

Kentucky Fertilizer Law Regulations

As Amended on November 18, 2020

Unofficial Text of
Administrative Regulations

For Information Only



Kentucky Fertilizer Law Regulations

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12 KAR 4:075.

Licenses and fertilizer product registration.

RELATES TO: KRS 250.366(16), (26), 250.371 - 250.461

STATUTORY AUTHORITY: KRS 250.371, 250.421

NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.371

authorizes the Kentucky Agricultural Experiment Station Director to promulgate administrative regulations for product registration and licensing of custom mix blending facilities. KRS 250.421 requires the director to promulgate administrative regulations necessary to implement KRS 250.371 through 250.451. This administrative regulation establishes requirements for fertilizer product registration and licensing.

Section 1. Definitions.

- (1) "Registrant" means the person who registers fertilizer.
- (2) "Licensee" means the person who is licensed to distribute fertilizer.

Section 2. An applicant for registration shall complete and submit to the Fertilizer Regulatory Program:

- (1) Application for Registration of Farm Fertilizer, Form RS-29-01 Farm Fertilizer;
- (2) Application for Registration of Specialty Fertilizer, Form RS-29-03 Specialty Fertilizer (10 pounds or less).
 - (a) In accordance with KRS 250.371(1), a fifty (50) dollar registration fee shall accompany form RS-29-03; and
 - (b) In accordance with KRS 250.381(4) a fifty (50) dollar inspection fee shall accompany form RS-29-03; or
- (3) Application for Registration of Specialty Fertilizer, Form RS-29-04. Specialty Fertilizer (Packages Greater Than 10 Pounds). In accordance with KRS 250.371(1), a fifty (50) dollar registration fee shall accompany the submitted application form.

Section 3. An applicant for licensing shall complete and submit to the Fertilizer Regulatory Program:

- (1) Application for Custom Mix Fertilizer Blending, Form RS-29-02 Bulk Fertilizer License; or
- (2) Application for Custom Mix Specialty Fertilizer Blending, Form RS-29-05 Bulk Specialty Fertilizer License. In accordance with KRS 250.371(4), a one-hundred (100) dollar license fee shall accompany the submitted application form.

Section 4. Incorporation by Reference.

- (1) The following material is incorporated by reference:
 - (a) "Application for Registration of Farm Fertilizer", Form RS-29-01, October 2019;
 - (b) "Application for Registration of Specialty Fertilizer", Form RS-29-03, October 2019;
 - (c) "Application for Registration of Specialty Fertilizer", Form RS-29-04, October 2019;
 - (d) "Application for Custom Mix Fertilizer Blending", Form RS-29-02, October 2019; and
 - (e) "Application for Custom Mix Specialty Fertilizer Blending", Form RS-29-05, October 2019.
- (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Regulatory Services, University of Kentucky, 103 Regulatory Services Building, Lexington, Kentucky 40546-0275, Monday through Friday, 8 a.m. to 4:30 p.m.

(20 Ky. R. 3334; eff. 8-24-1994; 47 Ky. R. 106, 734; eff. 11-18-2020.)

12 KAR 4:080.

Plant nutrient guarantees and labeling.

RELATES TO: KRS 250.366(7), 250.371 - 250.451

STATUTORY AUTHORITY: KRS 250.366(7), 250.421

NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.366(7)

authorizes the Kentucky Agricultural Experiment Station Director to promulgate administrative regulations for the inspection and analysis of plant nutrient guarantees. KRS 250.421 requires the director to promulgate administrative regulations necessary to implement KRS 250.371 through 250.451. This administrative regulation establishes requirements for plant nutrient labeling requirements.

Section 1. Plant Nutrient Guarantees. Plant nutrients, additional to nitrogen, phosphorus, and potassium, referenced by fertilizer labeling or information provided with a fertilizer shall be registered and guaranteed pursuant to this administrative regulation. Except guarantees for 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, garden soils, lawn soils, and any other growing media product labeled with a fertilizer guaranteed analysis, the minimum elemental percentages shall be as established in the Table established in this section.

Element	Percent
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

- (1) Guarantees and claims shall not be referenced by fertilizer labeling or information provided with a fertilizer for elements other than those established in the Table established in this section.
- (2) Except for nitrogen, phosphorus, and potassium, if present and that shall be listed first, guaranteed elements referenced by fertilizer labeling or information provided with a fertilizer shall be listed in the order established in the Table established in this section.
- (3) The elements established in this section shall be guaranteed on their elemental basis and are the only ones that shall be accepted.
- (4) Sources of the elements guaranteed and proof of availability shall be provided upon request.

