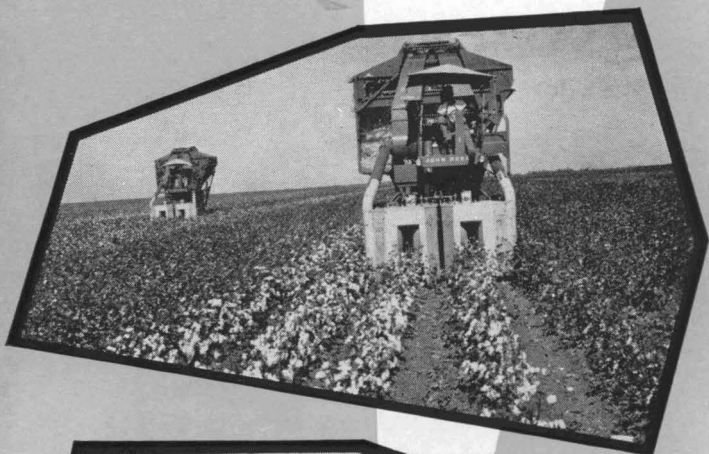


1965

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Cotton

DEFOLIATION GUIDE



FOR TEXAS

**READ THE FEDERALLY APPROVED LABEL ON FARM CHEMICALS
AND FOLLOW THE INSTRUCTIONS GIVEN THEREON !!**

TEXAS A&M UNIVERSITY
TEXAS AGRICULTURAL EXTENSION SERVICE
J. E. HUTCHISON, DIRECTOR, COLLEGE STATION, TEXAS

GUIDE FOR USE OF DEFOLIANTS AND DESICCANTS — 1965

Chemical Name	Name of Defoliant	Percent Principal Formulations	Suggested Rates of Application	Maximum Registered Rates (lbs. actual per acre)	Residue Allowable (PPM)	Limitations	Dilution Data	
							Application by Airplane	Application by Ground Machines
DUSTS								
Calcium Cyanamide	AERO Cyanamid	57	20-40 lbs.	28.5	None	Apply 7 to 14 days before harvest. Dew necessary to activate. See label.	Use full strength	Use full strength
SPRAYS								
							Gals. Water Per Acre	
Sodium Chlorate	Penco Liquid	19.6	1 1/2-2 gal.	4.0	None	Do not apply within 7 days of harvest. Use no more than two applications. Do not allow livestock to graze treated area. Do not feed gin trash to livestock. See label.	5-10	10-20
Magnesium Chloride	De-Fol-Ate	27.8						
Sodium Chlorate (with fire suppressant)	De-Pester Drop-Leaf Cotton Defoliant	18.5	1 1/2-2 gal.		None	Do not apply within 7 days of harvest. Do not graze treated areas or feed gin waste to livestock. See labels.		
	Niagara Leaf Dropper Def.	18.2	1 1/2-2 gal.					
	Ortho Liquid Cotton Def.	18.2	1 1/2-2 gal.	5.0	None		5-10	10-20
	Shed-A-Leaf "L" Stauffer	18.5	1 1/2-2 gal.					
	Chlorate-Borate Liquid Def.	18.2	1 1/2-2 gal.					
	Ferti-Fall Cotton Def.	19.0	1 1/2-2 gal.					
Tributyl-Phosphorotrithioate	DEF	70.5	1 1/3-2 pts.	1.5	None	Do not apply within 7 days of harvest. Apply specified rate per acre in recommended gallons of water or diesel oil to give thorough coverage. May be applied in diesel oil where night temperatures drop below 60°F., on storm-proof varieties of cotton or if cotton is moisture stressed. See labels.	5-10	10-20
	Ortho Phosphate Defoliant	70.5	1 1/3-2 pts.					
	De-Green Cotton Defoliant	70.5	1 1/3-2 pts.					
Tributyl-Phosphorotrithioate	Folex	71.2	1 1/2-2 pts.	1.5	0.25 (on cotton-seed)	Same as above.	5-10	10-20
	Niagara Deleaf Defoliant	73.8	1 1/3-2 pts.					
	Pennsalt Folex	71.2	1 1/3-2 pts.					
Arsenic Acid	Niagara Cotton Desiccant	75.0	1-1 1/2 qts.	4.4	4 ppm as As ₂ O ₃ on cotton-seed.	Apply after at least 75-80% of the bolls are open. Do not apply within 4 days of harvest. Do not graze treated areas or feed gin trash from treated areas to livestock. Avoid contact with or drift to desirable plants or crops. Do not store in unlined metal containers. Destroy containers after use. Read and follow labels.	5-10	5-15
	Penco Desiccant L-10	75.0	1-1 1/2 qts.					
	Hi-Yield H-10	75.0	1-1 1/2 qts.					
Pentachlorophenol		40.0	2-3 qts.	3.0	None	USE ON SEED CROP ONLY. Do not use seed from treated crop for food, feed or oil purposes.	3-5 gals. diesel or kerosene per acre.	4-7 gals. diesel or kerosene per acre.

