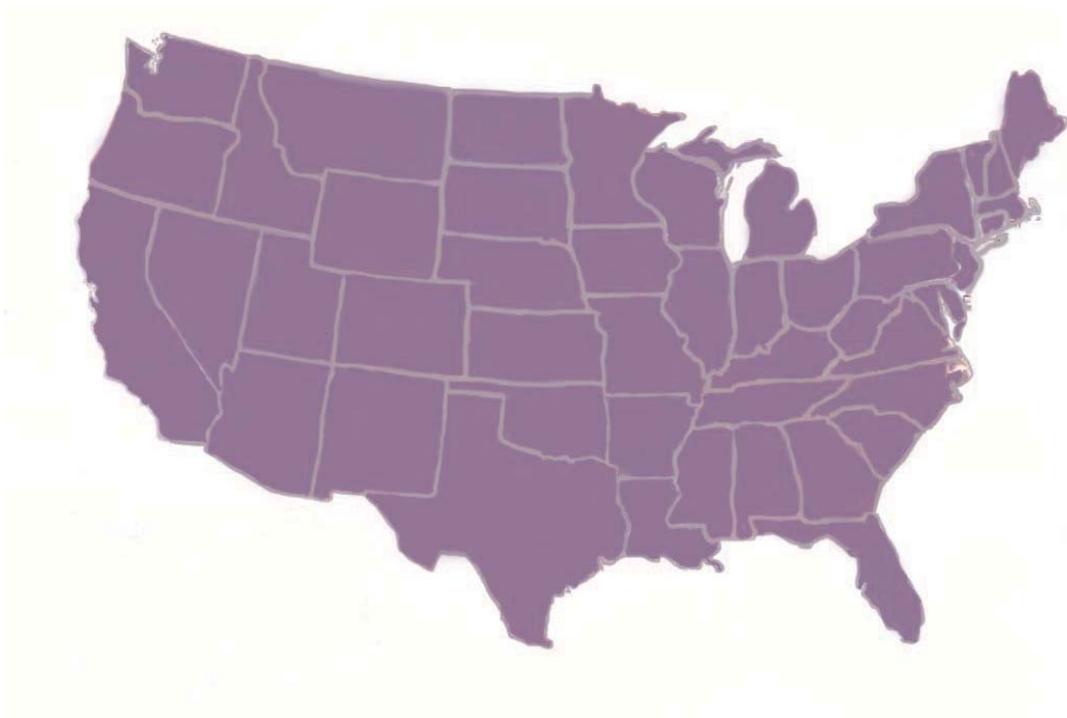




The Fertilizer Institute

Nourish, Replenish, Grow

2003 SUMMARY STATE FERTILIZER LAWS



Compiled By

The Fertilizer Institute's (TFI) Product Quality & Technology Committee

Washington, D.C.

SUMMARY OF STATE FERTILIZER LAWS

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Presented by The Fertilizer Institute's Product Quality & Technology Committee

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I. INTRODUCTION

Fertilizers are state-regulated products. Forty-eight state laws, amplified with administrative regulations, spell out procedures for registering products, licensing firms and information on labels, etc. Two states, Alaska and Hawaii, have no fertilizer laws. No Federal law or regulation applies to these items.

The Product Quality & Technology Committee of The Fertilizer Institute (TFI), working with the Association of American Plant Food Control Officials (AAPFCO), developed this summary as a reference to the wide variety of requirements of individual state fertilizer laws and regulations.

II. INDIVIDUAL STATE LAW PROVISIONS

This section includes 27 major items reported by state fertilizer control officials from state fertilizer laws. State laws contain many others, and each firm selling fertilizer must be responsible for understanding and complying with all requirements in each state in which it sells fertilizer. To assure compliance, contact the state fertilizer control official listed on pages 16-22.

An explanation of the 27 rules and regulations are listed as follows:

PRODUCT REGISTRATION

Renewal Date: P means permanent. Those states with a foot note have A ratio and/or grade list.

Minimum Nutrient Content: Minimum nutrient percentage (N, P₂O₅, K₂O) allowed; some states also specify minimum P₂O₅ for superphosphate.

Registration Application: Whether state requires source of nutrients on registration application.

Label: Whether state requires source of nutrients on label.

Package Weight Limit: Most states specify package sizes, such as 10 pounds or less, to which the “Specialty Goods” fee applies. For larger packages, the “Farm Goods” fee usually applies.

Farm Goods: \$ per brand or grade unless otherwise specified. Some states have fees for each brand (a term, design, or trademark used in connection with one or more grades).

Specialty Goods: \$ per brand or grade unless otherwise specified.

LICENSING

Renewal Date: Varies

Fee: \$ per plant, firm, etc.

INSPECTION FEES

Farm: Cents/ton.

Specialty: Cents/ton unless qualified. Some states apply the tonnage fee as such only to packages above a certain size. For goods in packages below that size, there often is a single charge, such as \$50.00 for each grade, to cover both the registration and inspection fee charge.

Frequency: Period (monthly, etc.) industry reports and pays inspection fee.

TONNAGE REPORTS

Frequency: Monthly (M), Quarterly (Q), Semi-Annually, Annually (A) that state publishes tonnage report.

County: Whether state publishes consumption statistics by county.

UFTR System: Whether state uses AAPFCO's Uniform Fertilizer Tonnage Reporting System.

QUALITY CONTROL

Sampling: Whether state uses AOAC sampling methods.

Analysis: Whether state uses AOAC analytical methods.

Penalty: Fines, refunds, etc., industry pays for deficiencies.

AAPFCO Investigational Allowances: Whether state uses AAPFCO investigational allowances.

Accept AAPFCO Uniform Label Format: Require label format recommended by AAPFCO.

Accept AAPFCO Terms & Definitions: Use AAPFCO terms & definitions in interpreting state regulations.

INDUSTRY STATISTICS

Registrants

Licensees

Dry Blending Plants

Fluid Blending Plants

PERCENT SALES TAX

Farm Goods

Specialty

III. INDIVIDUAL STATE INVESTIGATIONAL ALLOWANCES

This section summarized the individual state investigational allowances and penalties used to determine whether fertilizer sold in the state is in compliance with the provisions of the fertilizer law.

An explanation of the terms used in this section are as follows:

1. **Investigational Allowances** – The criteria used to judge whether any fertilizer is deficient in plant food following sampling and chemical analysis.
2. **Average Compensation** – An average in primary nutrients may compensate for a deficiency in another primary nutrient.
3. **Penalty Applied** – Financial compensation awarded consumer or regulatory agency over and above the commercial value of the fertilizer deficiency.
4. **Stop Sale** – State authorized to remove violative fertilizer lot from market.
5. **How Released** – Requirement on manufactures to remove “stop sale” order.
6. **Penalty Paid To** – The individual or state agency who receives payment for fertilizer deficiency.
7. **Receipt Required** – State laws mandate consumer receipt showing proof payment received.

INVESTIGATIONAL ALLOWANCES FOOTNOTES

- (A) Uniform State Fertilizer Bill as follows: a commercial fertilizer shall be deemed deficient if the analysis of any nutrient is below the guarantee by an amount exceeding the values in the following schedule, or if the overall index value of the fertilizer is below 98%

Guarantee Percent	Nitrogen Percent	Available Phosphoric Acid, Percent	Potash Percent
04	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

- (B) New Jersey – Uses Uniform Bill, but penalty only if deficiency is twice the allowance stated or below 95% relative value.

- (C) Oregon – Uses Uniform Bill.

(D) Kentucky

Guaranteed Percent	Total Nitrogen (N) Percent	Available Phosphoric (P₂O₅), Percent	Soluble Potash (K₂O) Percent
05 or less	0.37	0.65	0.39
06	0.47	0.71	0.47
07	0.59	0.77	0.56
08	0.72	0.82	0.63
09	0.81	0.86	0.70
10	0.89	0.89	0.76
12	1.03	0.95	0.87
14	1.18	1.02	0.96
16	1.29	1.12	1.05
18	1.43	1.19	1.12
20	1.57	1.32	1.18
22	1.62	1.39	1.22
24	1.65	1.46	1.26
26	1.66	1.53	1.29
28	1.58	1.59	1.33
30	1.28	1.67	1.36
32	1.28	1.67	1.36

For guarantees not listed, calculate the appropriate value by interpolation. The investigational allowances for secondary and minor elements are those adopted by AAPFCO.

- (E) Maine, Missouri, Ohio, Wisconsin – 10% of NPK guaranteed up to 2 units, or 97% relative value.
- (F) Alabama – 10% any N,P, or K and 5% single nutrient, 5% CV.
- (G) Mississippi, Oklahoma – 10% NPK and 96% relative value.
- (H) Virginia – .30 of 1% plus 3% of guarantee: relative value must be 97%. If 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% of the guarantee of the deficient nutrient, not to exceed two units.
- (I) Arkansas, Illinois – Up to 3% NPK guarantee.

(J) Florida

576.061 Plant nutrient investigational allowances, deficiencies, and penalties.-

(1) Investigational allowances are set as follows:

(a) *Primary plant nutrients; investigational allowances.-*

Guaranteed Percent	Total Nitrogen Percent	Available Phosphate Percent	Potash Percent
04 or less	0.49	0.67	0.41
05	0.51	0.67	0.43
Guaranteed Percent	Total Nitrogen Percent	Available Phosphate Percent	Potash Percent
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 or more	0.88	0.76	1.44

For guarantees not listed, calculate the appropriate value by interpolation.

(b) *Nitrogen investigational allowances.-*

Nitrogen breakdown	Investigational allowances Percent
Nitrate nitrogen	0.40
Ammoniacal nitrogen	0.40
Water soluble nitrogen or urea nitrogen	0.40
Water insoluble nitrogen	0.30

In no case may the investigational allowance exceed 50 percent of the amount guaranteed.

- *Secondary and micro plant nutrients, total or soluble.-***

Element	Investigational allowances Percent
Calcium	0.2 unit + 5 percent of guarantee
Magnesium	0.2 unit + 5 percent of guarantee
Sulfur (free and combined)	0.2 unit + 5 percent of guarantee
Boron	0.003 unit + 15 percent of guarantee

Element	Investigational allowances Percent
Cobalt	0.0001 unit + 30 percent of guarantee
Chlorine	0.005 unit + 10 percent of guarantee
Copper	0.005 unit + 10 percent of guarantee

Element	Investigational allowances Percent
Iron	0.005 unit + 10 percent of guarantee
Manganese	0.005 unit + 10 percent of guarantee
Molybdenum	0.001 unit + 30 percent of guarantee
Sodium	0.005 unit + 10 percent of guarantee
Zinc	0.005 unit + 10 percent of guarantee

The maximum allowance for secondary and minor elements when calculated in accordance with this section is 1 unit (1 percent). In no case, however, may the investigational allowances exceed 50 percent of the amount guaranteed.

(d) *Liming materials and gypsum.*

Range Percent	Investigational allowances Percent
0-10	0.30
Over 10-25	0.40
Over 25	0.50

(K) Georgia

As specified in O.C.G.A. § 2-12-9 (a) (1) and (c), a fertilizer shall be deficient if the analysis found is below the guarantee by an amount exceeding the values listed below:

(a) Primary Plant Nutrients.

<u>Guaranteed</u> <u>Percent</u>	<u>Total</u> <u>Nitrogen</u> <u>Percent</u>	<u>Available</u> <u>Phosphate</u> <u>Percent</u>	<u>Soluble</u> <u>Potash</u> <u>Percent</u>
04 or less	.67	1.27	1.40
05	.68	1.27	1.41
06	.69	1.27	1.42
07	.70	1.27	1.43
08	.71	1.28	1.45
09	.72	1.28	1.46
10	.73	1.28	1.48
11-12	.75	1.28	1.51
13-14	.77	1.29	1.54
15-16	.79	1.29	1.58
17-18	.81	1.30	1.61
19-20	.82	1.30	1.64
21-22	.84	1.30	1.67
23-24	.86	1.31	1.70
25-26	.88	1.31	1.74
27-28	.90	1.32	1.77
29-30	.92	1.32	1.80
31 or more	.92	1.32	1.80

(b) Secondary and Micro Plant Nutrients.

<u>Element</u>	<u>Investigational Allowances</u>
Calcium	25% of guarantee not to exceed 0.5%
Magnesium	25% of guarantee not to exceed 0.5%
Sulfur	25% of guarantee not to exceed 0.5%
Boron	25% of guarantee not to exceed 0.5%
Cobalt	25% of guarantee not to exceed 0.5%
Chlorine	25% of guarantee not to exceed 0.5%
Copper	25% of guarantee not to exceed 0.5%
Iron	50% of guarantee not to exceed 1.0%
Manganese	25% of guarantee not to exceed 0.5%
Molybdenum	25% of guarantee not to exceed 0.5%
Sodium	25% of guarantee not to exceed 0.5%

Zinc 25% of guarantee not to exceed 0.5%

Authority O.C.G.A. § 2-12-15

(L) Louisiana – Tolerance Used

1. Total Nitrogen (N): A penalty of four times the value of the deficiency if such deficiency is an excess of 0.4 of one percent on goods that are guaranteed to contain eight percent or less of total nitrogen; 0.5 of one percent on goods that are guaranteed to contain more than eight percent and less than twenty-one percent; and 0.8 of one percent on goods guaranteed twenty-one percent or more.
2. Available phosphoric acid (P2O5): a penalty four times the value of the deficiency if the deficiency is more than 0.4 of one percent on goods that are guaranteed to contain ten percent or less of available phosphoric acid; 0.5 of one percent; and 0.8 or one percent on goods that are guaranteed more than twenty-six percent.
3. Soluble potash (K2O); a penalty of four times the value of the deficiency if such deficiency is in excess of 0.5 of one percent on goods that are guaranteed to contain eight percent or less; 0.6 of one percent on goods that are guaranteed to contain more than eight percent and less than twenty-one percent and 1.00 percent on goods guaranteed over twenty-one percent.
4. If a fertilizer is deficient in one ingredient, overages in either or both of the other ingredients in dollar value, may be applied to offset the deficiency, provided that a deficiency may not be cured if the deficiency in any one ingredient is more than twice the present tolerance; a fertilizer deficient in two of the three ingredients may not be cured by overages in the third ingredient.

(M) Washington - Tolerance Used

15.54.380 **Penalties for deficiencies upon analysis of Commercial fertilizers – Appeal – Disposition of penalties.**

1.) If the analysis shall show that any commercial fertilizer falls short of the guaranteed analysis in any one plant nutrient or in total nutrients, penalty shall be assessed in favor of the department in accordance with the following provisions.

a. A penalty of three times the value of the deficiency, if such deficiency in any one plant nutrient is more than two percent under guarantee of any one commercial fertilizer in which that plant nutrient is guaranteed up to and including ten percent; a penalty of three times the value of the deficiency, if such deficiency in any one plant nutrient is more than three percent under

guarantee on any one tenth percent to twenty percent; a penalty of three times the value of the deficiency, is such deficiency in any one plant nutrient is more than four percent under guarantee on any one commercial fertilizer in which that plant nutrient is guaranteed twenty and one-tenth percent and above.

b. A penalty of three times the value of the total nutrient deficiency shall be assessed when such deficiency is more than two percent under the calculated total nutrient guarantee.

c. When a commercial fertilizer is subject to penalty under both (a) and (b) above, only the large penalty shall be assessed.

Sampling and Analytical Variances

<u>Guarantee</u>	<u>Deficient</u>	<u>Penalty</u>
Single Nutrient (Primary)	.0.5% Under Guarantee	2% Under Guarantee
	Mixed Fertilizer Individual Guarantees of (N,P2O5, K2O)	
1-10%	.0.5% under	2% under
10.1-20%	.0.75% under	3% under
20.1 & above	1.0% under	4% under
	Total Nutrients Guarantee	
(N,P2O5, K2O)	1.0% under	.2% under

* Secondary & Minor Tolerance

* Liming Materials Tolerance

* Administrative tolerance differs depending on sensitivity, accuracy and reproducibility of method used for the particular nutrient (these are currently under review)

(N) New Mexico – Tolerance Used

A. If the analysis shows that any commercial fertilizer falls short of the guaranteed analysis in any one ingredient, penalty shall be assessed in accordance with the following.

1. Total Nitrogen: A penalty of three times the value of the deficiency, if the deficiency is in excess of 0.20 of one percent on goods that are guaranteed two percent; 0.25 of one percent on goods that are guaranteed three percent; 0.35 of one percent on goods that are guaranteed four percent; 0.40 of one percent on goods that are guaranteed five percent up to and including eight percent; 0.50 of one percent on goods guaranteed above eight percent up to and including thirty percent; and 0.75 of one percent on goods guaranteed over thirty percent.