Section 2. Fertilizer Labels.

- (1) Fertilizer labels or information provided with a fertilizer shall be legible and conspicuous and shall include:
 - (a) Net Weight;
 - (b) Brand and grade, except grade shall not be required if primary nutrients are not claimed;
 - (c) Under the heading of Guaranteed Analysis;

Total Nitrogen (N)	%
Available Phosphate (P ₂ O ₅)	%
Soluble Potash (K ₂ O)	%
Other Nutrients, Elemental Basis	%

1. If the percentage is zero, the nutrient shall be omitted from the statement, except in nutrient guarantee breakdowns.
2. If the chemical forms of nitrogen are claimed, the form shall be guaranteed in the format established in the Table established in this subparagraph, and the percentages of the individual forms shall add up to the total nitrogen percentage. Implied order of the forms of nitrogen is not intended.

Total Nitrogen	_____%
_____% Ammoniacal Nitrogen	
_____% Nitrate Nitrogen	
_____% Water Soluble Nitrogen	
_____% Urea Nitrogen	
_____% Other recognized and determinable forms of nitrogen	

- (d) The source or sources of the guaranteed elements that, if shown on the fertilizer labeling or information provided with a fertilizer, shall be listed below the completed guaranteed analysis statement; and
- (e) Name and address of registrant or licensee.
- (2) For packaged products, Fertilizer Labels shall:
 - (a) Appear on the front or back of the package;
 - (b) Occupy at least the upper third of a side of a package; or
 - (c) Be printed on a tag and attached to the package.
- (3) If the chemical form of a plant nutrient is guaranteed, the percentage for each component shall be shown before the name of the form, as in the following example:

Total Nitrogen (N)	34%
17% Nitrate Nitrogen	
17% Ammoniacal Nitrogen	
Magnesium (Mg)	2.00%
1% Water Soluble Magnesium (Mg)	
Sulfur (S)	10.00%
5% Free Sulfur (S)	
5% Combined Sulfur (S)	
Iron (Fe)	2.00%
2% Chelated Iron (Fe)	

Section 3. Beneficial Substances and Beneficial Compounds.

- (1) Beneficial substances or beneficial compounds guarantees shall be listed below the guaranteed analysis statement under one (1) of the following headings; "Also Contains Beneficial Substances"; "Also Contains Beneficial Compounds"; or "Also Contains Non-Plant Food Ingredients."
- (2) The percentage for each beneficial substance or beneficial compound shall be shown after the name of the form, as in the following examples:
 - (a) Also Contains Beneficial Substances (Compounds)

Beneficial Substance	% or acceptable units
Purpose statement	
 - (b) Also Contains Non-Plant Food Ingredients.

Beneficial Substance	% or acceptable units
Purpose statement	

- (3) For the beneficial substance, Silicon, the guarantee shall be "Soluble Silicon (Si)." The method of determination of Soluble Silicon shall be from the Journal of AOAC International, Volume 96, No. 2, 2013.

Section 4. The term of "percentage" by symbol or word, when used on fertilizer labeling shall represent only the amount of individual plant nutrients in relation to the total product by weight.

Section 5. Incorporation by Reference.

- (1) "Journal of AOAC International", Volume 96, No. 2, 2013, "A 5-Day Method for Determination of Soluble Silicon Concentrations in Non-liquid Fertilizer Materials Using a Sodium Carbonate-Ammonium Nitrate Extractant Followed by Visible Spectroscopy with Heteropoly Blue Analysis: Single-Laboratory Validation", 2013, is incorporated by reference.
- (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Regulatory Services, University of Kentucky, 103 Regulatory Services Building, Lexington, Kentucky 40546-0275, Monday through Friday, 8 a.m. to 4:30 p.m.

(11 Ky.R. 509; eff. 11-13-1984; Am. 21 Ky.R. 450; eff. 9-28-1994; 47 Ky.R. 106, 734, 934; eff. 11-18-2020.)

12 KAR 4:100.

Slowly released nutrients; labeling.

RELATES TO: KRS 250.366(7), (17), (18)

STATUTORY AUTHORITY: KRS 250.421

NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.421

requires the director to promulgate administrative regulations necessary to implement KRS 250.371 through 250.451. This administrative regulation establishes requirements for referencing slowly released nutrients on fertilizer labels or information provided with a fertilizer.

