



Citrus Fertilization Chart for Arizona

Glenn Wright

*Fertilizer does no good in a heap, but a little spread
around works miracles all over.*

-Richard Brinsley Sheridan - Irish Playwright

To promote optimal growth and production of your citrus tree, use the chart to determine the correct amount of fertilizer to apply.

Steps To Use This Fertilizer Chart:

1. On the **blue left edge** of the chart, find a description of the tree you wish to fertilize. Since commercial citrus fertilizer application recommendations are based either on tree height, trunk diameter or the area of the ground covered by the canopy, ranges of all three measurements are included in the tree descriptions. The total pounds of actual nitrogen recommended by the University of Arizona for a tree for one year are found in the **gray column** directly to the right. Since no fertilizer is 100% nitrogen, use the chart to determine the amount of a specific type of fertilizer needed by your citrus tree.
2. Look at the **red top edge** of the chart for the percent nitrogen which your fertilizer contains. Remember that every container of fertilizer has 3 numbers written on it. The first number indicates the % nitrogen, the second the % phosphorus as available phosphate (P₂O₅), and the third the % potassium as available potash (K₂O). For example: 9-6-4 has 9% nitrogen, 6% phosphorus and 4% potassium – see illustration.
3. The intersection of the row describing your tree, and the column indicating % nitrogen of your fertilizer, is the recommended range of pounds of that particular type of fertilizer to use during the entire year for oranges, tangerines and other exotic citrus. For grapefruit and pummelo, apply ½ of this amount annually, and for lemons and limes, apply about 10% more than the amount in the chart annually.
4. For oranges, tangerines, and grapefruit, apply ⅓ of the recommended range of fertilizer in January-February, ⅓ in March-April and ⅓ in May-June.
5. For lemons and limes, apply ⅓ of the recommended range of fertilizer in January-February, ⅓ in March-April and ⅓ in August-September.

Example 1:

You have a small, 2-foot tall lemon tree, and a bag of citrus food (13-10-4) which has 13% nitrogen. Find the row for a

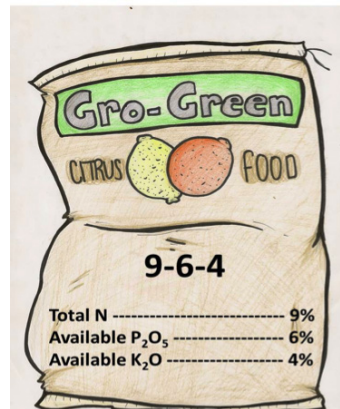


Illustration Credit: Christiana Wright.

small tree. Then, find the column for 13% nitrogen. They meet at the number 1.9 to 3.8. Because the tree is a lemon, add about 10% to the total (2.10 to 4.2 lbs.). Since the tree height is at the low end of the range, apply 2.10 lbs. of the citrus food during the year. Apply ⅓ (about 0.7 lbs.) during January-February, ⅓ in March-April, and ⅓ in August-September.

Example 2:

You have a large, 10 foot tall adult grapefruit tree, whose canopy covers about 100 square feet of the ground surface and you have citrus fertilizer with 6% nitrogen (6 is the first of the three numbers on the bag). The row for this tree and the column for 6% nitrogen join at the numbers 20.80 to 25.00. Mature grapefruit trees require only half of the amounts listed in the table.

Therefore, this tree will require about 10.4 to 12.50 lbs. of fertilizer annually. Apply about 3.5 to 4.0 lbs. (⅓ of the total) during January- February, ⅓ in March-April and ⅓ in May-June.

Adapted from and replaces

Chott, G., Chard, C., Bradley, L., 1998. *Fertilizing Citrus Chart*. University of Arizona Bulletin MC91. Tucson, AZ.

Steps at a Glance

1. Select the row from the chart which most closely describes your tree.
2. Select the chart column that matches the first number on your fertilizer product (the percent nitrogen of the fertilizer).
3. The box where the row and column intersect is the recommended range of fertilizer to apply annually. Grapefruit will require 50% less, and lemons 10% more than this amount.
4. For oranges, tangerines, and grapefruit, apply ⅓ of the total fertilizer from Step 3 in January-February, ⅓ in March-April and ⅓ in May-June.
5. For lemons and limes, apply ⅓ of the total from Step 3 in January-February, ⅓ in March-April and ⅓ in August-September.

