

CHAPTER 43  
FERTILIZERS AND AGRICULTURAL LIME

[Appeared as Ch 9A, 1973 IDR]  
[Prior to 7/27/88, see Agriculture Department 30—Ch 8]

Chapter exempt from chapter rescission pursuant to Iowa Code section 17A.7

**21—43.1(200) Additional plant food elements besides N, P and K.** Additional plant nutrients, besides nitrogen, phosphorus and potassium, 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 shall be shown on the application for registration. The minimum percentages which will be accepted for registration except for those fertilizers designed to be applied and ordinarily applied directly to growing plant foliage to stimulate further growth are as follows:

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

Guarantees or claims for the above-listed additional plant nutrients are the only ones which will be accepted. Proposed labels and directions for 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, nitrogen, phosphorus and potassium. Warning or caution statements are required on the label for any product which contains 0.03 percent or more of boron in a water-soluble form or 0.001 percent or more of molybdenum.

**21—43.2(200) Warning required.** When any product which contains 0.03 percent or more of boron in a water-soluble form or 0.001 percent or more of molybdenum is incorporated in a commercial fertilizer a special warning tag or statement must be furnished to the purchaser. This tag or statement shall carry the word “WARNING” in letters at least one inch in height; it shall state the crops for which the fertilizer is to be used and it shall state that use of the fertilizer on any other than those recommended may result in serious injury to the crops. The tag or statement is to be attached to or printed on the bag or other container in which the fertilizer is sold; for bulk fertilizers the statement must be placed on the invoice or other document which shall accompany delivery and be supplied to the purchaser at the time of delivery as provided in Iowa Code section 200.6(2).

**21—43.3(200) Specialty fertilizer labels.** Specialty fertilizer products shall be labeled to show the following information, if not appearing on the face or display side in a readable and conspicuous form, shall occupy at least the upper third of a side of the container.

- Net Weight
- Brand Name
- Grade
- Guaranteed Analysis:
- Total Nitrogen (N) \_\_\_\_\_ %

\_\_\_\_\_ % Ammoniacal Nitrogen<sup>1</sup>  
 \_\_\_\_\_ % Nitrate Nitrogen<sup>1</sup>  
 \_\_\_\_\_ % Water Insoluble Nitrogen\*  
 Available Phosphorus (P) or P<sub>2</sub>O<sub>5</sub> or both \_\_\_\_\_ %  
 Soluble Potassium (K) or K<sub>2</sub>O or both \_\_\_\_\_ %

Additional Plant Nutrients, if claimed, and in the order and not less than the minimum percentage as shown in 21—43.1(200).

<sup>1</sup>Potential Acidity or Basicity \_\_\_\_\_ % or \_\_\_\_\_ lbs.

Calcium Carbonate Equivalent per ton.

Name and Address of Registrant

NOTES:

\* If claimed or the statement “organic” or “slow acting nitrogen” is used on the label.

\*\* If claimed or required.

**21—43.4(200) Pesticides in fertilizers.** When an insecticide, herbicide or any other additive for pest control is added to fertilizer the product must be registered and guaranteed with respect to the kind and percentage of each of these additives as well as with respect to plant food elements. In a prominent manner the label on the package shall state the crops for which the fertilizer is to be used and shall state that the use of the fertilizer on any other crops or under conditions other than those recommended may result in serious injury to crops.

This rule is intended to implement Iowa Code sections 200.7 and 200.11.

**21—43.5(200) Cancellation or suspension of registration or license.** If official sampling and analysis of any registered commercial fertilizer or soil conditioner indicates that the product does not meet the guarantees or claims made for it, or that the products do not meet the minimum plant nutrient values established by rule 21—43.1(200), the secretary may notify the person guaranteeing the product that the quality of the fertilizer or soil conditioner must be improved prior to any further sale, distribution or offer for sale of such products in Iowa and the secretary may request that monetary reimbursement be made to purchaser to rectify the deficiency of the product reported by laboratory analysis and the monetary reimbursement be reported to the department. Reimbursement must be made within 30 days of the reported deficiency. In addition, if it appears to the secretary that the composition of the article does not warrant the claims made for it, or if the article, its labeling or other material required by Iowa Code section 200.5(6) to be submitted to the secretary, do not comply with the requirements of the Iowa fertilizer law, the secretary may revoke, suspend or refuse to register any commercial fertilizer or soil conditioner; or refuse to issue or revoke or suspend any license issued under Iowa Code chapter 200.