2. Available Phosphoric Acid or Available Phosphorous: A penalty of three times the value of the deficiency, if the deficiency exceeds 0.40 of one percent of available phosphoric acid (P₂O₅) on goods that are guaranteed up to and including ten percent; 0.50 of one percent of available phosphoric acid (P₂O₅) on goods that are guaranteed above ten percent up to and including twenty-five percent; and 0.75 goods guaranteed over twenty-five percent.

3. Soluble Potash or Soluble Potassium: A penalty of three times the value of the deficiency, if the deficiency is in excess of 0.20 of one percent of soluble potash (K₂O) on goods that are guaranteed two percent; 0.30 of one percent of soluble potash (K₂O) on goods that are guaranteed three percent; 0.40 of one percent of soluble (K₂O) on goods guaranteed four percent; 0.50 of one percent of soluble potash (K₂O) on goods guaranteed above four percent up to and including eight percent; 0.60 of one percent of soluble potash (K₂O) on goods guaranteed above eight percent u to and including twenty percent; and 1.00 of one percent of soluble potash (K₂O) on goods guaranteed over twenty percent.

(O) New York – Penalty Applied

Penalty assessments are provided by Section 39 of the N.Y.S. Agriculture and Markets Law as not less than \$50 nor more than \$200 for the first violation nor more than \$400 for the second and each subsequent violation of the Fertilizer Law

(P) California – A commercial fertilizer shall be deemed deficient if the analysis of any nutrient is below the guarantee by an amount exceeding the values in the following schedule.

INVESTIGATIONAL ALLOWANCES			
GUARANTEE %	NITROGEN %	PHOSPHORIC ACID %	POTASH%
01	0.20	0.20	0.20
02	0.40	0.40	0.35
03	0.45	0.60	0.39
04	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	0.68	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	1.00
20	0.73	0.72	1.00
22	0.75	0.72	1.00
24	0.78	0.73	1.00
26	0.81	0.73	1.00
28	0.83	0.74	1.00
30	0.86	0.75	1.00
32 or more	0.88	0.76	1.00

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	ALLOWABLE DEFICIENCY
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
Molybdenum	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
Sodium	0.005 unit + 10% of guarantee
Zinc	0.005 unit + 10% of guarantee
Humic Acid	10% of guarantee
Gypsum	5% of guarantee

The maximum allowance when calculated in accordance to the above shall be (1) unit (1%).

(Q) North Carolina – Uses Uniform Bill, also if relative value of a sample is equal to or excess the guaranteed relative value, an overage in primary nutrients may compensate for a deficiency in another primary nutrient up to 10% of the guarantee of the deficient nutrient, nor to exceed two units.

(R) Pennsylvania – 10% of guarantee up to 2 unit maximum, plus 97% of commercial value.

(S) Tennessee – A commercial fertilizer shall be deemed deficient if the analysis of any nutrient is below the guarantee by an amount exceeding the values in the following schedule, or if the overall index value of the fertilizer is below 97%.

Guarantee percent	Nitrogen percent	Available Phosphoric Acid percent	Potash Percent	Guarantee percent
4	0.98	1.34	0.82	4
5	1.02	1.34	0.86	5
6	1.04	1.34	0.94	6
7	1.08	1.36	1.06	7
8	1.10	1.36	1.20	8
9	1.14	1.36	1.30	9
10	1.16	1.38	1.40	10
12	1.22	1.38	1.58	12
14	1.26	1.40	1.74	14
16	1.34	1.40	1.88	16
18	1.40	1.42	2.02	18
20	1.46	1.44	2.16	20
22	1.50	1.44	2.30	22
24	1.56	1.46	2.42	24
26	1.62	1.46	2.54	26
28	1.66	1.48	2.66	28
30	1.72	1.50	2.78	30
32	1.76	1.52	2.88	32

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UNIFORM COMMERCIAL FERTILIZER LICENSE APPLICATION

APPLICATION FOR COMMERCIAL FERTILIZER LICENSE		FOR CONTROL OFFICIAL'S USE
STATE OF _____	DATE: _____ 19 ____	
<i>Control Agency</i>		
<i>Address</i>		
Application is hereby made and fee of \$ _____ enclosed for a license to manufacture and/or distribute commercial fertilizer at the following location for the period _____, 19 ____ through _____, 19 ____.		
<i>Applicant's Business Name</i>		<i>Plant Name, if Different</i>
<i>P.O. Box</i>	<i>Number & Street</i>	<i>P.O. Box</i> <i>Number & Street</i>
<i>City</i>	<i>State</i> <i>Zip Code</i>	<i>City</i> <i>State</i> <i>Zip Code</i>
<i>Person in Charge and Title</i>		<i>Area Code</i> <i>Telephone Number</i>
Type of Operation: Manufacturer; Distributor; Other _____ <i>Describe Kind</i>		
Materials Produced: <input type="checkbox"/> Dry Blends; <input type="checkbox"/> Ammoniation; <input type="checkbox"/> Liquid Hot Mix; <input type="checkbox"/> Liquid Cold Mix; <input type="checkbox"/> Anhydrous Ammonia; <input type="checkbox"/> Solutions; <input type="checkbox"/> Suspensions; <input type="checkbox"/> Secdy. or Micronutrients; <input type="checkbox"/> Other _____ <i>Desc.</i>		
_____ <i>Signature</i>		
Submit in duplicate. Make check payable to: (Name of agency authorized to receive funds)		
COMMERCIAL FERTILIZER LICENSE		
This license entitles the above named applicant to manufacture and/or distribute commercial fertilizer at the above location in the State of _____ for the period _____, 19 ____ through _____, 19 ____ Such license shall remain in effect unless suspended or revoked by the _____ for cause.		
LICENSE NUMBER: _____ DATE _____, 19 ____.		
_____ <i>Signature Control Official</i>		
_____ <i>Title</i>		

OFFICIALLY ADOPTED DOCUMENTS

Note – Although these documents have not been passed into law in all states, the subject matter covered herein does represent the official policy of this Association. NOTE: Tentative actions are in BOLD ITALICS, new wording is enclosed in brackets and underlined [_], and deleted materials is denoted with strike throughs, -----

UNIFORM STATE FERTILIZER BILL
(Official 1982)

An ACT to regulate the sale [] and [storage,] distribution [, use and application] of fertilizers in the state of _____. BE IT ENACTED by the legislature of the State of _____. (Tentative 1996)

Section 1. Title

This Act shall be known as the " _____ Fertilizer law of 19 ____".

Section 2. Enforcing Official

This Act shall be administered by the _____ of the State of _____, hereinafter referred to as the " _____".

Section 3 Definitions of Words and Terms

When used in this Act:

- (a) The term "fertilizer" means any substance containing one or more recognized plant nutrient (s) which is used for its plant nutrient content and which is designed for use or claimed to have value in promoting plant growth, except unmanipulated animal and vegetable manures, marl, lime, limestone, wood ashes and other products exempted by regulation by the _____ .
- (1) The term "Fertilizer material" means a fertilizer which either:
- A. Contains important quantities of no more than one of the primary plant nutrients: nitrogen (N), phosphate (P₂O₅) and potash (K₂O), or (Official 1994)
 - B. Has 85 percent or more of its plant nutrient content present in the form of a single chemical compound, or
 - C. Is derived from a plant or animal residue or by-product or natural material deposit which has been processed in such a way that its

content of plant nutrients has not been materially changed except by purification and concentration.

- (2) The term "mixed fertilizer" means a fertilizer containing any combination or mixture of fertilizer materials.
 - (3) The term "specialty fertilizer" means a fertilizer distributed for non-farm use.
 - (4) The term "bulk fertilizer" means a fertilizer distributed in a non-packaged form.
- (b) The term "brand" means a term, design, or trademark used in connection with one or several grades of fertilizer.
- (c) Guaranteed Analysis:

Until the _____ prescribes the alternative form of "Guaranteed Analysis" in accordance with the provisions of subparagraph (2) hereof, the term "Guaranteed Analysis" shall mean the minimum percentage of plant nutrients claimed in the following order and form:

- (1) Total Nitrogen (N) _____ %
Available Phosphate (P₂O₅) _____ %
Soluble Potash (K₂O) _____ %
(Official 1994)
- (2) For unacidulated mineral phosphatic material and basic slag, bone, tankage and other organic phosphatic materials, the Total Phosphate and/or degree of fineness may also be guaranteed. (Official 1994)
- (3) Guarantees for plant nutrients other than nitrogen, phosphorus and potassium may be permitted or required by regulation by the _____. The guarantees for such other nutrients shall be expressed in the form of the element. The source (oxides, salts, chelates, etc.) of such other nutrients may be required to be stated on the application for registration and may be included on the label. Other beneficial substances or compounds, determinable by laboratory methods, also may be guaranteed by permission of the _____ and with the advice of the Director of the Agricultural Experiment Station. When any plant nutrients or other substances or compounds are guaranteed, they shall be subject to inspection and analysis in accord with the methods and regulations prescribed by the _____. (Official 1994)

Secretary's Note: Section 3. (c) (2) (Off. Pub. No. 47) deleted. (Official 1994.)

- (d) The term "grade" means the percentage of total nitrogen, available phosphate, and soluble potash stated in whole numbers in the same terms, order, and percentages as in the guaranteed analysis. Provided, however, That specialty fertilizers may be guaranteed in fractional units of less than one percent of total nitrogen, available phosphate, and soluble

potash: Provided, further, that fertilizer materials, bone meal, manures, and similar materials may be guaranteed in fractional units. (Official 1994)

- (e) The term "official sample" means any sample of fertilizer taken by the _____ or his agent and designated as "official" by the _____.
- (f) The term "ton" means a net weight of two thousand pounds avoirdupois.
- (g) The term "primary nutrient" means total nitrogen, available phosphate, and soluble potash. (Official 1994)
- (h) The term "percent" or "percentage" means the percentage by weight.
- (i) The term "person" means individual, partnership, association, firm and corporation.
- (j) The term "distribute" means to import, consign, manufacture, produce, compound, mix, or blend fertilizer, or to offer for sale, sell, barter or otherwise supply fertilizer in this state.
- (k) The term "distributor" means any person who distributes.
- (l) The term "registrant" means the person who registers fertilizer under the provisions of this Act.
- (m) The term "licensee" means the person who receives a license to distribute a fertilizer under the provisions of this Act.
- (n) The term "label" means the display of all written, printed, or graphic matter, upon the immediate container, or a statement accompanying a fertilizer.
- (o) The term "labeling" means all written, printed, or graphic matter, upon or accompanying any fertilizer, or advertisements, brochures, posters, television and radio announcements used in promoting the sale of such fertilizer.
- (p) The term "investigational allowance" means an allowance for variations inherent in the taking, preparation and analysis of an official sample of fertilizer.
- (q) The term "deficiency" means the amount of nutrient found by analysis less than that guaranteed which may result from a lack of nutrient ingredients or from lack of uniformity. (Official 1985)

Section 4. Option A- Registration

- (a) No person whose name appears upon the label of a fertilizer shall distribute that fertilizer, except specialty fertilizers, to a non-license until a license to distribute has been obtained by that person from the _____ upon payment of a \$_____ fee. All licenses expire on the _____ day of _____ each year.

- (b) The application shall include the following information:
 - (1) The brand and grade;
 - (2) The guaranteed analysis;
 - (3) The name and address of the registrant;
 - (4) Net weight. (Official 1988)
- (c) A distributor shall not be required to register any fertilizer which is already registered under this Act by another person, providing the label does not differ in any respect.
- (d) A distributor shall not be required to register each grade of fertilizer formulated according to specifications which are furnished by a consumer prior to mixing, but shall be required to register his firm in a manner and at a fee as prescribed in regulations by the _____ and to label such fertilizer as provided in Section 5 (b).

Section 4 Option B – Registration and Licensing

- (a) No person whose name appears upon the label of a fertilizer shall distribute that fertilizer, except specialty fertilizers, to a non-licensee until a license to distribute has been obtained by that person from the _____ upon payment of a \$_____ fee. All licenses expire on the _____ day of _____ each year.
- (b) An application for license shall include:
 - (1) The name and address of licensee.
 - (2) The name and address of each distribution point in the state. The name and address shown on the license shall be shown on all labels, pertinent invoices, and storage facilities for fertilizer distributed by the licensee in this state.
- (c) The licensee shall inform the _____ in writing of additional distribution points established during the period of the license.
- (d) No person shall distribute in this state a specialty fertilizer until it is registered with the _____ by the distributor whose name appears on the label. An application for each brand and product name of each grade of specialty fertilizer shall be made on a form furnished by the _____ and shall be accompanied by a fee of \$ _____ per each grade of each brand, except those fertilizers sold in packages of 10 pounds or less shall be registered at a fee of \$ _____ per each grade of each brand. Labels for each brand and product name of each grade shall accompany the application. Upon the approval of an application by the

_____, a copy of the registration shall be furnished the applicant. All registrations expire on the ____ day of _____ each year.

(e) An application for registration shall include the following:

- (1) The brand and grade;
- (2) The guaranteed analysis;
- (3) Name and address of the registrant;
- (4) Net weight. (Official 1988)

Section 4. Option C – Licensing

(a) No person whose name appears upon the label of a fertilizer shall distribute that fertilizer to a non-licensee until a license to distribute has been obtained by that person from the _____ upon payment of a \$ _____ fee. All licenses expire on the _____ day of each year.

(b) An application for license shall include:

- (1) The name and address of licensee.
- (2) The name and address of each distribution point in the state.

The name and address shown on the license shall be shown on all labels, pertinent invoices, and storage facilities for fertilizers distributed by the licensee in this state.

(c) The licensee shall inform the _____ in writing of additional distribution points established during the period of the license.

Section 5 Labels

(a) Any fertilizer distributed in this state in containers shall have placed on or affixed to the container a label setting forth in clearly legible and conspicuous form the following information:

- (1) Net weight;
- (2) Brand and grade: Provided, that the grade shall not be required when no primary nutrients are claimed;
- (3) Guaranteed analysis;
- (4) Name and address of the registrant/licensee.

- In case of bulk shipments, this information in written or printed form shall accompany delivery and be supplied to the purchaser at time of delivery.
- (b) A fertilizer formulated according to specifications which are furnished by/for a consumer prior to mixing shall be labeled to show the net weight, the guaranteed analysis, and the name and address of the distributor or registrant /licensee.

Section 6. Inspection Fees

- (a) There shall be paid to the _____ for all fertilizers distributed in this state to non-registrants/non-licensees an inspection fee at the rate of _____ cents per ton; Provided, that sales or exchanges between importers, manufacturers, distributors or registrants/licensees are hereby exempted.
- (b) Every registrant/licensee who distributes fertilizer in the state shall file with the _____ a (monthly, quarterly, or semiannual) statement for the reporting period setting forth the number of net tons of each fertilizer so distributed in this state during such period. The report shall be due on or before thirty days following the close of the filing period and upon such statement shall pay the inspection fee at the rate stated in paragraph (a) of this section. If the tonnage report is not filed and the payment of inspection fees is not made within 30 days after the end of the specified filing period, a collection fee, amounting to 10 percent (minimum \$10) of the amount due, shall be assessed against the registrant/licensee and added to the amount due.
- (c) When more than one person is involved in the distribution of a fertilizer, the last person who has the fertilizer registered (is licensed) and who distributed to a non-registrant/licensee dealer, or consumer is responsible for reporting the tonnage and paying the inspection fee, unless the report and payment is made by a prior distributor of the fertilizer.
- (d) On individual packages of fertilizer containing 10 pounds or less there shall be paid, in lieu of the inspection fee of _____ cents per ton and in lieu of \$_____ per brand and grade, an annual registration and inspection fee of \$ _____ for each grade of each brand sold or distributed. Where a person distributes fertilizer in packages of 10 pounds or less and in packages over 10 pounds, the annual fee shall apply only to that portion distributed in packages of 10 pounds or less.
- (e) Fees so collected shall be used for the payment of the costs of inspection sampling and analysis, and other expenses necessary for the administration of this Act.

Section 7. Tonnage Reports

- (a) The person distributing or selling fertilizer to a non-registrant/non-licensee shall furnish the _____ a report showing the county of the consignee, the amounts (tons) of each grade of fertilizer, and the form in which the fertilizer was distributed

(bags, bulk, liquid, etc.). This information shall be reported by one of the following methods:

- (1) Submitting a summary report approved by the _____ on or before the ____ day of each month covering shipments made during the preceding month; or
 - (2) Submitting a copy of the invoice within ____ business days after shipment.
- (b) No information furnished the _____ under this section shall be disclosed in such a way as to divulge the operation of any person.

