

Adopt Agr 1100, previously effective 4-30-24 (Document #13947, Interim) and expired 10-27-24, to read as follows:

CHAPTER Agr 1100 FERTILIZERS

PART Agr 1101 DEFINITIONS

Agr 1101.01 "Coated slow release fertilizer" means a product containing sources of water soluble nutrients, release of which in the soil is controlled by a coating applied to the fertilizer.

Agr 1101.02 "Enhanced efficiency fertilizer" means "enhanced efficiency fertilizer" as defined in RSA 431:3, VI-a.

Agr 1101.03 "Guaranteed analysis" means "guaranteed analysis" as defined in RSA 431:3, X.

Agr 1101.04 "Micronutrients" means the following plant food elements which are essential for the normal growth of plants and which are required by plants in relatively small amounts:

- (a) Boron;
- (b) Chlorine;
- (c) Cobalt;
- (d) Copper;
- (e) Iron;
- (f) Manganese;
- (g) Molybdenum;
- (h) Sodium; and
- (i) Zinc.

Agr 1101.05 "Natural inorganic fertilizer" means "natural inorganic fertilizer" as defined in RSA 431:3 XIV-a.

Agr 1101.06 "Natural organic turf fertilizer" means "natural organic turf fertilizer" as defined in RSA 431:3 XIV-b.

Agr 1101.07 "Percent" or "percentage" means "percent or percentage" as defined in RSA 431:3, XVI.

Agr 1101.08 "Polymer coated fertilizer" means a coated slow release fertilizer consisting of fertilizer particles coated with a polymer (plastic) resin. It is a source of slowly available plant nutrient(s).

Agr 1101.09 "Primary nutrient" means "primary nutrient" as defined in RSA 431:3, XVIII.

Agr 1101.10 "Product grade" means the shorthand representation of the minimum guarantee of available nutrient content expressed in terms of total nitrogen, available phosphate, and soluble potash with each guarantee separated by a hyphen. For example, 19-19-19.

Agr 1101.11 "Secondary nutrients" means the following plant food elements which are essential for the normal growth of plants and which are required by plants in lesser amounts than the primary nutrients and greater amounts than the micronutrients:

- (a) Calcium;
- (b) Magnesium; and
- (c) Sulfur.

Agr 1101.12 "Slow or controlled release fertilizer" means a fertilizer in which one or more of the nutrients have limited solubility in the soil solution, so that they become available to the growing plant over a period of time. The limited solubility might be an inherent characteristic of the fertilizer or can be imparted to a soluble fertilizer by coating the particle with such materials as waxes and plastics. A slow or controlled release fertilizer 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. Such delay of initial availability or extended time of continued availability can occur by a variety of mechanisms. These include controlled water solubility of the material by semi-permeable coatings, occlusion, or by inherent water insolubility of polymers, natural nitrogenous organics, protein materials, or other chemical forms, by slow hydrolysis of water soluble low molecular weight compounds, or by other unknown means.

Agr 1101.13 "Starter fertilizer" means a fertilizer formulated for a one-time application at planting or near that time to encourage root growth and enhance the initial establishment.

Agr 1101.14 "Unit" means 20 pounds of plant food or one percent of a ton.

PART Agr 1102 SECONDARY AND MICRO PLANT NUTRIENTS

Agr 1102.01 Secondary and Micro Plant Nutrients.

(a) Secondary and micro plant nutrients when mentioned in any form or manner on a fertilizer product shall be registered with the department pursuant to Agr 1103, and shall be guaranteed as specified in RSA 431:5.

(b) Guarantees shall be stated in terms of the elements as required in RSA 431:5.

(c) If chelated, water soluble, or other forms are claimed or advertised, the form and percentage shall be guaranteed separately.

(d) Sources of the guaranteed elements and proof of nutrient availability, including but not limited to test results, shall be provided to the commissioner upon request.

