

Chapter Ag 17

FERTILIZER AND SOIL OR PLANT ADDITIVES

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Ag 17.01 Definitions. (1) "Combined nutrient index value" is the combined total of nutrient index values for all of the primary nutrients present in fertilizer computed on the basis of index factors established by the department. Example:

10.0 Units of Nitrogen	× 2.00 (assumed index factor)	= 20.0
10.0 Units of Available Phosphoric Acid	× 2.00 (assumed index factor)	= 20.0
10.0 Units of Potash	× 1.00 (assumed index factor)	= 10.0
Combined Nutrient Index Value		= 50.0

(2) "Index factor" is a weighted per unit numerical value assigned to each of the primary nutrients under these rules. Example: If wholesale value per unit of nitrogen is \$1.70, the index factor is 2.00.

(3) "Micronutrient pre-mix" means a mixed fertilizer, primarily containing micronutrients, which is intended for mixing or blending with other primary nutrient fertilizer materials.

(4) "Nutrient index value" is the result obtained by multiplying the number of units of any primary nutrient by the index factor per unit assigned to such nutrient by the department. Example: 10.0 units of total nitrogen × 2 (assumed index factor) = 20.0.

(5) "Pesticide" is as defined s. 94.67, Stats.

(6) "Pesticide-fertilizer combination" is a fertilizer which contains or to which a pesticide has been added.

(7) "Primary nutrients" are nitrogen (N), available phosphoric acid (P₂O₅) or phosphorus (P), and potash (K₂O) or potassium (K).

(8) "Secondary nutrients" and "micronutrients" are nutrients other than primary nutrients essential for normal growth of plants. "Secondary nutrients" are calcium, magnesium, and sulfur; and "micronutrients" are boron, chlorine, cobalt, copper, iron, manganese, molybdenum, sodium, and zinc.

(9) "Soil or plant additive" has the meaning specified in s. 94.65 (1) (f), Stats.

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(10) "Soil or plant additive-fertilizer combination" means any of the following:

- (a) A fertilizer containing a soil or plant additive.
- (b) A fertilizer to which a soil or plant additive has been added.
- (c) A fertilizer for which claims of benefit are made beyond those associated with the nutrients guaranteed present in the material.

(11) "Unit" means 20 pounds of plant food or one per cent of a ton.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71; renum. (1) to (8) to be (7), (8), (11), (2), (4), (1), (5) and (8) and am. (6), cr. (3), (9) and (10), Register, February, 1988, No. 386, eff. 3-1-88.

Ag 17.02 Sampling and analysis. (1) Names and definitions for fertilizer, fertilizer materials or soil or plant additives are those adopted by the Association of American Plant Food Control Officials and published in the Official Publication of the Association of American Plant Food Control Officials, No. 40, 1987.

(2) The methods of taking official fertilizer samples shall be the methods adopted by the Association of American Plant Food Control Officials and published in the Inspectors Manual of the Association of American Plant Food Control Officials, Fourth Edition, 1984.

Note: Copies of the Official Publications noted in subs. (1) and (2) may be obtained from the treasurer of the Association of American Plant Food Control Officials, P.O. Box 1163, 1100 Bank St., Room 412, Richmond, VA 23209. Copies are also on file at the Madison offices of the Department of Agriculture, Trade and Consumer Protection, the Secretary of State and the Revisor of Statutes.

(3) The methods of analysis for fertilizers shall be the methods adopted by the Association of Official Analytical Chemists contained in the 1984 Official Methods of Analysis, Fourteenth Edition, the methods found in the Association of Official Analytical Chemists Journals, Volumes 67 and 68, published by the Association of Official Analytical Chemists, and the 1984 modified comprehensive nitrogen method adopted by the department of agriculture, trade and consumer protection.

Note: Copies of the Association of Official Analytical Chemists methods may be obtained from the Association at 1111 N. 19th St., Suite 210, Arlington, VA 22209. Copies of these methods and of the modified comprehensive nitrogen method are also on file at the Madison offices of the Department of Agriculture, Trade and Consumer Protection, the Secretary of State and the Revisor of Statutes.

(4) The methods of sampling and analysis of soil or plant additives shall be any of the following:

(a) Methods adopted by the Association of American Plant Food Control Officials and published in the Inspectors Manual of the American Plant Food Control Officials, Fourth Edition, 1984.