Section 8. Inspection, Sampling, Analysis

- (a) It shall be the duty of the _____, who may act through his authorized agent, to sample, inspect, make analyses of, and test fertilizers distributed within this state and inspect the storage of bulk fertilizer at any time and place and to such an extent he may deem necessary to determine whether such fertilizers are in compliance with the provisions of this Act. The _____, individually or through his agent, is authorized to enter upon any public or private premises or carriers during regular business hours in order to have access to fertilizer subject to provisions of this Act and the regulations pertaining thereto, and to the records relating to their distribution and storage. (Official 1990)
- (b) The methods of sampling and analysis shall be those adopted by the AOAC International. In cases not covered by such methods, or in cases where methods are available in which improved applicability has been demonstrated, the _____ may adopt such appropriate methods from other sources.
- (c) The _____, in determining for administrative purposes whether any fertilizer is deficient in plant food, shall be guided solely by the Official sample as defined in paragraph (e) of Section 3, and obtained and analyzed as provided for in paragraph (b) of this section.
- (d) The results of official analysis of fertilizers and portions of official samples shall be distributed by the _____ as provided by regulation. Official samples establishing a penalty for nutrient deficiency shall be retained for a minimum of 90 days from issuance of a deficiency report.

Section 9. Plant Food Deficiency

- (a) Penalty for nitrogen, available phosphate, and soluble potash – If the analysis shall show that a fertilizer is deficient (1) in one or more of its guaranteed primary plant nutrients beyond the investigational allowance and compensations as established by regulation, or (2) if the overall index value of the fertilizer is below the level established by regulation, a penalty payment of _____ times the value of such deficiency or deficiencies shall be assessed. When a fertilizer is subject to

a penalty payment under both (1) and (2), the larger penalty payment shall apply.
(Official 1994)

- (b) Penalty payment for other deficiencies – Deficiencies beyond the investigational allowances as established by regulation in any other constituent (s) covered under Section 3 paragraph (c)(1) B and C of this Act, which the registrant/licensee is required to or may guarantee, shall be evaluated and penalty payments prescribed by the _____.
- (c) All penalty payments assessed under this section shall be paid by the registrant/licensee to the consumer of the lot of fertilizer represented by the sample analyzed within three months after the date of notice from the _____ to the registrant/licensee, receipts taken therefore and promptly forwarded to the _____. If said consumer cannot be found, the amount of the penalty payments shall be paid to the _____. Who shall deposit the same in the appropriate state fund allocated to fertilizer control service. If upon satisfactory evidence a person is shown to have altered the content of a fertilizer shipped to him by a registrant/licensee, or to have mixed or commingled fertilizer from two or more suppliers such that the result of either alteration changes the analysis of the fertilizer as originally guaranteed, then that person shall become responsible for obtaining a registration/license and shall be held liable for a penalty payments and be subject to other provisions of this Act, including seizure, condemnation and stop sale.
- (d) A deficiency in an official sample of mixed fertilizer resulting from non-uniformity is not distinguishable from a deficiency due to actual plant nutrient shortage and is properly subject to official action. (Official 1985)
- (e) Nothing contained in this section shall prevent any person from appealing to a court of competent jurisdiction praying for judgment as to the justification of such penalty payments.

Section 10. Commercial Value

For the purpose of determining the commercial value to be applied under the provisions of Section 9 the _____ shall determine and publish annually the values per unit of nitrogen, available phosphate, and soluble potash in fertilizers in this state. The value so determined and published shall be used in determining and assessing penalty payments.
(Official 1994)

Section 11. Misbranding

No person shall distribute misbranded fertilizer. A fertilizer shall be deemed to be misbranded

- (a) If it's labeling is false or misleading in a particular.

- (b) If it is distributed under the name of another fertilizer product.
- (c) If it is not labeled as required in Section 5 of this Act and in accordance with regulation prescribed under this Act.
- (d) If it purports to be or is represented as a fertilizer, or is represented as containing a plant nutrient or fertilizer unless such plant nutrient or fertilizer conforms to the definition of identity, if any, prescribed by regulation of the _____; in adopting such regulations the _____ shall give due regard to commonly accepted definitions and official fertilizer terms such as those issued by the Association of American Plant Control Officials.

Section 12. Adulteration

No person shall distribute an adulterated fertilizer product. A fertilizer shall be deemed to be adulterated:

- (a) *If it contains any deleterious or harmful ~~ingredient~~ [substance] in sufficient amount to render it injurious to beneficial plant [life, animals, humans, aquatic] life [, soil or water] when applied in accordance with directions for use on the label, or if adequate warning statements or directions for use which may be necessary to protect plant [life, animals, humans, aquatic] life [, soil or water] are not shown upon the label.*
- (b) *If its composition falls below or differs from that which it is purported to possess by its labeling.*
- (c) *If it contains unwanted crop seed or weed seed.*

(Tentative 1996)

Section 13. Publications

The ____ shall publish at least annually and in such forms as he may deem proper: (a) information concerning the distribution of fertilizers, (b) Results of analyses based on official samples of fertilizer distributed within the state as compared with analyses guaranteed under Section 4 and Section 5.

[Section 14. Storage, Use and Application

Bulk fertilizers must be stored in a manner that minimized the release of fertilizers and protects the environment. Fertilizer use and application may be set forth in regulations to protect the environment.] (Tentative 1996)

Section [1514.] Rules and Regulations

The _____ is authorized to prescribe and, after a public hearing following due public notice, to enforce such rules and regulation relating to investigational allowances, definitions, records, ~~and the distribution[,] storage [use and application]~~ of fertilizers as may be necessary to carry into effect the full intent and meaning of this Act [including protection of the environment]. (Tentative 1996)

Section [1645] Short Weight (Tentative 1996)

If any fertilizer in the possession of the consumer is found by the _____ to be short in weight, the registrant/licensee of said fertilizer shall within thirty days after official notice from the _____ submit to the consumer a penalty payment of _____ times the value of actual shortage.

Section [1746] Cancellation of Registration/License (Tentative 1996)

The _____ is authorized and empowered to cancel the registration (license of any person) of any brand of fertilizer or to refuse to register any brand of fertilizer (issue a license) as herein provided, upon satisfactory evidence that the registrant/licensee has used fraudulent or deceptive practices in the evasion or attempted evasion of the provisions of this Act or any regulations promulgated thereunder: Provided, that no license or registration shall be revoked or refused until the person (registrant/licensee) shall have been given the opportunity to appear for a hearing by the _____ .

Section [1847] "Stop Sale" Orders (Tentative 1996)

The _____ may issue and enforce a written or printed "stop sale, use, or removal" order to the owner or custodian of any lot of fertilizer and to hold at a designated place when the _____ finds said fertilizer is being offered or exposed for sale in violation of any of the provisions of this Act until the law has been complied with and said fertilizer is released in writing by the _____, or said violation has been otherwise legally disposed of by written authority. The _____ shall release the fertilizer so withdrawn when the requirements of the provisions of this Act have been complied with and all costs and expenses incurred in connection with the withdrawal have been paid.

Section [1948.] Seizure, Condemnation and Sale (Tentative 1996)

Any lot of fertilizer not in compliance with the provisions of this Act shall be subject to seizure on complaint of the _____ to a court of competent jurisdiction in the area in which said fertilizer is located. In the event the court finds the said fertilizer to be in violation of this Act and orders the condemnation of said fertilizer it shall be disposed of in any manner, consistent with the quality of the fertilizer and the laws of the state: Provided, That in no instance shall the disposition of said fertilizer be ordered by the court without first giving the claimant an opportunity to apply to the court for release of said fertilizer or for permission to process or relabel said fertilizer to bring it into compliance with this Act.

Section [2019.] *Violations (Tentative 1996)*

- (a) If it shall appear from the examination of any fertilizer that any of the provisions of this Act or the rules or regulations issued there under have been violated, the _____ shall cause notice of the violations to be given to the registrant/licensee or distributor from whom said sample was taken; any person so notified shall be given opportunity to be heard under such regulations as may be prescribed by the _____. If it appears after such hearing, either in the presence or absence of the person so notified, that any of the provisions of this Act or rules and regulations issued thereunder have been violated, the _____ may certify the facts to the proper prosecuting attorney. (Official 1989)
- (b) Any person convicted of violating any provision of this Act or the rules and regulations issued thereunder shall be punished in the discretion of the court.
- (c) Nothing in this Act shall be construed as requiring the _____ or his representative to report for prosecution or for the institution of seizure proceedings as a result of minor violations of the Act when he believes that the public interests will be best served by a suitable notice of warning in writing.
- (d) It shall be the duty of each _____ attorney to whom any violation is reported to cause appropriate proceedings to be instituted and prosecuted in a court of competent jurisdiction without delay.
- (e) The ____ is hereby authorized to apply for and the court to grant a temporary or permanent injunction restraining any person from violating or continuing to violate any of the provisions of this Act or any rule or regulation promulgated under this Act notwithstanding the existence of other remedies in law. Said injunction to be issued without bond.

Section [2120.] *Cooperation with Other Entities (Tentative 1996)*

The ____ may cooperate with and enter into agreement with governmental agencies of this State, other States, and agencies of the Federal Government in order to carry out the purpose and provisions of this Act. (Official 1991)

Section [2221.] *Exchanges Between Manufacturers (Tentative 1996)*

Nothing in this Act shall be construed to restrict or avoid sales or exchanges of fertilizers to each other by importers, manufacturers, or manipulators who mix fertilizer materials for sale, or as preventing the free and unrestricted shipments of fertilizer to manufacturers or manipulators who have registered their brands (are licensed) as required by provisions of this Act.

Section [2322.] *Constitutionality (Tentative 1996)*

If any clause, sentence, paragraph or part of this Act shall for any reason be judged invalid by any court of competent jurisdiction, such judgment shall not affect, impair, or invalidate the remainder thereof but shall be confined in its operation to the clause, sentence, paragraph, or part thereof directly involved in the controversy in which such judgment shall have been rendered.

Section ~~[2423]~~ Repeal (Tentative 1996)

All laws and parts of laws in conflict with or inconsistent with the provisions of this Act are hereby repealed.

Section ~~[2524]~~ Effective Date (Tentative 1996)

This Act shall take effect and be in force from and after the first day of _____.

FERTILIZER
RULES AND REGULATIONS

Under the Uniform State Fertilizer Bill by the _____ of the State of _____ Pursuant to due publication and notice of opportunity for a public hearing, the _____ has adopted the following regulations.

1. Plant Nutrients in Addition to Nitrogen, Phosphate and Potash.

Other plant nutrients when mentioned in any form or manner shall be registered and shall be guaranteed. Guarantees shall be made on the elemental basis. Sources of the elements guaranteed and proof of availability shall be provided the _____ 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 potting soils, the minimum percentages which will be accepted for registration are as follows: (Official 1996)

Element	%
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
Sodium (Na)	0.1000
Zinc (Zn)	0.0500

Guarantees or claims for the above listed plant nutrients are the only ones which will be accepted. Proposed labels and directions for the use of the fertilizer shall be furnished with the application for registration upon request. Any of the above listed elements which are guaranteed shall appear in the order listed immediately following guarantees for the primary nutrients of nitrogen, phosphate and potash. (Official 1994)

Secretary's Note – Paragraphs 3 and 4 (Off. Publication No. 38) were deleted – Official 1985

A warning or caution statement may be required for any product which contains (name of micro-nutrient) in water soluble form when there is evidence that (name of micro-nutrient) in excess of _____ % may be harmful to certain crops or where there are unusual environmental conditions. (Official 1984)

Examples of Warning or Caution Statements:

1. Directions: Apply the fertilizer at a maximum rate of (number of pounds) per acre for (name of crop).

CAUTION: Do not use on other crops. The (name of micro-nutrient) may cause injury to them.
2. CAUTION: Apply this fertilizer at a maximum rate of (number of pounds) per acre for (name of crop). Do not use on other crops; the (name of micro-nutrient) may cause serious injury to them.
3. WARNING: This fertilizer carries added (name of micro-nutrient) and is intended for use only on (name of crop). Its use on any other crops or under conditions other than those recommended may result in serious injury to the crops.
4. CAUTION: This fertilizer is to be used only on soil which responds to (name of micro-nutrient). Crops high in (name of micro-nutrient) are toxic to grazing animals (ruminants). (Official 1991)

Secretary's Note – Example Warning and Caution statements for boron and molybdenum (page 36 Off. Pub. No. 43) were deleted and above generic statements substituted. (Official 1991)

2. Fertilizer Labels.

The following information, in the format presented, is the minimum required for all fertilizer labels. For packaged products, this information 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. This information shall be in a readable and conspicuous form. For bulk products, this same information in written or printed form shall accompany delivery and be supplied to the purchaser at time of delivery.

- (a) Net weight
- (b) Brand
- (c) Grade (Provided that the grade shall not be required when no primary nutrients are claimed.)
- (d) Guaranteed Analysis*

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) * * * ____ %
(Official 1993)

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

(f) Name and address of registrant or licensee.

* Zero (0) guarantees should not be made and shall not appear in statement except in nutrient guarantee breakdowns. (Official 1993)

* * ***If chemical forms of N are claimed or required, the form shall be shown and the percentages of the individual forms shall add up to the Total Nitrogen percentage. No implied order of the forms of nitrogen is intended. (Tentative 1996)***

* * * As prescribed by regulation No. 1.
(Official 1986)

3. 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). (Official 1991)

(b) Types of products with slow release properties recognized are (1) water insoluble, such as natural organics, ureaform materials, urea-formaldehyde products, isobutylene direa, oxamide, etc., (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 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 reputable researcher acceptable to the _____). A laboratory procedure, acceptable to the _____ for evaluating the release characteristics of the product(s) must also be provided by the manufacturer. (Official 1991)

Secretary's Note: Rule 3 (c) was deleted and Rule 3 (d) renamed as they appeared on page 40 and 41 of Off. Pub. No. 47. (Official 1994)

(c) Until more appropriate methods are developed, AOAC International Method 970.04 (15th Edition) is to be used to confirm the coated slow release and occluded slow release nutrients and others whose slow release characteristics depend on particle size. AOAC International Method 945.01

(15th Edition) shall be used to determine the water insoluble nitrogen of organic materials. (Official 1994)

4. Definitions.

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

5. 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.

6. Investigational Allowances.

(a) A commercial fertilizer shall be deemed deficient if the analysis of any nutrient is below the guarantee by an amount exceeding the values in the following schedule, or if the overall index value of the fertilizer is below 98%. *Note: For these investigational allowances to be applicable, the recommended AOAC International procedures for obtaining samples, preparation and analysis must be used. These are described in official Methods of Analysis of the Association of Official Analytical Chemists, 13th Edition, 1980, and in succeeding issues of the Journal of the Association of Official Analytical Chemists. In evaluating replicate data, Table 19, page 935, Journal of the Association of Official Analytical Chemists, Volume 49, No. 5, October, 1966, should be followed.*

Guaranteed Percent	Nitrogen percent	Available Phosphate percent	Potash 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 or more 0.88 0.76 1.44

(Official 1993)

For guarantees not listed, calculate the appropriate value by interpolation.

The overall index value is calculated by comparing the commercial value guaranteed with the commercial value found. Unit values of the nutrients used shall be those referred to in Section 10 of the Act.

Overall index value – Example of calculation for a 10-10-10 grade found to contain 10.1% Total Nitrogen (N), 10.2% Available Phosphate (P₂O₅) and 10.1% Soluble Potash (K₂O). Nutrient unit values are assumed to be \$3 per unit N, \$2 per unit P₂O₅ and \$1 per unit K₂O. (Official 1993)

10.0 units N	x3=	30.0
10.0 units P ₂ O ₅	x2=	20.0
10.0 units K ₂ O	x1=	10.0
Commercial Value Guaranteed	=	60.0

10.1 units N	x3=	30.3
10.2 units P ₂ O ₅	x2=	20.4
10.1 units K ₂ O	x1=	10.1
Commercial Value Found	=	60.8

Overall Index Value = 100 (60.8/60.00) = 101.3%

- (b) 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	Investigational Allowance
Calcium)	0.2 unit + 5% of guarantee
Magnesium)	0.2 unit + 5 % of guarantee
Sulfur)	0.2 unit + 5 % of guarantee
Boron)	0.0003 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)	0.0005 unit + 10% of guarantee
Zinc)	0.005 unit + 10% of guarantee

The maximum allowance when recalculated in accordance to the above shall be 1 unit (1%).

7. Sampling

Sampling equipment and procedures shall be those adopted by the AOAC International wherever applicable.

8. 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.