This rule is intended to implement Iowa Code sections 200.5 and 200.14.

**21—43.6(200) Standard for the storage and handling of anhydrous ammonia.** The Compressed Gas Association’s (CGA’s) American National Standard Safety Requirements for the Storage and Handling of Anhydrous Ammonia (6th edition), commonly referred to as ANSI/CGA G-2.1 2014, is adopted by this reference as the official requirement for the storage and handling of anhydrous ammonia, with the following exceptions:

1. Strike subrule 3.1 in its entirety and insert in lieu thereof the following:
  - 3.1 Any person required to handle, transfer, transport, or otherwise work with ammonia shall be trained once each calendar year prior to handling to understand the properties of ammonia, to become competent in safe operating practices, and to take appropriate actions in the event of a leak or an emergency.
2. Insert a new subrule 5.1.3 to read as follows:
  - 5.1.3 Equipment and components must be installed, operated, and maintained in accordance with the manufacturer’s recommendations or best engineering practices.
3. The following subrule 5.3.4 as set out in CGA G-2.1 2014, page 16, is included:

5.3.4 In the absence of a specific determination by local jurisdictions, separation distances for new, additional or relocated ammonia stationary storage containers and placements of containers covered by Sections 9, 10, 11 and 12 after January 1, 2002, shall be in accordance with Table 5:

Minimum Separation Distances for Location of Ammonia Storage Containers

Nominal Capacity of Container <sup>3</sup> (Gallons or Cubic Meters)	Minimum Distances (in feet or meters) from Each Container to:			
	Mainline of Railroad <sup>4</sup>	Highway <sup>5</sup> or Line of Adjoining Property which can be built upon	Place of Public Assembly <sup>6</sup> or Residential Occupancy <sup>7</sup>	Institutional Occupancy <sup>8</sup>
Over 500 to 2,000 gals <sup>9</sup> )	100 ft	25 ft	150 ft	250 ft
Over 2,000 to 30,000 gals	100 ft	50 ft	300 ft	500 ft
Over 30,000 to 100,000 gals	100 ft	50 ft	450 ft	750 ft
Over 100,000 gals	100 ft	50 ft	600 ft	1000 ft
Over 2 to 8 m <sup>3</sup>	30 m	8 m	45 m	75 m
Over 8 to 110 m <sup>3</sup>	30 m	15 m	90 m	150 m
Over 110 to 400 m <sup>3</sup>	30 m	15 m	140 m	230 m
Over 400 m <sup>3</sup>	30 m	15 m	180 m	300 m

- 1) Separation distances referred to are approximate and based on experience with minor releases.
- 2) For additional distances, see 5.3.2, 5.3.3, 5.3.4, 5.3.5, 5.3.6 and 6.4.6.
- 3) The nominal capacity of multiple containers shall be aggregated, but only if containers are interconnected and safeguards do not exist to prevent a leak from one container from emptying interconnected containers.
- 4) Class II track or better. See 49 CFR 213.9 [8].
- 5) A highway is defined as a public way for purposes of vehicular travel, including the entire area within the right of way. See American Association of State Highway and Transportation Officials (AASHTO) Transportation Glossary (1983) [37].
- 6) Public assembly occupancy is a premise or that portion of a premise where large numbers of people congregate and from which occupants cannot quickly vacate the space. Public assembly occupancies include, among others, auditoriums, ballrooms, classrooms, passenger depots, restaurants, and theatres. See ANSI/ASHRAE 15 [1].
- 7) Residential occupancy is a premise or that portion of a premise that provides the occupants with complete independent living facilities including permanent provisions for living, sleeping, eating, cooking, and sanitation. Residential occupancies include, among others, dormitories, hotels, multiunit apartments, and private residences. See ANSI/ASHRAE 15 [1].
- 8) Institutional occupancy is a premise or that portion of a premise from which, because they are disabled, debilitated, or confined, occupants cannot readily leave without the assistance of others. Institutional occupancies include, among others, hospitals, nursing homes, asylums, and spaces containing locked cells. See ANSI/ASHRAE 15 [1].
- 9) For 500 gallons (2m<sup>3</sup>) or less, see 5.3.1 and 5.3.3.

