



CMG GardenNotes #233

Calculating Fertilizer Application Rates

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Steps to Calculating Fertilizer Application Rate

Example is for a 40-foot by 100-foot lawn area, using a 20-10-0 fertilizer.

1. Calculating size of area to be fertilized

Feet long x feet wide = square feet

Example: 40 feet x 100 feet = 4000 square feet

2. Calculating fertilizer application rate

Pound nutrient per square foot
_____ = pounds fertilizer/ square feet
% nutrient in fertilizer

Example: 1 pound nutrient per 1000 square feet
_____ = 5 pounds fertilizer/1000 square feet
20% nutrient in fertilizer

3. Calculating pounds of fertilizer to apply

Lawn or garden area x application rate = pound of fertilizer per garden or lawn

_____ square foot _____ pounds fertilizer pounds fertilizer
_____ x _____ = _____
garden or lawn _____ square foot garden or lawn

Example: 4000 square feet 5 pounds fertilizer 20 pounds fertilizer
_____ x _____ = _____
lawn 1000 square feet lawn

Because soil test recommendations for any given soil do not exactly match a fertilizer, select a fertilizer that gives comparative amounts of nitrogen, phosphorus and potassium as recommended by the soil test. In fertilizer application, it is most important to match the nitrogen requirement and compromise some for the phosphorus and potassium. The amount of fertilizer to apply that will give the recommended amount of nitrogen can be obtained from the following table:

Table 1. Fertilizer Application Rate Table

Amount of Fertilizer to Apply Based on Actual Nitrogen Recommendations			
Nitrogen Rate:	0.1 pound nitrogen per 100 square feet	0.2 pound nitrogen per 100 square feet	1 pound nitrogen per 1000 square feet
Fertilizer Grade	Pounds fertilizer to apply per 100 square feet	Pounds fertilizer to apply per 100 square feet	Pounds fertilizer to apply per 1000 square feet
45-0-0 (urea)	0.2	0.4	2.2
37-3-3	0.3	0.5	2.7
36-6-6	0.3	0.6	2.8
33-0-0	0.3	0.6	3.0
32-4-4 32-3-10	0.3	0.6	3.1
30-4-4 30-0-10	0.3	0.7	3.3
28-3-3 28-4-6	0.4	0.7	3.6
27-7-7 27-3-3	0.4	0.7	3.7
25-5-5 25-3-12	0.4	0.8	4.0
24-8-16 24-0-15	0.4	0.8	4.2
22-4-4 22-6-3	0.5	0.9	4.5
21-0-0 21-3-12	0.5	1.0	4.8
20-20-20 20-4-8	0.5	1.0	5.0
19-19-19 19-11-12	0.5	1.0	5.3
18-6-12 18-3-6	0.6	1.1	5.6
16-8-8 16-4-8	0.6	1.3	6.3
15-15-15 15-5-5	0.7	1.3	6.7
13-3-9 13-25-12	0.8	1.5	7.7
12-12-12 12-4-4	0.8	1.7	8.3
10-10-10 10-20-10	1.0	2.0	10.0
10-5-5 10-10-20	1.0	2.0	10.0
6-12-12 6-2-0	1.7	3.3	16.7
5-10-10 5-10-5	2.0	4.0	20.0

Example: If the N (nitrogen) recommendation is for 0.1 lb. N/100 square foot and the fertilizer grade selected has a ratio of 18-6-12 (column 1), apply 0.6 lb. of this fertilizer per 100 square feet.

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Reviewed July 2022