EXAMPLES:

Total Nitrogen (N) ____%
 ____% Ammoniacal Nitrogen
 ____% Nitrate Nitrogen
Magnesium (Mg) ____%
 ____% Water Soluble Magnesium (Mg)
Sulfur (S) ____%
 ____% Free Sulfur (S)
 ____% Combined Sulfur (S)
Iron (Fe) ____%
 ____% Chelated Iron (Fe)
Manganese (Mn) ____%
 ____% Water Soluble Manganese (Mn)

(Official 1992)

9. Organic Nitrogen

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

(Official 1994)

STATEMENTS OF UNIFORM INTERPRETATION
AND POLICY

1. Grade – The grade of a fertilizer shall be used by the registrant/licensee in the labeling and by the control official in his reports and publications. No numeral shall be used in the grade of a fertilizer except those referring to Total Nitrogen (N), Available Phosphate (P_2O_5) and Soluble Potash (K_2O) (Official 1993)
2. Nutrient Guarantee – All fertilizer Nutrients, with the exception of phosphate (P_2O_5) and potash (K_2O) if guaranteed, shall be stated in terms of the elements. (Official 1993)
3. Name of Fertilizer Material – When the name of a fertilizer material is used as a part of the brand name of a fertilizer, as for example, blood, bone or fish, the nutrients guaranteed shall be derived from or supplied entirely by the material named. (Official 1985)
4. Phosphate (P_2O_5) and Potash (K_2O) – As the terms phosphate (P_2O_5) and potash (K_2O) are used universally in guaranteeing and in reporting the analysis of fertilizers it is recommended that the same terms also be used in reporting and discussing the results of analyses of related materials. (Official 1993)
5. Net Weights – The weights appearing on packages of fertilizers, agricultural lime, and liming materials shall always mean net weights. (Official 1953)
6. Mixtures of Ammonium Nitrate and Limestone or Dolomite – These shall not be designated as “ammonium calcium nitrate”, “calcium ammonium nitrate” or similar names which imply the presence of either calcium nitrate or ammonium carbonate in such mixture. (Official 1953)
7. Activity of Water Insoluble Nitrogen in Mixed Fertilizers – The alkaline and neutral permanganate methods (AOAC International Methods No. 920.06 and 920.07, 15th Ed., respectively) distinguish between the better and the poorer sources of water insoluble nitrogen, and do not show the percentage availability of the materials. The available nitrogen of any product can be measured only after carefully conducted vegetation experiments
 - (a) The methods shall be used on mixed fertilizers containing water insoluble nitrogen amounting to three-tenths (0.3%) of one percent or more of the weight of the material. If a total nitrogen exceeds the minimum guarantee and is accompanied by a low activity of the insoluble nitrogen, the over-run shall be taken into consideration in determining the classification of the Water Insoluble Nitrogen.
 - (b) The water insoluble nitrogen in mixed fertilizers showing an activity below fifty percent (50%) by the alkaline method and also below eighty percent (80%) by the neutral method shall be classed as inferior. This necessitates the use of both

methods, also the provision as to over-run in (a), before classifying as inferior. (Official 1966)

8. Fused and Noncrystalline Phosphate Products – These shall be marketed with an adequate statement concerning size of particles, in terms of percentages of the total product which pass through U.S. Standard Sieves of stated sizes. (Official 1958)
9. Specialty Fertilizer Labels – Any product coming under the fertilizer law shall not carry labels to emphasize that dilutions will make so many gallons of fertilizer. Specific claims, such as “contents of this package will make _____ gallons of fertilizer” should be prohibited. The labels shall not carry any extravagant and misleading advertising and claims. (Official 1958)
10. Amount of Chlorine Permissible in Fertilizers in Which the Potash is Claimed to be Present in Form Other than Chloride – The chlorine in mixed fertilizers in which the potash is claimed in form other than chloride shall not exceed one-half of one percent (0.5%) more than five percent (5%) of the potash content found. (Calculate as follows: 0.05 times the percentage of potash found plus 0.5). (Official 1976)
11. Labels for Liming Materials Mixtures – Artificial mixtures of two or more liming materials or of gypsum and liming materials shall include on the label a list of the ingredients used. (Official 1958)
12. Sieve Numbers – Sieve numbers designate sieve openings conforming to the United States Standard Sieve Series according to ASTM Specifications E-11-81 and ISO 565. (Official 1989)
13. Reporting Analyses – Reporting the analyses of official samples is an integral part of fertilizer control, and their usefulness to manufacturers and guarantors is largely dependent upon the time lapse between sample collection and reporting. Every effort should be expended toward reporting analyses within a reasonable period of time after sample collection. (Official 1976)
14. Fertilizer Legislation – The Uniform Bill and Regulations are the result of considerable study and deliberation. Control officials and industry should keep each other advised of pending legislation and provide the necessary information to promote uniformity. (Official 1976)
15. Sampling – The proper collection of a sample is the foundation of a sound and equitable fertilizer program. AOAC International has adopted official sampling procedures and apparatus, thus these should be used by all states. (Official 1976)
16. Guarantees for Fertilizer Materials – Fertilizer materials containing only one plant food and recognized by their chemical names are required to list only a guarantee for the plant food contained therein. For example, the only guarantee required for ammonium nitrate would be “Total Nitrogen (N).....33.5%”. (Official 1976)

17. Coated Slow Release or Occluded Slow Release Nutrients – When nutrients in a fertilizer are coated or occluded to obtain slow release properties, then the guarantees for those components may be shown as footnotes rather than as a component following each nutrient. For example,

(a) A fertilizer with one coated material:

Fertkote 10-15-20

Guaranteed Analysis

Total Nitrogen (N)	10%
2.5% Ammoniacal nitrogen	
2.5% Nitrate nitrogen	
5.0% Urea nitrogen *	
Available Phosphate (P ₂ O ₅)	15%
Soluble Potash (K ₂ O)	20%
Sulfur (S)	14%
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* _____% Slowly available Urea Nitrogen From _____

(b) A fertilizer with all materials of one nutrient coated:

Fertkote 10-15-20

Guaranteed Analysis

Total Nitrogen (N) *	10%
2.5% Ammoniacal nitrogen	
2.5% Nitrate nitrogen	
5.0% Urea nitrogen	
Available Phosphate (P ₂ O ₅)	15%
Soluble Potash (K ₂ O)	20%
Sulfur (S)	14%
-----	-----

* _____ % Slowly Available Nitrogen From _____

(C) A fertilizer with two (2) or more nutrients from coated materials:

Fertkote 10-15-20

Guaranteed Analysis

Total Nitrogen (N) *	10%
2.5% Ammoniacal nitrogen	
2.5% Nitrate nitrogen	
5.0% Urea nitrogen	
Available Phosphate (P ₂ O ₅) *	15%
Soluble Potash (K ₂ O) *	20%
Sulfur (S)	14%
-----	-----

(Official 1993)

* The nitrogen, phosphate and potash materials in this product have been coated to provide 9.0% coated slow release nitrogen (N), 13% coated slow release available phosphate (P₂O₅), and 18% coated slow release Soluble Potash (K₂O). (Official 1994)

18. Sampling of On-Farm Bulk Storage – No sample obtained from on-farm bulk storage owned and/or controlled by the farmer – consumer shall be designated as “official” unless (1) the sample is taken in the presence of the farmer-consumer and the fertilizer registrant or their respective representatives; or (2) the sample is taken in the presence of the farmer-consumer or his representative, the fertilizer registrant having been informed and accepting responsibility for the quality of product sampled; or (3) the sample is taken in the presence of the farmer-consumer or his representative and he certifies by written affidavit that the product as sampled, and identified upon the delivery statement, has not been altered or mixed with any other. (Official 1982)
19. Mixed Fertilizer – A deficiency in an official sample of mixed fertilizer resulting from non-uniformity is not distinguishable from a deficiency due to actual plant nutrient shortage and is properly subject to official action. (Official 1984)
20. Brand – The brand of a fertilizer shall be used by the registrant/licensee in the labeling and by the control official in his reports and publications. No numeral(s) that are misleading or confusing shall be used in the brand of a fertilizer. (Official 1987)
21. Slowly Available Water Soluble Nitrogen – When a fertilizer material or fertilizer mixture contains recognized and determinable forms of water soluble nitrogen with slowly available properties, then the guarantees for those components, if claimed,

should be shown as footnotes rather than as a component in the nitrogen breakdown. For example:

SLOW FERTILIZER 20-0-0

GUARANTEED ANALYSIS

Total Nitrogen (N)	20%
8% Urea Nitrogen	
2% Other water soluble Nitrogen	
2.9% Slowly Available Water Soluble Nitrogen *	
7.1% Water Insoluble Nitrogen	

* Slowly Available Nitrogen from _____.

OR

SLOW FERTILIZER 20-0-0

GUARANTEED ANALYSIS

Total Nitrogen (N)	20%
8% Urea Nitrogen	
4.9% Other Water Soluble Nitrogen *	
7.1% Water Insoluble Nitrogen	

* _____% Slowly Available Nitrogen from _____ .

Note: When other recognized forms of water soluble nitrogens are listed in the N breakdown, then the term "other" must precede the "water soluble nitrogen *" footnoted breakdown. (Official 1987) The word "organic" may be used in the nitrogen breakdown where appropriate. (Official 1992)

- 22. Animal Manures – If ingredients are added to animal manure the ingredients shall be specified on the principal label of the container. If the added ingredient exceeds the amount of manure, it shall be the first ingredient listed on the principal label and the words, "manure", "co manure", "sheep manure", etc., shall be in type smaller than that used for such added ingredient. When the packaging of a product features the picture of a designated animal, manure of that species of animal shall comprise more than 50% of the material in the container. (Official 1991)

- 23. Fertilizer Materials – Fertilizer materials not defined by AAPFCO can be used as fertilizer materials provided the registrant furnishes an acceptable definition, AOAC

International or other appropriate method analysis , and agronomic data when deemed necessary. (Official 1991)

24. Plant or Animal By-Products – Plant or animal by-products that meet the requirements of current group definitions (e.g. N-19. Process Tankage) may be listed by name on the label provided the registrant furnishes an acceptable definition, AOAC International or other appropriate method of analysis, and agronomic data when deemed necessary. (Official 1991)

OFFICIAL TERMS AND DEFINITIONS

TERMS

- T-1. Acid-Forming Fertilizer – Capable of increasing the residual acidity of soil. (Official 1953)
- T-2. Nonacid-Forming Fertilizer – Not capable of increasing the residual acidity of the soil. (Official 1953)
- T-3. Analysis – The percentage composition of the product expressed in terms that the law requires and permits. (Official 1953)
- T-4. Brand – Term, design, or trademark used in connection with one or several grades of fertilizer. (Official 1953)
- T-5. Brand or Product Name – A specific designation applied to an individual fertilizer. (Official 1970)
- T-6. Fertilizer Formula – The quantity and grade of the crude stock materials used in making a fertilizer mixture. For example: 800 pounds of 16% super phosphate, 800 pounds of tankage (7.4% nitrogen and 9.15% total phosphate), and 400 pounds of sulfate of potash-magnesia (26% potash). (Official 1993)
- T-7. Fertilizer Grade – The minimum guarantee of available plant food expressed in terms of total nitrogen (not ammonia), available phosphate and soluble potash. The numerals for nitrogen (N), available phosphate (P_2O_5), and soluble potash (K_2O), appearing as the grade must coincide with the guaranteed analysis statement. Only one set of numerals may be used in the grade designation. (Official 1994)
- T-8. Primary Nutrients – These include the following plant foods: nitrogen (N); available phosphate (P_2O_5) and soluble potash (K_2O). (Official 1994)
- T-9. Secondary and Micro Plant Nutrients – Those other than the primary nutrients that are essential for the normal growth of plants and that may need to be added to the growth medium. Secondary plant nutrients shall include calcium, magnesium, and sulfur; micro plant nutrients shall include boron, chlorine, cobalt, copper, iron, manganese, molybdenum, sodium and zinc. (Official 1965)
- T-10. Unit – Twenty (20) pounds of plant food or one percent (1%) of a ton. (Official 1953)
- T-11. Bulk fertilizer – fertilizer delivered to the purchaser either in solid or liquid state in a non-package form to which a label cannot be attached. (Official 1953)
- T-12. Organic Fertilizer – A material containing carbon and one or more elements other than hydrogen and oxygen essential for plant growth. (Official 1973)

- T-13. Natural Organic Fertilizer – Materials derived from either plant or animal products containing one or more elements (other than carbon, hydrogen and oxygen) which are essential for plant growth. These materials may be subjected to biological degradation processes under normal conditions of aging, rainfall, sun-curing, air drying, composting, rotting, enzymatic, or anaerobic/aerobic bacterial action, or any combination of these. These materials shall not be mixed with synthetic materials or changed in any physical or chemical manner from their initial state except by manipulations such as drying, cooking, chopping, grinding, shredding, hydrolysis, or pelleting. (Official 1994)
- T-14. Synthetic – Any substance generated from another material or materials by means of a chemical reaction. (Official 1973)
- T-15. Filler – A substance added to fertilizer materials to provide bulk, prevent caking or serve some purpose other than providing essential plant nutrients. (Official 1968)
- T-16. Granular Fertilizer – One in which 95 percent or more of the product is retained on a series of sieves within the range of U.S. No. 4 (4.75 mm opening) to and including U.S. No. 20 (0.850 mm opening), and in which the largest particle passes through a sieve having an opening not larger than four (4) times that of the sieve which retains 95 percent or more of the product. (Official 1989)
- T-17. Liquid Fertilizer – A fluid in which the plant nutrients are in true solution. (Official 1970)
- T-18. Slurry Fertilizer – A fluid mixture containing dissolved and undissolved plant nutrient materials which requires continuous mechanical agitation to assure homogeneity. (Official 1970)
- T-19. Suspension Fertilizer – A fluid mixture containing dissolved and undissolved plant nutrients. The suspension of the undissolved plant nutrients may be inherent with the materials or produced with the aid of a suspending agent of non-fertilizer properties. Mechanical agitation may be necessary in some cases to facilitate uniform suspension of undissolved plant nutrients. (Official 1970)
- T-20. Overall Index Value – The value obtained from the calculation: $(\text{Commercial Value Found}) \times 100 / (\text{Commercial Value Guaranteed})$ using assigned values for N, AP, and soluble K_2O , such as \$3, \$2 and \$1 per unit. (Official 1993)
- T-21. Coated Slow Release Fertilizer – A product containing sources of water soluble nutrients, release of which in the soil is controlled by a coating applied to the fertilizer. (Official 1970)
- T-22. Nitrophosphate – The product obtained by acidulation of Phosphate Rock with nitric acid. The complex mixture of nitrates and phosphate thus obtained does not contain nitrate nitrogen and phosphorus in the same molecule. The process is subject to modification designed to remove the hygroscopic calcium nitrate formed. Such modifications include ammoniation, physical separation, co-acidulation with sulfuric or phosphoric acids, or subsequent treatment with carbon dioxide. (Official 1974)

- T-23. Lot – An identifiable quantity of fertilizer that can be sampled officially according to AOAC International procedures, up to and including a freight car load or 50 tons maximum, or that amount contained in a single vehicle, or that amount delivered under a single invoice. (Official 1975)
- T-24. Chelated plant nutrients – Compounds of metallic secondary and micro plant nutrients with organic chelating agents which have the property of being available under pH conditions in which the nutrients normally form insoluble compounds. (Official 1975)
- T-25. Pelletized Fertilizer – A form, uniform in size and usually of globular shape, containing one or more nutrients produced by one of several methods including: (a) solidification of a melt while falling through a concurrent stream of air, (b) dried layers of slurry applied to recycling particles, (c) compaction, (d) extrusion, and (e) granulation. (Official 1976)
- T-26. Manipulation – Processed or treated in any manner, including drying to a moisture content of less than thirty percent (30%). (Official 1976)
- T-27. Chelate – The type of compound or chemical union in which a central metal (cation or anion) is joined to a chelating agent in the same molecule by two or more bonds. Such linkages result in the formation of one or more heterocyclic rings in which the metal is part of the ring. (Official 1978)
- T-28. Chelating Agent (Sequestering Agent) – A compound having two or more sites of attachment to a metal (cation or anion) to form a chelate. Examples are EDTA (ethylenediaminetetraacetic acid), NTA (nitrilo – triacetic acid), polyphosphoric acid, proteins and polyflavonoids. (Official 1978)
- T-29. Slow or controlled release fertilizer – A fertilizer containing 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 reference “rapidly available nutrient fertilizer” such as ammonium nitrate or urea, ammonium phosphate, or potassium chloride. Such delay of initial availability or extended time of continued availability may occur by a variety of mechanisms. These include controlled water solubility of the material (by semipermeable 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. (Official 1985)
- T-30. Hydroponics – A system in which water soluble nutrients are placed in intimate contact with the plant's root system, being grown in an inert supportive medium which supplies physical support for the roots but which does not add or subtract plant nutrients. (Official 1986)
- T-31. Continuous liquid feed – The external application of water soluble nutrients in the irrigation water every time the plant requires water. (Official 1986)

