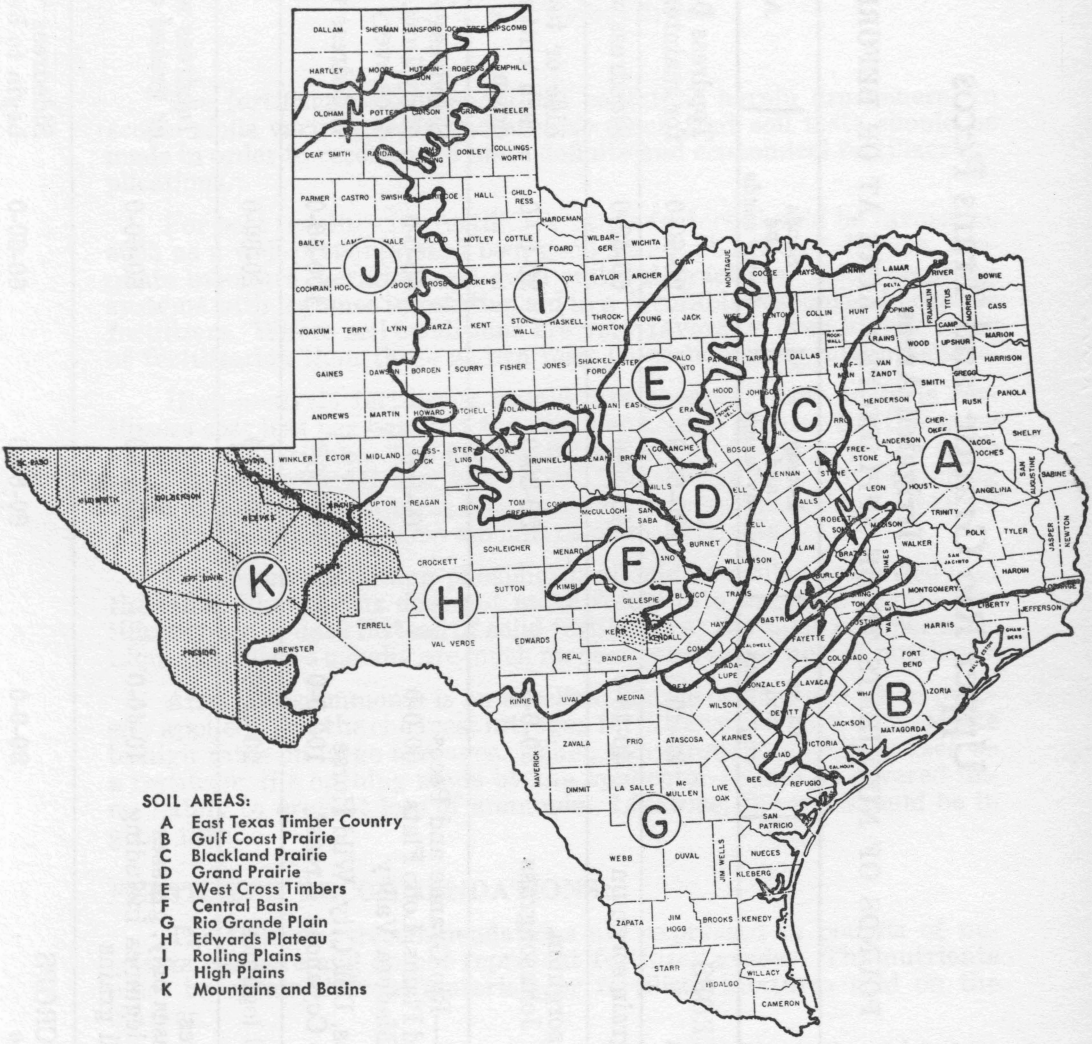
FERTILIZER RECOMMENDATIONS

for the Upper Rio Grande and Trans Pecos



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TEXAS AGRICULTURAL EXTENSION SERVICE
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The fertilizer recommendations contained herein are general in scope. Soils vary in fields and area so much that soil tests should be made in order to recommend more definite and economical fertilizer applications.

For best results with fertilizers, other factors should be favorable, such as a well-prepared seed bed, 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. Where soil conditions are very favorable even higher rates of fertilization than those shown may be economically advantageous.

