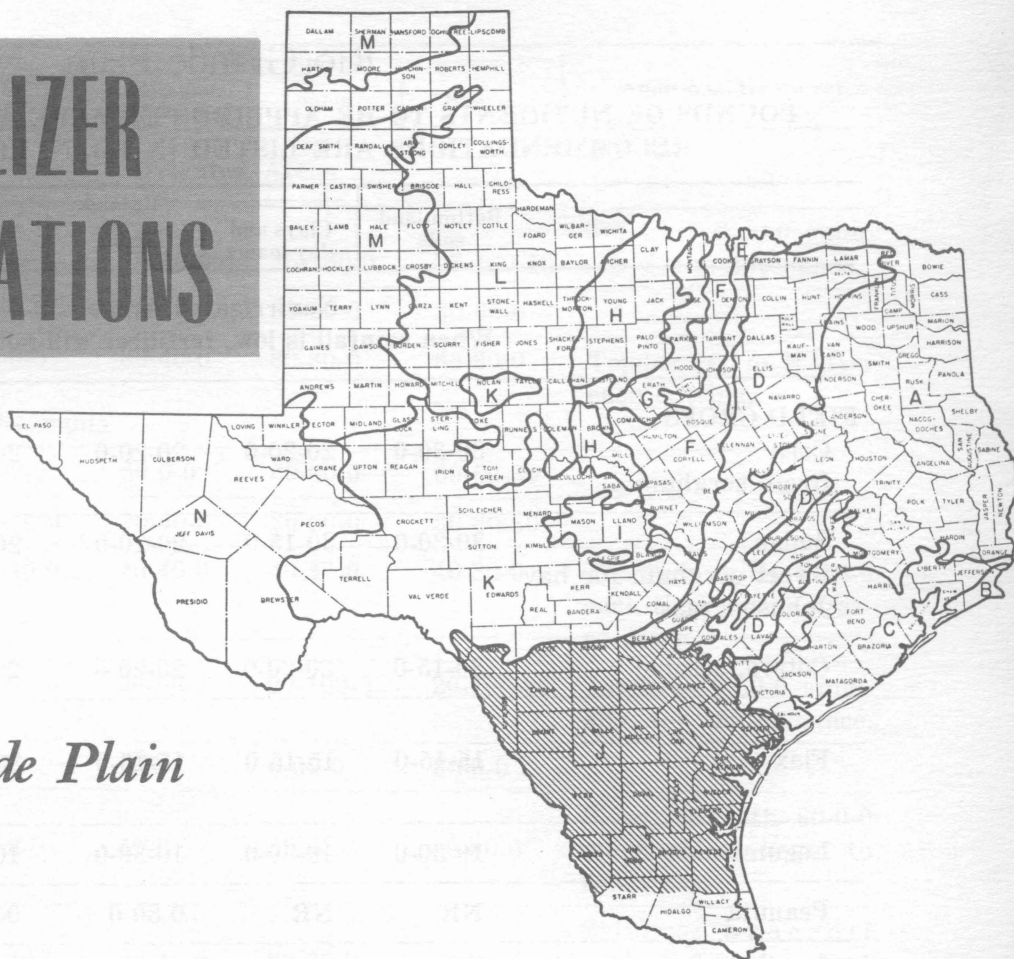


*for the Rio Grande Plain*



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

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.

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## Rio Grande Plain

**POUNDS OF NUTRIENTS TO BE APPLIED PER ACRE AT OR BEFORE PLANTING  
RECOMMENDATIONS ARE LISTED IN LB. N, LB. P<sub>2</sub>O<sub>5</sub> and LB. K<sub>2</sub>O**