(b) Methods adopted by the Association of Official Analytical Chemists and contained in the 1984 Official Methods of Analysis or in the Association of Official Analytical Chemists Journals, Volumes 67 and 68.

(c) Methods specified by the secretary of the department of agriculture, trade and consumer protection.

History: Cr. Register, August, 1971, No. 188, eff. 9-1-71; am. Register, September, 1985, No. 357, eff. 10-1-85; am. (1) to (3), cr. (4), Register, February, 1988, No. 386, eff. 3-1-88. Register, February, 1988, No. 386

Ag 17.03 Labeling. (1) PESTICIDE-FERTILIZER COMBINATIONS. Pesticide-fertilizer combinations shall be labeled in accordance with both the state pesticide and fertilizer law. Labels shall include the identity of all pesticide active ingredients and concentrations, directions for use on agricultural crops or as nonagricultural fertilizers and any warning statements related to use, re-entry into treated areas by unprotected persons or use of the treated commodity.

(1e) SOIL OR PLANT ADDITIVE-FERTILIZER COMBINATIONS. Soil or plant additive-fertilizer combinations shall be labeled in accordance with both the state soil and plant additive and the fertilizer laws.

(1h) SOIL OR PLANT ADDITIVE-PESTICIDE COMBINATIONS. Soil or plant additive-pesticide combinations shall be labeled in accordance with both the state soil and plant additive and the pesticide laws.

(1m) MICRONUTRIENT PRE-MIXES. Micronutrient pre-mixes that are exempt from the minimum guarantees for pre-mixes under s. Ag 17.035 shall be prominently labeled as follows: "This product is intended for use in mixing or blending with other fertilizer materials, to produce fertilizers whose total primary nutrient guarantees equal or exceed 24%."

(1s) FOLIAR FERTILIZERS. Any product labeled or advertised for foliar fertilization of agricultural crops shall be prominently labeled either with directions for agricultural uses, showing only the rates and conditions for use that have been scientifically documented as benefiting crops, or with the following statement: "Foliar fertilization is intended as a supplement to a regular fertilization program and will not, by itself provide all the nutrients normally required by agricultural crops."

(2) TOBACCO FERTILIZERS. No person shall advertise, offer for sale, or sell any fertilizer for use as tobacco fertilizer unless its label bears a statement of maximum chlorine content.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71; am. (1), cr. (1e) to (1s), Register, February, 1988, No. 386, eff. 3-1-88.

Ag 17.035 Exempting micronutrient pre-mixes. A micronutrient pre-mix is exempt from the 24% minimum guarantee for primary nutrients under s. 94.64 (3m) (a), Stats., and may be distributed as a mixed fertilizer if all of the following conditions are met:

(1) The product is labeled with directions for use with other fertilizer materials to meet the 24% minimum guarantee for primary nutrients.

(2) The product is labeled in accordance with ss. Ag 17.03 (1m) and 17.04 and with s. 94.64 (2), Stats., and the product's label has been submitted to and approved by the department.

(3) The product is distributed only to fertilizer manufacturers or distributors licensed under s. 94.64 (3), Stats., for use in further manufacturing of fertilizers.

History: Cr. Register, February, 1988, No. 386, eff. 3-1-88.

Ag 17.04 Guarantees; secondary nutrients and micronutrients; active and inert ingredients. (1) No fertilizer claims or guarantees for secondary nutrients or micronutrients may be made in any form or manner except for nutrients guaranteed to be present in the following minimum percentages:

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

(2) Secondary nutrient and micronutrient guarantees shall appear using the elemental form and the format listed in sub. (1) and shall immediately follow guarantees for primary nutrients.

(3) Sources of the guaranteed nutrients and active or inert ingredients, proof of availability or efficacy, and proposed labels and directions for use of fertilizer or soil or plant additives shall be furnished to the department on request.

(4) Warning or caution statements shall be included on the label for any product which contains 0.06 % or more of boron in a water-soluble form or 0.001% or more of molybdenum. The statement shall carry the word "WARNING" in a conspicuous manner and shall include a statement of the crops for which the fertilizer may be used and that use on crops other than those for which the fertilizer is recommended may result in serious damage or injury to the crop.

