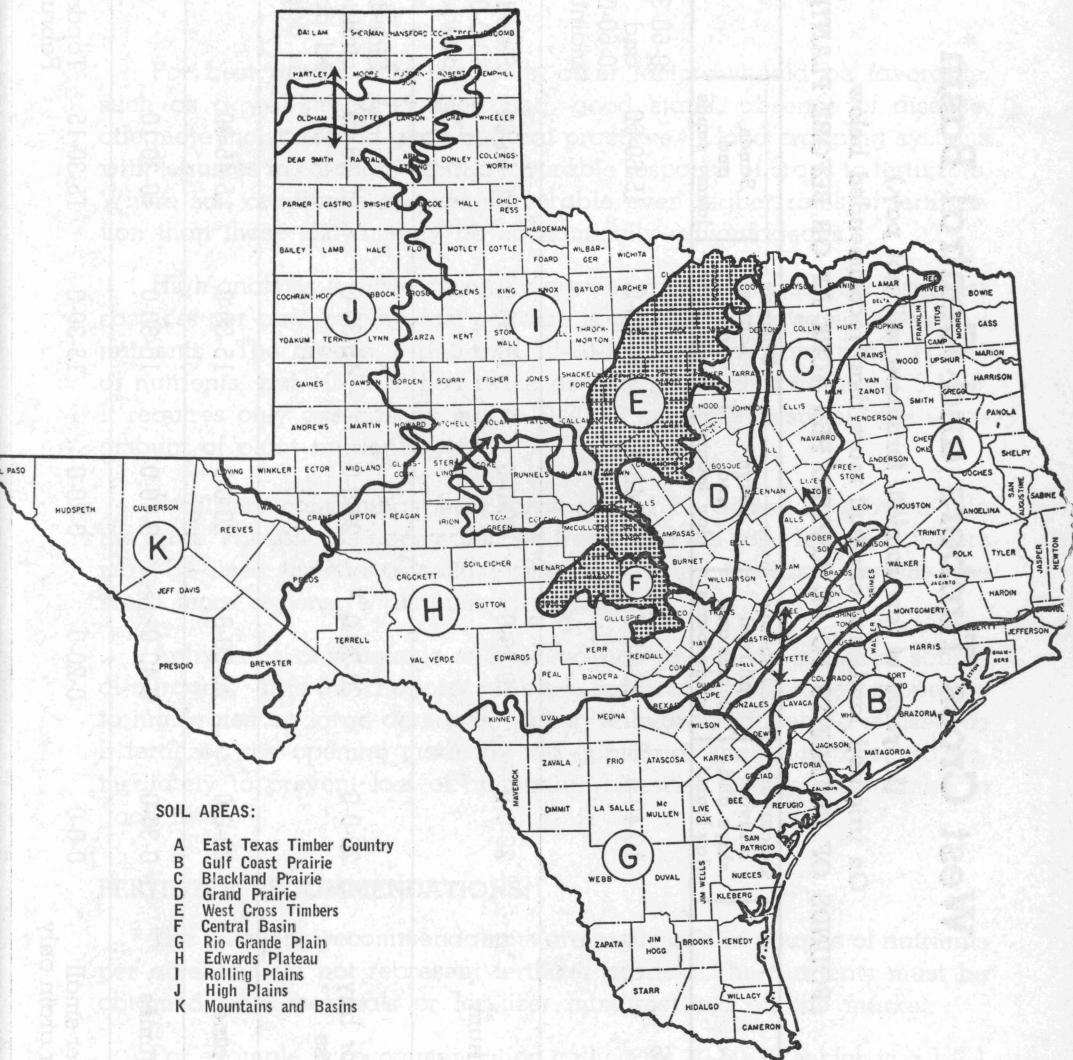


# FERTILIZER RECOMMENDATIONS for the West Cross Timbers



Adapted from Texas Agricultural Experiment Station Bulletin 431, by W. T. Carter.

TEXAS AGRICULTURAL EXTENSION SERVICE  
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# FERTILIZER RECOMMENDATIONS

## *for the West Cross Timbers*

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For best results with fertilizers, other factors should be favorable, such as a well-prepared seed bed, good stand, absence of disease, adequate moisture 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 much 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. Liquid fertilizers usually are much more expensive per unit of nutrients.

