November 27, 2019

To the Arkansas State Plant Board,

Audubon Arkansas, state office of the nonprofit conservation organization National Audubon Society, is AGAINST the 2020 proposed dicamba rule as written. Please restore the April 16 cutoff, impose an 80-degree restriction, and double the buffers for sensitive crops and natural areas. We support the two new record keeping requirements.

A recent study by the Cornell Lab of Ornithology (3billionbirds.org) found that more than 1 in 4 birds have disappeared from the landscape in a mere half a century. Widespread herbicide use has contributed to the loss. The purpose of Arkansas’s regulations on pesticide use is to “...minimize the adverse effects of certain pesticides to: 1. Plants, including forage plants, or adjacent or nearby lands; 2. Wildlife in the adjoining or nearby areas; 3. Fish and other aquatic life in waters in reasonable proximity to the area to be treated; and 4. Humans, animals, or beneficial insects.” Current and proposed regulations on dicamba are not serving this purpose.

As shown yet again this past growing season in Arkansas and across the country, when dicamba is sprayed during warm weather it causes off-target damage.

You’ve received even more alleged dicamba case files in 2019 than in 2018. Whether or not a complaint results in a violation, someone’s property has been damaged, often without compensation. Yet the number of misuse complaints due to damage to private property you receive is an under-representation of the extent of dicamba’s off-target impacts, limited by the number of inspectors proactively investigating and number of citizens willing to file a complaint. Further, rural homeowners, their fencerows, and wooded areas, will continue to see damage that will likely never be reported. Few homeowners will connect tree damage with an application that took place up to a month prior to symptoms really showing up and while they were at work and did not witness the spraying.

Audubon Arkansas’s monitoring project to document apparent dicamba symptoms on vegetation on public lands revealed that dicamba’s off-target impact to plants was widespread in both geographic scope and number of species afflicted. As I presented to you on September 17, Audubon staff and trained volunteers made 243 observations of apparent dicamba symptomology on a variety of plants across 17 eastern Arkansas counties. Plant species impacted included sycamore, oak, maple, redbud, hackberry, mulberry, muscadine, morning glory, peppervine, and trumpetvine.
A study by Bish et al. at the University of Missouri published last month in the Journal of Environmental Quality found that two new formulations (BAPMA salt and DGA plus VaporGrip) were both detectable in the air up to 72 hours (3 days) after application, at which time they stopped measuring. They state that volatility, combined with the high rate of dicamba use and high occurrence of temperature inversions in our region accounts for the landscape-scale dicamba damage. They conclude "therefore, dicamba formulations might best be used in the early stages of the growing season, to control weeds prior to soybean planting instead of controlling weeds once the crops are established. This would limit the number of sensitive crops and plants actively growing at the time of applications, although it is still concerning with regards to sensitive tree species that may be breaking dormancy."

**Given that all forms of dicamba are too volatile to allow spraying over the top of crops during warm weather, an April 16 cutoff is warranted above all else.**

Barring that, an 80-degree temperature restriction should go along with any later date cutoff. Dicamba’s volatility is related to temperature. A temperature restriction using the forecasted high for the day of application and for the five-day forecast following application date, regardless of calendar date, should reduce off-target impacts. This also gives farmers flexibility should there be a cool spring, and accounts for variability in temperature caused by latitude and local landscape. Applicators are already required by the federal label and Arkansas regulations to record wind speed, wind direction and temperature at the time of application, plus be aware of humidity and inversions. Illinois imposed a temperature restriction so I don’t see why Arkansas can’t do it too. It is the scientifically justifiable course of action.

There are two problems with the current May 25 cutoff. The first is atmospheric loading in a compressed spray season, which our nationally renowned University of Arkansas weed scientist Dr. Jason Norsworthy said will have landscape-scale impacts to sensitive plants. Millions of acres sprayed at the same time that trees and other plants are leafing out could have lasting impacts on plant health. May is also the peak of migration, when millions of songbirds are fueled by insects that are feeding on young leaves. Second, this date cutoff does not take into account warm spells, early springs, and climate change. A new report from National Audubon Society (climate.audubon.org) reveals that climate change will cause more spring heat waves across Arkansas.

**Buffers are needed for public recreation areas, private property, and other areas with sensitive plants. These places need protection from chemical trespass.**

Audubon Arkansas’s monitoring found dicamba symptoms on plants growing on public lands such as university research farms, wildlife management areas, city parks, and cemeteries. Some of these sites are small and all are surrounded by row crops. What is a church group to do when every tree on their property dies off due to repeated annual
exposure? Are small rural churches supposed to sue for damages? Are churchyards and backyards not entitled to protection from chemical trespass?

I mapped the locations where inspector-collected plant tissue samples tested positive for dicamba. There are 14 places where Audubon’s observations of affected native plants occurred within two miles of dicamba-positive samples, as measured between sampling coordinates. The actual distance from spraying was likely closer if exact edge-of-field distances could be used. The University of Arkansas Northeast Research and Extension Center at Keiser is one of those locations, where more than experimental soybeans showed symptoms. The 1-mile buffer did not protect this station!

Public and private lands need buffers to protect them. Audubon Arkansas recommends a 2-mile buffer. In addition, Section XIII part B.2.a of the rule should include crops that are in the process of becoming certified organic. Farmers who are in the three-year certification process, and certified farmers who have been hit with dicamba and thus have to restart their three-year application deserve as much protection as fully certified farmers. The current rule disincentivizes certified organic farmers from submitting herbicide misuse complaints to you for fear of losing both their certification and their protective buffer; though if they have suffered chemical trespass with a 1-mile buffer, it is not protective.

**Audubon Arkansas supports the two new record keeping requirements**, namely the GPS map of the spray swath and the online registry. Unfortunately, no regulations will prevent bad actors from simply not keeping records, so I urge you to increase your inspections team. Further, when collecting pigweed tissue for testing, inspectors should also collect samples from nearby woody and herbaceous native plants that display symptoms. The Plan: Board is supposed to be a regulating agency, not a law enforcement agency, but sadly this is another symptom of dicamba.

As the Bird Conservation Director for Audubon Arkansas, I understand the need for herbicides to control weeds in the name of bird habitat protection. But it is time to consider safer and more sustainable alternatives to the weed management challenges facing farmers. There are certainly many techniques for managing weeds that involve much less use of herbicides, and which largely avoid the problems with volatility and weed resistance.

I urge you to follow the science, and to heavily weigh the documented impacts to our natural resources and agricultural community. Thank you for your consideration.

Sincerely,

Dan Scheiman, Ph.D.