(5) Soil or plant additives containing active or inert ingredients shall be labeled as follows:

(a) The genus of each microbiological product shall be stated. If identifiable and the product's benefits are unique to the species, a microbiological product's species shall also be stated.

(b) Each inert ingredient shall be stated.

(c) Except for microbiological products, each active or inert ingredient's common name, if any, and chemical name, as listed in The Merck Index, Tenth Edition, 1983, published by Merck & Co., Inc., shall be stated.

Note: Copies of The Merck Index may be obtained from Merck & Co., Inc., Rahway, NJ 07065. Copies are also on file at the Madison offices of the Department of Agriculture, Trade and Consumer Protection, the Secretary of State and the Revisor of Statutes.

(6) An applicant or permit holder under s. 94.65 (3), Stats., shall furnish the methods of analysis for each guaranteed active ingredient in a soil or plant additive to the department of agriculture, trade and consumer protection on request.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71; am. (1), (2) and (3), cr. (5) and (6), Register, February, 1988, No. 386, eff. 3-1-88.

Ag 17.05 Anhydrous ammonia installations. Anhydrous ammonia shall be stored and transported in accordance with standards for the design, construction, location, installation, and operation of anhydrous ammonia systems prescribed by the department of industry, labor and human relations, ch. ILHR 43, Wis. Adm. Code.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71.

Ag 17.06 Computation of tonnages. In determining tonnages for payment of the inspection, research and groundwater fees, the tonnages of all Register, February, 1988, No. 386

fillers or carriers added to dry fertilizers or soil or plant additives and of water added to liquid fertilizer or soil or plant additives shall be included.

(2) Soil or plant additive permit holders and fertilizer licensees distributing soil or plant additive-fertilizer combinations shall report the combination tonnage for fertilizer and for soil or plant additives, as required by both ss. 94.64 (5) and 94.65 (6), Stats., and shall pay inspection, research and groundwater fees as required by both ss. 94.64 (4) and 94.65 (6), Stats., on the tonnage distributed.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71; renum. to be (1) and am., cr. (2), Register, February, 1988, No. 386, eff. 3-1-88.

Ag 17.07 Investigational and enforcement tolerances. (1) A fertilizer is mislabeled and unlawful for sale or distribution if on analysis it is found to be deficient in plant nutrients guaranteed to be present in excess of tolerances prescribed herein.

(2) A fertilizer does not meet allowable tolerances for deficiencies in primary nutrients if it is found to be more than:

(a) Ten percent or 2 units below label guarantees in any one of the 3 primary nutrients guaranteed to be present, whichever is less; or

(b) Three percent below the combined nutrient index value of the fertilizer.

Note: Sample calculations are set forth in the appendix to these rules.

(3) (a) Secondary nutrients and micronutrients are deficient if any element is below label guarantee in amounts exceeding values in the following schedule:

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

(b) The maximum tolerance under par. (a) shall be one per cent (1 unit).

(4) A fertilizer is mislabeled if its label guarantee is not reasonably representative of the product or if, when used according to its guaranteed nutrient concentrations, it could be injurious to plants, humans or animals.

(5) Fertilizer material in custom mixed fertilizer not labeled for grade shall first be calculated to grade before applying the investigational and enforcement tolerances.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71; am. (2), renum. (3) and (4) to be (3) (a) and (b) and am., cr. (4), Register, February, 1988, No. 386, eff. 3-1-88.

Note: A model rule of the Association of American Plant Food Control Officials, found in its Official Publication No. 40, 1987, offers the following examples of warning and caution statements for fertilizers containing boron in a water-soluble form:

"1. Directions: Apply this fertilizer at a maximum rate of 350 pounds per acre for alfalfa or red clover seed production. CAUTION: Do not use on other crops. The boron may cause injury to them."

"2. CAUTION: Apply this fertilizer at a maximum rate of 700 pounds per acre for alfalfa or red clover seed production. Do not use on other crops; the boron may cause serious injury to them."

"3. WARNING: This fertilizer carries added borax and is intended for use only on alfalfa. Its use on any other crops or under conditions other than those recommended may result in serious injury to the crops."