4. Strike subrule 5.3.6 in its entirety and insert in lieu thereof the following:

5.3.6 Areas within 10 feet (3 meters) of a storage container shall be maintained clear of dry grass and weeds and other combustible materials. Areas shall be kept clear of debris or any item that would interfere with emergency actions or evacuation as well as materials or objects not necessary for the operation of the storage system and components.

5. Strike subrule 5.6.6 in its entirety and insert in lieu thereof the following:

5.6.6 Adequate provisions shall be made to protect the storage system and components, including all exposed piping, from physical damage which could result from impact by moving machinery, automobiles or trucks, or any other equipment at the facility. See also 6.7.1.

6. Insert a new subrule 5.10.8.2 to read as follows:

5.10.8.2 For transfer of liquids from a container utilizing a remote transfer point, each liquid filling connection shall have a positive shut-off valve in conjunction with either an internal back-pressure check valve or an internal excess flow valve. Vapor connections shall have a positive shut-off valve between the supply source and the intake side of the pump. The liquid line supplying this transfer from the pump shall have an emergency shut-off valve between the supply source and the intake side of the pump. The emergency shut-off valve shall remain closed when the plant is not in use.

NOTE: The internal back-pressure check valves or internal excess flow valves shall be installed in the facility piping prior to the positive shut-off valves. These valves shall be installed so that any break will occur on the side of the transfer hose. Protection from pull away while connected is the same as described in 5.10.8.1.

7. Add the following subrule 5.10.10:

5.10.10 Anhydrous ammonia shall be vented into an adequate supply of water. For this purpose, an adequate supply of water means ten gallons of water for each gallon of liquid ammonia or fraction thereof which is contained in the hose or vessel to be vented. The ammonia should be injected into the water as near the bottom of a vented water containing vessel as practical. If a hose is used to inject ammonia into water, the hose should be weighted or secured so that the end of the hose will remain near the bottom of the vessel. An approved sparging device is recommended. Any aqueous ammonia solution resulting from the venting process shall be disposed of safely and properly.

NOTE: Ammonia vapor may be flared off when appropriate equipment is used to not allow ammonia vapor to escape unchecked into the atmosphere. This section does not apply to venting of a coupling between transfer hose and nurse tank or applicator or venting of vapor through 85 percent bleeder valve when loading a nurse tank or applicator.

8. Add the following subrule 5.10.10.1:

5.10.10.1 Anhydrous ammonia shall not be vented into the air. Each transport truck unloading point at an anhydrous ammonia storage facility shall have a valve for venting purposes installed in the piping at or near the point where the piping and hose from the transport truck are connected. Anhydrous ammonia from any transport truck hose shall be vented into an adequate supply of water. For this purpose, an adequate supply of water means ten gallons of water for each gallon of liquid ammonia or fraction thereof which could be contained in the hose. The ammonia should be injected into the water as near the bottom of a vented water containing vessel as practical. If a hose is used to inject ammonia into water, the hose should be weighted or secured so that the end of the hose will remain near the bottom of the vessel. An approved sparging device is recommended. Any aqueous solution resulting from the venting process shall be disposed of safely and properly.

9. Add the following subrule 5.10.11:

5.10.11 All anhydrous ammonia storage locations shall have a permanent working platform installed at each nurse tank or applicator loading location. The working platform shall be designed to allow for connecting and disconnecting of transfer hoses without standing on equipment being loaded.

NOTE: This section does not apply to nurse tanks or applicators with a working surface designed for loading purposes.