(e) The minimum percentages which will be accepted for registration shall be as shown below in Table 1102-1 Minimum Percentages, except for guarantees for those water-soluble nutrients labeled for the items in (1)-(6) as follows:

Table 1102-1 Minimum Percentages

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

- (1) Ready to use foliar fertilizers;
- (2) Ready to use specialty liquid fertilizers;
- (3) Hydroponic liquid feed programs;
- (4) Continuous liquid feed programs;
- (5) Potting, garden, and lawn soils; and
- (6) Horticultural growing media, which are exempted by RSA 431:3, VII.

(f) Only guarantees or claims for the plant nutrients in Table 1102-1 shall be accepted.

(g) Proposed labels and directions for the use of the fertilizer shall be furnished with the application for registration.

(h) Any of the elements listed in Table 1102-1 which are guaranteed shall appear in the order listed immediately following guarantees for the primary nutrients of nitrogen, phosphate, and potash.

PART Agr 1103 FERTILIZER LABELS

Agr 1103.01 Fertilizer Labels.

(a) The following information shall be the minimum required for all fertilizer labels:

- (1) Net weight;
- (2) Brand or product name, which shall not be misleading as to the purpose and guarantees;

(3) Product grade, if primary nutrients are claimed;

(4) Guaranteed analysis, including:

Total Nitrogen (N) _____%
 % Ammoniacal Nitrogen
 % Nitrate Nitrogen
 % Water Insoluble Nitrogen
 % Urea Nitrogen
 % (Other recognized and determinable forms of N)
 Available Phosphate (P₂O₅) _____%
 Soluble Potash (K₂O) _____%
 (Other nutrients, elemental basis) _____%

a. Zero guarantees shall not be made and shall not appear on the label except in nutrient guarantee breakdowns;

b. If chemical forms of nitrogen are claimed or required, the form shall be shown. No implied order of the forms of nitrogen shall be intended; and

c. Requirements as prescribed by Agr 1102.01;

(5) Sources of nutrients, when shown on the label, shall be listed below the completed guaranteed analysis statement;

(6) Name and mailing address of registrant;

(7) Directions for use of the fertilizer for the consumer, as follows:

a. For specialty fertilizer, minimum directions for use shall include:

1. Recommended application rate or rates in units of weight or volume per unit of area coverage. Where application rates are given in volume, the label shall provide sufficient information to calculate the application rates by weight;
2. Application timing and minimum intervals to apply the product when plants can utilize nutrients; and
3. The statement “Apply Only as Directed” or a statement of similar designation; and

b. For all other fertilizers, minimum directions for use shall include at least one of the following:

1. A statement such as:

“Use in accordance with recommendations of a qualified individual or institution, such as, but not limited to, a certified crop advisor, agronomist, university crop extension publication, or apply according to recommendations in your approved nutrient management plan;” or

2. Detailed directions for a specific use; and

(8) The following caution statement shall be required on all labels for fertilizers containing any prohibited materials under 21 CFR 589.2000 or Cattle Materials Prohibited in Animal Feed (CMPAF) under 21 CFR 589.2001:

“CAUTION: Do not eat, feed to animals, or apply to land used for grazing ruminant animals. Wash hands thoroughly with soap and water after handling and before eating or smoking.”

(b) For packaged products, the label requirements shall either:

- (1) Appear on the front or back of the package;
- (2) Occupy at least the upper-third of a side of the package; or
- (3) Be printed on a tag and attached to the package.

(c) The label requirements shall be in a readable and conspicuous form.

(d) For bulk products, the label requirements shall be in written or printed form and shall accompany delivery and be supplied to the purchaser at time of delivery.

Agr 1103.02 Slowly Released Plant Nutrients.

(a) No fertilizer label 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 slow release components are identified and guaranteed at a level of at least 15% of the total guarantee for that nutrient(s).

(b) Types of products with slow release properties recognized shall include:

- (1) Water insoluble, such as:
 - a. Natural organics;
 - b. Ureaform materials;
 - c. Urea-formaldehyde products; and
 - d. Isobutylidene diurea and oxamide;
- (2) Coated slow release, such as sulfur 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) Products containing water soluble nitrogen such as:
 - a. Ureaform materials;
 - b. Urea-formaldehyde products;
 - c. Methylenediurea (MDU);

- d. Dimethylenetriurea (DMTU); and
- e. Dicyanodiamide (DCD).

