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INSECT, PLANT DISEASE, & WEED SCIENCE NEWS [No. 87-11] [May 29, 1987]

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INSECT PLANT DISEASE WEED SCIENCE

NEWS

DEPARTMENT OF AGRONOMY (WEED SCIENCE) UNIVERSITY OF NEBRASKA-LINCOLN,
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Liquid Nitrogen--Herbicide Mixes After Corn/Sorghum Emergence

Corn and sorghum in fields intended for liquid nitrogen - preemergence herbicide mixes sometimes emerge before herbicide application. While certain preemergence herbicides can be applied after crop emergence, they are not labeled for application with fluid fertilizer after emergence, due to risk of injury. Emerged corn is more tolerant than sorghum of fertilizer-herbicide mixtures. Some growers may accept the injury in return for accomplishing two jobs at once.

Dual, Lasso and Ramrod applied with liquid nitrogen on emerged sorghum would result in injury similar to the fertilizer alone. Injury is more serious with atrazine combinations. Bladex should not be used after sorghum emergence. The tolerance of emerged sorghum to liquid nitrogen and these herbicides is greatest in the spike stage and decreases as the sorghum grows.

Minnesota experiments have shown that atrazine applied to 4-leaf corn with 60 lbs N/acre caused heavy burning with widespread necrosis on the 2nd, 3rd and 4th leaves. This injury, from which the corn recovered, was similar to injury caused by 150 lbs N/acre applied by itself. Injury to emerged corn is usually more severe with herbicide combinations in liquid N and is particularly severe with Bladex in liquid N. If nitrogen must be applied as liquid N to emerged corn, early post herbicides should be applied in water several days prior to the application of liquid nitrogen. Cool, wet weather can be expected to increase the injury caused by such treatment.

Safened Sorghum Seed

Sorghum seed treated with the seed safeners Concep II and Screen, is protected from possible injury from Dual and Lasso. Dual is to be used with Concep II treated seed and Lasso with Screen treated seed. Both safeners provide protection from either herbicide, however they are not "cross" labelled.



Delayed Preemergence Herbicides

Timely herbicide application is not always possible in the busy planting season. Some but not all preemergence herbicides can be applied early postemergence with good results. However, most of these treatments are more effective when applied preemergence than postemergence especially against annual grasses. A rain or sprinkler irrigation is required after application for best control. The following table lists herbicides that are commonly used in Nebraska and can be used both preemergence and early postemergence.

Treatment	Crop Stage	Weed Stage
<u>Corn</u>		
AAtrex/Atrazine	0-30"	1 1/2" grass
Banvel + Atrazine	not stated	1 1/2" grass
Banvel + Bladex 80W	before 5th leaf	1 1/2" grass
Bicep	0-5"	2-leaf
Bladex 80W only	before 5th leaf	1 1/2" grass
Bladex 80W + Atrazine 80W	before 5th leaf	1 1/2" grass
Conquest 4L	before 5th leaf	1 1/2" grass
Dual	0-5"*	unemerged
Dual + AAtrex	0-5"	2-leaf
Extrazine	before 5th leaf	1 1/2"
Lasso	0-5"	2-leaf
Lasso + Atrazine	0-5"	2-leaf
Lasso + Banvel	0-3"	2-leaf
Prowl + Atrazine	up to 2-leaf	1"
Prowl + Bladex 80W	up to 2-leaf	1"
Prozine	up to 4-leaf	1"
Ramrod + Atrazine	0-5"*	2-leaf
<u>Soybeans</u>		
Amiben	cracking to 2nd trifoliolate	1-4" certain broadleaves
Dual	thru unifoliolate stage*	unemerged
Dynap	crook stage	seedling
Lasso	thru unifoliolate stage	unemerged
<u>Grain Sorghum</u>		
AAtrex/Atrazine	0-24"	1 1/2"
Bicep	up to 5"*	2-leaf
Dual	up to 5"*	unemerged
Lasso	up to 5"*	unemerged
Lasso + Atrazine	up to 5"	2-leaf
Ramrod + Atrazine	0 to 5"*	2-leaf

*Not labelled postemergence, however, experience indicates little chance of crop injury.

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