from the Commissioner or a Court of appropriate jurisdiction.
- H. Lime and wood ash mixtures may be registered as liming materials and include a guarantee for potassium or potash provided that the wood ash totals less than 50 percent of the mixture.
- I. Individuals wishing to distribute industrial waste or industrial by-products as agricultural liming materials shall provide documentation at the time of registration demonstrating that the product does not contain deleterious or harmful ingredients in amounts sufficient to or in amounts which through accumulation may render it injurious to beneficial plant life, livestock or human health.
- J. The Commissioner may require periodic analysis of the industrial waste or by-product as a condition of the registration if the applicant can not demonstrate that the characteristics and components of the product will remain uniform over time.
- K. Nothing in this rule shall be construed to restrict or impair the sales, exchanges or transportation of fertilizers or liming materials among distributors provided that products are registered as required by 6 V.S.A. Chapter 28 and these regulations.

SECTION III. Tonnage Reports and Tonnage Fees

- A. In accordance with 6 V.S.A. section 366, all persons who distribute fertilizer in this State shall furnish the Commissioner with an annual report detailing the tonnage distributed during the calendar year.
- B. Fertilizer tonnage reports shall be submitted to the Commissioner by August 1 for the previous calendar year ending December 31.
- C. Fertilizer tonnage reports shall be submitted in a manner prescribed by the Commissioner and may include the name and address of the distributor, the grade and form of each fertilizer or material reported, the county into which the fertilizer or material was sold and a certification that the report is factual.
- D. Each registrant shall pay, to the Commissioner, an annual inspection fee of twenty-five cents (\$0.25) per ton of fertilizer distributed in this State.
- E. There shall be a minimum inspection fee of twenty-five dollars (\$25.00) on all registrants who distribute less than one hundred tons during a reporting year.
- F. All inspection fees shall accompany the annual tonnage report.
- G. For the purposes of this rule, the sale or exchange of registered fertilizer or lime materials among importers, distributors, manufacturers or blenders are not subject to the tonnage reporting and fee requirements.

SECTION IV. Fertilizer Labels

- A. The following information is the minimum required for all fertilizer labels. This information shall be in a readable and conspicuous form.
  - 1. Net weight.
  - 2. Brand.
  - 3. Grade (provided that the grade shall not be required when no primary nutrients are claimed).
  - 4. Guaranteed analysis as prescribed in Section V.
  - 5. Name and address of the registrant.
- B. For bulk products, this same information in written or printed form shall accompany delivery and be supplied to the purchaser at time of delivery.

C. For packaged products, the following label information shall be provided:

1. Net weight.
2. Brand
3. Grade (provided that the grade shall not be required when no primary nutrients are claimed).
4. Guaranteed Analysis as prescribed by Section V:

Total Nitrogen (N).....%

Available Phosphoric Acid.....%

Soluble Potash.....%

(Other Nutrients as prescribed by  
Section V.) .....%

5. Sources of nutrients, when shown on the label, shall be listed below the completed guaranteed analysis statement.
6. Name and address of the registrant.

This information shall either:

- a. appear on the front or back of the package; and
- b. occupy at least one-third of a side of the package; or
- c. be printed on a tag and attached to the package.

D. Custom mix products formulated according to specifications furnished by a consumer prior to mixing shall be labeled to show:

1. Net weight;
2. Name and address of the distributor;
3. Identity of the purchaser; and
4. Guaranteed analysis or the name, analysis and weight of each ingredient in the mixture.

E. With the exception of the primary plant nutrients, zero (0) guarantees shall not be made and shall not appear in label statements.

- F. Any grade expressed in fractional terms which is not preceded by a whole number shall be preceded by a zero.
- G. The word or symbol for "percentage" on a fertilizer label shall only be used to represent the amount of an individual plant nutrient in relation to the total product weight. "Percent" may not be used as part of a brand name or to make label claims.