- T-32. Polymer Coated Fertilizer – is coated slow release fertilizer consisting of fertilizer particles coated with a polymer (plastic) resin. It is a source of slowly available plant nutrient(s). (Official 1990)
- T-33. Composting – *The biological decomposition of organic matter. It [is] may be accomplished by mixing and piling in such a way to promote aerobic and/or anaerobic decay. The process inhibits pathogens, viable weed seeds, and odors. (Tentative 1995)*
- T-34. Compost – A biologically stable material derived from the composting process. (Official 1991)
- T-35. Natural Inorganic Fertilizer – A mineral nutrient source that exists in or is produced by nature and may be altered from its original state only by physical manipulation. (Official 1993)
- T-36. Natural Fertilizer – A substance composed only of natural organic and/or natural inorganic fertilizer materials and natural fillers. (Official 1993)
- T-37. Potting Soil – A material suitable for holding and growing potted plants and usually made from natural materials. It may include fertilizers, pesticides and/or soil amendments. (Official 1993)
- T-38. Natural Base Fertilizer – A mixed fertilizer where more than half of the fertilizer materials is natural and where more than half of the sum of the guaranteed primary nutrient percentages is derived from natural materials. (Official 1995)
- T-39. Organic Base Fertilizer – A mixed fertilizer where more than half of the fertilizer materials is organic and where more than half of the sum of the guaranteed primary nutrient percentages is derived from organic materials. (Official 1995)
- T-40. Nitrogen Stabilizer – A substance added to a fertilizer which extends the time the nitrogen component of the fertilizer remains in the soil in the ammoniacal form. (Official 1994)
- T-41. Stabilized Nitrogen Fertilizer – A fertilizer to which a nitrogen stabilizer has been added. (Official 1994)
- T-42. Sphagnum Peat Moss – A material obtained from a sphagnum peat deposit (bog) of which an oven dried sample contains a minimum of 66 2/3% sphagnum moss fiber by weight. Those fibers shall be stems and leaves that have recognizable fibrous and cellular structure. (Official 1995)
- T-43. Foliar Fertilization – The practice of applying plant nutrients primarily for direct absorption by the above ground portions of the plant. (Official 1996)
- T-44. Ready to Use Liquid Fertilizer – A liquid fertilizer requiring no user mixing or dilution prior to application. (Official 1996)

- T-45. Urease Inhibitor – A substance which inhibits hydrolytic action on urea by urease enzyme. When applied to soils a urease inhibitor results in less urea nitrogen lost by ammonia volatilization.] (Official 1996)
- T-46. N-(n-butyl) thiophosphoric triamide (NBPT) – A compound that is the normal butyl derivative of thiophosphoric triamids and is a urease inhibitor. (CAS No. 94317-64-3, N-(n-butyl) phosphorothiole triamide). (Official 1996)

[T-47. Greensand – The naturally occurring mineral, glauconite, which is a hydrated silicate of iron and potassium.] (Tentative 1996)

DEFINITIONS

NITROGEN PRODUCTS

- N-1. Ammoniated Superphosphate - is a product obtained when superphosphate is treated with Ammonia or with solutions which contain ammonia and other compounds of nitrogen. The guaranteed percentages of nitrogen and of Available Phosphate shall be stated as part of the name. (Official 1993)
- N-2. Ammonium Nitrate - is chiefly the ammonium salt of nitric acid. It shall contain not less than thirty-three percent (33%) nitrogen, one-half of which is in the ammonium form and one-half in the nitrate form. (Official 1951)
- N-3. Calcium Nitrate - is chiefly the calcium salt of nitric acid. It shall contain not less than fifteen percent (15%) nitrate nitrogen. (Official 1951)
- N-4. Nitrate of Potash - (potassium nitrate is chiefly the potassium salt or nitric acid. It shall contain not less than twelve percent (12%) nitrogen and forty-four percent (44%) Soluble Potash. (Official 1951)
- N-5. Nitrate of Soda (sodium nitrate) - is chiefly the sodium salt of nitric acid. It shall contain not less than sixteen percent (16%) nitrate nitrogen and twenty-six percent (26%) sodium. (Official 1952)
- N-6. Nitrate of Soda and Potash - (sodium and potassium nitrate) is chiefly the sodium and potassium salts of nitric acid. It shall contain not less than fifteen percent (15%) nitrate nitrogen, ten percent (10%) soluble potash and eighteen percent (18%) sodium. (Official 1952)
- N-7. Sulfate of Ammonia (ammonium sulfate) - is chiefly the ammonium salt of sulfuric acid. It shall contain not less than twenty and five-tenths percent (20.5%) nitrogen. (Official 1951)
- N-8. Ammonium Sulfate Nitrate - is a double salt of ammonium sulfate and ammonium nitrate which are present in equal molecular proportions. It shall contain not less than twenty-six

- percent (26%) nitrogen, one-fourth of which is in nitrate form and three-fourths in the ammonium form. (Official 1954)
- N-9. Acidulated Fish Tankage - (acidulated fish scrap) is the rendered product derived from fish and treated with sulfuric acid. (Official 1950)
- N-10. Activated Sewage Products - are those made from sewage freed from grit and coarse solids and aerated after being inoculated with micro organisms. The resulting flocculated organic matter is withdrawn from the tanks, filtered with or without the aid of coagulants, dried, ground and screened. (Official 1950)
- N-11. Bat Guano - is partially decomposed bat manure. (Official 1951)
- N-12. Cyanamide - is a commercial product consisting principally of calcium cyanamide (CaNCN) and carbon and it shall contain not less than nineteen and five tenths percent (19.5%) nitrogen. (Official 1976)
- N-13. Dried Blood - is the collected blood of slaughtered animals, dried and ground and containing not less than twelve percent (12%) nitrogen. (Official 1950)
- N-14. Animal Manures - are the excreta of animals together with whatever bedding materials are needed to follow good dairy barn, feedlot, poultry house, etc., practice in order to maintain proper sanitary conditions. (Official 1991)
- N-15. Garbage Tankage - is the rendered, dried and ground product derived from waste household food materials. (Official 1951)
- N-16. Hoof and Horn Meal - is processed dried, ground hoofs and horns. (Official 1951)
- N-17. Peat - is partly decayed vegetable matter of natural occurrence. It is composed chiefly of organic matter that contains some nitrogen of low activity. (Official 1951)
- N-18. Fish Tankage - (fish scrap, dry ground fish, fish meal fertilizer grade) is the dried ground product derived from rendered or unrendered fish. (Official 1950)
- N-19. Process Tankage - is a product made under steam pressure from crude inert nitrogenous materials, with or without the use of acids or bases, for the purpose of increasing the activity of nitrogen. These products shall be called "Process Tankage" with or without further qualification. The water insoluble nitrogen in these products shall test at least fifty percent (50%) active by the alkaline, or eighty percent (80%) by the neutral permanganate method. (Official 1994)
- N-20. Tankage - (without qualification) is the rendered, dried, and ground by-product, largely meat and bone from animals (slaughtered or that have died otherwise). (Official 1950)
- N-21. Sheep Manure Wool Waste - is the by-product from wool-carding establishments consisting chiefly of sheep manure, seeds, and wool fiber. (Official 1951)

- N-22. Crude, Inert, or Slow-Acting Nitrogenous Materials - are unprocessed organic substances relatively high in nitrogen but having a very low value as a plant food and showing a low activity by both the alkaline and neutral permanganate methods, (below 50% and 80% respectively). (Official 1964)
- N-23. Urea - is the commercial synthetic acid amide of carbonic acid and it shall contain not less than forty-five percent (45%) nitrogen. (Official 1966)
- N-24. Ureaform Fertilizer Materials (sparingly soluble) - are reaction products of urea and formaldehyde which contain at least thirty-five percent (35%) nitrogen, largely in insoluble but slowly available form. The water insoluble content shall be at least sixty percent (60%) of the total nitrogen. The water insoluble nitrogen in these products shall have an activity index of not less than forty percent (40%) when determined by the appropriate AOAC International method. (Official 1984)
- N-25. Urea Formaldehyde Products (sparingly soluble) - are reaction products of urea and formaldehyde which contain less than thirty-five percent (35%) nitrogen, largely in insoluble but slowly available form. They shall have the percentage of total nitrogen as part of the product name; for example: 20% N Urea-Formaldehyde. The water insoluble Nitrogen shall be at least sixty percent (60%) of the total nitrogen. The activity index of the water insoluble nitrogen shall be either (1) not less than forty percent (40%) by the AOAC International method for Urea-formaldehyde Products or (2) not less than fifty percent (50%) by the AOAC International alkaline permanganate method or eighty percent (80%) by the neutral permanganate method. (Official 1984)
- N-26. Isobutylidene Diurea – A condensation product of isobutyraldehyde and urea having a minimum total nitrogen content of thirty percent (30%). It is a source of slowly available nitrogen by virtue of particle size, solubility decreasing with increase in particle size. Material conforming to the description of a “granular fertilizer” will have ninety percent (90%) of its nitrogen content in the water-insoluble form prior to grinding as tested by AOAC International Method 945.01 (15th Edition). (Official 1986)
- N-27. Sulfur Coated Urea (SCU) – A coated slow release fertilizer consisting of urea particles coated with sulfur. The product is usually further coated with a sealant (2% to 3% of total weight) and a conditioner (2% to 3% of total weight). It typically contains about thirty percent (30%) to forty percent (40%) nitrogen and about ten percent (10%) to thirty percent (30%) sulfur. (Official 1980)
- N-28. Urea-Formaldehyde Products (water soluble) - are reaction products of urea and formaldehyde which contain at least thirty percent (30%) nitrogen, largely in water soluble form. Some slowly available nitrogen products are present. Stable aqueous solutions may be prepared from these materials. The reaction products shall contain a maximum of fifty-five percent (55%) free urea, with the remainder of the urea being chemically combined as methylolureas, methylolurea ethers, and/or methylenediurea (MDU) and dimethylenetriurea (DMTU). (Official 1984)

- N-29. Methylenediurea (MDU) - is a water soluble condensation product resulting from the reaction of one molecule of formaldehyde with two molecules of urea, with the elimination of one molecule of water. It has a minimum total nitrogen content of forty-two percent (42%) and is a source of slowly available nitrogen. (Official 1984)
- N-30. Dimethylenetriurea (DMTU) - is a water soluble condensation product resulting from the reaction of two molecules of formaldehyde with three molecules of urea, with the elimination of two molecules of water, and having a minimum total nitrogen content of forty-one percent (41%). It is a source of slowly available nitrogen. (Official 1984)
- N-31. Dicyanodiamide (cyanoguanidine) - is a water soluble organic compound of formula $C_2H_4N_4$ which contains at least sixty-five percent (65%) nitrogen. It is a source of slowly available nitrogen. (Official 1985)
- N-32. Polymer Coated Urea (PCU) - is a coated slow release fertilizer consisting of urea particles coated with a polymer (plastic) resin. It typically contains about forty percent (40%) nitrogen. It is a source of slowly available nitrogen. (Official 1990)
- N-33. Triazone - is a water soluble compound of formula $C_3H_7N_3O$ which contains at least forty-one percent (41%) total nitrogen. (CAS No. 7098-14-6, 1, 3, 5-triazin-2-one, tetrahydro-S-triazone.) (Official 1989)
- N-34. Melamie - is a sparingly soluble organic compound of formula $C_3H_6N_6O$ which contains at least sixty-six percent (66%) nitrogen. (CAS No. 108-78-1 2,4,6-triamino-1,3,5-triazine, triamino-s-triazine.) (Official 1989)
- N-35. Urea-Triazone Solution - is a stable solution resulting from controlled reaction in aqueous medium of urea, formaldehyde, and ammonia which contains at least twenty-five percent (25%) total nitrogen. The solution shall contain no more than forty percent (40%) nor less than five percent (5%) of total nitrogen from unreacted urea and not less than forty percent (40%) from triazone. All other nitrogen shall be derived from water soluble, dissolved reaction products of the above reactants. It is a source of slowly available nitrogen. (Official 1990)
- N-36. Oxamide - (fertilizer grade) is the diamide of oxalic acid of the formula $C_2H_4N_2O_2$ which contains twenty-eight to thirty-two percent nitrogen (28%-32%). It is a source of slowly available nitrogen. (Official 1990)
- N-37. Ammonium Thiosulfate - (fertilizer grade) is a commercial product composed principally of $(NH_4)_2S_2O_3$. The guaranteed percentages of nitrogen and sulfur shall be stated as part of the name. (Official 1990)

PHOSPHATE PRODUCTS (P_2O_5)

- P-1. *The term Phosphate designates [is the amount of pentavalent phosphorus {P(V)} present in the material calculated as] phosphorus pentoxide (P_2O_5).* (Tentative 1996)

- P-2. Available Phosphate - is the sum of the water soluble and the citrate-soluble phosphate. (Official 1993)
- P-3. Ammoniated Superphosphates - is a product obtained when superphosphate is treated with ammonia or with solutions which contain ammonia and other compounds of nitrogen. The guaranteed percentages of nitrogen and of available phosphate shall be stated as part of the name. (Official 1993)
- P-4. Ammonium Phosphate - (fertilizer grade) is a product obtained when phosphoric acid is treated with ammonia (anhydrous or aqueous), and consists principally of monoammonium phosphate and diammonium phosphate or a mixture of these two salts. The guaranteed percentage of nitrogen and of available phosphate shall be stated as part of the name. (Official 1993)
- P-5. Ammonium Phosphate – Sulfate (fertilizer grade) is a product obtained when a mixture of phosphoric acid and sulfuric acid is treated with ammonia. It consists principally of a mixture of ammonium phosphate and ammonium sulfate. The guaranteed percentages of nitrogen and of Available Phosphate shall be stated as a part of the name. (Official 1993)
- P-6. Basic Lime Phosphate - (lime-based superphosphate) is a superphosphate to which liming materials have been added in a quantity at least six percent (6%) calcium carbonate equivalent in excess of the quantity required to convert all water soluble phosphate to the citrate-soluble form. (Official 1951)
- P-7. Basic Phosphate Slag – is a by-product obtained in the manufacture of steel from phosphatic iron ores. The product shall contain no admixture of materials other than those resulting from the original process of manufacture. It shall contain not less than twelve percent (12%) of total phosphate, of which at least eighty percent (80%) shall be available phosphate. It shall be ground so that not less than seventy percent (70%) of the material passes through a U.S. Standard No. 100 sieve (150 um opening) and ninety percent (90%) passes through a U.S. Standard No. 50 sieve (300 um opening). Any basic phosphate slag not conforming to this definition shall be designated low phosphate. (Official 1993)
- P-8. Citrate-Soluble Phosphate - is that part of the total phosphate in a fertilizer that is insoluble in water but soluble in a solution of citrate of ammonia according to the method adopted by the AOAC International. (Official 1993)
- P-9. Dicalcium Phosphate - is a manufactured product consisting chiefly of dicalcic salt of phosphoric acid. (Official 1951)
- P-10. Acidulated Bone - is ground bone or bone meal that has been treated with sulfuric acid. (Official 1951)
- P-11. Ground Raw Bone - is ground animal bones that have not been previously steamed under pressure, heated, or otherwise manipulated. (Official 1984)