Annual Fertilizer Requirements for Citrus Trees

- For oranges, tangerines, and grapefruit, apply $\frac{1}{3}$ of the total in January-February, $\frac{1}{3}$ in March-April and $\frac{1}{3}$ in May-June.
- For lemons and limes, apply $\frac{1}{3}$ of the total in January-February, $\frac{1}{3}$ in March-April and $\frac{1}{3}$ in August-September.

	Lbs. of Actual Nitrogen Required for the Year	% Nitrogen in Fertilizer (First number written on fertilizer container – See illustration)						46%* (Urea)		
		4%	5%	6%	8%	10%	13%		16%	21%* (Ammonium Sulfate)
Oranges, tangerines, tangelos, and other exotic citrus. For grapefruit, pummelo, lemons and limes, see note below.		None to 3.0 lbs.	None to 2.5 lbs.	None to 2.0 lbs.	None to 1.5 lbs.	None to 1.2 lbs.	None to 0.9 lb.	None to 0.75 lb.	None to 0.6 lb.	None to 0.25 lb.
Newly Planted Tree You may apply small amounts of nitrogen after tree is established and new growth has emerged	None to 0.13 lb.	None to 3.0 lbs.	None to 2.5 lbs.	None to 2.0 lbs.	None to 1.5 lbs.	None to 1.2 lbs.	None to 0.9 lb.	None to 0.75 lb.	None to 0.6 lb.	None to 0.25 lb.
Small Tree 2 to 3 feet tall, up to 1.25" trunk diameter and up to 9 sq. ft. of ground area covered by the canopy	0.25 to 0.50 lb.	6.25 to 12.50 lbs.	5.00 to 10.00 lbs.	4.20 to 8.40 lbs.	3.10 to 6.25 lbs.	2.50 to 5.00 lbs.	1.90 to 3.80 lbs.	1.60 to 3.20 lbs.	1.20 to 2.40 lbs.	0.50 to 1.10 lbs.
Medium Tree** 4 to 8 feet tall, 1.25" to 4.0" trunk diameter and from 16 to 64 sq. ft. of ground area covered by the canopy	0.75 to 1.00 lb.	18.75 to 25.00 lbs.	15.00 to 20.00 lbs.	12.50 to 16.75 lbs.	9.40 to 12.50 lbs.	7.50 to 10.00 lbs.	5.80 to 7.70 lbs.	4.70 to 6.50 lbs.	3.60 to 4.80 lbs.	1.60 to 2.20 lbs.
Large Tree 10 feet tall or more, 6 to 10" trunk diameter and more than 64 sq. ft. of ground area covered by the canopy	1.25 to 1.50 lbs.	31.25 to 37.50 lbs.	25.00 to 30.00 lbs.	20.80 to 25.00 lbs.	15.60 to 18.75 lbs.	12.50 to 15.00 lbs.	9.60 to 11.50 lbs.	7.80 to 9.40 lbs.	6.00 to 7.10 lbs.	2.70 to 3.30 lbs.

Note: For grapefruit and pummelo trees small adult or larger: use $\frac{1}{2}$ of the amounts shown. For lemons and limes, use about 10% more than the amounts shown.

* Application of 21-0-0 or 46-0-0 fertilizer will require additional applications of other nutrients, as these fertilizers only contain nitrogen. Urea (46-0-0) is especially concentrated.

** Trees in containers should be fertilized according to this chart, but usually grow no taller than a medium-sized tree.

• To convert from decimal to ounces, multiply the decimal portion of the number by 16. Example: For 6.25 lbs. fertilizer, multiply .25 x 16 = 4 ounces, giving 6 lbs. 4 oz.
• Measure accurately before applying and always incorporate fertilizers in the soil and follow with irrigation.



COLLEGE OF AGRICULTURE & LIFE SCIENCES

**Cooperative
Extension**

**THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
TUCSON, ARIZONA 85721**

GLENN WRIGHT

Associate Extension Specialist – Citrus and Date Palms

CONTACT:

GLENN WRIGHT

gwright@cals.arizona.edu

**This information has been reviewed by University faculty.
extension.arizona.edu/pubs/az1671-2015.pdf
Originally published: 1998
Other titles from Arizona Cooperative Extension can be found at:
extension.arizona.edu/pubs**

Any products, services or organizations that are mentioned, shown or indirectly implied in this publication do not imply endorsement by The University of Arizona.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Extension & Economic Development, College of Agriculture Life Sciences, The University of Arizona.

The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities.