

SECTION 629 FERTILIZER AND AGRICULTURAL LIMESTONE

629.1 Description

- (1) This section describes furnishing and incorporating fertilizing material in the soil on areas of proposed seeding or proposed sodding.
- (2) This section also describes furnishing and incorporating agricultural limestone in the soil.

629.2 Materials

629.2.1 Fertilizers

629.2.1.1 General

- (1) Use fertilizers for seeding, sodding, or other planting that are standard, commercial, packaged or bulk products, in granular or liquid form conforming to Wisconsin Statutes and the Wisconsin Administrative Code Chapter ATCP 40. Ensure that each container of packaged fertilizer is plainly marked with the analysis of the contents showing minimum percentages of total nitrogen, available phosphoric acid, and soluble potash. If furnishing the fertilizer in bulk, include an invoice in each shipment indicating the minimum percentages of total nitrogen, available phosphoric acid, and soluble potash in the contents.
- (2) If using fertilizer with a total of nitrogen, phosphoric acid, and potash greater than 32 percent for type A or 50 percent for type B, apply them at a rate that provides equal nitrogen, phosphoric acid, and potash.

629.2.1.2 Type A

- (1) Type A fertilizer shall conform to the following minimum requirements:

Nitrogen, not less than.....	16%
Phosphoric Acid, not less than	6%
Potash, not less than	6%
- (2) The total of nitrogen, phosphoric acid, and potash shall equal at least 32 percent.
- (3) Total nitrogen shall at least equal the sum of the phosphoric acid and soluble potash.

629.2.1.3 Type B

- (1) Type B fertilizer shall conform to the following minimum requirements:

Nitrogen, not less than.....	16%
Phosphoric Acid, not less than	6%
Potash, not less than	24%
- (2) The total of nitrogen, phosphoric acid, and potash shall equal at least 50 percent.

629.2.2 Agricultural Limestone

- (1) Conform to chapter 94.66 of the Wisconsin Statutes and of the Wisconsin Administrative Code Chapter ATCP 44. Furnish limestone with a neutralizing index of not less than 40 or more than 109.
- (2) Before using, furnish a statement to the engineer indicating the index zone or grade of the limestone for each deposit.

629.3 Construction

629.3.1 Fertilizer

629.3.1.1 General

- (1) Uniformly apply the fertilizer selected for the seeding areas and incorporate into the soil by light discing or harrowing. If applying granular fertilizer, ensure it is well pulverized and free from lumps.
- (2) If incorporating fertilizer into topsoiled areas, the contractor may apply it just before, and in conjunction with, final discing or harrowing, or if hand manipulating the topsoil, apply it just before final raking and leveling.
- (3) If placing fertilizer on surfaces with no topsoil, prepare the soil by discing or harrowing to at least 6 inches (150 mm) deep and then incorporate the fertilizer as specified above.

- (4) If sowing seeding areas by pressure sprayer, then fertilize by placing the required amount of fertilizer in the tank, mixing with the water and the seed, agitating constantly, and apply during the seeding operation. If applying fertilizer this way then the department will not require discing and harrowing after placement.
- (5) If fertilizing areas to receive sod, spread the fertilizer uniformly over the soil before sodding at the rate specified below, and then work the fertilizer into the soil while preparing as specified for preparing the earth bed in 631.3.1.
- (6) If applying fertilizer for work specified under section 632, then apply the fertilizer as specified in that section.

629.3.1.2 Type A

- (1) Apply fertilizer containing 32 percent total of nitrogen, phosphoric acid, and potash at 7 pounds per 1000 square feet (3.5 kg/100 m²) of area, unless the contract specifies otherwise. For type A fertilizer that contains a different percentage of components, determine the new application rate by multiplying the specified rate by a dimensionless conversion factor determined as follows:

$$\text{Conversion Factor} = 32 / \text{New Percentage of Components}$$

629.3.1.3 Type B

- (1) Apply fertilizer containing 50 percent total of nitrogen, phosphoric acid, and potash at 7 pounds per 1000 square feet (3.5 kg/100 m²) of area, unless the contract specifies otherwise. For type B fertilizer that contains a different percentage of components, determine the new application rate by multiplying the specified rate by a dimensionless conversion factor determined as follows:

$$\text{Conversion Factor} = 50 / \text{New Percentage of Components}$$

629.3.2 Agricultural Limestone Treatment

- (1) Unless the contract specifies otherwise, spread agricultural limestone over the contract-designated areas at a uniform rate, measured in pounds per 100 square feet (kg/100 m²), as follows:

INDEX ZONES	40-49	50-59	60-69	70-79	80-89	90-99	100-109
RATE	140 (70)	120 (60)	100 (50)	90 (45)	80 (40)	70 (35)	60 (30)

- (2) To conveniently check the required application rate, the contractor may measure materials used on a volumetric basis, providing the conversion from weight to volume is determined from representative samples of materials used.
- (3) Incorporate the agricultural limestone with the required fertilizers into the soils in the designated areas. The pertinent construction requirements applicable to fertilizers shall apply to those materials also.

629.4 Measurement

- (1) The department will measure the Fertilizer bid items by the hundred pounds (CWT) acceptably completed, measured based on an application rate of 7 pounds per 1000 square feet (3.5 kg/100 m²). The department will not measure fertilizer used for the bid items under section 632. The measured quantity equals the number of hundred-weight (CWT) of material determined by multiplying the actual number of cwt. of material incorporated by the ratio of the actual percentage of fertilizer components used to 32 percent for type A and to 50 percent for Type B.
- (2) The department will measure Agricultural Limestone Treatment by the ton acceptably completed, measured based on an application rate of 100 pounds per 1000 square feet (50 kg/100 m²) and an index zone of 60-69. The measured quantity equals the number of tons of material determined by multiplying the actual number of tons of material incorporated by 50 and dividing by the application rate required for the index zone of the material used.

629.5 Payment

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
629.0200 - 0299	Fertilizer (type)	CWT
629.1100	Agricultural Limestone Treatment	TON

- (2) Payment for the Fertilizer bid items is full compensation for providing, hauling, placing, and incorporating in the work.

(3) Payment for Agricultural Limestone Treatment is full compensation for providing, hauling, placing and incorporating the required materials in the soil.