10. Add the following subrule 6.3.1.1:

6.3.1.1 Containers designed with internal pressure relief systems are exempt from this requirement.

11. Strike subrule 9.7.3 in its entirety and insert in lieu thereof the following:

9.7.3 A cargo tank of 3,500 gallons or less water capacity may be unloaded into permanent storage locations meeting the requirements of 3.4.1 and 5.10.8 through 5.10.8.2 or into implements of husbandry meeting the requirements of Section 11. A cargo tank of greater than 3,500 gallons water capacity but not greater than 5,000 gallons water capacity may be unloaded at permanent storage locations meeting the requirements of 3.4 and 5.10.8 through 5.10.8.2 or into a portable application equipment container which is capable of holding the entire load. A cargo tank of greater than 5,000 gallons water capacity may only be unloaded into a permanent storage location meeting the requirements of 3.4 and 5.10.8 through 5.10.8.2 and capable of holding the entire load.

12. Strike subrule 11.3.5 in its entirety and insert in lieu thereof the following:

11.3.5 All vapor and liquid connections, except pressure relief valves and those specifically exempt in 5.5.5 and 5.5.6, shall be equipped with approved excess flow valves or may be fitted with quick-closing internal valves, which shall remain closed except during operating periods.

1. All vapor and liquid connections shall be closed except during operation periods.

2. Shared piping where multiple containers are plumbed together shall be equipped with additional excess flow valves or back-pressure check valves or both to meet the requirements of 5.10.8.

3. Mechanical remote shut-off valves may be added or substituted for excess flow valves in the piping after the vapor and liquid connections as a means of controlling the flow.

13. Strike subrule 11.6.1 in its entirety and insert in lieu thereof the following:

11.6.1 Each person operating, repairing appurtenances of, or inspecting a nurse tank shall comply with the following requirements:

1. Any person required to handle, transfer, transport, or otherwise work with ammonia shall be trained once each calendar year prior to handling to understand the properties of ammonia, to become competent in safe operating practices, and to take appropriate actions in the event of a leak or an emergency; and

2. Any person making, breaking or testing any ammonia connection, transferring ammonia or performing maintenance or repair on an ammonia system under pressure shall wear chemical splash goggles and protective gloves impervious to ammonia. A full face shield may be worn over the goggles. However, a face shield shall not be worn as a substitute for a primary eye protection device (goggles).

14. Strike subrule 11.6.2 in its entirety and insert in lieu thereof the following:

11.6.2 Each nurse tank shall be equipped with the following safety equipment and features:

1. Each container shall have for first-aid purposes at least 5 gallons (20 liters) of clean water in a container designed to provide ready access to the water for flushing any area of the body contacted by ammonia; and

2. A legible decal listing first-aid procedures to follow for injuries caused by ammonia.

15. Strike subrule 12.3.3 in its entirety and insert in lieu thereof the following:

12.3.3 An excess flow valve is not required in the vapor connections, provided that the controlling orifice is not in excess of 0.4375 inches (11.1 mm) in diameter and the valve is a hand-operated (attached hand wheel or equivalent) shut-off valve. Bleed off of vapors may be done into water meeting requirements of 5.10.10 if vapor connections cannot be made to the supplying vessel when filling applicator tanks. Vapors may be vented into the ground in the field of application under proper field conditions.

16. Strike subrule 12.4.1 in its entirety and insert in lieu thereof the following:

12.4.1 Each person operating, repairing appurtenances of, or inspecting an applicator tank shall comply with the following requirements:

1. Any person required to handle, transfer, transport, or otherwise work with ammonia shall be trained once each calendar year prior to handling to understand the properties of ammonia, to become competent in safe operating practices, and to take appropriate actions in the event of a leak or an emergency; and

2. Any person making, breaking or testing any ammonia connection, transferring ammonia or performing maintenance or repair on an ammonia system under pressure shall wear chemical splash goggles and protective gloves impervious to ammonia. A full face shield may be worn over the goggles. However, a face shield shall not be worn as a substitute for a primary eye protection device (goggles).

This rule is intended to implement Iowa Code section 200.14.