(c) The terms, "water insoluble", "coated slow release", "slow release", "controlled release", "slowly available water soluble", and "occluded slow release" shall be accepted as descriptive of these products, provided the manufacturer can show a testing program substantiating the claim as specified in (d) below. Testing shall be under guidance of experiment station personnel or a researcher who follows Association of Official Analytical Chemists (AOAC) methods.

(d) Pursuant to RSA 431:7, II, the AOAC International Method 970.04 shall be used to confirm the coated slow release and occluded slow release nutrients and others whose slow release characteristics depend on particle size.

(e) The AOAC International Method 945.01 shall be used to determine the water insoluble nitrogen of organic materials.

PART Agr 1104 NAMES OF COMMERCIAL FERTILIZERS

Agr 1104.01 Names of Commercial Fertilizers. The names and definitions for commercial fertilizers shall be those adopted by the Association of American Plant Food Control Officials (AAPFCO), and published in the AAPFCO Official Publication, Edition No. 77, available as specified in Appendix II.

Agr 1104.02 Percentages. The term of "percentage" by symbol or word, when used on a fertilizer label shall represent only the amount of individual plant nutrients in relation to the total product by weight.

PART Agr 1105 INVESTIGATIONAL ALLOWANCES

Agr 1105.01 Commercial Fertilizer Deficiency.

(a) A commercial fertilizer shall be deficient if the analysis of any nutrient is below the guarantee by an amount exceeding the values listed below in Table 1105-1 Commercial Fertilizer Deficiencies, or if the overall index value of the fertilizer is below 98%:

Table 1105-1 Commercial Fertilizer Deficiencies

Guarantee Percent	Nitrogen (N)	Avail. Phosphate (P ₂ O ₅)	Sol. Potash (K ₂ O)
	Investigational Allowance, percent		
04 or less	0.49	0.67	0.41
05	0.51	0.67	0.43
06	0.52	0.67	0.47
07	0.54	0.68	0.53
08	0.55	0.68	0.60
09	0.57	0.68	0.65
10	0.58	0.69	0.70
12	0.61	0.69	0.79

14	0.63	0.70	0.87
16	0.67	0.70	0.94
18	0.70	0.71	1.01
20	0.73	0.72	1.08
22	0.75	0.72	1.15
24	0.78	0.73	1.21
26	0.81	0.73	1.27
28	0.83	0.74	1.33
30	0.86	0.75	1.39
32	0.88	0.76	1.44
34	*	0.79	1.46
36	*	0.83	1.49
38	*	0.86	1.51
40	*	0.90	1.54
42	*	0.93	1.56
44	*	0.96	1.58
46	*	1.00	1.61
48	*	1.03	1.63
50	*	1.07	1.66
52	*	1.10	1.68
54	*	#	1.70
56	*	#	1.73
58	*	#	1.75
60	*	#	1.78
62	*	#	1.80

* For N guarantees above 32%, the investigational allowance shall be 0.88

For P₂O₅ guarantees above 52% and K₂O guarantees above 62%,
contact the AAPFCO IA Investigator.

(b) For guarantees not listed in Table 1105-1, the department shall calculate the appropriate value by interpolation.

Agr 1105.02 Overall Index Value. The overall index value of a fertilizer, $(V_2 / V_1) \times 100$, shall be determined as follows:

(a) “V₁” means the commercial value guaranteed, as determined by multiplying the guaranteed percentage of a nutrient by the unit value of that nutrient. The results are then added together. Unit values of the nutrients used shall be those referred to in Agr 1105.03;

(b) “V₂” means the commercial value found, as determined by multiplying the found percentage of a nutrient by the unit value of that nutrient. The results are then added together. Unit values of the nutrients used shall be those referred to in Agr 1105.03; and

(c) To calculate the overall index value the manufacturer shall divide V₂ by V₁, and then multiply the result by 100, as in the formula below:

$$\text{Overall index value} = (V_2 / V_1) \times 100$$

Agr.1105.03 Commercial Values to be Applied. For the purpose of determining the commercial values to be applied under the provisions of RSA 431:8 and RSA 431:9, the values per unit of nitrogen, phosphate, and potash in commercial fertilizer shall be as follows:

- (a) Nitrogen, \$12.00 per unit;
- (b) Phosphate, \$19.00 per unit; and
- (c) Potash, \$10.00 per unit.

