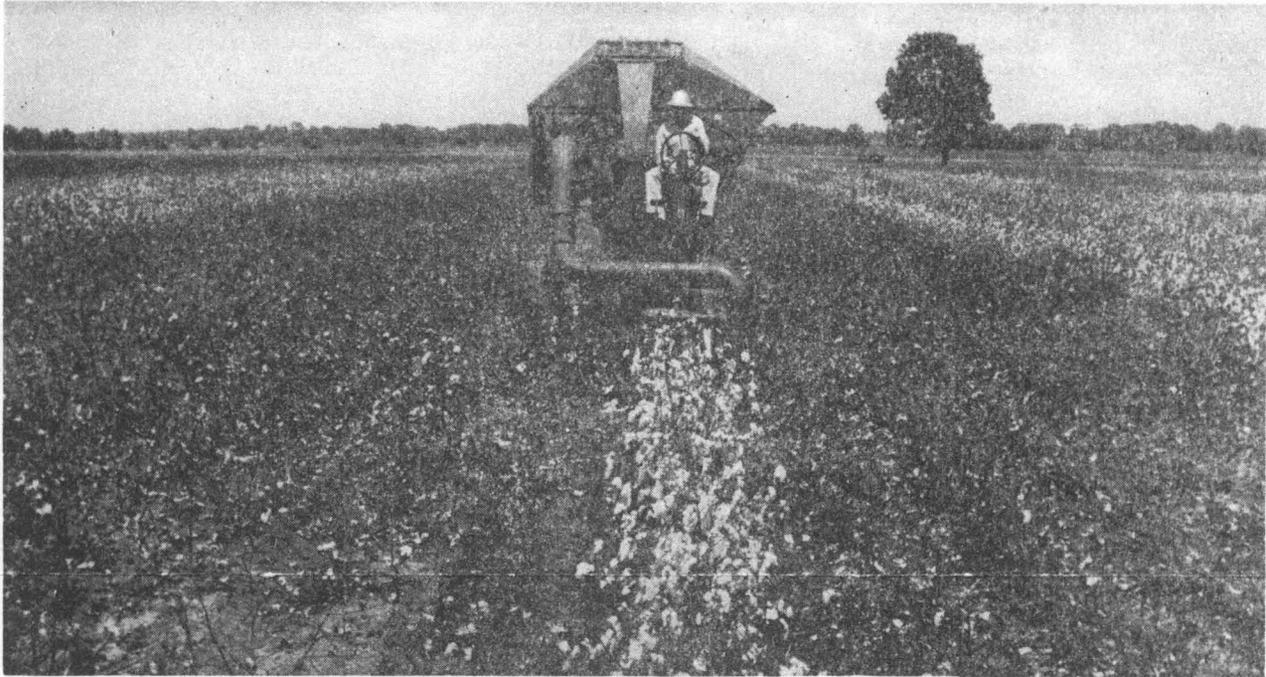


COTTON DEFOLIATION GUIDE IN TEXAS

By

FRED C. ELLIOTT
Extension Cotton Work Specialist
Texas A. & M. College System



When to Apply: Defoliant, dusts or sprays, should be applied at least 35 days after the period of maximum flower load. This permits maximum staple length development. Another way to time the application of defoliant would be 30 days after cotton quits making, 'cut out' or when the youngest bolls expected to make cotton are 30 days old. This will be when about 10 per cent of the bolls are open. Application should also be made ten days or two weeks prior to intended picking date in Central and South Texas, and two to three weeks on the High Plains.

1. DUST DEFOLIANTS

Use Calcium Cyanamide when plants are wet with dew or adequate dew is forecast. Material must remain in moisture on the leaf for at least two hours; four or more hours of moist exposure preferred.

Monosodium Cyanamide does not depend on dew for activation. It becomes liquid on the leaf by drawing moisture from the air or from the leaf. Leaves should be turgid or green, not wilted.

GUIDE FOR 1953 USE OF DEFOLIANTS

Chemical name (% active ingredient) Name of Defoliant	Rate Per Acre	Dilution Information
DUSTS		
	Lbs.	
Calcium cyanamide (57%) AERO Cyanamid, Special Grade	30-40	None
Monosodium cyanamide (27%) AERO Sodium Cyanamid, Dust.	30-40	None

2. SPRAY DEFOLIANTS

Spray defoliants may be used in the absence of dews and at low humidities. Thorough coverage is essential.