- P-12. *[Bone Meal] Ground Sterilized Bone is ground animal bones ~~or bone meal~~ that have been previously steamed under pressure, heated, or rendered sterile in some other acceptable manner. (Tentative 1996)*
- P-13. Phosphate Rock - is a natural rock containing one or more calcium phosphate minerals of sufficient purity and quantity to permit its use, either directly or after concentration, in the manufacture of commercial products. (Official 1952)
- P-14. Precipitated Phosphate - is a product consisting mainly of dicalcium phosphate obtained by neutralizing with calcium hydroxide the acid solution of either phosphate rock or processed bone. (Official 1951)
- P-15. Superphosphate - is a product obtained when rock phosphate is treated with either sulfuric acid, phosphoric acid, or a mixture of those acids. The guaranteed percentage of available phosphate shall be stated as a part of the name. (Official 1993)
- P-16. Soft Phosphate with Colloidal Clay - is a very finely divided low-analysis by-product from mining Florida rock phosphate by a hydraulic process in which the colloidal materials settle at points in artificial ponds and basins farthest from the washer, and are later removed after the natural evaporation of the water. (Official 1951)
- P-17. Calcium Metaphosphate - is a vitreous product substantially free from crystalline phosphates, resulting from the treatment of phosphate rock with gaseous phosphorus pentoxide at high temperatures. The guaranteed percentage of available phosphate shall be stated as part of the name. (Official 1993)
- P-18. Polyphosphates - is a general term pertaining to salts of any of a series of polyphosphoric acids, whose molecular structure contain two or more phosphorus atoms linked by oxygen. Solutions may contain several species such as orthophosphates, pyrophosphates, and polyphosphates containing three (3) or more phosphorous atoms, commonly known as triphosphates or tetraphosphates and water. (Official 1976)
- P-19. Superphosphoric Acid - is the acid form of polyphosphates, consisting of a mixture of orthophosphoric and polyphosphoric acids. Species distribution varies with concentration, typically sixty-eight to eighty-three percent (68 to 83%) P_2O_5 . (Official 1976)
- P-20. Calcined Phosphate - is phosphate rock which has been heated, with or without one or more catalysts or reagents, sufficient to volatilize and remove most or all organic, carbonate, fluoride and other impurities, and/or thermally altered to more available calcium phosphate compounds, depending on the process. A significant portion of the phosphate is citrate soluble and such percentages shall be stated as part of the brand name. Included are products known as fused tricalcium phosphate, defluorinated phosphate, rhenania phosphate and various trade names. (Official 1994)
- P-21. DAP(fertilizer grade) is a product composed of ammonium phosphates, principally diammonium phosphate, resulting from the ammoniation of phosphoric acid. It may

contain up to 2% non-ammoniacal nitrogen. The guaranteed percentage of nitrogen and available phosphate shall be stated as part of the name. (Official 1993)

- P-22. MAP (fertilizer grade) - is a product composed of ammonium phosphates, principally monoammonium phosphate, resulting from the ammoniation of phosphoric acid. The guaranteed percentage of nitrogen and available phosphate shall be stated as part of the name. (Official 1991)
- P-23. Magnesium Ammonium Phosphate - is chiefly the ammonium and magnesium double salt of orthophosphoric acid and its condensates. It shall contain not less than seven percent (7%) nitrogen, thirteen percent (13%) magnesium and forty percent (40%) available phosphate. It is a source of slowly available nitrogen, magnesium, and available phosphate. (Official 1995)
- P-24. Magnesium Potassium Phosphate - is chiefly the magnesium and potassium double salt of orthophosphoric acid and its condensates. It shall contain not less than twenty one percent (21%) soluble potash, twelve percent (12%) magnesium and thirty six percent (36%) available phosphate. It is a source of slowly available potash, magnesium and available phosphate. (Official 1995)

POTASH PRODUCTS (K₂O)

- K-1. The term Potash designates potassium oxide (K₂O). (Official 1957)
- K-2. Soluble Potash is that portion of the potash contained in fertilizer or fertilizer materials which is soluble in aqueous ammonium oxalate, aqueous ammonium citrate, or water, according to an applicable AOAC International method. (Official 1986)
- K-3. Kainit is potash salt containing potassium and sodium chlorides and sometimes sulfate of magnesia with not less than twelve percent (12%) soluble potash (K₂O). (Official 1975)
- K-4. Mine Run Potash Salts are potash salts containing a high percentage of chloride and from twenty percent (20%) to thirty percent (30%) soluble potash (K₂O). (Official 1951)
- K-5. Muriate of Potash (commercial potassium chloride) is a potash salt containing forty-eight percent (48%) to sixty-two percent (62%) soluble potash (K₂O) chiefly as chloride. (Official 1951)
- K-6. Nitrate of Potash (potassium nitrate) is chiefly the potassium salt of nitric acid. It shall contain not less than twelve percent (12%) nitrogen and forty-four percent (44%) soluble potash. (Official 1951)
- K-7. Nitrate of Soda and Potash (sodium and potassium nitrate) is chiefly the sodium and potassium salts of nitric acid. It shall contain not less than fifteen percent (15%) nitrate

nitrogen, ten percent (10%) soluble potash and eighteen percent (18%) sodium. (Official 1952)

- K-8. Sulfate of Potash-Magnesia is a potash salt containing not less than twenty-five percent (25%) soluble potash (K_2O) nor less than twenty-five percent (25%) sulfate of magnesia and not more than two and one-half percent (2.5%) chlorine. (Official 1950)
- K-9. Double Sulfate of Potash and Magnesia (Langbeinite) is a commercial product containing not less than twenty-one percent (21%) soluble potash (K_2O) nor less than fifty-three percent (53%) sulfate of magnesia and not more than two and one-half percent (2.5%) chlorine. (Official 1950)
- K-10. Sulfate of Potash (commercial potassium sulfate) is a potash salt containing not less than forty-eight percent (48%) soluble potash (K_2O), chiefly as sulfate, and not more than two and one-half percent (2.5%) chlorine. (Official 1950)
- K-11. Kelp – (Seaweed) is the dried marine algae of the botanical divisions of Rhodophyta (red algae), Phaeophyta (brown algae), and Chlorophyta (green algae). (Official 1992)

CALCIUM (Ca) and MAGNESIUM (Mg) PRODUCTS

- C-1. Agricultural Liming Materials means a product whose calcium and magnesium compounds are capable of neutralizing soil acidity. (Official 1976)
- C-2. High Calcic Liming Materials are liming materials containing at least twenty-five percent (25%) calcium. Further, at least ninety-one percent (91%) of the total calcium and magnesium is calcium. (Official 1976)
- C-3. High Magnesian Liming Materials are those containing at least six percent (6%) magnesium. (Official 1976)
- C-4. Dolomite is a material composed chiefly of carbonates of magnesium and calcium in substantially equimolar (1-1.19) proportions. (Official 1950)
- C-5. Ground Limestone (course-ground limestone) is a calcic or dolomitic limestone ground sufficiently fine for effective use as a liming material. (Official 1950)
- C-6. Pulverized Limestone (fine-ground limestone) is the product obtained by grinding either calcitic or dolomitic limestone so that all materials will pass U.S. Standard No. 20 sieve (850 μm opening) and at least seventy-five percent (75%) will pass a U.S. Standard No. 100 sieve (150 μm opening). (Official 1989)
- C-7. Air-slaked Lime is a product composed of varying proportions of the oxide, hydroxide, and carbonate of calcium, or of calcium and magnesium, and derived from exposure of quicklime. (Official 1950)

- C-8. Hydrated Lime is a dry product consisting chiefly of calcium and magnesium hydroxides. (Official 1950)
- C-9. Quick Lime, Burned Lime, Caustic Lime, Lump Lime, or Unslaked Lime are Calcined materials comprised chiefly of calcium oxide in natural association with lesser amounts of magnesium, and which are capable of slaking with water. (Official 1950)
- C-10. Ground Shells is the product obtained by grinding the shells of mollusks so that not less than fifty percent (50%) shall pass a U.S. Standards No. 100 sieve. The products shall also carry the name of the mollusk from which said product is made. (Official 1950)
- C-11. Marl is a granular or loosely consolidated earthy material compromised largely of shell fragments and calcium carbonate precipitated in ponds. (Official 1958)
- C-12. Ground Shell Marl is the product obtained by grinding natural deposits of shell marl so that at least seventy-five percent (75%) shall pass a U.S. Standard No. 100 sieve (150 um opening). (Official 1989)
- C-13. Waste Lime (by-product lime) is any industrial waste or by-product containing calcium or calcium and magnesium in forms that will neutralize acids. It may be designated by prefixing the name of the industry or process by which it is produced, i.e., gas-house lime, tanners' lime, acetylene lime-waste, lime-kiln ashes, calcium silicate, etc. (Official 1950)
- C-14. Agricultural Slag is a fused silicate whose calcium and magnesium content is capable of neutralizing soil acidity and which is sufficiently fine to react readily in soil. (Official 1958)
- C-15. Gypsum, Landplaster or Crude calcium sulfate is a product consisting chiefly of calcium sulfate with combined water ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) and is incapable of neutralizing soil acidity. It shall contain not less than seventy percent (70%) $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$. (Official 1981)
- C-16. Magnesium Sulfate is a product consisting chiefly of that material with or without combined water; Epsom salts ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$), Kieserite ($\text{MgSO}_4 \cdot \text{H}_2\text{O}$) and Calcined kieserite (MgSO_4). (Official 1958)
- C-17. Calcined Brucite is a magnesium product concentrated from brucite limestone. It consists chiefly of magnesium oxide with lesser amounts of calcium hydroxide, silicates and sesquioxides. (Official 1968)
- C-18. Pelletized Limestone is pulverized limestone that has been granulated by the addition of a water soluble binding agent. (Official 1996)

SULFUR (S) PRODUCTS

- S-1. Sulfate of Ammonia. See N-7.
- S-2. Ammonium Sulfate Nitrate. See N-8.

- S-3. Sulfate of Potash-Magnesia. See K-8.
- S-4. Double sulfate of potash and magnesium. See K-9.
- S-5. Sulfate of Potash. See K-10.
- S-6. Gypsum. See C-15.
- S-7. Magnesium Sulfate. See C-16.
- S-8. Manganese Sulfate. See M-1.
- S-9. Ammonium Thiosulfate. See N-37. (Official 1990)

MANGANESE PRODUCTS (Mn)

- M-1. Manganese Sulfate. The term manganese sulfate, when applied to an ingredient of a mixed fertilizer, shall designate anhydrous manganese sulfate (MnSO_4). (Official 1950)

PRODUCT REGISTRATION

	RENEWAL	MINIMUM NUTRIENT	NUTRIENT SOURCE REGISTRATION		
<u>STATE</u>	<u>DATE</u>	<u>CONTENT</u>	<u>APPLICATION</u>	<u>LABEL</u>	<u>COMMENTS</u>
ALABAMA	January 1	None	No	Yes	
ALASKA	N/A	N/A	N/A	N/A	No specific fertilizer laws in effect
ARIZONA	July 1	None	No	Yes	
ARKANSAS	July 1	20%	Yes	Yes	
CALIFORNIA	January 1	det. Amts.	Yes	Yes	Product Registration renewal is biennial on even numbered years.
COLORADO	July 1	20% farm goods	Yes	Yes	
CONNECTICUT	July 1	None	Yes	No	
DELAWARE	January 1	None	No	No	
FLORIDA	July 1	Varies	Yes	Yes	
GEORGIA	July 1	None	Yes	Yes	
IDAHO	January 1	5% on Ag	No	Yes	Must include metal analysis for waste derived fertilizers.
ILLINOIS	January 1	18% & 20%	Yes	Yes	
INDIANA	July 1	None	micronutrient only	No	Late fee 100% after July 31
IOWA	P (July 1:25lb/>)	20% total	No	No	
KANSAS	July 1	None	Yes	Yes	
KENTUCKY	January 1	None	No	No	
LOUISIANA	None	20%	No	No	
MAINE	January 1	None	No	No	
MARYLAND	February 1	None	Yes	Yes	Nutrient source is regulated by the Maryland Dept. of the Environment for products containing sewage sludge.
MASSACHUSETTS	January 1	Varies	Yes	Yes	
MICHIGAN	January 1	Varies	No	No	
MINNESOTA	January 1	None	Yes	Yes	
MISSISSIPPI	July 1	20%	Yes	Yes	State also has a ratio or grade list.
MISSOURI	None	None	No	No	
MONTANA	January 1	None	Yes	Yes	must include metal analysis for waste-derived fertilizers
NEBRASKA	January 1	20% total	Yes	Yes	
NEVADA	July 1	5%	No	Yes	
NEW HAMPSHIRE	July 1		Upon Request	No	Min. Nutr. Content: Whole numbers except specialty fert. & fert. Materials & certain organics may be in fractional units.

PRODUCT REGISTRATION

		MINIMUM	NUTRIENT SOURCE		
	RENEWAL	NUTRIENT	REGISTRATION		
STATE	DATE	CONTENT	APPLICATION	LABEL	COMMENTS
NEW JERSEY	July 1	None	No	Yes	
NEW MEXICO	January 1	None	Yes	No	
NEW YORK	None	None	No	No	
					Superphosphate's Minimum nutrient content
					is 18%. Whole #'s only for mixed
NORTH CAROLINA	July 1	Whole #'s	Yes	No	fertilizers greater than 16 oz.
					This is a 2 year registration. All registrants
NORTH DAKOTA	July 1	None	Yes	Yes	are kept on same schedule.
OHIO	July 1	None	No	No	
					Min. Nutr. Content: Specialty fert. In
OKLAHOMA	P ≥ 30 lbs.; July 1 < 30 lbs.	Whole #'s	Yes	Yes	tablets, etc. does not have to be in whole #'s
OREGON	January 1	5%	Yes	Yes	
PENNSYLVANIA	July 1	None	No	No	
RODE ISLAND	January 1	None	No	No	
SOUTH CAROLINA	July 1	N/A	Yes	No	
SOUTH DAKOTA	N/A	N/A	No	Yes (spec. prod.)	Fert. Reg. Not Req.
TENNESSEE	July 1	N/A	Yes	No	
TEXAS	P	None	No	No	
UTAH	January 1	None	No	No	
VERMONT	January 1	Whol. Nos., agr-fert.	No	No	
VIRGINIA	July 1	18%	No	No	
WASHINGTON	July 1	None	Yes	Yes	
WEST VIRGINIA	July 1	No	Yes	Yes	
WISCONSIN	P if <24%, none if >24%	24%	No	No	
WYOMING	December 31	None	Yes	Yes	
CANADA	July 1	24% total	Yes	No	
PUERTO RICO	Annually	24%	Yes	Yes	A bond shall be filed w/the Secretary for not less than
					\$2,000 on basis of the sales volume. Exempt
					specialized fertilizer.

PRODUCT REGISTRATION (Continued)

<u>STATE</u>	<u>PACKAGE WEIGHT LIMIT</u>	<u>FARM GOODS</u>	<u>FEE</u>	<u>COMMENTS</u>
ALABAMA	N/A	N/A	N/A	
ALASKA	N/A	N/A	N/A	No specific fertilizer laws in effect
ARIZONA	None	None	\$50/brand	
ARKANSAS	None	\$25/brand	\$25/brand	
CALIFORNIA	None	none/fert.	\$100	\$100 per product
COLORADO	None	\$10-25 +	\$2.50/grade	
CONNECTICUT	None	\$15/element	\$15/element	Max of \$90 per product
DELAWARE	10 lbs. or less	\$1.15	\$28.75	
FLORIDA	49 lbs. or less and distr. For home/garden use	exempt	N/A	\$200 each for 1st 5 grades of each brand, \$50 for same brand of each grade thereafter.
GEORGIA	\$50:10 lbs. / less (annual)	None	A:10:lbs./less	
IDAHO	25 lbs. or less	\$25/brand	\$25/grade + \$25/brand	
ILLINOIS	None	\$10	\$30:5 lbs. or less	
INDIANA	12 lbs. or less	None	None	\$20 over 12 lbs; <12 lbs = \$50
IOWA	25 lbs. or less	None	\$100	
KANSAS	None	\$5	\$5	
KENTUCKY	None	N/A	\$50	All farm goods are registered except custom blends. There is no registration fee for farm goods.
LOUISIANA	None	None	\$100 > 100/ton	
MAINE	None	\$14/element	N/A	
MARYLAND	10 lbs or <	\$15	\$15, \$35	
MASSACHUSETTS	None	None	\$100/product	
MICHIGAN	None	None	\$125	Breakout: \$25/registration; \$100 groundwater fee
MINNESOTA	None	None	\$100	
MISSISSIPPI	None	\$10	\$50 10 bs.<	One-half fee goes to groundwater fund
MISSOURI	N/A	N/A	N/A	
MONTANA	None	\$30/grade	\$45/grade	of which \$10.00 per product to groundwater contamination fund
NEBRASKA	None	None	None	
NEVADA	Less than 1lb.	\$25	\$25	
NEW HAMPSHIRE	None	\$75/products	\$75/product	
NEW JERSEY	None	None	None	
NEW MEXICO	5 lbs. or <	\$5	\$5	Packaging weighing 5lbs. Or less pay \$10.00 annual inspection fee in lieu of quarterly tonnage.

