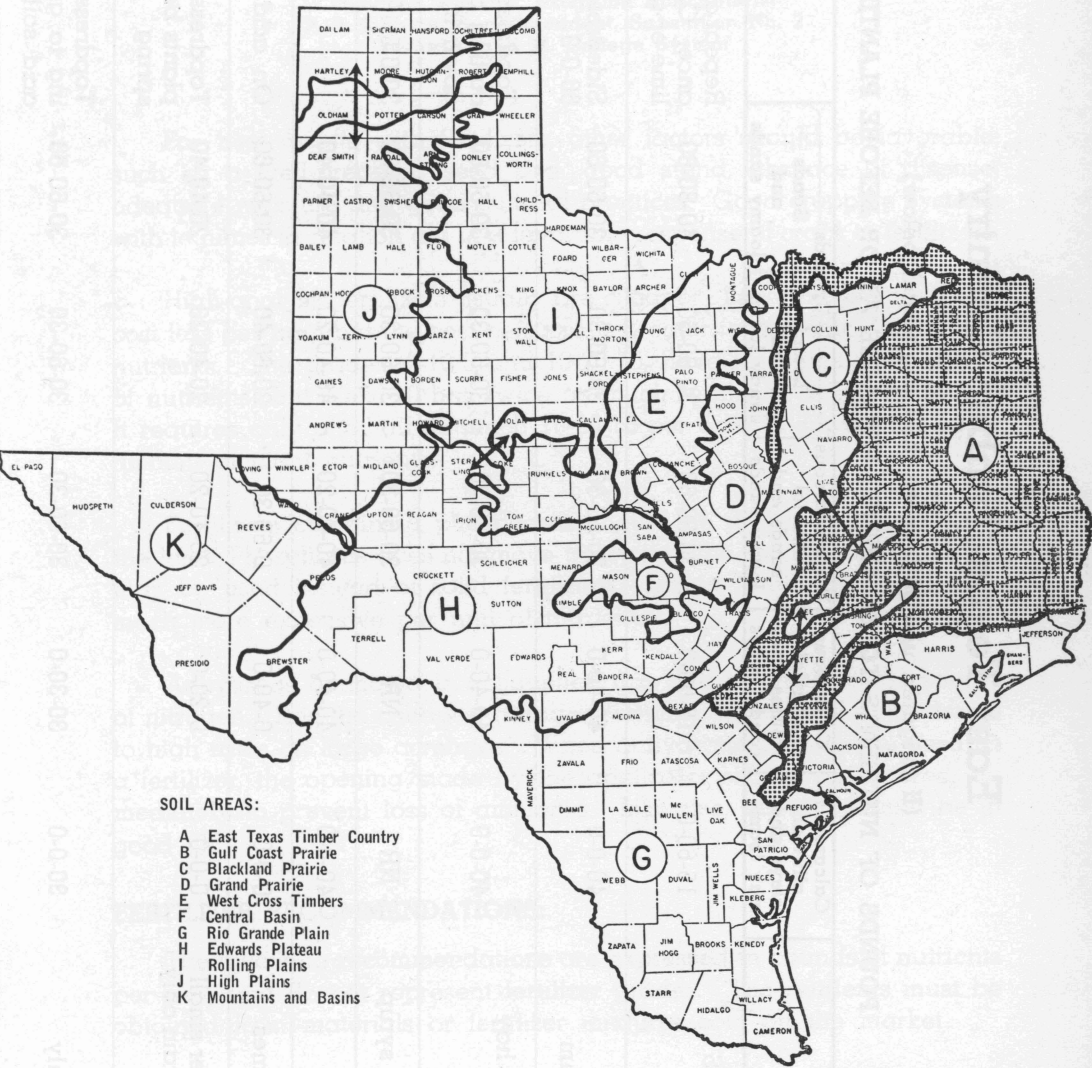


FERTILIZER RECOMMENDATIONS

for the East Texas Timbers



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

FERTILIZER RECOMMENDATIONS

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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.

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 should be applied in 40 to 60 days as a topdressing. For maintenance, topdress as needed.

Fruit Trees: Fertilizers for fruit trees should be applied over the area covered by the spread of the limbs and cultivated 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.