	Bottomland soils	Clays and clay loams	Upland		Additional treatment
			Loams	Sands	
Nonirrigated Areas When rainfall is low, fertilizer will not pay.					
FIELD CROPS					
Corn	30-30-0	20-20-0	20-20-0	20-20-0	
Grain sorghum					
Sudan	30-30-0	30-15-0	20-20-0	20-20-0	
Sweet sorghum for hay					
Johnsongrass					
Cotton, sesame	30-15-0	20-20-0	20-20-0	20-20-0	
Flax	15-15-0	15-15-0	15-15-0	30-15-0	Topdress 20 lb. N in early Feb. if soil mois- ture is adequate.
Legumes	10-30-0	10-30-0	10-30-0	10-30-0	
Peanuts	NR	NR	0-30-0	0-30-0	
Pastures	30-30-0	30-30-0	30-30-0	30-30-0	
Grasses and legumes including small grains					
TRUCK CROPS					
Lettuce, cabbage, turnip greens	20-0-0	20-0-0	20-40-0	20-40-20	Sidedress or topdress with 30-0-0 when plants begin to head or at 4 to 5-leaf stage.
Spinach, beets, carrots and turnips	20-0-0	20-0-0	20-40-0	20-40-20	
Peppers, tomatoes	20-0-0	20-0-0	20-40-0	20-40-20	Sidedress with 20-0-0 at first bloom.
Watermelons	NR	NR	20-40-0	20-40-20	Sidedress with 20-0-0 when vines begin to run.
Cucumbers	20-40-0	20-40-0	30-60-0	30-60-30	
Onions	20-0-0	20-0-0	20-40-0	20-40-0	
Strawberries	NR	40-40-0	40-80-0	40-80-20	1/2 at setting out and 1/2 at first bloom.



	Bottomland soils	Upland			Additional treatment
		Clays and clay loams	Loams	Sands	
Irrigated Areas					
FIELD CROPS					
Alfalfa	15-60-0	15-60-0	25-100-0	25-100-50	Topdress 0-60-0 annually for maintenance.
Corn, grain sorghum	70-0-0	70-30-0	80-60-0	80-60-0	
Hay crops including sorghum for hay, sudan, Johnsongrass and Coastal Bermuda	50-0-0	80-40-0	80-80-0	80-80-0	Topdress 60 lb. N after each cutting.
Cotton, sesame	60-0-0	60-0-0	60-60-0	60-60-30	
Legumes	20-40-0	20-40-0	20-60-0	30-60-30	
Pastures Grasses and small grain	40-40-0	40-40-0	40-40-0	40-80-0	Topdress with 60-0-0 each time cut or grazed down.
Pastures Grass and legume	20-60-0	20-60-0	20-100-0	20-100-20	Topdress 0-60-0 annually for maintenance.
Peanuts	NR	NR	0-60-0	0-60-0	
TRUCK CROPS					
Lettuce, cabbage, turnip greens	40-0-0	40-0-0	40-40-0	40-80-0	Sidedress with 60-0-0 when plants begin to head.
Broccoli, cauliflower	20-40-0	20-40-0	30-60-0	40-80-0	Sidedress broccoli with 40-0-0 after first cutting.
Carrots, beets, turnips	NR	40-80-0	40-80-0	40-80-0	½ at planting—½ in 60 days.
Irish potatoes	0-0-0	40-40-0	40-80-0	80-80-0	½ at planting—½ in 40 days.
Tomatoes, peppers, eggplants	0-0-0	40-40-0	40-80-0	40-80-0	Sidedress at set of first fruit with 40-0-0.
Cucumbers, squash	0-0-0	40-40-0	40-80-0	40-80-0	Sidedress with 40-0-0 when vines begin to run.
Cantaloupes, watermelons	0-30-0	20-40-0	30-60-0	30-60-30	
Spinach	20-80-0	20-80-0	20-80-0	40-80-0	
Onions	20-40-0	20-40-0	40-80-0	40-80-0	
Grapefruit, oranges, lemons	0-0-0	20-0-0	20-40-0	20-40-0	Sidedress in spring or early summer with 60-0-0.

## GRADES OF FERTILIZER

The fertilizer recommendations are expressed in pounds of nutrients per acre and do not represent fertilizer grades. For example, 30-30-0 means 30 pounds N, 30 pounds  $P_2O_5$  and not any  $K_2O$  per acre. The nutrients must be obtained from materials or fertilizer mixtures sold on the market.

For example, a recommendation calling for 15-30-0, which is a 1:2:0 ratio, can be obtained by applying 185 pounds of 8-16-0 or 150 pounds of 10-20-0. 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 time of planting. Fertilizers are used more efficiently 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 also can 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 the remainder applied 35 to 45 days later as a side or top-dressing.

**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 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.