Section 1. A fertilizer label shall not state or imply that certain plant nutrients contained in a fertilizer are released slowly over a period of time, unless the nutrient or nutrients are identified and guaranteed at a level of at least fifteen (15) percent of the total guarantee for that nutrient or nutrients.

Section 2. Types of products with recognized slow release properties shall be:

- (1) Water insoluble (Nitrogen products only), such as natural organics, urea form materials, urea-formaldehyde, Isobutylidene diurea, and oxamide. "AOAC International method 945.01" shall be used to determine the water insoluble nitrogen;
- (2) Coated slow release, such as sulfur coated urea and other encapsulated soluble fertilizers. "AOAC International method 970.04" shall be used to confirm the coated slow release nutrients and others whose slow release characteristics depend on particle size;

- (3) Occluded slow release, if fertilizers or fertilizer materials are mixed with waxes, resins, or other inert materials and formed into particles. "AOAC International method 970.04" shall be used to confirm the occluded slow release nutrients and others whose slow release characteristics depend on particle size; and
- (4) Products containing water soluble slowly available nitrogen, such as urea-formaldehyde products, methylenediurea (MDU), dimethylenetriurea (DMTU), dicyanodiamide (DCD), and urea-triazone solutions.
- (5)
 - (a) The terms, "water insoluble", "coated slow release", "slow release", "controlled release", "slowly available water soluble", and "occluded slow release" shall be accepted as descriptive of these products, if the manufacturer can show a testing program substantiating the claim.
 - (b) In addition to the requirements established in paragraph (a) of this subsection, the manufacturer shall provide a laboratory procedure for evaluating the release characteristics of the product or products.

Section 3. Nitrogen.

- (1) If an amount of nitrogen is designated as organic, then the water in-soluble nitrogen or the slow release nitrogen guarantee shall not be less than sixty (60) percent of the nitrogen so designated.
- (2) Coated urea shall not be included in meeting the sixty (60) percent requirement.

Section 4. Incorporation by Reference.

- (1) The following material is incorporated by reference:
 - (a) AOAC International method 970.04 in the Official Methods of Analysis, 15th Edition (1990); and
 - (b) "AOAC International method 945.01" in the Official Methods of Analysis, 15th Edition (1990).
- (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Regulatory Services, University of Kentucky, 103 Regulatory Services Building, Lexington, Kentucky 40546-0275, Monday through Friday, 8 a.m. to 4:30 p.m.

(11 Ky.R. 510; eff. 11-13-1984; Am. 21 Ky.R. 452; 1023; eff. 9-28-1994; 47 Ky.R. 100, 108; eff. 11-18-2020.)

112 KAR 4:110.

Definitions for 12 KAR Chapter 4.

RELATES TO: KRS 250.406

STATUTORY AUTHORITY: KRS 250.421

NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.421 requires the director to promulgate administrative regulations necessary to implement KRS 250.371 through 250.451. This administrative regulation establishes definitions for terms used in 12 KAR Chapter 4.

Section 1. Definitions. Definitions for 12 KAR Chapter 12 shall be the Official Terms and Official Fertilizer Definitions published by the Association of American Plant Food Control Officials.

Section 2. Incorporation by Reference.

- (1) "Official Terms and Official Fertilizer Definitions published by the Association of American Plant Food Control Officials", 2020 edition, is incorporated by reference.
- (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Regulatory Services, University of Kentucky, 103 Regulatory Services Building, Lexington, Kentucky 40546-0275, Monday through Friday, 8 a.m. to 4:30 p.m.

(11 Ky.R. 511; eff. 11-13-1984; Am. 12 Ky.R. 1519; eff. 4-17-1986; 21 Ky.R. 453; 1023; eff. 9-28-1994; 47 Ky.R. 110; eff. 11-18-2020.)

12 KAR 4:130. Investigational allowances.

RELATES TO: KRS 250.366(19), 250.391(3), 250.396(1), (2), 250.401

STATUTORY AUTHORITY: KRS 250.421

NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.421

requires the director to promulgate administrative regulations necessary to implement KRS 250.361 through 250.461. This administrative regulation establishes scientifically sound and fair investigational allowances as a basis for declaring a fertilizer sample deficient in its guaranteed analyses and to detail the calculation of the index value of a fertilizer.

Section 1. A fertilizer shall be deemed deficient if the analysis of an official sample for any primary nutrient is below the guarantee by an amount exceeding the values in the table established in this section.

