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Failed cotton herbicide rotation restrictions to corn in Oklahoma

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Effective weed management is fundamental to achieving successful crop production and is essential for maintaining agricultural productivity. Herbicides play a vital role in this aspect, assisting farmers in managing weed populations and protecting crop health. In Oklahoma, instances of failed cotton crops and the subsequent challenges with herbicide rotation restrictions when replanting to corn have emerged as an issue for Oklahoma producers.

Several factors can influence a cotton crop failure such as hail, freezing temperatures after emergence, heavy rainfall resulting in standing water or pest/disease issues. Utilizing certain herbicides intended for use in cotton can make it challenging for producers when they are faced with a replant situation. These herbicide residues, intended for weed control in cotton crops, can persist and disrupt growth of subsequent crops like corn, leading to complications when rotating.

This publication delves into the significance of adhering to herbicide rotational restrictions during the transition from failed cotton to corn in Oklahoma. By consolidating information on commonly used herbicides in cotton production and their residual effects on corn crops, farmers can make educated choices to safeguard their crops against potential herbicide damage and maximize yields.

The significance of rotational restrictions extends beyond protecting crop health; it also plays a crucial role in managing herbicide resistance in weeds. By adhering to rotational guidelines, farmers can mitigate the risk of herbicide-resistant weed populations emerging, thereby preserving the efficacy of herbicides for future applications and maintaining sustainable weed management practices.

Moreover, adherence to rotational restrictions promotes long-term soil health and fertility by minimizing the buildup of herbicide residues, which can have detrimental effects on soil microbiota and nutrient cycling processes. By following proper rotational practices, farmers can ensure the continued productivity and sustainability of their agricultural operations while mitigating environmental risks associated with herbicide use.

Table 1. Herbicide rotational restrictions for sorghum planted after failed cotton in Oklahoma.

Herbicide	Component Herbicides	MOA*	Corn Replant Restrictions	Notes
2,4-D LV6	2,4-Dichlorophenoxyacetic Acid	4	0 months	
AIM EC	Carfentrazone	14	0 months	
Assure II	Quizalofop	1	4 months	Restriction is minimized with Enlist field corn.
Caparol	Prometryn	5	5 months	
Clarity	Dicamba	4	0 months	
Dual Magnum	S-Metolachlor	15	0 months	
Fusilade DX	Fluazifop	1	2 months	

Table 1. Herbicide rotational restrictions for sorghum planted after failed cotton in Oklahoma. (Cont'd)

Herbicide	Component Herbicides	MOA*	Corn Replant Restrictions	Notes
Fusion	Fluazifop Fenoxaprop	1	2 months	
Roundup Power Max	Glyphosate	9	0 months	
Gramoxone SL 2.0	Paraquat	22	0 months	
Liberty 280 SL	Glufosinate-Ammonium	10	0 months	
Direx 4L	Diuron	7	Following season	
Engenia	Dicamba BAPMA Salt	4	0 months	
Enlist Duo with Colex-D Technology	2,4-D Choline Salt Plus Glyphosate DMA Salt	4 & 9	7-14 days	Rotation intervals increase with higher application rates. Enlist corn, cotton and soybeans can be planted immediately.
Enlist One with Colex-D Technology	2,4-D Choline Salt	4	14 days	Enlist corn, cotton and soybeans can be planted immediately.
MSMA 6.6	MSMA	17	0 months	
Outlook	Dimethenamid-P	15	0 months	Replant only with Concep-treated or screen-treated seed.
Poast Plus	Sethoxydim	1	1 month	
Prowl H2O	Pendimethalin	3	0 months	
Select Max	Clethodim	1	6 days	For RoundUp Ready Corn.
Sequence	Metolachlor & Glyphosate	15 & 9	0 months	
Sharpen	Saflufenacil	14	0 months	
Staple LX	Pyriithiobac	2	10 months	Corn may be planted 10 months after Staple LX application was made in cotton providing that the total amount of Staple LX from all applications did not exceed 3.8 fluid ounces per acre. No additional soil mixing is required beyond that normally performed for a production system.
Tavium Plus Vapor-Grip	Dicamba & S-Metolachlor	4 & 15	0 months	
Treflan HFP	Trifluralin	3	12 months	
Valor SX	Flumioxazin	14	1 month	Days listed are based on after receiving 1 inch of rainfall. Rotation restrictions can be higher for higher than 3 oz/ac rates.
Warrant	Acetochlor	15	0 months	
XtendiMax with Vapor Grip Technology	Dicamba DGA Salt	4	30-45 days	Rotation intervals increase with higher application rates.

*Mode of action



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