The Association offers the following example of a caution statement for fertilizers containing molybdenum:

"CAUTION: This fertilizer is to be used only on soil which responds to molybdenum. Crops high in molybdenum are toxic to grazing animals (ruminants)."

Ag 17.08 Nonagricultural fertilizer labels. (1) Nonagricultural fertilizer products shall be conspicuously labeled to show the following information:

- (a) Net weight
- (b) Brand name
- (c) Grade
- (d) Guaranteed analysis:

- 1. Total nitrogen (N) %
- a. _____ % Ammoniacal nitrogen
- b. _____ % Nitrate nitrogen
- c. _____ % Water insoluble nitrogen
- 2. Available phosphoric acid (P₂O₅)..... %
- 3. Soluble potash (K₂O)..... %
- 4. Additional plant nutrients, if claimed, in the order and not less than minimum percentage as shown in s. Ag 17.04 (1).

(e) Name and address of licensee

(2) Percentage of ammoniacal, nitrate, and water insoluble nitrogen shall be stated only if claimed to be present or the statement "organic" or "slow acting nitrogen" is used on the label.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71; am. (1) (intro.), Register, February, 1988, No. 386, eff. 3-1-88.

Ag 17.09 Fertilizer index factors. (1) The index factor shall be based on a determination of per unit wholesale value of nitrogen, available phosphoric acid, and soluble potash used in fertilizers sold in this state Register, February, 1988, No. 386

rounded out to be the nearest whole dollar. Index factors so established shall be used in determining whether the fertilizer is in compliance with tolerances prescribed by these rules.

(2) In arriving at average wholesale values, the per unit prices of major wholesale suppliers selling fertilizer in Wisconsin shall be used. The department shall review wholesale prices periodically to determine the need for any adjustment in the index factor. If changes are required, they shall be made by amendment to these rules.

(3) Index factors are:

Nitrogen (N): 2.

Available phosphoric acid (P_2O_5) or phosphorus (P): 2.

Potash (K_2O) or potassium (K): 1.

History: Cr. Register, March, 1971, No. 183, eff. 4-1-71.

Ag 17.10 Products exempt from soil or plant additive requirements. (1) Composted or dried manures, mulches intended as a soil cover, potting soils, peat moss, sand, tree bark, wood shavings, vermiculite and mixes of these products are exempt from the soil or plant additive license and permit requirements. If these ingredients are prominently stated on the label and no claims of benefits deriving from use of the product are made other than loosening the soil.

(2) Any soil or plant additive used for treatment of seed shall comply with this chapter and s. 94.65, Stats. Each permit holder under s. 94.65 (3), Stats., shall pay inspection, research and groundwater fees, regardless of whether the treated seed is distributed in Wisconsin.

(3) Seed that is treated or coated with a soil or plant additive is exempt from soil or plant additive license and permit requirements.

(4) Adjuvants designed, labeled and promoted for improving the mixing, handling or application of fertilizers or pesticides are exempt from soil or plant additive license and permit requirements, if no statements of benefit are made beyond a precautionary label statement that the adjuvant may increase the fertilizer or pesticidal activity of products applied with it.

History: Cr. Register, February, 1988, No. 386, eff. 3-1-88.

APPENDIX

SAMPLE CALCULATIONS OF MAXIMUM ALLOWABLE
TOLERANCES BELOW LABEL'S GUARANTEE FOR
INDIVIDUAL PRIMARY NUTRIENTS

Section Ag 17.07 (2) (a)

Nutrient	Units Guaranteed	Allowable Tolerance*
N	5	0.5 unit
P	10	1 unit
K	30	2 units

*A tolerance of 10% of the units guaranteed, not to exceed 2 units, is allowable.

SAMPLE CALCULATION OF MAXIMUM ALLOWABLE
TOLERANCE BELOW LABEL'S GUARANTEE BASED ON
COMBINED NUTRIENT INDEX VALUE

Section Ag 17.07 (2) (b)

Nutrient	Units Guaranteed	Index Factor	Nutrient Index Value
N	5	×	2 = 10
P	10	×	2 = 20
K	30	×	1 = 30

Combined nutrient index value = 60
 Allowable tolerance* = 60 × .03 = 1.8

*Allowable tolerance is 3% of combined nutrient index value