



BUILDING A GREENER COMMUNITY ONE YARD AT A TIME.

LAWN FERTILIZING GUIDE

RATE CALCULATIONS AND APPLICATION TIPS

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BUILDING A GREENER COMMUNITY ONE YARD AT A TIME.

A healthy lawn adds value to your home and improves the quality of the environment. Vigorously growing lawns are capable of filtering out air pollution, slowing movement of chemicals and fertilizers into surface water, protecting soil from washing away, and releasing life-sustaining oxygen.

Most lawn grasses require some fertilizer every year to keep them strong and actively growing. Appropriate amounts help maintain turf vigor, but too much can cause problems.

Fertilizer left on hard surfaces such as sidewalks, driveways, and streets should be swept up and distributed over the lawn to prevent it from getting into the water supply.

Nitrogen (N), phosphorus (P), and potassium (K) are the three most common nutrients in fertilizers.

Nitrogen can be a health hazard to infants and animals when present in high concentrations in water. It can cause algae blooms that choke out other aquatic life-forms.

Phosphorus is a major cause of excessive aquatic plant growth. This depletes oxygen in ponds and lakes, which can cause fish kills.

The best method for determining your lawn's fertilizer needs is a soil test. Contact your local K-State Research and Extension office for information on submitting soil for testing. Lawns generally require more nitrogen than phosphorous and potassium.

FERTILIZING TIPS

- Fescue and bluegrass are best fertilized in September and November; May if irrigated. Fertilize bermudagrass and zoysiagrass between May and August, and buffalograss in June.
- In spring and early fall, use fertilizers that contain slow-release nitrogen. Use quick-release nitrogen fertilizers in early winter.
- Do not apply fertilizers with added weed killers or insecticides if they are not needed. Weed and insect pests can be better controlled with spot treatments that focus on the problem.
- Do not apply fertilizer when heavy rain is expected.
- After fertilizing, apply about a half-inch of water to the lawn. This will move nutrients into the topsoil where they are more likely to be used by the grass.
- Use a drop spreader rather than a rotary type spreader when applying fertilizer near open water.
- Fill spreaders over hard surfaces for easy spill cleanup.
- Calibrate spreader properly before use.
- When using the spreader, turn it off before stopping and when making turns. Then, turn it back on after you have resumed walking. Shut off the spreader when passing over pavement. Walk in straight lines, and be careful not to overlap or skip areas.
- Do not dump or wash excess fertilizer into storm drains or sewers.

STEP 1

Determine the square footage of the area to be fertilized. Divide your yard into sections. Multiply the length times the width of each to calculate area in square feet.

STEP 2

Do the math:

Front: Length x Width = Square feet

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Back: Length x Width = Square feet

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Side 1: Length x Width = Square feet

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Side 2: Length x Width = Square feet

$$\underline{\hspace{2cm}} \times \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Total area in square feet: = $\underline{\hspace{2cm}}$

HOW TO CALCULATE AREAS

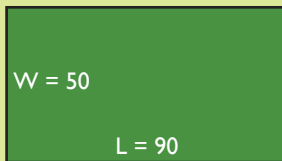
Square or rectangular yard

$$\text{Area} = L \times W$$

L = length

W = width

$$\begin{aligned} \mathbf{A} &= \mathbf{90\ ft \times 50\ ft} \\ &= \mathbf{4,500\ sq\ ft} \end{aligned}$$



Irregularly shaped yard

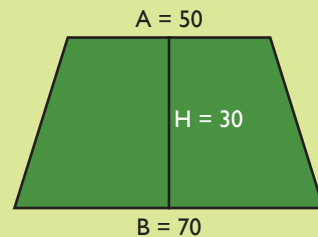
$$\text{Area} = 0.5 \times (A + B) \times H$$

A = one parallel side

B = second parallel side

H = height perpendicular to parallel sides

$$\begin{aligned} \mathbf{Area} &= \mathbf{0.5 (50\ ft + 70\ ft) \times 30\ ft} \\ &= \mathbf{0.5 \times 120\ ft \times 30\ ft} \\ &= \mathbf{1,800\ sq\ ft} \end{aligned}$$



STEP 3

The secret to healthy lawns is applying the correct amount of fertilizer. Use the table below to calculate the amount – equivalent to 1 pound of actual nitrogen per 1,000 square feet – recommended by K-State Research and Extension.

The numbers across the top indicate the percent nitrogen in the fertilizer you are using. This is the first numeral of the three-number ratio displayed on the bag (for example, 23–3–3 contains 23 percent nitrogen). A soil

test through your local K-State Research and Extension office will assist in selecting the proper nutrient ratio for your lawn. The numbers in the left column indicate total area to be fertilized in square feet. (See Step 1 for calculations.) Numbers within the chart equal pounds of fertilizer needed to complete the job.

For example, if the fertilizer product you select is 23 percent nitrogen and you calculated the area of your yard to be 10,000 square feet, you would need to apply 43 pounds of the 23-3-3 fertilizer according to the table below.

LAWN FERTILIZER TABLE

Sq. Ft.	Nitrogen Content of Fertilizer Product (%)															
	6	9	10	18	22	23	25	27	28	30	33	34	35	37	39	46
1,000	20	11	10	5	5	4	4	4	3	3	3	3	3	3	3	2
2,000	40	22	18	11	10	9	8	7	7	6	6	6	6	5	5	4
3,000	60	33	27	16	14	13	12	11	10	9	9	9	9	8	8	7
4,000	80	44	36	21	19	17	16	15	14	13	12	12	11	11	10	9
5,000	100	56	45	26	24	22	20	19	17	16	15	15	14	14	13	11
6,000	120	67	55	32	29	26	24	22	21	19	18	18	17	16	15	13
7,000	140	78	64	37	33	30	28	26	24	22	21	21	20	19	18	15
8,000	160	89	73	42	38	35	32	30	28	25	24	24	23	22	21	17
9,000	180	100	82	47	43	39	36	33	31	28	27	26	26	24	23	20
10,000	200	111	91	53	48	43	40	37	34	31	30	29	29	27	26	22
11,000	220	122	100	58	52	48	44	41	38	34	33	32	31	30	28	24
12,000	240	133	109	63	57	52	48	44	41	38	36	35	34	32	31	26
13,000	260	144	118	68	62	57	52	48	45	41	39	38	37	35	33	28
14,000	280	156	127	74	67	61	56	52	48	44	42	41	40	38	36	30
15,000	300	167	136	79	71	65	60	56	52	47	45	44	43	41	38	33
16,000	320	178	145	84	76	70	64	59	55	50	48	47	46	43	41	35
17,000	340	189	155	89	81	74	68	63	59	53	52	50	49	46	44	37
18,000	360	200	164	95	86	78	72	67	62	56	55	53	51	49	46	39
19,000	380	211	173	100	90	83	76	70	66	59	58	56	54	51	49	41
20,000	400	222	182	105	95	87	80	74	69	63	61	59	57	54	51	43