[ARC 2059C, IAB 7/22/15, effective 1/1/16; see Delay note at end of chapter]

## **21—43.7(200) Groundwater protection fee.**

**43.7(1)** There shall be paid by the licensee, as licensed under Iowa Code section 200.4, to the secretary for all commercial fertilizers and soil conditioners sold or distributed in this state, a groundwater protection fee of 75 cents per ton based on an 82 percent nitrogen solution. Other product formulations containing nitrogen shall pay a fee based on the percentage of actual nitrogen contained in the formulation with 82 percent nitrogen solution serving as the base. Product formulations containing less than 2 percent nitrogen shall be exempt from the payment of a groundwater protection fee. Payment of the groundwater protection fee by any licensee exempts all other persons, firms or corporations from the payment.

**43.7(2)** Every licensee and any person required to pay a groundwater protection fee under this chapter shall:

*a.* File not later than the last day of January and July of each year, on forms furnished by the secretary, a semiannual statement setting forth the number of net tons of commercial fertilizer or soil conditioners containing nitrogen which were distributed in this state during the preceding six-month period; and upon filing the statement shall pay the groundwater protection fee at the rate stated in subsection 1 of this rule, except that manufacturers of individual packages of fertilizer containing 25 pounds or less shall file not later than the last day of July of each year, on forms furnished by the secretary, an annual statement setting forth the number of net tons of fertilizer containing nitrogen distributed in this state in packages of 25 pounds or less during the preceding 12-month period; and upon filing the statement shall pay the groundwater protection fee at the rate stated in subrule 43.7(1).

*b.* Reserved.

**43.7(3)** All licensees who distributed specialty fertilizer, as defined in Iowa Code section 200.3, paragraph 5, or apply specialty fertilizer for compensation, shall file not later than the last day of July of each year, on forms furnished by the secretary, an annual statement setting forth the number of tons of fertilizer containing nitrogen distributed in this state and listing the manufacturer from which the product was purchased but no groundwater protection fee shall be due.

This rule is intended to implement Iowa Code section 200.9.

**21—43.8 to 43.19** Reserved.

**21—43.20(201) Agricultural lime.**

**43.20(1)** *Notification of production.* The manufacturer or producer of agricultural lime, limestone or aglime shall notify the secretary seven calendar days prior to the manufacture or production of agricultural lime, limestone, or aglime so that samples may be taken.

**43.20(2)** *Sample fee.* The manufacturer or producer of agricultural lime, limestone, or aglime shall pay a fee of no more than \$60 per sample collected. This fee may be adjusted by the secretary of agriculture by a separate notice letter to each manufacturer or producer to reflect as accurately as possible the actual cost of sampling and testing expended by the Iowa department of agriculture and land stewardship for each sample taken at the manufacturer's or producer's facilities.

This rule is intended to implement Iowa Code sections 201A.6 and 201A.11.

[ARC 4138C, IAB 11/21/18, effective 1/1/19]

**21—43.21(200) Minimum requirements for registration of fertilizer and soil conditioners.**

**43.21(1)** Fertilizer and soil conditioners submitted for registration may be required to be tested for a minimum of two growing seasons in at least three Iowa crop reporting districts in accordance with standards for efficacy testing. The results of testing shall be reviewed by the secretary's pesticide and fertilizer advisory committee. The testing requirement may be waived if research has been conducted with crops and under conditions relevant to the state of Iowa. The secretary's pesticide and fertilizer advisory committee may require the applicant for registration to submit an economic or environmental impact statement.

**43.21(2)** Applications for registration shall include methods of laboratory analysis of products used for achieving results consistent with the label guarantee.

This rule is intended to implement Iowa Code sections 200.5 and 200.14.

**21—43.22(200) Provisional product registration.** A provisional product registration may be granted during the time required to complete efficacy testing to achieve product registration. Prior to the growing seasons or granting of a provisional product registration, the registrant must submit a plan for efficacy testing to the department for approval by the first day of February. A fee of \$100 shall be collected for each provisional product registration. Annual reviews of provisional product registrations shall determine if satisfactory progress is being made toward achieving product registration. A provisional product registration may be canceled if it appears that conditions under which provisional product registration was granted have not been completed.

The registrant does not have the right to sell, distribute or promote any fertilizer or soil conditioner within the state of Iowa under a provisional product registration.