Guaranteed Percent	Total Nitrogen (N) Percent*	Available Phosphate (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	0.7
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 or more	1.28	1.67	1.36

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

*For these investigational allowances to be applicable the Procedures recommended by AOAC International for obtaining samples, preparation and analysis shall be used. These are described in the 15th edition (1990) of the Official Methods of Analysis of the AOAC International. In evaluating data, Table 19 page 935, Journal of the Association of Official Analytical Chemists, Volume 49, No. 5, October 1966 shall be followed.

Section 2. A fertilizer shall be deemed deficient in the overall index value if the overall index value is less than ninety-seven (97) percent.

- (1) The overall index value shall be calculated by comparing the value guaranteed with the value found. Unit values of the nutrients used shall be those referred to in KRS 250.401.
- (2) Overall index value. Example of calculation for a 10-10-10 grade found to contain ten and one-tenth (10.1) percent Total Nitrogen (N), ten and two-tenths (10.2) percent Available Phosphate (P₂O₅) and ten and one-tenth (10.1) percent Soluble Potash (K₂O). Nutrient unit values shall be assumed to be three (3) dollars per unit N, two (2) dollars per unit (P₂O₅), and one (1) dollar per unit K₂O.

10.0 units N	x	3	=	10
10.0 units P ₂ O ₅	x	2	=	20
10.0 units K ₂ O	x	1	=	10
Commercial Value Guaranteed			=	60
10.0 units N	x	3	=	30.3
10.2 units P ₂ O ₅	x	2	=	20.4
10.1 units K ₂ O	x	1	=	10.1
Commercial Value Found			=	60.8
Overall Index Value = 100 (60.8/60.00) = 101.3%				

Section 3. Secondary and minor elements shall be deemed deficient if the analysis of an official sample for any of these elements is below the guarantee by an amount exceeding the values in the table established in this section.

Element	Investigational Allowance
Calcium (Ca)	0.2 unit + 5% of guarantee
Magnesium (Mg)	0.2 unit + 5% of guarantee
Sulfur (S)	0.2 unit + 5% of guarantee
Boron (B)	0.003 unit + 15% of guarantee
Molybdenum (Mo)	0.0001 unit + 30% of guarantee
Chlorine (Cl)	0.005 unit + 10% of guarantee
Copper (Cu)	0.005 unit + 10% of guarantee
Iron (Fe)	0.005 unit + 10% of guarantee
Manganese Mn)	0.005 unit + 10% of guarantee
Sodium (Na)	0.005 unit + 10% of guarantee
Zinc (Zn)	0.005 unit + 10% of guarantee

The maximum allowance calculated in accordance with this table shall be one (1) unit (1 percent.)

Section 4. Incorporation by Reference.

- (1) The following material is incorporated by reference:
 - (a) "15th Edition (1990) of the Official Methods of Analysis of the AOAC International", 1990; and
 - (b) "Table 19, page 935, Journal of the Association of Official Analytical Chemists, Volume 49, No. 5", October, 1966
- (2) This material may be inspected, copied, or obtained, subject to applicable copyright law, at the Division of Regulatory Services, University of Kentucky, 103 Regulatory Services Building, Lexington, Kentucky 40546-0275, Monday through Friday, 8 a.m. to 4:30 p.m.

(11 Ky.R. 512; eff. 11-13-1984; Am. 21 Ky.R. 457; 1027; eff. 9-28-1994; 114, 935; eff. 11-18-2020.)

12 KAR 4:140.
Monetary penalties.

RELATES TO: KRS 250.396(1), (2)
STATUTORY AUTHORITY: KRS 250.421
NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.421 requires the director to promulgate administrative regulations necessary to implement KRS 250.361 through 250.461. This administrative regulation establishes the specific method of calculating the monetary penalties required by the fertilizer law.

Section 1. Penalties for deficiencies in Total Nitrogen (N), Available Phosphate (P₂O₅), soluble potash (K₂O), and index value shall be calculated based on the table established in this section.

Number of Investigational Allowances Below Guarantee	Penalty Schedule
< 2	Equal to the monetary value of the deficiency
>2 but <3	Two (2) times the monetary value of the deficiency
>3	Three (3) times the monetary value of the deficiency

Section 2. Minimum standards and overages of primary nutrients may reduce penalties calculated in Section 1 of this administrative regulation for fertilizer with index values equal to or greater than ninety-seven (97) percent on the basis of the table established in this section.