East Texas Timber Country						
(If irrigated use 50% more than suggested 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	Non-calcareous alluvial sands and loamy sands	Uplands		Remarks
				Loams and sandy loams	Sands and loamy sands	
FIELD CROPS						
Alfalfa	15-60-0	15-60-0	30-80-60	30-80-60	40-80-80	Repeat annually for maintenance. On acid soils, 1 ton lime or according to soil test.
Sericea						
Corn	40-0-0	40-40-0	30-60-30	30-60-30	30-60-60	Sidedress in 35 days with 60-0-0
Grain sorghum						
Sorghum for hay	40-0-0	40-40-0	30-60-30	30-60-30	30-60-60	Topdress with 30-0-0 each cutting or each time grazed down if soil is moist
Sudan						
Johnsongrass						
Sorghum for syrup	NR	NR	30-60-30	30-60-30	30-60-60	30-0-0 in 35 days
Cotton	40-0-0	40-40-0	40-40-20	40-40-20	40-40-40	
Annual legumes	0-0-0	0-40-0	0-60-30	20-60-40	30-60-60	On acid soils, 1 ton lime
Oats and other small grain for grain only	0-0-0	0-20-0	20-40-20	20-40-20	20-40-40	Topdress with 30-0-0 before plants begin to joint in early spring
PASTURES						
Grasses only	30-0-0	30-30-0	30-60-30	30-60-30	30-60-60	Topdress with 30-0-0 according to grazing practices, on acid soils, 1 ton lime
PASTURES						
Grasses and legumes	30-0-0	30-60-0	30-60-30	30-60-30	30-60-60	Repeat annually for maintenance. On acid soils, 1 ton lime or according to soil test
Hay Meadows						
Bluestem, etc.	100-40-0	120-40-0	150-50-25	120-40-20	120-40-40	Phosphate and potash applied during winter or early spring; half of N. in March or early April; 1/2 of N. after first cutting
Peanuts	NR	NR	NR	20-40-20	20-40-40	Topdress with 500 lb. gypsum or lime as topdressing over peg zone at blooming time
Sugar cane for syrup	NR	NR	30-60-30	30-60-30	30-60-60	Sidedress with 30-0-0 in May or June
TRUCK CROPS						
Mustard, collards	40-40-0	40-80-0	40-80-40	40-80-40	40-80-80	Sidedress with 60-0-0 in 5 days after emergence
Cabbage, lettuce	40-40-0	40-80-0	40-80-40	40-80-40	40-80-80	When heads begin to form sidedress with 60-0-0
Carrots, beets, turnips	NR	40-80-0	40-80-40	40-80-40	40-80-80	
Irish potatoes	NR	40-80-0	40-80-40	40-80-40	40-80-80	Sidedress with 60-0-0 at time tubers begin to form
Sweetpotatoes	NR	NR	NR	40-80-120	40-80-120	
Onions (green)	20-40-0	20-80-0	40-80-40	40-80-40	40-80-80	Sidedress with 40-0-0 30 days after planting. If bulb onions are being grown, omit sidedressing
Tomatoes, peppers	60-0-0	40-80-0	80-80-40	80-80-40	80-80-80	2/3 applied at planting 1/3 applied at first bloom
Egg plants, okra						
Cantaloupes	NR	40-80-40	40-80-40	40-80-40	40-80-80	Sidedress with 40-0-0 when vines begin to bloom — On acid soils, 1 ton lime
Squash						
Cucumbers						
Watermelons	NR	0-40-20	30-60-0	20-40-20	30-60-30	Sidedress with 20-40-20 when vines begin to run
Beans	0-40-0	20-40-0	20-40-20	20-40-20	20-40-40	
Peas, English						
Peas, blackeye,						
Purple hull, etc.						
Blackberries	NR	NR	60-60-30	80-80-40	80-80-80	Apply at first bloom
Dewberries						
Strawberries	NR	NR	70-140-70	70-140-70	70-140-140	1/2 at planting, 1/2 at first bloom. 60-0-0 in late spring after season closes
Pounds of Fertilizer per bearing tree per inch diameter						
Apples	NR	NR	2 lb. 5-10-5	2 lb. 5-10-5	2 lb. 5-10-10	1/2 in Feb. and 1/2 in April. For young trees 1/3 to 1/2 quantity for bearing trees
Peaches	NR	NR	2 lb. 10-10-5	2 lb. 10-10-5	2 lb. 10-10-10	
Plums						
Pecans	1 lb. 33-0-0 or 1 1/2 lb. 20-0-0	1 lb. 33-0-0 or 1 1/2 lb. 20-0-0	6 lb. 10-10-5	6 lb. 10-10-5	6 lb. 10-10-10	Apply in February or early March. Young trees 1/3 to 1/2 quantity for bearing trees

The use of a starter solution on transplant vegetable crops at the time of transplanting has been shown to result in better stands and increased yields.