This rule is intended to implement Iowa Code sections 200.5 and 200.14.

**21—43.23(200) Review of product registrations.** Fertilizer and soil conditioner registrations may be reviewed to determine that the product meets claims for which registration was granted. If credible cause can be demonstrated that product claims have not been substantiated, registration may be canceled and a provisional registration may be issued until minimum requirements for registrations of fertilizers and soil conditioners again have been satisfied.

**21—43.24(200) Product claims.** Product claims may be substantiated by one of two methods: (1) efficacy testing; or (2) substantiation of data relevant to Iowa crops and soils. Efficacy testing and substantiation shall be completed when requested by the department to support claims made for fertilizer and soil conditioner that is sold, distributed or offered for sale in Iowa. Documentation substantiating product claims by efficacy testing shall contain the following information:

1. All guaranteed ingredients must be identified and indicated by percentage.
2. State the crop or soil response being measured.
3. The research facility and investigators conducting the trials.
4. Dates and locations of trials.
5. The trials must be conducted, utilizing the principles of experimental design and methods consistent with those in agricultural research. This involves raw data from proper treatment selection, replication and randomization in such a manner that statistical analysis of data is possible.
6. Exclude consumer testimonials.

This rule is intended to implement Iowa Code sections 200.5 and 200.14.

**21—43.25 to 43.29** Reserved.

**21—43.30(201A) Definitions.** When used in this chapter:

*“Agricultural liming material”* means a product containing calcium and magnesium compounds capable of neutralizing soil acidity.

*“Brand”* means the term, designation, trade name, product name, or other specific designation under which individual agricultural liming material is offered for sale.

*“Bulk”* means in nonpackaged form.

*“Calcium carbonate equivalent”* means the acid-neutralizing capacity of an agricultural liming material expressed as percentage of pure calcium carbonate.

*“Effective calcium carbonate equivalent (ECCE)”* means the acid-neutralizing capacity of an agricultural liming material or specialty limestone.

*“Fineness”* means the percentage by weight of the material which will pass U.S. standard sieves of specified sizes.

*“Industrial by-product”* means agricultural liming material containing calcium or a combination of calcium with magnesium and capable of neutralizing soil acidity which is derived from any industrial waste or by-product.

*“Label”* means any written or printed material on or attached to the package or on the delivery ticket which accompanies bulk shipments.

*“Limestone”* means a material consisting essentially of calcium carbonate or a combination of calcium carbonate with magnesium carbonate capable of neutralizing soil acidity.

*“Pelletized lime”* means agricultural liming material containing calcium or a combination of calcium with magnesium and capable of neutralizing soil acidity which has been processed into pellet or granular form, with or without binding agents.

*“Percent”* or *“Percentage”* means by weight.

*“Permanent production facilities”* means stationary crushing and screening equipment which is immobile.

*“Person”* means individual, partnership, association, firm or corporation.

*“Portable plant”* means mobile crushing and screening equipment mounted on wheels.

*“Quarry lime”* means agricultural liming material containing calcium or a combination of calcium with magnesium which has been excavated from the earth and processed by crushing and screening and capable of neutralizing soil acidity.

*“Specialty limestone”* means agricultural liming material distributed primarily for nonfarm use, such as home gardens, lawns, shrubbery, flowers, golf courses, municipal parks, cemeteries, greenhouses and nurseries.

*“Ton”* means a net weight of 2,000 pounds avoirdupois.

*“Water treatment lime”* means agricultural liming material containing calcium or a combination of calcium with magnesium and capable of neutralizing soil acidity which is derived from water treatment plants.

*“Weight”* means the weight of undried agricultural liming material or specialty limestone offered for sale.

**21—43.31(201A) Determination of ECCE.** Agricultural liming material or specialty limestone offered for sale, sold or otherwise distributed in this state shall be analyzed on the basis of the number of pounds of effective calcium carbonate equivalent per ton, using the method set forth in this rule.