SECTION V. Plant Nutrient Guarantees

- A. Any plant nutrient in addition to nitrogen, phosphoric acid and potash when claimed in the labeling of any fertilizer shall be guaranteed on the elemental basis. Any of the elements listed below which are guaranteed shall appear in the order and format listed, immediately following guarantees for the primary plant nutrients, nitrogen, phosphorus and potassium. The minimum percentages which may be guaranteed are as follows:

Calcium (Ca)	1.00
Magnesium (Mg)	0.50
Sulfur (S)	1.00
Boron (B)	0.02
Chlorine (Cl)	0.10
Cobalt (Co)	0.0005
Copper (Cu)	0.05
Iron (Fe)	0.10
Manganese (Mn)	0.05
Molybdenum (Mo)	0.0005
Sodium (Na)	0.10
Zinc (Zn)	0.05

- B. Guarantees for those water soluble nutrients labeled for hydroponic or continuous liquid feed programs are exempt from the minimum guarantee limits listed above.
- C. Sources of the elements guaranteed and proof of availability shall be provided the Commissioner upon request. Additional elements shall be guaranteed as required above and shall specify the percentage guarantee. No claims or guarantees shall be made for any plant nutrients except for the elements set forth above.
- D. When any plant nutrient guarantee is broken down into the component forms, the percentage of each component shall be shown before the name of the form.

E. If chemical forms of N are claimed, the forms shall be shown and the percentages of the individual forms shall add up to the total nitrogen percentage. This information shall appear in the following form and format as a part of the label information required by Section IV. of this regulation.

- \_\_\_\_\_ % Ammoniated Nitrogen
- \_\_\_\_\_ % Nitrate Nitrogen
- \_\_\_\_\_ % Urea Nitrogen
- \_\_\_\_\_ % Water Insoluble Nitrogen
- \_\_\_\_\_ % Other recognized and determinable forms of (N)

SECTION VI. Slow Release Plant Nutrients

A. No fertilizer shall bear a statement that connotes or implies that certain plant nutrients contained in a fertilizer are released slowly over a period of time, unless the nutrient or nutrients are identified and guaranteed.

B. Types of products with recognized slow release properties are:

1. Water insoluble (N products only), such as natural organics, urea formaldehyde, IBDU, oxamide, etc.;
2. Coated slow release such as sulphur coated urea and other encapsulated soluble fertilizers;
3. Occluded slow release, where fertilizers or fertilizer materials are mixed with waxes, resins, or other inert materials and formed into particles; and
4. Water soluble nitrogen such as ureaform materials, urea formaldehyde products, methylenediurea (MDU), dimethylenetriurea (DMTU), dicyanodiamide (DCD), etc.

The terms "water insoluble", "coated slow release", "occluded slow release" and "slowly available water soluble" are accepted as descriptive of these types of products, respectively, provided the registrant can furnish testing data substantiating the claim. These testing studies shall be conducted under the guidance of Experiment Station personnel or a reputable research laboratory approved by the Commissioner. A laboratory procedure, acceptable to the Commissioner, for evaluating the nutrient release characteristics of the product(s) must also be provided by the manufacturer.

- C. When a slowly released nutrient is less than 15% of the guarantee of either total nitrogen (N), available phosphoric acid ( $P_2O_5$ ), or soluble potash ( $K_2O$ ), as appropriate, the label shall not make any slow release claims or statements.
- D. In addition to Section VI.B., if any amount of nitrogen is designated as organic then the water insoluble nitrogen and/or the slow release nitrogen guarantee must be at least 60% of the nitrogen designated as organic. Coated urea may not be included in meeting the 60% requirement.

SECTION VII. Commercial Value and Analytical Tolerances

- A. For the purpose of this regulation, the Commercial Values of nitrogen, phosphoric acid and potash ( $CV_N$ ,  $CV_P$ ,  $CV_K$ ) shall be set by the Commissioner and used to assess penalty payments as provided for by 6 V.S.A. Section 373.
- B. In accordance with 6 V.S.A. Section 372, a fertilizer shall be deemed deficient if the guarantee for nitrogen, available phosphoric acid or phosphorus or soluble potash or potassium exceeds the AAPFCO established permitted analytical variance at a confidence level of ninety-seven and one-half percent (97.5%).

A fertilizer shall be deemed deficient if the analysis of any nutrient varies from the labeled guarantee by an amount exceeding the values in the following Permitted Analytical Variance Table (P.A.V.):

