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FERTILIZER
CONVERSION
TABLES

LAWNS
&
FLOWER
BEDS

In applying fertilizer to home lawns, gardens, flower beds and compost piles, frequently it is necessary to convert suggested rates into amounts for smaller areas or for row application. This leaflet provides some common conversions in Tables 1, 2 and 3. To fertilize properly, it is necessary to understand the content of fertilizers, especially if substitutions of a different analysis must be made.

The label on the fertilizer bag shows the percent of N, P and K as illustrated in figure 1. For example a 12-12-12 fertilizer contains 12 percent each of nitrogen (N), phosphorus (P) and potassium (K), in this order from left to right. A 50 pound bag contains 6 pounds of each nutrient or 18 pounds total. A 10-6-4 fertilizer would contain 20 pounds of nutrients. The remainder of the fertilizer is made up of other elements such as oxygen, hydrogen, etc. which are chemically combined in the sources of nutrients used.

Table 1. Conversion from pounds per acre into weights for small areas

Rates per acre (lb)	Lb. per	
	1000 sq. ft.	100 sq. ft.
100	2½	¼
200	5	½
400	9	1
800	18½	2
1000	23	2½
Manure, leaves and straw:		
8000 (4 tons)	200	20
16000 (8 tons)	400	40

FERTILIZER CONVERSION TABLES FOR LAWNS, GARDENS AND FLOWER BEDS

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Since many different fertilizers are sold but the selection from a given store is limited, substitutions often are necessary. Generally, the basis for substitution is the amount of nitrogen in the fertilizer. Substitutions can be made as long as enough fertilizer is used to meet plant food requirement, but not enough applied to cause injury to germination, seedlings or growing plants.

A complete fertilizer is one containing nitrogen, phosphorus and potassium. Some common analyses and possible substitutions are presented in Table 4. The factors for converting from a standard analysis to a desired substitute are shown. For example, a 13-13-13 is so near a 12-12-12 that the same rate can be used, but only .8 as much 15-15-15 would be required to supply the same amount of nutrients as in a 12-12-12. If 15 pounds of 12-12-12 per 1,000 square feet is suggested, the same amount of N, P and

Table 2. Conversion from area rate to linear row.

Rates per		Row width		
1000 sq. ft.	100 sq. ft.	3 ft.	2 ft.	1 ft.
Lb.	Lb.	Lb. per 100 ft. of row		
5	½	1½	1	½
10	1	3	2	1
20	2	6	4	2
30	3	9	6	3
40	4	12	8	4
50	5	15	10	5

K would be supplied by 12 pounds of 15-15-15 (15 x .8 = 12).

The method of applying fertilizer influences results. For gardens, flower beds and other similar conditions where soil is being prepared for planting, it is generally desirable to broadcast (spread on surface) the fertilizer and work it into the soil. A small amount of a phosphorus fertilizer (one containing only phosphorus) can be put in the row with the seed or a very small amount of the fertilizer that was broadcast can be put in a band(s) beside the row. Be careful not to apply too much fertilizer with or too near the seed. For plants with a high nitrogen requirement, additional nitrogen fertilizer can be sidedressed.

A soil test will help in deciding the analysis fertilizer, limestone or other amendments to apply. For materials needed in collecting and mailing soil samples, contact your county Extension office.

Table 3. Conversion from area rate to a per plant basis.

Rates per 100 sq. ft.	Spacings		
	5 x 5 ft.	2½ x 2½ ft.	2½ x 1½ ft.
Lb.		Oz.* per plant	
½	2	1	½
1	4	2	1
2	8	4	2
3	12	6	3
4	16	8	4
5	20	10	5

*1 oz. = 2 tbsp.



Figure 1. The analysis on the bag shows percent N, P and K in that order.

Table 4. Factors for converting suggested rates when substituting a different analysis fertilizer.

Suggested analysis	Analysis to be substituted	Rate conversion factor*
12-12-12	20-20-20	.6
	17-17-17	.7
	16-6-12	.8
	15-15-15	.8
	13-13-13	1
	12-6-6	1
	10-5-5	1.2
	10-6-4	1.2
10-20-10	5-10-5	2
	5-15-5	2
	6-12-6	1.7
	12-24-12	.85
	15-30-15	.65
10-20-20	12-24-24	.85
	15-30-30	.65

*Multiply times rate for suggested analysis. Example: want to substitute 20-20-20 for 15 pounds 12-12-12. $15 \times .6 = 9$ pounds 20-20-20 needed.

REFERENCES

(Available from your county agricultural agent)

- B-203 Home Lawns (For sale only)
- L-164 Soil Reaction (pH) Ranges
- D-495 Soil Sampling Information Sheet for Lawns, Gardens and Flower Beds
- TAP-19 Gladiolus for Texas Gardens
- TAP-34 The Culture of Gardenias in Texas
- TAP-63 Chrysanthemums for Texas Gardens

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Cooperative Extension Work in Agriculture and Home Economics, The Texas A&M University System and the United States Department of Agriculture cooperating. Distributed in furtherance of the Acts of Congress of May 8, 1914, as amended, and June 30, 1914.

10M-11-73, Revision

AGR11-1