**43.31(1)** A fineness factor shall be determined as follows:

- a. Multiply the percent of the total material passing the number 4 sieve by one-tenth.
- b. Multiply the percent of the total material passing the number 8 sieve by three-tenths.
- c. Multiply the percent of the total material passing the number 60 sieve by six-tenths. Add the results obtained from paragraph “a,” “b” and “c” of this subrule to obtain the fineness factor.

**43.31(2)** Multiply the fineness factor obtained by using the method in subrule 43.31(1) by the percent of calcium carbonate equivalent in the material to obtain the percent of ECCE.

**43.31(3)** The percent of ECCE obtained in subrule 43.31(2) shall be reduced by the percent of moisture contained in the sample.

**43.31(4)** Multiply 2,000 pounds by the percent ECCE obtained in subrule 43.31(3) to determine the number of pounds of ECCE per ton of agricultural liming material or specialty limestone.

**21—43.32(201A) Sample procedure.**

**43.32(1)** Samples of agricultural liming material for analyzing the number of pounds of ECCE shall be obtained by taking samples from the manufacturer’s production belt or stockpile. A minimum of one sample and up to five samples shall be taken at locations where there are permanent production facilities each year that agricultural liming material is being produced. Samples shall be taken at locations where there are no permanent production facilities once during the time that a portable plant is at the location producing agricultural liming material. Subsequent samples will be taken either during the period that the portable plant is at the location or from the stockpile created, until a total of three to five representative samples from the pile have been accumulated and submitted for analysis. The manufacturer or producer of agricultural liming material shall notify the secretary of agriculture or person or persons appointed by the

secretary of the production of agricultural liming material seven calendar days prior to the manufacture or production of agricultural liming material so that samples may be obtained by a person or persons appointed by the secretary in compliance with this rule.

**43.32(2)** Samples of specialty limestone for analyzing the number of pounds of ECCE shall be submitted to the secretary of agriculture by the manufacturer or producer of specialty limestone for analysis in accordance with rule 21—43.33(201A).

**43.32(3)** Samples of agricultural liming material may be obtained from manufacturers' or producers' production belts, stockpiles or in transportation and analyzed for compliance with certification requirements of rule 21—43.35(201A). Samples of specialty limestone may be obtained from packages and analyzed for compliance with certification requirements of rule 21—43.35(201A).

**43.32(4)** Samples of water treatment plant lime for analyzing the number of pounds of ECCE shall be obtained by taking samples from the water plant designated sampling point. Samples shall be taken when agricultural liming material is being taken off-site for land application. The producer of the agricultural liming material shall notify the secretary of agriculture or person(s) appointed by the secretary about the intent to land apply the liming material seven calendar days prior to the land application when agricultural liming material is stockpiled so that samples may be obtained in compliance with this rule.

[ARC 4138C, IAB 11/21/18, effective 1/1/19]

**21—43.33(201A) Sample analysis.** Samples of agricultural liming material or specialty limestone obtained as provided in rule 21—43.32(201A) shall be submitted to the Soil Testing Laboratory, Iowa State University of Science and Technology, for analysis of acid neutralization capacity expressed as calcium carbonate equivalent, percentage of material passing a 4-, 8- and 60-mesh sieve and the percentage of moisture contained in the sample. The results of the analysis of each sample shall be submitted to the secretary of agriculture.

**21—43.34(201A) Sample fee.** The manufacturer or producer of agricultural liming material or specialty limestone shall pay a fee of no more than \$60 per sample collected. This fee may be adjusted by the secretary of agriculture by a separate notice letter to each manufacturer or producer to reflect as accurately as possible the actual cost of sampling and testing expended by the Iowa department of agriculture and land stewardship for each sample collected.

[ARC 4138C, IAB 11/21/18, effective 1/1/19]

**21—43.35(201A) Certification.**

**43.35(1)** The secretary of agriculture shall, upon receipt of the analysis provided in rule 21—43.33(201A), certify the number of pounds of ECCE, using the method provided in rule 21—43.31(201A). The certification shall be forwarded to the manufacturer or producer from whom the sample was obtained by written notice and sent by United States mail.

