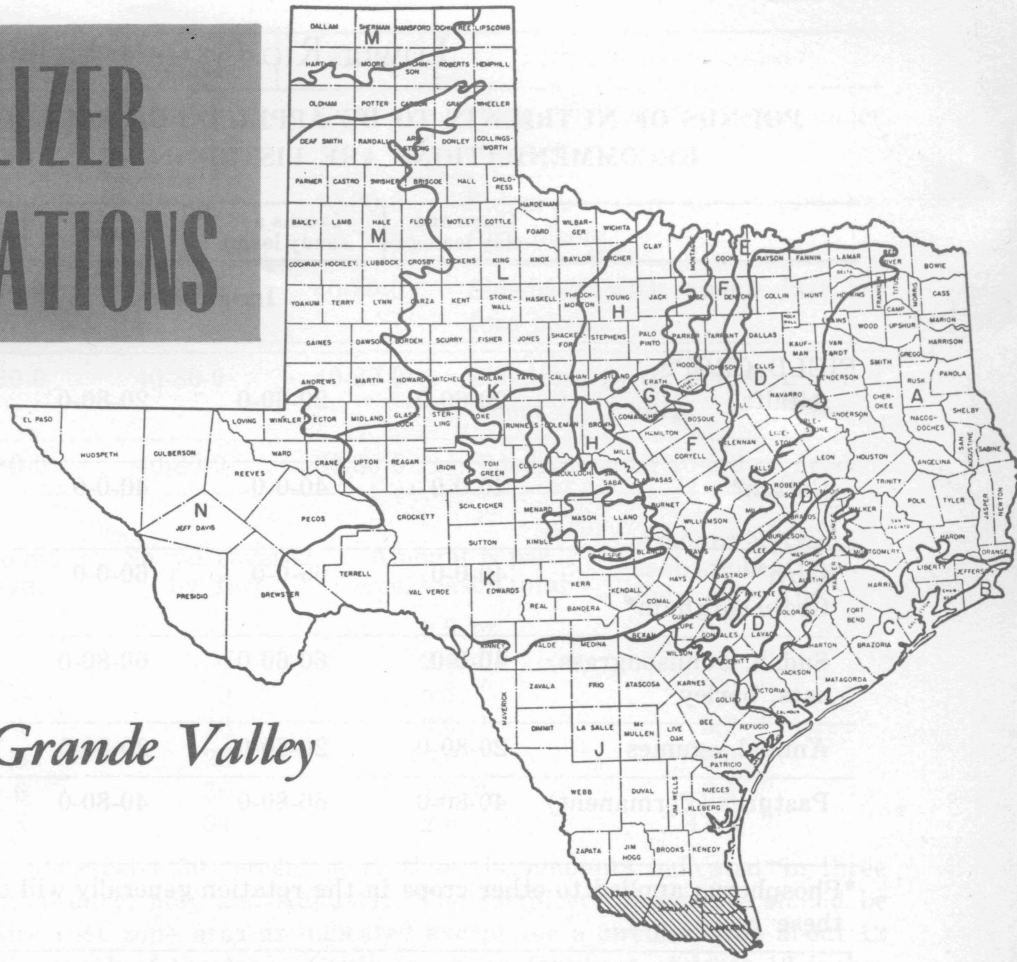


GENERAL FERTILIZER RECOMMENDATIONS



for the Lower Rio Grande Valley

RECOMMENDATIONS for fertilizers in this leaflet are those found best by experiments, soil test summaries and practical experience in the field. The recommendations are general in scope. Since soils vary so much in nutrient levels, *soil tests should be made in order to obtain more definite and economical fertilizer recommendations.*

For best results with fertilizers, other factors should be favorable, such as a well-prepared seedbed, good stand, absence of disease, adequate moisture, aeration and good cultural practices. Good cropping systems with legumes in rotation aid in a favorable response of crops to fertilizers. When crops follow legumes turned under, the amount of nitrogen needed may be reduced. Where soil and crop management practices are favorable, even higher rates of fertilization than those shown may be economically advantageous.

The letters NR mean that the crop is not recommended for this class of soils.