High-analysis fertilizers usually are cheaper. Low-analysis fertilizers cost less per bag, but the cost per acre is greater for the same amount of nutrients. The grades, 5-10-5 and 10-20-10, have the same ratio (1-2-1) of nutrients, but 10-20-10 has twice as much fertilizing value as 5-10-5. It requires only one-half as many pounds of 10-20-10 per acre to supply the same amount of plant nutrients.

Fertilizers containing phosphorus should be drilled or plowed into the land. Phosphorus does not move freely into the soil. Liquid fertilizers may be used instead of solid fertilizers at the same rate per acre. Liquid fertilizers usually are much more expensive per unit of nutrients.

Anhydrous ammonia is an excellent source of nitrogen when properly applied. It is the cheapest nitrogen fertilizer when used at moderate to high rates on large acreages. When anhydrous ammonia is used as a fertilizer, the opening made by the applicator should be covered immediately to prevent loss of ammonia. Likewise, the soil should be in good tilth.

FERTILIZER RECOMMENDATIONS:

The following 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 30-60-30, which is a 1-2-1 ratio, can be obtained by applying 600 pounds of 5-10-5 or 250 pounds of 12-24-12 or 300 pounds of 10-20-10. 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.

Row Crops: Fertilizer usually is applied at the time of planting or just before. 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.

If equipment for applying fertilizers in bands while planting or cultivating is not available, apply the fertilizer in the water furrow and bed on it when the land is prepared for planting. Avoid putting the seed too close to the fertilizer as germination may be impaired.

If large quantities of nitrogen fertilizer are to be applied, part of the nitrogen should be drilled into the soil with the phosphorus and potash 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 potash should not be allowed to touch the seed.

Phosphorus, potash 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, topdress with 30-0-0 as needed. Repeat basic fertilizer treatment annually as suggested or according to a soil test.

Fruit Trees: Fertilizer for fruit trees may be applied over the entire area covered by the orchard when the trees are mature. In nonbearing orchards, the fertilizer should be applied over the area covered by the spread of the limbs. Keep fertilizer 1 foot away from tree trunks. Cultivate fertilizer applications into the soil.

Recommendations for fertilizers in this circular are those found best by experiments, tests and practical experience in the field. They range from the calcareous (limy) river valley clays to the sands of the uplands. If your farm contains both clays and loams, there will be two recommendations for your land.

When crops follow legumes turned under, the amount of fertilizer to be applied at planting may be reduced. Side or topdress with the amount of fertilizer suggested.

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

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Irrigated Areas

POUNDS OF NUTRIENTS TO BE APPLIED PER ACRE AT OR BEFORE PLANTING

	Clays and clay loams	Loams and sandy loams	Sands and loamy sands	Additional Treatment
FIELD CROPS Alfalfa	20-40-0	20-60-0	20-60-0	Topdress 0-60-0 annually in spring for maintenance
Corn, grain sorghum	40-40-0	40-40-0	60-60-0	Sidedress with 80-0-0 in 35 days
Sweet sorghum, Sudan, Johnsongrass	30-0-0	30-30-0	30-60-0	Side or topdress with 60-0-0 after each cutting or each time grazed down
Cotton—Rio Grande and Pecos Flood Plains, Lobo Flats and Madera Valley	60-0-0	60-0-0	60-0-0	Sidedress with 40-0-0 in late May or early June. Apply 60 lb. P_2O_5 to land once every 5 years
Pecos, Dell City, Wild Horse and Coyanosa Areas*	100-0-0	100-50-0	100-50-0	Sidedress with 60-0-0 at 1st square
Annual legumes	20-40-0	20-40-0	20-60-0	
Pastures Grasses only, grasses and legumes including small grains	40-40-0	40-40-0	60-60-0	Topdress with 60-0-0 each time cut or grazed down
TRUCK CROPS Lettuce	30-0-0	60-60-0	60-60-0	Sidedress with 60-0-0 when plants begin to head
Tomatoes, peppers	20-40-0	30-60-0	40-80-0	Sidedress with 40-0-0 at set of first fruit
Cantaloupes	40-40-0	40-80-0	40-80-0	Sidedress with 50-0-0 at first bloom
Onions	20-60-0	40-80-0	50-100-0	

Adequate water supply must be available at all times.
Under heavy water application, the amount of fertilizer may be increased.
*Rates may vary, depending upon soil permeability, water and management practices.