Guaranteed Percentage	Nitrogen P.A.V.	Available Phosphoric Acid P.A.V.	Soluble Potash P.A.V.
4 or less	0.60	0.83	0.51
5	0.63	0.83	0.53
6	0.64	0.83	0.58
7	0.67	0.84	0.65
8	0.68	0.84	0.74
9	0.70	0.84	0.80
10	0.72	0.85	0.86
11	0.74	0.85	0.92
12	0.75	0.85	0.97
13	0.77	0.85	1.02
14	0.78	0.86	1.07
15	0.81	0.86	1.12
16	0.83	0.86	1.16
17	0.85	0.87	1.21
18	0.86	0.88	1.25
19	0.88	0.88	1.29
20	0.90	0.89	1.33
21	0.92	0.89	1.38
22	0.93	0.89	1.42
23	0.95	0.89	1.46
24	0.96	0.90	1.49
25	0.98	0.90	1.53
26	1.00	0.90	1.57
27	1.01	0.90	1.61
28	1.02	0.91	1.64
29	1.04	0.92	1.68
30	1.06	0.93	1.72
31	1.08	0.93	1.75
32 or more	1.09	0.94	1.78

For fractional guarantees not listed, the P.A.V. will be calculated by interpolation in units of one-half of one percent (0.5%).

- C. If a fertilizer is deemed deficient under Section VIII.B., the registrant shall pay a penalty equaling two (2) times the commercial value of the deficiency.

- D. The variance of each deficient nutrient shall equal the absolute value of the difference between the guarantee of the nutrient and the analysis of the nutrient. This is represented by the following formula:

$$\text{Variance} = (\text{Guarantee} - \text{Analysis})$$

- E. The penalty payment shall be calculated by multiplying the variance of each deficient nutrient by the lot weight in pounds. This product is multiplied by the commercial value per pound of the deficient nutrient. This value represents the commercial value of the deficiency and is multiplied by a factor of two (2). In cases where more than one nutrient is deficient, the commercial values of the deficiencies are added together and this sum is multiplied by a factor of two (2). This is expressed by the following formulae:

$$\text{Lot Weight} \times \text{Variance}_N \times \text{Commercial Value}_N = X_N$$

$$\text{Lot Weight} \times \text{Variance}_P \times \text{Commercial Value}_P = X_P$$

$$\text{Lot Weight} \times \text{Variance}_K \times \text{Commercial Value}_K = X_K$$

$$(X_N + X_P + X_K) \times 2 = \text{Penalty Payment}$$

#### SECTION VIII. Lime Labels

- A. The following information is the minimum required for all lime labels. This information shall be in a readable and conspicuous form.
1. Net Weight.
  2. Brand.
  3. The name and address of the registrant.
  4. The agricultural lime material classification required by Section IX of this regulation, and the material's Calcium Carbonate Equivalent (CCE) claim.

5. Minimum percent of elemental calcium, calcium carbonate and calcium oxide and elemental magnesium, magnesium carbonate and magnesium oxide expressed in the following form and format:

Total Calcium (Ca).....	_____	%
Calcium carbonate (CaCO <sub>3</sub> ).....	_____	%
Calcium oxide (CaO).....	_____	%
Total Magnesium (Mg).....	_____	%
Magnesium carbonate (MgCO <sub>3</sub> )...	_____	%
Magnesium oxide (MgO).....	_____	%

6. The minimum fineness guarantee, as required by Section X.

- B. For packaged products, this information shall either
1. appear on the front or back of the package and
  2. occupy at least one-third of a side of the package, or
  3. be printed on a tag and attached to the package.

- C. For bulk products, this same information in written or printed form shall accompany delivery and be supplied to the purchaser at time of delivery.

SECTION IX. Liming Material Designation and Calcium Carbonate Equivalent (CCE)

- A. Agricultural liming materials shall be classified in terms of calcium carbonate equivalent. This classification shall appear on the label as required by Section VIII of this regulation. The classification shall be one of the five categories listed in Table 1.

Table 1. AGRICULTURAL LIMING MATERIALS

Material	Calcium Carbonate Equivalent (C.C.E.), percent
Burnt Lime	not less than 140
Hydrated Lime	not less than 110
Limestone	not less than 80
Slag	not less than 80
Shells	not less than 80

- B. To be labeled as "Calcitic", a liming material must contain at least 90 percent calcium carbonate, derive at least 36% of its calcium from calcium carbonate, and have a minimum calcium carbonate equivalent (CCE) of 90.
- C. To be labeled as "Dolomite", a liming material must contain 40 to 44 percent magnesium carbonate and 54 to 58 percent calcium carbonate.
- D. To be labeled as "Dolomitic" ("High Mag Lime"), a liming material must contain at least 22 percent magnesium carbonate, derive at least 6% of its magnesium from magnesium carbonate and have a minimum calcium carbonate equivalent (CCE) of 90.