LAND RESOURCE AREAS

- A East Texas Timberlands
- B Coast Marsh
- C Coast Prairie
- D Blackland Prairies
- E East Cross Timbers
- F Grand Prairie
- G West Cross Timbers
- H North Central Prairies
- I Central Basin
- J Rio Grande Plain
- K Edwards Plateau
- L Rolling Plains
- M High Plains
- N Trans-Pecos

Developed by Personnel of the Department of Soil and Crop Sciences, College Station and Substation No. 15, Weslaco of The A&M College of Texas

THE AGRICULTURAL AND MECHANICAL COLLEGE OF TEXAS
TEXAS AGRICULTURAL EXTENSION SERVICE
J. E. HUTCHISON, DIRECTOR, COLLEGE STATION, TEXAS



Lower Rio Grande Valley

**POUNDS OF NUTRIENTS TO BE APPLIED PER ACRE AT OR BEFORE PLANTING
RECOMMENDATIONS ARE LISTED IN LB. N, LB. P₂O₅ and LB. K₂O**

	Clays and clay loams	Loams and sandy loams	Sands	Additional treatment
Irrigated				
FIELD CROPS				
Alfalfa	20-60-0	20-60-0	20-80-0	Topdress with 30-0-0 each cutting and 0-60-0 annually in spring for maintenance.
Cotton*	40-0-0	40-0-0	40-0-0	Sidedress with 40-0-0 at first forms.
Corn* Grain sorghum*	40-0-0	60-0-0	60-0-0	Sidedress with 60-0-0 at knee high.
Sudan, Johnsongrass, oats, barley	40-0-0	60-60-0	60-80-0	Sidedress with 60-0-0 each time cut or grazed down.
Annual legumes	20-80-0	20-80-0	20-80-0	
Pastures (Permanent)	40-80-0	60-80-0	40-80-0	Topdress with 60-0-0 each time cut or grazed down.
*Phosphorus applied to other crops in the rotation generally will take care of phosphorus needs for these crops.				
TRUCK CROPS				
Spinach, escarole, endive, dandelion, collards, parsley	40-40-0	40-80-0	80-80-0	
Cabbage	60-60-0	60-60-0	60-60-0	60-0-0 when plants begin to head.
Broccoli	60-60-0	60-60-0	60-60-0	60-0-0 at 6 to 8 leaves.
Lettuce	40-60-0	40-60-0	60-60-0	60-0-0 when plants begin to head.
Sweet corn	40-0-0	40-0-0	40-0-0	40-0-0 when plants are knee high.
Tomatoes	40-80-0	40-80-0	40-80-0	40-0-0 at set of first fruit.
Eggplants	40-80-0	40-80-0	60-80-0	
Peppers	80-80-0	80-80-0	80-80-0	Sidedress with 40-0-0 as needed.
Potatoes	40-40-0	40-80-0	80-80-0	Sidedress with 40-0-0 as needed.
Carrots	40-40-0	40-80-0	40-80-0	Sidedress with 40-0-0 as needed.
Beets, turnips	40-40-0	40-40-0	40-80-0	Sidedress with 40-0-0 as needed.

	Clays and clay loams	Loams and sandy loams	Sands	Additional treatment
Onions	80-40-0	80-80-0	80-80-0	Place fertilizer 3-4 inches under the row.
Squash	40-80-0	40-80-0	40-80-0	Sidedress with 40-0-0 just before bloom.
Beans and peas	40-40-0	40-80-0	40-80-0	Sidedress with 40-0-0 just before bloom.
Watermelons Cucumbers	40-80-0	40-80-0	40-80-0	Sidedress with 40-0-0 at first bloom.
Cantaloupes	40-80-0	40-80-0	80-80-0	Sidedress with 40-0-0 as needed.