PRODUCT REGISTRATION (Continued)

	<u>PACKAGE WEIGHT</u>	<u>FARM GOODS</u>	<u>FEE</u>	<u>COMMENTS</u>
<u>STATE</u>	<u>LIMIT</u>			
NEW YORK	None	None	None	
NORTH CAROLINA	5 lbs. or <	\$5	\$30	Fert. Package weighing 5 lbs. Or less pay \$30.00 registration fee but do not pay the \$.25 cents per ton inspection fee. For all other weight pkgs. & bulk fert. an additional \$.10 per ton (total 35 cents per ton) is collected and the money goes to the Agricultural Foundation to research and development
NORTH DAKOTA	None	\$25	\$25	
OHIO	None	None	\$50	
OKLAHOMA	<30 lbs.	None	<30lbs. \$100/30lbs or > none or <30lbs. \$100	\$100 registration fee (annual) for soil conditioners.
OREGON	None	\$25/Product	\$25/Product	
PENNSYLVANIA	None	None	\$25	Specialty fertilizers include primary sources of micronutrients
RODE ISLAND	None	\$72 /Product	N/A	
SOUTH CAROLINA	10 lbs. or <	\$0	\$30	
SOUTH DAKOTA	N/A	None	N/A	\$25.00 registration fee for soil conditioners & brands sold in packages 25 pounds or less.
TENNESSEE	25 lbs. or <	None	\$25	
TEXAS	110 lbs. max	Yes	Yes	Exception: products packaged solely in containers weighing 5 lbs. or less pay a flat rate inspection fee of \$50.00 per brand and grade per fiscal year.
UTAH	None	\$25	\$25	
VERMONT	None	13/element	N/A	Maximum of \$78.00 per grade.
VIRGINIA	50 lbs. Or <, 5 gal. Or <	None	\$50/brand	VA charges \$100 per brand registration for soil amendmets, soil conditioners & horticultural growing media sold in any size container.
WASHINGTON	None	\$25/brand	\$25/brand	\$25 for the 1st product, \$10 for each product thereafter.
WEST VIRGINIA	N/A	\$4/brand	\$30/brand	\$75 per brand Soil Amdend, Compost & Growing media \$100 penalty
WISCONSIN	N/A	N/A	N/A	
WYOMING	Yes	N/A	N/A	\$75 flat rate per agricultural & specialty products
CANADA	None	\$250 for ag. supplies	\$250	
PUERTO RICO	None	None	None	

LICENSING

<u>STATE</u>	<u>RENEWAL DATE</u>	<u>FEE</u>	<u>COMMENTS</u>
ALABAMA	October 1	\$25-400 /license	
ALASKA	N/A	N/A	No specific fertilizer laws in effect.
ARIZONA	July 1	\$125/plant	
ARKANSAS	July 1	\$50/facility	manufactures, jobbers, blenders, and manipulators of commercial fertilizer shall obtain a facility license from the Plant Board for each fertilizer blending and/or bulk storage facility
CALIFORNIA	January 1	\$100/location	License renewal is biennial an odd numbered years.
COLORADO	None	None	
CONNECTICUT	None	None	
DELAWARE	None	None	
FLORIDA	July 1	\$200/license	
GEORGIA	July 1	\$50/license	
IDAHO	None	None	
ILLINOIS	Varies	\$50	Custom Mix / Blenders
INDIANA	None	None	
IOWA	July 1	\$10/plant	
KANSAS	January 1	\$25/plant	
KENTUCKY	January 1	100 (Specialty)	\$100 fee for custom mix specialty and bulk specialty. No fee for farm custom blenders. KY licenses all custom blenders
LOUISIANA	January 1	Spec. co \$100	
MAINE	None	None	
MARYLAND	None	None	
MASSACHUSETTS	January 1	\$250	
MICHIGAN	January 1	\$100	For non-specialty manufacturer/distributor only, each facility.
MINNESOTA	January 1	\$100/plant	Agricultural Chemical Response & Reimbursement (ACRRA) surcharge \$50/site
MISSISSIPPI	July 1	varies w/tonnage	Licensing applies only to custom blending plants
MISSOURI	July 1	\$100.00	Per location: either shipping into the state or within the state that changes product identity
MONTANA	January 1	\$50/outlet	\$75.00 new license & renewal after Jan 1.
NEBRASKA	January 1	15	Retail stores selling less than 5 tons annually exempt.
NEVADA	None	None	

LICENSING

<u>STATE</u>	<u>RENEWAL DATE</u>	<u>FEE</u>	<u>COMMENTS</u>
NEW HAMPSHIRE	None	None	
NEW JERSEY	July 1	\$125/plant lic. In NJ	\$250/plant license out of NJ
NEW MEXICO	None	None	
NEW YORK	January 1	\$150/biennial lic. Period	
NORTH CAROLINA	July 1	\$100	
NORTH DAKOTA	July 1	\$50	\$100/bienniem/location
OHIO	July 1	\$5/plant	Includes each plant out-of-state shipping to non-licenses in Virginia
OKLAHOMA	January 1	\$50	Any person operating a business engaged in distribution, use, sale of commercial fert. Shall obtain a license for each business location. Only exemption is the final consumer or a retail store selling only bagged, registered fertilizer.
OREGON	January 1	\$50/Company	
PENNSYLVANIA	July 1	\$25/plant & guarantor	Multi-purpose products (fertilizer & soil amendment) require labeling, licensing and registration
RODE ISLAND	None	None	
SOUTH CAROLINA	July 1	\$100/\$400	bracketed based on previous years tonnage (0=5000 tons=\$100/5000-29000=200/2500+= \$400)
SOUTH DAKOTA	January 1	\$25 / biennium	biennial \$25 registration fee for soil conditioners
TENNESSEE	None	None	
TEXAS	None	None	
UTAH	None	None	
VERMONT	None	None	
VIRGINIA	July 1	\$50/plant	Includes each plant out-of-state shipping to non-licencees in Virginia
WASHINGTON	Annually	\$15/application + \$25/location	
WEST VIRGINIA	July 1	\$35/firm	July 1 for fertilizer formulators
WISCONSIN	August 15		Fee: Out of state \$50; In state w/pest. Lic. \$30; In state wo/pest. Lic.\$50
WYOMING	None	None	
CANADA	N/A	N/A	
PUERTO RICO	None	None	

INSPECTION FEES (cents/ton unless indicated)

<u>STATE</u>	<u>FARM</u>	<u>SPECIALTY</u>	<u>REPORTING FREQUENCY</u>	<u>COMMENTS</u>
ALABAMA	50	50	Monthly	
ALASKA	N/A	N/A	N/A	No specific fertilizer laws in effect
ARIZONA	25	25	Quarterly	
ARKANSAS	1.20	1.20	Monthly	.89 cents goes to support Univeristy of Arkansas soil test lab and research
CALIFORNIA	mill assmt.	2 mills	Quarterly	
COLORADO	75	27.5/100 lbs.	Semi-Annually	
CONNECTICUT	25	25	Annually	less than 10 tons = no fee, but must file
DELAWARE	10	10:>;lbs.	Semi-Annually	
FLORIDA	*	*		.75 per ton for mixed fertilizer & fertilizer materials; .30 per ton for liming materials; additional .50 per ton if fert. Contains nitrogen or phosphate
GEORGIA	30	30:> 10 lbs.	Quarterly	
IDAHO	15	None	Semi-Annually	
ILLINOIS	25	25	Semi-Annually	
INDIANA	0.45	0.45	Semi-Annually	over 12 lbs. late fee - \$50 or 10% of amount due after 30 days
IOWA	17	\$100<=25 lbs. or 17	Semi-Annually	
KANSAS	30	30	Semi-Annually	
KENTUCKY	50	\$50 < = 10 lbs.	Quarterly	50 cent/ton all over 10#
LOUISIANA	75	75: > 10 lbs.	Quarterly	
MAINE	12	12	Annually	
MARYLAND	25	25: > 10 lbs.	Semi-Annually	
MASSACHUSETTS	15	15	Semi-Annually	Semi-Annual Tonnage fee has remained @ \$.15/ton with \$5.00 minimum
		10; no fee for		An additional 1 1/2 cents per % N per ton groundwater protection
MICHIGAN	10	packages < 10 lbs.	Semi-Annually	fee for farm-use fertilizer
MINNESOTA	15	15	Semi-Annually	Ag & specialty fertilizer have an ACRRRA surcharge of 30 cents/ton.
MISSISSIPPI	25	paid w/ reg.	Quarterly	\$.25 inspection Fee
MISSOURI	50	50	Semi-Annually	
MONTANA	60 or \$1.30/AA	None	Monthly	Inspection fee paid by manufacturer
NEBRASKA	10	10	Semi-Annually	Inspection fees paid by person distributing to the ultimate user.

INSPECTION FEES (cents/ton unless indicated)

<u>STATE</u>	<u>FARM</u>	<u>SPECIALTY</u>	<u>REPORTING FREQUENCY</u>	<u>COMMENTS</u>
NEVADA	25	25	Quarterly	
NEW HAMPSHIRE	20 (\$5 min.)	20 (\$5 min.)	Semi-Annually	
NEW JERSEY	15	\$15	Semi- Annually	
NEW MEXICO	35	\$15: 5/<	Quarterly	
NEW YORK	10	10 lbs.	Annually	
NORTH CAROLINA	25	25 lbs.:>5 lbs.	Monthly	
NORTH DAKOTA	20	> 25 lbs.	Annually	
OHIO	12	12	Semi- Annually	
				Minimum \$10.00 semi annually per registrant \$.65 breakout is: \$.35
OKLAHOMA	65	65	Semi- Annually	inspection, \$.30 soil fertility & ground water research.
OREGON	10	10	Semi- Annually	
PENNSYLVANIA	15	15	SA> 15 lbs.> A	\$25 per brand and grade for packages 15 lbs. and under, annually
RODE ISLAND	15	15	Monthly	
SOUTH CAROLINA	\$0.50	50>10lbs.	Monthly	\$10 for soil amendments (due quarterly)
SOUTH DAKOTA	\$0.10	\$0.10	Annually	
TENNESSEE	20	20	Monthly	
TEXAS	36	36	Quarterly	Minimum inspection fee of \$100 per registrant annually.
UTAH	15	None	None	
VERMONT	25	25	Annually	
VIRGINIA	25		Annually	
WASHINGTON	N/A	N/A	Semi- Annually	30 cents/ ton fertilizer (all), 15 cents/ ton limes.
WEST VIRGINIA	40	40	Quarterly	\$15 per brand & grade packages 10# or less late tonnage inspection fee and additional 10% fee added to total amount
WISCONSIN	N/A	N/A	Annually	Wisconsin relative to inspection fees. The \$1 breakout is \$.70 cents inspection \$.10 research \$.10 groundwater, \$.10 extension. There are no pkg. size specs in WI relative to insp. Fees. The \$1 breakout is: same as above
WYOMING	None	None	None	
CANADA	None	None	None	
PUERTO RICO	15	15	Monthly	

TONNAGE REPORTS

<u>STATE</u>	<u>FREQUENCY OF PUBLISHED REPORTS</u>	<u>COUNTY</u>	<u>UFTR SYSTEM</u>	<u>COMMENTS</u>
ALABAMA	Monthly	Yes	Yes	
ALASKA	N/A	N/A	N/A	No specific fertilizer laws in effect
ARIZONA	Quarterly	Yes	Yes	Own system, compatible to UFTR
ARKANSAS	Monthly	Yes	No	Own system, compatible to UFTR
CALIFORNIA	Semi-Annually	Yes	Yes	
COLORADO	Monthly	Yes	Yes	
CONNECTICUT	Annually	No	Yes	
DELAWARE	Semi-Annually	Yes	Yes	
FLORIDA	Monthly	Yes	Yes	Contracted thru AAPFCO accept UFTRS text file format on disks
GEORGIA	Quarterly, Annually	No	No	
IDAHO	Semi-Annually	No	Yes	
ILLINOIS	Monthly, Annually	Yes	No	Tonnage Taxes @ .25/ton
INDIANA	Annually	Yes	Yes	
IOWA	Semi-Annually	No	No	
KANSAS	Semi-Annually	Yes	Yes	
KENTUCKY	Semi-Annually, Annually	Yes	Yes	UFTR: Currently using Version 4.04
LOUISIANA	Quarterly	Yes	Yes	
MAINE	Annually	No	No	
MARYLAND	Annually	Yes	Yes	
MASSACHUSETTS	Semi-Annually	No	Yes	
MICHIGAN	Semi-Annually	No	Yes	
MINNESOTA	Semi-Annually	Yes	Yes	
MISSISSIPPI	Quarterly	Yes	Yes	
MISSOURI	Monthly, Semi-Annually	Yes	Yes	
MONTANA	Semi-Annually	No	Yes	
NEBRASKA	Semi-Annually	Yes	Yes	
NEVADA	Annually	No	Yes	
NEW HAMPSHIRE	Semi-Annually	No	Yes	

TONNAGE REPORTS

TONNAGE REPORTS				
	FREQUENCY OF			
<u>STATE</u>	<u>PUBLISHED REPORTS</u>	<u>COUNTY</u>	<u>UFTR SYSTEM</u>	<u>COMMENTS</u>
NEW JERSEY	Semi-Annually	No	Yes	
NEW MEXICO	Monthly, Quarterly, Annually	Yes	Yes	
NEW YORK	Semi-Annually	No	Yes	
NORTH CAROLINA	Monthly, Semi-Annually, Annual	No	Yes	
NORTH DAKOTA	Annually	Yes	No	
OHIO	Semi-Annually	Yes	No	Tonnage taxes @ 12 cents/ton.
OKLAHOMA	None	No	Yes	
OREGON	Semi-Annually	No	Yes	
PENNSYLVANIA	Semi-Annually, Annually	Yes	Yes	
RODE ISLAND	Annually	No	Yes	
SOUTH CAROLINA	Monthly	Yes	Yes	Tonnage taxes @ 50 cents/ton.
SOUTH DAKOTA	Annually	No	Yes	
TENNESSEE	Quarterly	Yes	Yes	
TEXAS	Semi-Annually, Annually	Yes	Yes	
UTAH	None	None	None	Tonnage taxes @ 15 cents/ton.
VERMONT	Annually	Yes	No	
VIRGINIA	Monthly, Annually	Yes	Yes	
WASHINGTON	Semi-Annually	No	Yes	
WEST VIRGINIA	Monthly, Quarterly	Yes	Yes	
WISCONSIN	Annually	No	Yes	
WYOMING	None	None	None	The 1971 fertilizer law requires industry to report monthly &
				by county. The state, however, is only publishing annual reports
				and without county statistics
CANADA	None	None	None	
PUERTO RICO	Monthly	Yes	None	

QUALITY CONTROL

<u>STATE</u>	<u>SAMPLING</u>	<u>ANALYSIS</u>	<u>PENALTY</u>	<u>COMMENTS</u>
ALABAMA	Yes	Yes	Penalty	
ALASKA	N/A	N/A	N/A	No specific fertilizer laws in effect
ARIZONA	Yes	Yes	Penalty	
ARKANSAS	Yes	Yes	Refund	
CALIFORNIA	Yes	Yes	None	Compliance w/ Fertilizer Materials Law is based upon overall compliance for a 12 mo. period.
COLORADO	Yes	Yes	Fine	
CONNECTICUT	Yes	Yes	Fine/Pen	
DELAWARE	Yes	Yes	Fine	
FLORIDA	Yes	Yes	Penalty	
GEORGIA	Yes	Yes	Penalty	
IDAHO	Yes	Yes	Penalty	
ILLINOIS	Yes	Yes	Refund	
INDIANA	Yes	Yes	Refund	
IOWA	Yes	Yes	Refund	
KANSAS	Yes	Yes	Fine	
KENTUCKY	Yes	Yes	Penalty	
LOUISIANA	Yes	Yes	Penalty	
MAINE	Yes	Yes	Refund	
MARYLAND	Yes	Yes	Ref/Pen/Fine	
MASSACHUSETTS	Yes	Yes	Fine	
MICHIGAN	Yes	Yes	None	
MINNESOTA	Yes	Yes	None	
MISSISSIPPI	Yes	Yes	Penalty	
MISSOURI	Yes	Yes	Penalty	
MONTANA	Yes	Yes	Penalty	
NEBRASKA	Yes	Yes	None	
NEVADA	Yes	Yes	Refund	
NEW HAMPSHIRE	Yes	Yes	Refund	

QUALITY CONTROL

<u>STATE</u>	<u>SAMPLING</u>	<u>ANALYSIS</u>	<u>PENALTY</u>	<u>COMMENTS</u>
NEW JERSEY	Yes	Yes	Fine	
NEW MEXICO	Yes	Yes	Refund	
NEW YORK	Yes	Yes	Fine	\$300 first time violation; \$600 subsequent violation
NORTH CAROLINA	Yes	Yes	Penalty	
NORTH DAKOTA	Yes	Yes	None	
OHIO	Yes	Yes	Penalty	
OKLAHOMA	Yes	Yes	Penalty	
OREGON	Yes	Yes	Fine	
PENNSYLVANIA	Yes	Yes	Penalty	
RODE ISLAND	Yes	Yes	Penalty	
SOUTH CAROLINA	Yes	Yes	Penalty	3X Relative commercial value of shortage
SOUTH DAKOTA	Yes	Yes	None	
TENNESSEE	Yes	Yes	Penalty	
TEXAS	Yes	Yes	None	
UTAH	Yes	Yes	None	
VERMONT	Yes	Yes	Fine	
VIRGINIA	Yes	Yes	Fine/Refund	
WASHINGTON	Yes	Yes	Penalty	
WEST VIRGINIA	Yes	Yes	Penalty	
WISCONSIN	Yes	Yes	Fine	
WYOMING	Yes	Yes	Penalty	
CANADA	Yes	Yes	Pen/Fine	
PUERTO RICO	Yes	Yes	Penalty	