SECTION X. Fineness Standards for Lime

- A. The minimum fineness guarantee shall be at least 90% passage through a 20-mesh screen and 40% passage through a 100-mesh screen.
- B. The minimum fineness guarantee shall be expressed in the following form and format and shall appear on the label as required by Section VIII of this regulation.

20-mesh.....	_____	%
100-mesh.....	_____	%

SECTION XI. Sampling, Analysis and Inspection

- A. Any sampling and analysis as provided for by the Law shall be in accordance with methods of sampling and analysis generally accepted in the scientific community. The methods of sampling and analysis set forth in the latest edition of the Official Method of Analysis of the Association of Official Analytical Chemists, shall be prima facie evidence of such generally accepted standards.
- B. For the purpose of enforcing these regulations, the Commissioner, upon presenting appropriate credentials, is authorized to:
  1. Enter any public building or private premises, except domiciles, during regular business hours and stop and enter any vehicle used to transport or hold fertilizer or lime;
  2. Inspect blending plants, warehouses, establishments, vehicles, equipment, finished or unfinished materials, containers, labeling and records relating to distribution, storage or use; and

3. Collect and analyze any samples of fertilizer, lime, soil, water or other materials as he may deem necessary.

#### SECTION XII. Shortweight

- A. A fertilizer or lime shall be deemed deficient if it is found to be shortweight. It shall be found to be shortweight if the lot weight does not equal or exceed the labeled weight as required by Sections IV and VIII of this regulation.
  1. For the purposes of this regulation, a bulk fertilizer or lime shall be considered shortweight if the measured weight of the lot varies from the labeled weight by more than one-half of one percent (0.5%) of the net weight.
  2. If a fertilizer or lime is found to be shortweight, a penalty payment of three (3) times the sales price of the shortage shall be assessed by the Commissioner.

#### SECTION XIII. Storage, Handling and Use of Fertilizer Materials

- A. Fertilizer and fertilizer ingredients shall be stored, handled and used so as not to exceed the primary groundwater quality enforcement standards identified in Chapter 12.702 of the "Ground Water Protection Rule and Strategy" in accordance with 10 V.S.A. Chapter 48.
- B. Fertilizer containers and storage vessels shall be fabricated in a manner known to minimize breakage of and leakage from such containers and also to minimize contamination of non-target lands and waters of the State. Waters of the State shall include surface and ground waters.
- C. The storage, handling and use of fertilizer and fertilizer materials shall be managed to reduce the concentrations of plant nutrients in ground water to the preventive action limits established by Chapter 12.702 of the "Ground Water Protection Rule and Strategy" when monitoring indicates the presence of plant nutrient concentrations in groundwater that exceed the preventive action limits.
- D. Bagged or bulk fertilizers and waste fertilizer materials shall be stored under cover and on a non-porous surface.
- E. Fertilizer storage areas shall be appropriately identified and placarded.

SECTION XIV. Administrative Penalties and Appeals

- A. The Commissioner may assess an administrative penalty up to one thousand dollars (\$1,000) per violation if he or she finds that any person has violated 6 V.S.A. Chapter 28 or this rule by doing any one of the following acts:
- 1) Distributing a specialty fertilizer or lime without first obtaining the appropriate product registration;
  - 2) Distributing a fertilizer or lime without the appropriate labeling;
  - 3) Failing to file an annual tonnage report or failing to file an accurate tonnage report;
  - 4) Failing to pay the appropriate tonnage fee; or
  - 5) Violating a cease and desist order.
- B. Any administrative penalty issued by the Commissioner under Sections II, III, IV, VII, VIII or XII of this rule shall be given in writing and delivered by personal service or certified mail. Any person receiving notice of an administrative penalty shall have fifteen (15) days from the date of receipt to request a hearing with the Commissioner.
- C. Administrative penalties for deficient or short weight fertilizers or lime shall be paid to the affected party. If the consumer cannot be identified, the penalty shall be paid to the Commissioner and deposited into the Departments' fertilizer program account.
- D. Payment of administrative penalties shall be made within thirty (30) days of the Commissioners decision to assess a penalty. In cases where the penalty payment is made to a consumer, proof of payment to the consumer shall be forwarded to the Commissioner by the registrant within forty five (45) days of the penalty payment deadline.
- E. Any person aggrieved by a final decision of the Commissioner may appeal the decision to a superior court within thirty (30) days of the final decision. As provided for by 6 V.S.A. Section 380, the Commissioner may enforce a final administrative penalty by filing a civil collection action in any district or superior court.

