

Use the Fertilizer Label to Calculate Appropriate Rates and Applications



Grade (N-P-K-Mg): the percentage (%) total nitrogen (N), available phosphate expressed as P₂O₅ and soluble potassium expressed as K₂O. Sometimes, a palm fertilizer label will express magnesium (Mg) as the fourth number in the grade.

20-0-10

GUARANTEED ANALYSIS

TOTAL NITROGEN (N).....	20.00%
20.00% Urea Nitrogen*	
SOLUBLE POTASH (K ₂ O).....	10.00%
MAGNESIUM (Mg) Total.....	1.00%
1.00% Water Soluble Magnesium (Mg)	
SULFUR (S) Total.....	8.35%
6.25% Free Sulfur (S)	
2.10% Combined Sulfur (S)	
IRON (Fe) Total.....	6.00%
0.06% Water Soluble Iron (Fe)	
MANGANESE (Mn) Total.....	1.00%
0.14% Water Soluble Manganese (Mn)	
DERIVED FROM: Polymer Coated Sulfur Coated Urea, Muriate of Potash, Iron Sulfate, Manganese Sulfate, Sulfate of Potash-Magnesia	
CHLORINE (Cl) Max.....	6.00%

*14.00% Slowly Available Urea Nitrogen from Polymer Coated Sulfur Coated Urea.

Derived From: This is a statement of the actual source materials for the primary or secondary plant nutrients guaranteed. When one or more slow- or controlled-release nutrients are claimed or advertised, the guarantees for such nutrients shall be shown as a footnote (*) following the listing of source materials and are expressed as percent of the actual nutrient.

Guaranteed Analysis: the percentage of plant nutrients claimed to be present in a fertilizer.

SLOW-RELEASE NITROGEN (SRN) PERCENTAGE FORMULA

Determine the SRN percentage using the label information (example below)

EXAMPLE

***14.00%**

Nitrogen in a form which delays its availability to the plant

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20%

Total N according to the Guaranteed Analysis

=

.7 OR 70% SRN

If the SRN is 30% or more, it is considered a slow-release fertilizer product.

If the SRN is below 30%, it is considered a quick-release fertilizer product.

EXERCISE 1. Determine the slow-release nitrogen (SRN) using the following information.

Fertilizer Label Information	Determine SRN
<p>Problem 1 Grade: 24-0-11 Derived from: *6.60% Slowly Available Urea</p>	<p>_____ ÷ _____ = _____ SRN</p>
<p>Problem 2 Grade: 8-0-12 Derived from: *5.60% Slowly Available Polymer Coated Sulfur Coated Urea</p>	<p>_____ ÷ _____ = _____ SRN</p>
<p>Problem 3 Grade: 15-0-15 Derived from: *4.50% Slowly Available Urea Nitrogen from sulfur Coated Urea</p>	<p>_____ ÷ _____ = _____ SRN</p>

NITROGEN TO POUNDS OF ACTUAL FERTILIZER FORMULA

Calculate how much fertilizer to use (example below)

EXAMPLE

Fertilizer products containing **30% or more** slow-release, apply 1 (**100**) pound nitrogen per 1000 sq.ft.
 Fertilizer products containing **less than 30%** slow-release, apply 0.5 (**50**) pounds of nitrogen per 1000 sq.ft

Grade: **15**-0-15 SRN: **50%** product Area: **2,000** sq.ft.

Step 1. $\left\{ \begin{array}{l} \mathbf{100} \\ \text{Constant} \end{array} \right. \div \left\{ \begin{array}{l} \mathbf{15} \\ \text{Grade of N} \end{array} \right. = \mathbf{6.66 \text{ LBS}}_{(A)} / \mathbf{1,000 \text{ sq.ft.}}$

Step 2. $\left\{ \begin{array}{l} \mathbf{2,000 \text{ AREA}} \\ \text{Total sq.ft.} \end{array} \right. \div \mathbf{1,000} = \mathbf{2} \times \mathbf{6.66 \text{ LBS}}_{(A)} / \mathbf{1,000 \text{ sq.ft.}} = \mathbf{13.32 \text{ lbs}} \text{ OF FERTILIZER PRODUCT}$
Per total sq.ft. of area

EXERCISE 2. Determine the appropriate fertilizer rate based on pounds of nitrogen per area.

<p>Problem 1 Grade: 24-0-11 SRN: 70% Area: 4,000 sq.ft</p>	$\mathbf{100} \div \text{_____} \text{ GRADE OF N} = \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}}$ <small>(A)</small> $\text{_____} \text{ AREA} \div \mathbf{1,000} = \text{_____} \times \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}} = \text{_____} \text{ LBS OF FERTILIZER PRODUCT}$ <small>Total sq.ft. (A) Per total sq.ft. of area</small>
<p>Problem 2 Grade: 22-2-11 SRN: 85% Area: 5,500 sq.ft</p>	$\mathbf{100} \div \text{_____} \text{ GRADE OF N} = \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}}$ <small>(A)</small> $\text{_____} \text{ AREA} \div \mathbf{1,000} = \text{_____} \times \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}} = \text{_____} \text{ LBS OF FERTILIZER PRODUCT}$ <small>Total sq.ft. (A) Per total sq.ft. of area</small>
<p>Problem 3 Grade: 8-0-12 SRN: 24% Area: 3,500 sq.ft</p>	$\mathbf{50} \div \text{_____} \text{ GRADE OF N} = \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}}$ <small>(A)</small> $\text{_____} \text{ AREA} \div \mathbf{1,000} = \text{_____} \times \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}} = \text{_____} \text{ LBS OF FERTILIZER PRODUCT}$ <small>Total sq.ft. (A) Per total sq.ft. of area</small>
<p>Problem 4 Grade: 14-0-26 SRN: 14% Area: 6,000 sq.ft</p>	$\mathbf{50} \div \text{_____} \text{ GRADE OF N} = \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}}$ <small>(A)</small> $\text{_____} \text{ AREA} \div \mathbf{1,000} = \text{_____} \times \text{_____} \text{ LBS}/\mathbf{1,000 \text{ sq.ft.}} = \text{_____} \text{ LBS OF FERTILIZER PRODUCT}$ <small>Total sq.ft. (A) Per total sq.ft. of area</small>