QUALITY CONTROL (Continued)

	AAPFCO	AAPFCO	AAPFCO		
	INVESTIGATIONAL	UNIFORM LABEL	TERMS &		
STATE	ALLOWANCES	FORMAT	DEFINITIONS		COMMENTS
ALABAMA	NO	Yes	Yes		
ALASKA	N/A	N/A	N/A		No specific fertilizer laws in effect
ARIZONA	Yes	Yes	Yes		
ARKANSAS	No	Yes	Yes		
CALIFORNIA	Yes	Yes	Most		
COLORADO	Yes	Yes	Yes		
CONNECTICUT	Yes	Yes	Yes		
DELAWARE	Yes	Yes	Yes		
FLORIDA	Yes	Yes	Yes		
GEORGIA	No	Yes	Yes		
IDAHO	Yes (except dry custom mixes)	Yes	Yes		
ILLINOIS	No	Yes	Yes		
INDIANA	Yes	Yes	Yes		
IOWA	Yes	Yes	Yes		
KANSAS	No	Yes	Yes		
KENTUCKY	No	Yes	Yes		
LOUISIANA	No	Yes	Yes		
MAINE	No	Yes	Yes		
MARYLAND	No	Yes	Yes		
MASSACHUSETTS	Yes	Yes	Yes		
MICHIGAN	No	Yes	Yes		
MINNESOTA	Yes	Yes	Yes		
MISSISSIPPI	No	Yes	Yes		
MISSOURI	No	Yes	Yes		
MONTANA	Yes	Yes	Yes		
NEBRASKA	Yes	Yes	Yes		
NEVADA	No	Yes	Yes		
NEW HAMPSHIRE	Yes	Yes	Yes		

QUALITY CONTROL (Continued)

STATE	AAPFCO INVESTIGATIONAL ALLOWANCES	AAPFCO UNIFORM LABEL FORMAT	AAPFCO TERMS & DEFINITIONS	COMMENTS
NEW JERSEY	Yes	Yes	Yes	
NEW MEXICO	No	Yes	Yes	
NEW YORK	Yes	Yes	Yes	
NORTH CAROLINA	Yes	Yes	Yes	Accept uniform label format with minimum specified size for grade numeral
NORTH DAKOTA	No	Yes	Yes	No on straights only
OHIO	Yes	Yes	Yes	
OKLAHOMA	Yes	Yes	Yes	
OREGON	Yes	Yes	Yes	
PENNSYLVANIA	No	Yes	Yes	
RODE ISLAND	Yes	Yes	Yes	
SOUTH CAROLINA	No	Yes	Yes	
SOUTH DAKOTA	Yes	Yes	None	
TENNESSEE	Yes	Yes	Yes	
TEXAS	Yes	Yes	Yes	
UTAH	Yes	Yes	Yes	
VERMONT	No	Yes	Yes	
VIRGINIA	No	Yes	Yes	
WASHINGTON	No	Yes	Yes	
WEST VIRGINIA	Yes	Yes	Yes	
WISCONSIN	No	Yes	Yes	
WYOMING	No	Yes	Yes	
CANADA	No	Yes		Major exceptions are requirement for metric units of measure and French language in Quebec.
PUERTO RICO	No	Yes	Yes	

INDUSTRY STATISTICS

						DRY	FLUID			
						BLENDING	BLENDING			
STATE	REGISTRANTS	LICENSEES	PLANTS	PLANTS	COMMENTS					
ALABAMA	N/A	344		55	27					
ALASKA	N/A	N/A		N/A	N/A	No specific fertilizer laws in effect				
ARIZONA	154	322		9	11					
ARKANSAS	329	192		198	103					
CALIFORNIA	456	1500		33	53					
COLORADO	356	N/A		160	47					
CONNECTICUT	233	N/A		2	4					
DELAWARE	209	N/A		12	4					
FLORIDA	N/A	487		70	21					
GEORGIA	461	461		122	78					
IDAHO	350	N/A						Blending plants # undetermined		
ILLINOIS	475	860		788	678					
INDIANA	620	N/A		390	242					
IOWA	N/A	2757		989	1051					
KANSAS	270	421		142	124					
KENTUCKY	349	199		205	1					
LOUISIANA	300	N/A		108	80					
MAINE	120	N/A		12	1					
MARYLAND	235	N/A		64	6					
MASSACHUSETTS	208	44		6	2					
MICHIGAN	500	460		N/A	N/A					
MINNESOTA	310	1367		516	371					
MISSISSIPPI	314	150		120	30					
MISSOURI	N/A	957		268	58	combination 257				
MONTANA	147	230		N/A	N/A					
NEBRASKA	363	1295		N/A	N/A					
NEVADA	137	N/A		N/A	N/A					
NEW HAMPSHIRE	160	N/A		2	N/A					

INDUSTRY STATISTICS

						DRY	FLUID			
						BLENDING	BLENDING			
STATE	REGISTRANTS		LICENSEES			PLANTS	PLANTS			COMMENTS
NEW JERSEY	N/A		220			9	3			
NEW MEXICO	256		N/A			11	7			
NEW YORK	N/A		300			75 combined	75 combined			
NORTH CAROLINA	404		167			285	117			
NORTH DAKOTA	157		508			175	12			
OHIO	226		668			455	390			
OKLAHOMA	335		1100			292 combined	292 combined			
OREGON	375		N/A			100 combined	100 combined			
PENNSYLVANIA	422		366			93	27			
RODE ISLAND	157		N/A			3	4			
SOUTH CAROLINA	325		325			62	23			
SOUTH DAKOTA	20		500			300	20			
TENNESSEE	150		N/A			104	14			
TEXAS	984		N/A			N/A	N/A			
UTAH	148		N/A			23	2			
VERMONT	90		N/A			8	3			
VIRGINIA	178		247			N/A	N/A			
WASHINGTON	228		317			N/A	N/A			
WEST VIRGINIA	90		111			N/A	N/A			
WISCONSIN	N/A		596			354	198			
WYOMING	149		N/A			N/A	N/A			
CANADA	53		N/A			1297 combined	1297 combined			
PUERTO RICO	85		N/A			5	N/A			

PERCENT SALES TAX

<u>STATE</u>	<u>FARM GOODS</u>	<u>SPECIALTY</u>	<u>COMMENTS</u>
ALABAMA	Exempt	Exempt	
ALASKA	N/A	N/A	No specific fertilizer laws in effect
ARIZONA	Exempt	Exempt	
ARKANSAS	5	county tax, 1/2-2%	
CALIFORNIA	Exempt	7.25	
COLORADO	Exempt	3.0	
CONNECTICUT	Exempt	6.00 (non-farm use)	
DELAWARE	Exempt	Exempt	
FLORIDA	Exempt	7.00	
GEORGIA	Exempt	7.00	
IDAHO	Exempt	6.00%	
ILLINOIS	Exempt	6.25	
INDIANA	Exempt	6.0	
IOWA	Exempt	Exempt	
KANSAS	Exempt	5.0	
KENTUCKY	Exempt	6.00	
LOUISIANA	Exempt	3.00	
MAINE	Exempt	5.00	
MARYLAND	Exempt	5.00	
MASSACHUSETTS	Exempt	Exempt	
MICHIGAN	Exempt	6.00	
MINNESOTA	Exempt	6.5	
MISSISSIPPI	Exempt	7.0	
MISSOURI	Exempt	7.225%	
MONTANA	None	None	
NEBRASKA	Exempt	4.5	
NEVADA	Exempt	6.0	
NEW HAMPSHIRE	No Tax	No Tax	

PERCENT SALES TAX

<u>STATE</u>	<u>FARM GOODS</u>	<u>SPECIALTY</u>			<u>COMMENTS</u>
NEW JERSEY	Exempt	5.00			
NEW MEXICO	Exempt	Varies by county			
NEW YORK	Exempt	Varies by county			
NORTH CAROLINA	Exempt	Exempt			
NORTH DAKOTA	Exempt	6.00			
OHIO	Exempt	5.00			
OKLAHOMA	Exempt	Varies			
OREGON	No Tax	No Tax			
PENNSYLVANIA	Exempt	6.00			
RODE ISLAND	Exempt	7.00			
SOUTH CAROLINA	Exempt	5.00			
SOUTH DAKOTA	Exempt	5.00			
TENNESSEE	Exempt	9.10			
TEXAS	Exempt	Exempt			
UTAH	None	5.50			
VERMONT	Exempt	None			
VIRGINIA	Exempt	4.25			
WASHINGTON	Exempt	7.00 - 8.60			
WEST VIRGINIA	6.00	6.00			
WISCONSIN	Exempt	5.00			
WYOMING	4.00	4.00			
CANADA	Exempt	7.00			
PUERTO RICO	N/A	N/A			

**COMPARISON OF STATE FERTILIZER REGULATIONS
(TOLERANCES AND PENALTIES)**

<u>STATE</u>	<u>INVESTIG. ALLOW.</u>	<u>AVG. COMP.</u>	<u>PENALTY APPLIED</u>	<u>STOP SALE</u>	<u>HOW RELEASED</u>	<u>PENALTY PAID TO</u>	<u>RECEIPT REQUIRED</u>
ALABAMA	(F)	No	3 times value	Yes	Rework / Relabel	Consumer / Dept of Agriculture	Yes
ARIZONA	(A)	Yes	3 times value	Yes	Rework / Relabel	Consumer / Dept of Agriculture	Yes
ARKANSAS	(I)	Yes	Actual del From 3.5% 3 times value over 5%	Yes	Rework/ Relabel	Consumer / State Plant Board	Yes
CALIFORNIA	(R)	No	None	Yes	Rework/ Relabel	None	None
COLORADO	(A)	Yes	3 times value	Yes	Rework / Relabel	Consumer / Dept of Agriculture	Yes
CONNECTICUT	(A)	No	Less than one ton: none. More than 1 ton: 3 times of def. of 1 or more nutrients	Yes	Rework / Relabel	Customer when known, otherwise General Refund	No
DELAWARE	(A)	Yes	2 times value	Yes	Rework / Relabel	Consumer / Dept. of Agriculture	Yes
FLORIDA	(J)	Yes (ltd.)	3 times value. 4.5 times value for plants on probation. (1 1/2 times value to Dept. of Agri., 3 times value to customer	Not <u>Used</u>	Rework / Relabel	Consumer / Dept of Agriculture	Yes
GEORGIA	(L)	No	10% of price +2 times difference in relative value.	Yes	Rework / Relabel	Consumer/ Dept. of Agri.	No
IDAHO	(A)	No	3 times value	Yes	Rework / Relabel	Dept. of Agri.	No

**COMPARISON OF STATE FERTILIZER REGULATIONS
(TOLERANCES AND PENALTIES)**

<u>STATE</u>	<u>INVESTIG. ALLOW.</u>	<u>AVG. COMP.</u>	<u>PENALTY APPLIED</u>	<u>STOP SALE</u>	<u>HOW RELEASED</u>	<u>PENALTY PAID TO</u>	<u>RECEIPT REQUIRED</u>
ILLINOIS	(I)	No	Actual def. from 3-5%. 3 times value over 5%				
INDIANA	(A)	Yes	Refunds	Yes	Rework / Relabel	Consumer / Charity / Education	Yes
IOWA	(A)	Yes	Yes, not stated	Yes	Rework / Relabel	Consumer	Yes
KANSAS	None Stated	No	None	Yes	Rework	None	None
KENTUCKY	(D)	Yes	1, 2, or 3 times value	Yes	Rework/Relabel/adjust price/penalty	Consumer or Agri. Exp. Station	Yes
LOUISIANA	(M)	(Ltd)	4 times value	Yes	Rework / relabel	Consumer / Dept. of Agriculture	No
MAINE	(E)	Yes	Actual Def.	Yes	Rework / relabel	Consumer / Dept. of Agriculture	No
MARYLAND	(A)	Partially	3 times value	Yes	Rework / relabel	Consumer / Dept. of Agriculture	Yes
MASSACHUSETTS	(A)	No	2 times value	Yes	Rework / relabel	Dept. of Agri (for consumer)	Yes
MICHIGAN	10% of NPK guaranteed up to 2 units, use investigational allowances adopted by AAPFCO for secondary and minor elements	No	None	Yes	Rework / relabel	None	None
MINNESOTA	(A)		None (notifies consumer that refund is due)	Yes	Rework / relabel	None	None
MISSISSIPPI	(G)	No	3 times value	Yes	Rework	Dept. of Agri.	No

**COMPARISON OF STATE FERTILIZER REGULATIONS
(TOLERANCES AND PENALTIES)**

<u>STATE</u>	<u>INVESTIG. ALLOW.</u>	<u>AVG. COMP.</u>	<u>PENALTY APPLIED</u>	<u>STOP SALE</u>	<u>HOW RELEASED</u>	<u>PENALTY PAID TO</u>	<u>RECEIPT REQUIRED</u>
MISSOURI	(E)	Yes	3 times value if def. over 5%	Yes	Rework / relabel	Consumer / Agri. Exp. Station	Yes
MONTANA	(A)		2 times value	Not Used	Rework / relabel	Consumer	Yes
NEBRASKA	Non Stated	Not Stated	None	Yes	Rework / relabel	None	None
NEVADA	(A)	No	3 times value	Not Used	Rework / relabel	Consumer / Dept. of Agriculture	Yes
NEW HAMPSHIRE	(A)	No	3 times value	Yes	Rework / relabel	Dept. of Agri (for consumer)	No
NEW JERSEY	(B)	No	3 times value	Yes	Rework / relabel	Consumer / Dept. of Agriculture	Yes
NEW MEXICO	(O)	No	3 times value	Yes	Rework / relabel	Consumer / School Fund	Yes
NEW YORK	(A)	No	(G)	Yes	Rework / relabel	State Treasurer	No
NORTH CAROLINA	(S)	No	3 times value	Yes	Rework / relabel	Consumer / Dept. of Agriculture	Yes
NORTH DAKOTA	(A)	No	None (refund)	Yes	Rework / relabel	None	None
OHIO	(E)	No	None	Yes	Rework / relabel	None	None
OKLAHOMA	(G)	Yes	2 times value	Yes	Rework / relabel	Consumer / Dept Agriculture	Yes
OREGON	(A)	No	Sliding Scale	Yes	Relabel	Dept. of Agri	None
PENNSYLVANIA	(T)	No	5 times value	Yes	Relabel/reformulate	Consumer/ Dept Agriculture	Yes
RHODE ISLAND	(A)	Yes	3 times value	Yes	Rework/relabel	Dept. of Agri (for consumer) Consumer State	Yes

**COMPARISON OF STATE FERTILIZER REGULATIONS
(TOLERANCES AND PENALTIES)**

<u>STATE</u>	<u>INVESTIG. ALLOW.</u>	<u>AVG. COMP.</u>	<u>PENALTY APPLIED</u>	<u>STOP SALE</u>	<u>HOW RELEASED</u>	<u>PENALTY PAID TO</u>	<u>RECEIPT REQUIRED</u>
SOUTH CAROLINA	(A) & (K)	No	3 times value	Yes	Rework /	Treasurer	Yes
SOUTH DAKOTA	(A)	No	None	Yes	Rework / relabel	None	None
TENNESSEE	(A)	No	3 times value	Yes	Rework / relabel	Consumer / Dept.] of Agriculture	Yes
TEXAS	None Stated	No	None (voluntary)	Yes	Rework/relabel	Consumer	Yes
UTAH	(A)	Yes	3 times value	Yes	Rework / relabel	State Fund	Yes
VERMONT	(A)	Sometimes	3 times value of short wages	Yes	Rework / relabel	Farmer	none
VIRGINIA	(H)	Yes	2 times value for N,P,K, and low index (97%); penalty for secondary or minor elements is \$1.00 ton plus 3 times the value	Yes	Rework / relabel sell at reduced price	Consumer / State Treasurer	
WASHINGTON	(N)	No	3 times value	Yes	Rework / relabel	Dept. of Agri.	Yes
WEST VIRGINIA	(A)	No	3 times value	Yes	Rework / relabel	Consumer / Dept. of Agriculture	Yes
WISCONSIN	(E)	No	None	Yes	Rework / relabel	None	None
WYOMING	(A)	No	3 times value	Yes	Relabel	Consumer	No



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