CITRUS

Age of tree in years	Area around tree—yd.	Sq. yd. covered by fert.	Amount N per tree, season total	Amount N/tree each application (Feb., May, Aug.)
1	1 x 1	1	0.6 oz.	0.2 oz.
2	2 x 2	4	2.4 "	0.8 "
3	3 x 3	9	5.2 "	1.7 "
4	4 x 4	16	9.6 "	3.2 "
5	5 x 5	25	15.0 "	5.0 "
6-10	6 x 6	36	1.2 lb.	6.4 "
11-20	8 x 8	64	2.0 "	11.2 "

Trees in sod orchards should receive 50 percent more than the amounts indicated, in three applications during the year (February, May and August). The fertilizer concentrate should be broadcast **evenly** over the entire root zone area as indicated except for a circular area about 12 inches across, centered about the trunk of the tree. Caution: **Keep fertilizer at least 12 inches away from tree trunk.** The 1 ounce per square yard rule for applying nitrogen concentrate should be used when tank watering trees. Caution is advised in not applying an excessive amount of concentrated nitrogen, as many young citrus trees are damaged by excessive rates of application. The amounts recommended are **maximums and should not be exceeded.** Excessive amounts of nitrogen applied to older trees may result in smaller fruit size and a reduction in the amount of first quality fruit.

Nonirrigated

The recommendations for nonirrigated land given below are for normal moisture conditions for the area. In years when subsoil moisture is very low and surface moisture is below normal, fertilizer probably will not pay. If moisture conditions are favorable later in the season, sidedressed applications may be profitable.

FIELD CROPS				
Cotton†	30-0-0	30-0-0	30-0-0	Sidedress with 30-0-0 at first forms, if soil moisture is adequate.
Corn† Grain Sorghum†	30-0-0	30-0-0	30-0-0	Sidedress with 30-0-0 within 35 days if soil moisture is adequate.
Annual legumes	20-40-0	20-60-0	20-60-0	
Pastures (Permanent)	40-40-0	40-40-0	40-40-0	Topdress with 30-0-0 about twice during season if soil moisture is adequate.

Pastures				Topdress with 30-0-0 about twice during season if soil moisture is adequate.
Oats and sudan	40-40-0	40-40-0	40-40-0	
TRUCK CROPS				
Beans, peas	40-40-0	40-40-0	40-40-0	
Cabbage	40-0-0	40-0-0	40-0-0	Sidedress with 40-0-0 if soil moisture is adequate.
Cantaloupes Cucumbers	40-40-0	40-40-0	80-40-0	Sidedress with 40-0-0 at first bloom if soil moisture is adequate.
Squash	40-40-0	40-40-0	40-40-0	
Onions	40-0-0	40-40-0	40-40-0	
Watermelons	30-30-0	30-60-0	30-90-0	Sidedress with 40-0-0 at first bloom if soil moisture is adequate.

†Phosphorus applied to other crops in the rotation generally will take care of phosphorus needs for these crops.

GRADES OF FERTILIZER

The fertilizer recommendations are expressed in pounds of nutrients per acre and do not represent fertilizer grades. The nutrients must be obtained from materials or fertilizer mixtures sold on the market.

For example, a recommendation calling for 60-60-0, which is a 1:1:0 ratio, can be obtained by applying 400 pounds of 15-15-0, or 60-60-0 could be applied by using 300 pounds 10-20-0, plus an application of 30 pounds of actual nitrogen as a straight nitrogen fertilizer. Again, if a recommendation calls for 15-60-0, this may be obtained by applying about 400 pounds of a 4-16-0 or 125 pounds of 11-48-0.

METHOD OF APPLICATION

Row Crops: Fertilizer can be applied prior to or at the time of planting. Fertilizers are more efficiently used by most crops when applied in a band 2 to 3 inches to the side and 2 to 3 inches below the seed. Fertilizer can be

applied while planting or cultivating if equipment is available.

It can also be applied in the furrow prior to last rebedding in heavy textured soil. Avoid putting the seed too close to the fertilizer because germination may be impaired.

If large quantities of nitrogen fertilizer are to be applied, part of the nitrogen can be applied with the phosphorus and potassium and the remainder applied 35 to 45 days later as a side or topdressing.

Small Grains: Fertilizers for small grains may be broadcast, drilled in or plowed in. Fertilizers containing nitrogen and potassium should not be allowed to touch the seed.

Phosphorus, potassium and part of the nitrogen should be applied at or before seeding. The rest of the nitrogen should be applied in the spring just before plants begin to joint.

Pastures: For establishing improved pastures, fertilizer should be applied in bands when possible. Otherwise, it should be broadcast, drilled or plowed in. For maintenance of grass pasture, topdress with 30-0-0 as needed. Repeat basic fertilizer treatment annually as suggested or according to a soil test.