Number of Investigational Allowances Below Guarantee	Penalty Adjustments
No more than one (1) deficiency that is less than or equal to two (2) investigational allowances	Penalty adjusted to zero
No more than one (1) deficiency that is greater than two (2) but less than three (3) investigational allowances	Value of overages may adjust up to 100% of the value of the deficiencies
Two (2) deficiencies that are less than three (3) investigational allowances; or, no more than one (1) deficiency that is equal to or greater than three (3) but less than four (4) investigational allowances	Value of overages may adjust up to 75% of the value of the deficiencies

Section 3. If a fertilizer is subject to a penalty from both a primary nutrient deficiency and an index value deficiency, only the larger penalty shall apply and the penalty shall not exceed the total value of the fertilizer.

Section 4. Penalties for deficiencies in secondary and minor elements and for excess chlorine in tobacco fertilizer shall be calculated as established in this section.

(1) Deficiencies

Number of Investigational Allowances Below Guarantee	Penalty Schedule
< 2	Equal to the monetary value of the deficiency
> 2	Two (2) times the monetary value of the deficiency

- (2) Excessive chlorine in tobacco fertilizers. The investigational allowance for maximum chlorine shall be five-tenths (0.5) percent.

Number of Investigational Allowances Above Maximum Chlorine	
Guarantee	Penalty Schedule
< 2	Equal to the difference in the soluble potash (for tobacco) unit value and the non-tobacco soluble potash unit value
> 2	Two (2) times the difference in the soluble potash (for tobacco) unit value and the non-tobacco soluble potash unit value

Section 5. Any penalty assessed under Section 1 of this administrative regulation shall be added to any penalty assessed under Section 4 of this administrative regulation, and the total shall be paid by the registrant to the consumer of the lot of fertilizer represented by the sample within three (3) months after the date of notice from the director, receipts taken therefore and forwarded to the director.

- (1) If a consumer cannot be found, the amount of the penalty payments shall be paid to the Kentucky Agricultural Experiment Station within three (3) months after the date of the notice from the director to the registrant and set aside for purchase of equipment for the sampling, handling, analyzing and reporting of results of analysis of official samples and for the education of the Kentucky fertilizer industry on the newest methods in manufacturing blended fertilizers.
- (2) If the lot of fertilizer is on hand at a retail location the penalty payments assessed under this section shall be used to reduce the retail price of the fertilizer if it is to be relabeled and sold.

Section 6. The total of the penalties assessed under this administrative regulation shall not exceed the retail value of the fertilizer.

(11 Ky.R. 514; eff. 11-13-1984; Am. 12 Ky.R. 1519; 1730; eff. 4-17-1986; 21 Ky.R. 458; eff. 9-28-1994; 47 Ky.R. 116, 936; eff. 11-18-2020.)

12 KAR 4:170.

Maximum chlorine guarantees for tobacco fertilizers.

RELATES TO: KRS 250.366(7), 250.376, 250.411(1)

STATUTORY AUTHORITY: KRS 250.421

NECESSITY, FUNCTION, AND CONFORMITY: KRS 250.421

requires the director of the Kentucky Agricultural Experiment Station to enforce the provisions of KRS 250.371 through 250.451 and to promulgate and enforce administrative regulations necessary to implement KRS 250.371 through 250.451. This administrative regulation establishes the specific format and conditions for maximum chlorine guarantee for tobacco fertilizers, which is necessary for production of quality tobacco.

Section 1.

- (1) All fertilizers sold for or represented for use on field crop tobacco, shall, in addition to the other guarantees established by 12 KAR Chapter 4, state a maximum chlorine guarantee not to exceed fifty (50)pounds chlorine per acre (equivalent to 100 pounds of muriate of potash per acre) in the following format:

Chlorine (Cl), Maximum 50 lb./acre

- (2) The maximum chlorine guarantee shall be prominently and conspicuously displayed on the label as required by KRS 250.376.
- (3) The invoice, shipping ticket, or bag label shall:
 - (a) State the rate of application expressed as pounds or tons of the blended fertilizer per acre;
 - (b) State clearly that the fertilizer is for use on tobacco; and
 - (c) Give directions for use to include a maximum application rate so that no more than fifty (50)pounds of chlorine shall be applied per acre.
- (4) The provisions of this administrative regulation shall not apply to fertilizers for use on plant beds.

(11 Ky.R. 516; Am. 970; eff. 11-13-1984; 26 Ky.R. 1586; eff. 4-12-2000; 47 Ky.R. 118, 937; eff. 11-18-2020.)

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Information and questions concerning the Kentucky
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