Agr 1105.04 Deficiency of Secondary Nutrients and Micronutrients.

(a) Secondary nutrients and micronutrients shall be those listed in Table 1102-1 Minimum Percentages.

(b) Secondary nutrients and micronutrients shall be deemed deficient if the analysis of any element is below the guarantee by an amount exceeding the values calculated according to Table 1105-2:

Table 1105-2 Secondary and Minor Element Deficiencies

Element	Investigational Allowance
Calcium	0.2 unit + 5% of guarantee
Magnesium	0.2 unit + 5% of guarantee
Sulfur	0.2 unit + 5% of guarantee
Boron	0.003 unit + 15% of guarantee
Cobalt	0.0001 unit + 30% of guarantee
Chlorine	0.005 unit + 10% of guarantee
Copper	0.005 unit + 10% of guarantee
Iron	0.005 unit + 10% of guarantee
Manganese	0.005 unit + 10% of guarantee
Molybdenum	0.0001 unit + 30% of guarantee
Sodium	0.005 unit + 10% of guarantee
Zinc	0.005 unit + 10% of guarantee

(c) The maximum allowance when calculated in accordance to the above shall be one unit, which equals one percentage point.

PART Agr 1106 INSPECTION FEE AND SEMI-ANNUAL TONNAGE REPORT

Agr 1106.01 Inspection Fee.

(a) Under RSA 431:6, each person distributing commercial fertilizer shall pay an inspection fee of 20 cents per ton of fertilizer sold in New Hampshire, with a minimum fee of \$5.

(b) Such fee shall be payable at the time of filing the semi-annual tonnage report as specified in RSA 431:6.

Agr 1106.02 Semi-Annual Tonnage Report.

(a) The semi-annual tonnage report shall list the following:

- (1) The period for which the report covers;
- (2) The tons sold of each grade and type of material;
- (3) Whether the tonnage sold is dry or liquid and bagged or bulk;
- (4) The company name and address; and
- (5) The name, title, and signature of the person completing the report.

(b) The semi-annual tonnage report, with the minimum fee in Agr 1106.01(a), shall be filed even if no fertilizer has been distributed in New Hampshire.

PART Agr 1107 SAMPLING

Agr 1107.01 Sampling. Sampling equipment and procedures shall be those adopted by the AOAC International, wherever applicable, as described in RSA 431:7, II.

PART Agr 1108 BREAKDOWN OF PLANT FOOD ELEMENTS WITHIN THE GUARANTEED ANALYSIS

Agr 1108.01 Breakdown of Plant Food Elements Within the Guaranteed Analysis. When a plant nutrient guarantee is broken down into the component forms, the percentage for each component shall be shown before the name of the form.

PART Agr 1109 ORGANIC NITROGEN

Agr. 1109.01 Organic Nitrogen. If an amount of nitrogen is designated as organic then the water insoluble nitrogen or the slow release nitrogen guarantee shall not be less than 60% of the nitrogen so designated. Coated urea shall not be included in meeting the 60% requirement.

Appendix I

Rule	Specific State Statute which the Rule is Intended to Implement
Agr 1100 (Specific rules implementing other statutes are listed below.)	RSA 431:13
Agr 1102	RSA 431:5
Agr 1103	RSA 431:5, RSA 431:10
Agr 1105	RSA 431:8
Agr 1105.02	RSA 431:9
Agr 1106	RSA 431:6
Agr 1107	RSA 431:7
Agr 1108	RSA 431:5
Agr 1109	RSA 431:5

Appendix II

Rule	Material Incorporated	How Material May be Obtained
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Agr 1104.01	AAPFCO Official Publication, Edition No. 77	Association of American Plant Control Officials www.aapfco.org . Cost is \$75 (online only), \$125 (hard copy and online copy), or \$65 (hard copy only)
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