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Dicamba Off-target Injury Update

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Dicamba Off-target Injury Update

Abstract
As of July 20, the Iowa Department of Agriculture and Land Stewardship (IDALS) had received 142 cases of pesticide misuse, historically this number has ranged from 58-85 at this time of year. Dicamba was involved in 46 of these cases. Two of the dicamba cases involved use in non-crop areas, 10 involved applications on corn and 36 were related to applications to dicamba-resistant soybean (Xtend). The soybean cases were nearly evenly split between Xtendimax w/VGT and Engenia, there were no reports involving products not registered for use on soybean. Cases also were evenly split between commercial and private applicators. Total dicamba cases reported to IDALS had increased to 74 on August 2 (Figure 1), and I expect the number of cases to increase. As discussed elsewhere, official reports to regulatory agencies are the tip of the iceberg since many farmers and applicators attempt to settle issues among themselves rather than involve regulatory agencies.

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The EPA held a teleconference on July 28 with academic weed scientists from states experiencing off-target injury from dicamba applications on dicamba-resistant soybean. Weed scientists described the magnitude of the problem in their respective states, and the likely sources of off-target movement. While the extent of damage varied from state to state, the causes of off-target injury were similar. Sources of problems included: 1) particle drift, 2) contaminated sprayers, 3) spraying during temperature inversions, 4) volatilization, and 5) movement out of treated fields in runoff water. While many problems could be attributed to the applicator failing to follow label restrictions, weed scientists reported that many applicators experienced problems while doing everything right.

In my opinion, the biggest concern is that the new formulations do not appear to have solved the age-old problem of dicamba volatility. Researchers from three universities presented data from current research investigating vapor loss of the new products. While Xtendimax and Engenia have reduced volatilization compared to older formulations, the combination of relatively high dicamba rates and applications during high temperatures can result in significant dicamba concentrations leaving treated fields.

The EPA officials used the teleconference as a means of gathering information on the scope of the problem, this knowledge will be used to chart the path forward. Both groups (academics and regulatory) acknowledged the need for new tools to help manage the herbicide resistant weed problem, but recognize that the extent of off-target injury observed in 2017 (and in some states last year) is unacceptable. Difficult decisions will need to be made on how dicamba is utilized in the future that will preserve the value of the tool while protecting sensitive plants in the landscape.

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Crop: Soybean
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