Harvest-aid chemicals have been subject to regulation under public law 518 since March 6, 1960. The chemicals listed herein have been registered, or granted an extension, by the USDA at time of publication except where noted under Limitations. Additional chemicals or formulations may be registered prior to the harvest season.

Before using any chemical, **STUDY THE LABEL** carefully to determine if your use complies with Label clearance. No claim is made that this list is complete and others may be added as registration requirements are met and become commercially available.

WHEN TO APPLY

When 60 percent or more of the bolls are open, it is safe for most defoliant to be applied. Desiccants should be applied when more than 75 percent of the bolls are open under dryland conditions. Under irrigation, apply desiccants when more than 80 percent of the bolls are open. Plants are considered suitably mature if the *youngest* bolls (1) cannot be dented by pressure between the thumb and forefinger or (2) cannot easily be cut through with a sharp knife.

Disregard of these recommendations and applying defoliant or desiccants too early results in (1) reduced yields per acre, (2) lower micronaire reading and (3) weaker fiber. Thus quality is lowered causing cotton to suffer at the market place.

1. Dust Defoliant

Use dust defoliant when plants are wet with dew or when adequate dew is forecast. Material must remain in moisture on the leaf for at least 2 hours to activate the chemical; 4 or more hours of moist exposure give better results, or follow label instructions.

2. Spray Defoliant

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

Airplane spraying: Apply at rates given in the table. Swath widths should be limited to the wingspan of the plane. For uniform applications, a flag man is necessary.

Ground spraying: Use rates given in the table. Use in 10 to 20 gallons of water, depending on type of sprayer and extent of plant growth. Use fenders on tractor equipment in rank cotton. Consider carefully all weather information such as dew and humidity forecasts, temperature, wind velocity and rainfall from radio and television stations.

BOTTOM DEFOLIATION

In extremely rank cotton, bottom defoliation may be helpful in reducing boll rot and field loss. Defoliate as high up on the plant as possible until bolls are found that can be cut with a pocket knife.

Defoliation higher up on the stalk will injure the immature bolls. For bottom defoliation, use half the minimum rate given in the table for the spray defoliant. Use extreme caution in bottom defoliation to avoid complete defoliation of the plants. Generally, one fan-type nozzle on each side of the row gives satisfactory results.

For the final defoliant application, *do not exceed* the total maximum residue limits per acre. If necessary, use a chemically different defoliant to stay within the allowable limits of residue tolerance.

CAUTIONS

Defoliate only enough acreage to stay ahead of harvesting. If a second application is required in unusually rank cotton, use a chemical with a different active ingredient, if necessary, to stay within a safe residue tolerance. Read carefully and follow the precautions printed on the container labels. Avoid using any defoliant that is not labeled as to exact chemical content. Unknown defoliant may injure exposed fibers, unopened bolls or cause fire hazards at the gin. Wait 1 or 2 weeks before operating stripper harvesters after applying desiccants. Unusual delay may result in regrowth or barky cotton.

CARE OF EQUIPMENT

Before beginning application, clean spray tanks, pumps, lines and nozzles thoroughly to remove sticky residues left by liquid insecticides. Flush spray machines with water after each day's operation.

If phosphorus-type insecticides have been used in the same spray equipment, thoroughly wash spray tank, particularly dried deposits on aircraft fabric. Likewise, if chlorate-type chemicals have been used in the same spray equipment, thoroughly wash spray tank and dried deposits on aircraft fabric before applying organo-phosphorus defoliant.

SAFETY WITH CHEMICALS

Avoid spray drift to plants and crops other than cotton.

Follow carefully precautions on the label.

If chemicals come in contact with the skin, remove the residue immediately by scrubbing with

soap and water. Store materials in a safe place out of reach of small children and irresponsible persons. Keep the materials in their original, properly labeled containers, away from human food or animal stuff, fertilizers, seeds, insecticides, fungicides, etc., and where there is no fire hazard.

Burn or bury empty arsenic acid desiccant containers.

The basis for the control program on farm chemicals is to prevent undue risk from residues of the chemicals in the raw agricultural product. Any defoliant or desiccant used eventually will have tolerances or an exemption from tolerances designated for its safe use or will be registered on a nonresidue basis. Until official Federal regulations are issued governing the use of a specific defoliant or desiccant, it should not be used.

It is the responsibility of the manufacturer or formulator of a particular defoliant or desiccant to obtain registry with the Pesticide Regulation Division of USDA and the Food and Drug Administration.

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