Anhydrous ammonia is a liquefied gas and is an excellent source of nitrogen. 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 two to three inches to the side and two to three 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.

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 should be applied in a band midway between the seed rows through a separate drill spout. 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, phosphorus, potash and part of the nitrogen should be drilled or plowed in. The remainder of the nitrogen should be applied broadcast in 40 to 60 days as a topdressing. For maintenance, topdress as needed.

**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.

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.

# West Cross Timbers and Central Basin\*

(In years of low rainfall, fertilizers will not pay.)

On irrigated land, use one-half more than recommended below.

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

	Calcareous alluvial clays and clay loams	Calcareous alluvial loams and sandy loams	Clays and clay loams	Uplands Loams and sandy loams	Sands and loamy sands	Remarks
<b>FIELD CROPS</b>						
Alfalfa	10-40-0	10-40-0	10-40-0	10-40-0	15-60-60	0-60-30 annually on sands and loamy sands and 0-60-0 on other soils for maintenance
Corn Grain sorghum	20-0-0	20-20-0	20-0-0	15-30-0	20-40-20	Sidedress in 35 days with 30-0-0 if soil moisture is adequate
Sudan Sorghum for hay Johnsongrass	20-0-0	20-20-0	20-0-0	15-30-0	20-40-40	Sidedress with 20-0-0 each cutting or each time grazed down if soil moisture is adequate
Cotton, sesame	20-0-0	20-20-0	20-0-0	15-30-0	15-45-30	
Annual legumes	0-30-0	0-40-0	0-40-0	10-30-0	10-30-10	
Oats or other small grains for grain only	0-0-0	0-20-0	0-20-0	15-30-0	15-30-15	Topdress with 30-0-0 in February
Pastures Grasses only, and small grains with legumes	30-0-0	20-20-0	20-20-0	20-40-0	20-40-20	Topdress with 30-0-0 each cutting or each time grazed down if soil moisture is adequate
Pastures Grasses and legumes	20-20-0	20-20-0	20-20-0	20-60-0	20-60-20	Apply lime according to soil test
Peanuts	NR	15-30-0	NR	20-40-0	20-40-40	
<b>TRUCK CROPS</b>						
Berries	NR	20-20-0	NR	20-40-0	20-40-20	
Cantaloupes	NR	15-15-0	NR	15-30-0	15-30-15	Sidedress with 16-20-0 or 20-20-0 when vines begin to run
Peppers and tomatoes	15-15-0	15-30-0	15-30-0	15-30-15	15-30-15	Sidedress with 16-20-0 or 20-20-0 at first bloom
Sweetpotatoes	0-0-0	20-40-0	20-40-0	20-40-20	20-40-20	
Irish potatoes	0-0-0	20-40-0	20-40-0	20-40-20	20-40-20	
Grapes	NR	20-20-0	NR	20-40-0	20-40-20	
Watermelons	0-30-0	15-30-0	15-30-0	15-30-15	15-30-15	Sidedress with 16-20-0 when vines begin to run

## FRUIT TREES

	Pounds of Nutrients per inch diameter of tree					
Pecan bearing trees	1 lb. 33-0-0 or 1½ lb. 20-0-0	3 lb. 10-10-0	3 lb. 10-20-0	3 lb. 10-20-10	3 lb. 10-20-20	Apply in February or early March. For young trees, 1/3 to 1/2 quantity for bearing trees
Apples, pears bearing trees	NR	NR	1 lb. 10-20-0	1 lb. 10-20-10	1 lb. 10-20-20	Sidedress in May or June with 1 lb. 33-0-0. Apply in Feb. or early March. For young trees, 1/3 to 1/2 quantity for bearing trees
Peaches, plums bearing trees	NR	NR	1 lb. 20-0-0	1 lb. 10-20-10	1 lb. 10-20-20	Apply in Feb. If cover crops are used, apply in late March
nonbearing trees			½ lb. 20-0-0	½ lb. 20-0-0	½ lb. 20-0-0	Apply in February and same amount in June

\*Including reddish prairie soils on Western edge.

The recommendations given above are based on normal moisture conditions for the area, to insure good yields. In years when sub soil moisture is very low and surface soil moisture is below normal, then use 1/3 to 1/4 less at planting time, using the remainder as a sidedressing if rains come within 30 days from planting.