Airplane spraying: Dissolve 1 pound material in 1 gallon of water. Apply at rates given below. Swath widths should be limited to the wing spread of the plane. For uniform applications, a flag man is essential.

Ground spraying: Use rates given below. Dissolve in at least 25 gallons of water, depending on type of sprayer and extent of plant growth. Use fenders on tractor equipment in rank cotton.

GUIDE FOR 1953 USE OF DEFOLIANTS

Chemical name (% active ingredient) Name of Defoliant	Rate Per Acre	Dilution Information
SPRAYS		
	Qts.	
Endothal (6.3%) Niagrathal D-F Spray	4-5	Use 7 to 10 gal. H ₂ O per acre by air, 25 to 40 gal. by ground.
Pennsalt Endothal Defoliant S-4069	4-5	
	Lbs.	
Magnesium chlorate, hexahydrate (58%) De-Fol-Ate	7-10	Use 7 to 10 gal. by air and 20 to 40 gal. H ₂ O per acre by ground.
Monosodium cyanamide (85%) AERO Cyanamid, Soluble	5-10	Use 7 to 10 gal. by air and 25 to 40 gal. H ₂ O per acre by ground.
Potassium cyanate (92%) AERO Cyanate Weed Killer	5-10	Apply in 1 gal. H ₂ O per lb. by air and in 2 gal. or more per lb. by ground.
Sodium chlorate defoliants		
Sodium chlorate-pentaborate (40%-52%) Shed-A-Leaf	7-10	Use 7 to 10 gal. H ₂ O by air, 25 to 40 gal. H ₂ O per acre by ground.
Sodium chlorate-pentaborate (37%-60%) P. C. B. Defoliant	7-10	"
Sodium chlorate-pentaborate-tetraborate (40%-45%-11%) Ortho C-1 Defoliant	5-10	"
Sodium chlorate-pentaborate (40%-60%) Tumbleleaf	6-10	"
Sodium chlorate-pentaborate (40%-60%) Orchard Brand Chlorate Defoliant	8-10	"
Sodium ethyl xanthate (85%) S. E. X.	6-8	Apply in sufficient H ₂ O to wet plants or follow instructions on labels.
Sodium monochloroacetate (85%) Dow Defoliant	5-7	Use 7 to 10 gal. H ₂ O by air and 25 to 40 by ground.
	Gals.	
Pentachlorophenol* Golden Harvest (40%)	3-5	Dilute 1 to 5 with No. 2 diesel oil before applying at rates shown.
Permaguard Defoliant Concentrate* (44%)	3-5	Dilute 1 to 10 with diesel oil before applying at rate shown.
Permaguard Defoliant WE-40 (42%)*	3-5	Dilute 1 to 10 with diesel oil or H ₂ O before applying at rate shown.

*Pentachlorophenol is primarily a desiccant rather than a true defoliant. Because of its severe action on plant tissue it should not be used on immature cotton. Use only when all bolls are fully mature.

More efficient defoliation is obtained when the cotton is mature with leaves in a condition of activity, not wilted, and not toughened by drought or starved by lack of fertility, and where plant moisture is adequate, weather warm and humid. Make full use of all weather information, such as dew and humidity forecasts, temperature, wind velocity, rainfall, etc., from radio stations.

Cautions: Defoliate only enough acreage to stay ahead of harvesting. A second application may be necessary in unusually rank cotton, or if plants are immature. This should be after leaves have fallen from the first application, usually 7-10 days. Read carefully and follow the precautions printed on the container labels. Do not use any defoliant that is not labeled as to exact chemical content. Unknown defoliants may injure open fiber, unopen bolls or cause fire hazards at the gin.

Care of Equipment: Before beginning application, it is suggested that spray tanks, pumps, lines, and nozzles be thoroughly cleaned to remove stick residues left by liquid insecticides. Flush spray machines with water after each day's operation.

Issued by
The Agricultural Extension Service
The Texas A. & M. College System and
The United States Department of Agriculture
G. G. Gibson, Director, College Station, Texas