

July 26, 2019

## DICAMBA DRIFT STILL A PROBLEM

I received an inquiry during and after the Saline County Fair to look at Liberty soybeans west of Wilber and near Plymouth that had cupping symptoms. Numerous different soybean farmers with Liberty soybeans were faced with the consequences of seeing stressed, cupped soybeans from dicamba injury. What is frustrating to them is the thought of potential yield loss as a result of growth regulator herbicide damage.

UNL research has proven on soybeans that are not under drought stress, will grow on average, a new node every 3.75 days. The soybean leaves that are fully developed at the time of exposure to dicamba will not show cupping symptoms. The new growth shows the growth regulator stress symptoms. Therefore, you can count backwards on the plant the number of nodes and get a very accurate date estimate of when the soybeans were exposed to dicamba. For more information go to: <https://go.unl.edu/countnodes>

In several of the fields, the last week in June up to the 4<sup>th</sup> of July became a problem. What these days have in common this year is persistent daytime highs in the 80's or 90's and persistent low wind speeds that were generally southerly. On the 4<sup>th</sup> of July, wind speeds were too calm which intensifies the chance of an air inversion event carrying vapor and fines long distances. Applicators know the soybean dicamba products must be applied between a 3 and 10 mph wind at boom height or it is a violation of federal pesticide label laws.

Tank contamination was ruled out in most of the fields I observed this week. Physical particle drift was an issue in one of the fields. What's left is vapor drift and air inversion events that can move the product long distances and spraying up against adjacent sensitive soybeans (which is off label) if the wind is blowing towards sensitive beans during application.

Vapor drift can occur with dicamba when it changes from a liquid state to a gas state which can move off target and cause damage to neighboring sensitive plants including sensitive crops, grapes, certain garden plants, fruit trees, landscape trees, etc. High temperatures, low humidity and leaf canopy drive this issue. The highest amount of volatility is in the first 24 hours after application, but it has been measured as long as four days after application. Results of Behrens, et. al, 1979, dicamba (original formulation) was applied to corn and five different trials looked at percent soybean injury from 0-72 hours post-application. The percent injury to soybeans from volatility was 65%, 54% and 35% average in three trials at 0-24 hours, 24-48 hours and 48-72 hours respectively. Of interest, as little as .04 rain can reduce volatility almost altogether.

What should farmers do if their soybeans are affected? Will there be any yield loss? We don't know until harvest time but height of the soybeans is an initial clue. What steps should be taken to document injury? How could damages be recovered? Professor Emeritus Paul Hay shared the following from a news column in 2017:

He recommended that farmers seeing injury signs in their soybean fields should take pictures of the injury with a digital camera with the date stamp on. Print out these pictures on plain paper so they are easy to see and share.



In a calm and business-like manner, share with neighboring farmers who may have been involved in herbicide applications to soybeans or corn, which could have resulted in this injury. (This year what I am seeing is mainly from soybean applications). Regardless of the response of that person involved, stay calm and explain that you will bring over the yield maps and load data after harvest time.

The only good way forward is to share ways to lessen the potential impact in the future. Severely damaging relations with the neighboring farmer may make this kind of planning and progress impossible. If the applicator sends proof to you that he applied the product legally according to the strict label guidelines and his insurance carrier will not cover any damages that is troublesome, because ultimately the neighbor is the one that made the choice that had consequences in the farming community.

The Nebraska Department of Agriculture is handling calls directed to Tim Creger, Head of the Pesticide Programs. The number to call is 402-471-2351. Using this central contact allows the Nebraska Department of Agriculture to effectively use their investigators to analyze different types of fields in various locations across the state and review their current regulations. If there is a change of pesticide regulations in Nebraska a draft of those regulatory changes first goes to the governor's council, and if approved, to a public hearing.

Further actions of testing soybeans, contacting farm insurers (insurance does not cover pesticide drift losses), consulting with investigative CCA agronomists and your attorney should be carefully thought-out ahead of any action. Legal actions are expensive, time consuming and very uncertain. They can have lasting effects on relationships. Calling the applicator in a calm manner and inviting them to walk in your field is a great start. Each year is different on yield outcomes.

Randy Pryor, Extension Educator

University of Nebraska-Lincoln Extension in Saline County · 306 West 3<sup>rd</sup> Street, Wilber, NE 68465

Phone (402) 821-2151 · Fax (402) 821-3398 · e-mail: [randy.pryor@unl.edu](mailto:randy.pryor@unl.edu)