Each certification of ECCE should be based on the average of a maximum of five analyses from five samples. Each new analysis received should be added to the previous five analyses and the oldest analysis shall be omitted. Fewer than five analyses shall be averaged on the basis of the actual number of analyses. Nothing in this rule shall preclude a manufacturer or producer from having a certification on separate stockpiles of agricultural liming material provided that each stockpile shall be separated from any other stockpile and each separate stockpile has been sampled and certified as required.

**43.35(2)** All agricultural liming material or specialty limestone offered for sale, sold or otherwise distributed shall be offered for sale, sold or distributed by the pound of ECCE. Any person who offers for sale, sells or distributes agricultural liming material or specialty limestone shall affix or cause to be affixed to every bill of lading, scale ticket, delivery receipt or other instrument of sale or package the certification of the secretary of agriculture of the number of pounds of ECCE per ton in the agricultural liming material or specialty limestone.

The certification shall be in the following form: Iowa Secretary of Agriculture Certified \_\_\_\_\_ pounds ECCE per ton. The pounds of ECCE certified by the secretary of agriculture for the agricultural liming material or specialty limestone shall be inserted in the space provided.

**43.35(3)** Agricultural liming material which has been further processed, subsequent to certification, as provided in rule 21—43.31(201A), including but not limited to decreasing or increasing moisture content, shall have the certification adjusted accordingly. Within 48 hours from the time of delivery, the adjusted certification shall be provided to the ultimate consumer of the agricultural liming material in writing together with the certification as provided in subrule 43.35(2) and shall accurately reflect the ECCE of the agricultural liming material.

**43.35(4)** All agricultural liming material and specialty limestone certifications shall expire on January 1, three years after being issued, provided no samples have been obtained and analyzed.

[ARC 4138C, IAB 11/21/18, effective 1/1/19]

**21—43.36(201A) Compliance with certification.** If official sampling and analysis of agricultural liming material or specialty limestone in accordance with subrule 43.32(3) and rule 21—43.33(201A) indicates that the agricultural liming material or specialty limestone does not meet a minimum of 90 percent of the certification as provided in rule 21—43.35(201A), the secretary shall notify the manufacturer or producer of the agricultural liming material or specialty limestone that the certification must be corrected prior to any further sale, distribution or offer for sale of the agricultural liming material or specialty limestone in Iowa. The secretary may request that monetary reimbursement be made to the purchaser to rectify the deficiency of the agricultural liming material or specialty limestone and that the monetary reimbursement be reported to the department. Reimbursement must be made within 30 days of the reported deficiency.

**21—43.37(201A) Labeling.** Agricultural liming material shall not be offered for sale, sold or otherwise distributed in this state unless a label accompanies the agricultural liming material which provides the identification of the type of agricultural liming material in accordance with rule 21—43.30(201A).

**21—43.38(201A) Toxic materials prohibited.** It shall be unlawful for any manufacturer or producer of agricultural liming material or specialty limestone to sell, distribute or offer for sale any agricultural liming material or specialty limestone which contains toxic materials in quantities injurious to plant, animal, human or aquatic life or which causes soil or water contamination. The secretary may require additional laboratory analysis be conducted and results submitted to the department by the manufacturer or producer of agricultural liming material or specialty limestone to determine that the product does not contain an injurious quantity of toxic materials.

**21—43.39(201A) Added materials.** It shall be unlawful to sell, distribute or offer for sale any agricultural liming material or specialty limestone which contains other added materials unless the added materials are registered and guaranteed as provided in Iowa Code section 200.5(1), except binding materials used in the production of pelletized lime as defined in rule 21—43.30(201A).

**21—43.40(201A) Egg shells.** The following shall apply to any agricultural liming material that consists primarily of egg shells:

1. With the exception of paragraph “2,” the material shall be stored in a structure that prevents precipitation from contacting the stored material.
2. The material may be stored in a manner not meeting the requirements of paragraph “1” for a period of not more than 14 days in the field where the material will be land-applied.

These rules are intended to implement Iowa Code chapters 200, 201, and 201A.

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<sup>1</sup> January 1, 2016, effective date of ARC 2059C [43.6] delayed until the adjournment of the 2016 General Assembly by the Administrative Rules Review Committee at its meeting held August 11, 2015.