

## PRIORITIZING COMPLAINT RESPONSES

The Nebraska Pesticide Act (the Act) authorizes the Nebraska Department of Agriculture (NDA) to regulate, in the public interest, the use and application of pesticides for the protection of human health and the environment. The Legislature found that pesticides, while potentially causing detrimental effects if used improperly, were also valuable to the state's agricultural production and to protect humans and the environment from insects, rodents, weeds, diseases and other forms of life which are classified as pests. Recently, the U.S. Environmental Protection Agency indicated that while some pesticides can cause adverse visual effects in non-target organisms, the agency must weigh the benefits of the pesticide against the risk of harm it could cause, in order to determine whether the adverse effects are considered unreasonable.

The Act authorizes NDA to investigate a report of claims of pesticide misuse or misapplication, if NDA has reasonable cause to believe that a violation of the Act has occurred. The Act also provides NDA discretion to decline an investigation if the report is made more than 90 days after the person claiming damages knew of the damages, is outside the scope of the Act, or is frivolous or minor\* in nature under the intent of the Act. Due to the high number of dicamba herbicide claims NDA has received since 2017 that have found no chemical residues, no nearby applications, or no measurable yield losses, NDA has developed the following priorities when determining whether a herbicide damage claim will be investigated, *in the order presented*:

- Direct and verifiable impacts on human health.
- Direct and verifiable impacts on endangered species or their habitat.
- Direct and verifiable impacts on surface or ground water resources.
- Direct and verifiable impacts on commercial agricultural commodities (crops, livestock, etc.).
- Direct and verifiable impacts on private property such as gardens, trees, lawns, or shared space.
- Indirect, or questionable adverse effects on the above, in the order presented.

\* Minor harm is defined in regulation as “*actual or potential harm which is or would be of short duration, has no lasting effects or permanent damage, or is easily reversible, and the harm did not or would not result in significant monetary loss*”.

### HERBICIDE SYMPTOMS

For suspected herbicide symptoms on plants, NDA will use the following range of visual symptoms when considering whether to respond to claims of off-target movement. The abbreviations below represent the following: **NS** = no or negligible symptoms, **MI** = minor symptoms, **MO** = Moderate symptoms, **SS** = serious symptoms.

**NS** Plants have normally shaped leaves, no stem or branch stunting, new leaves that emerge and unroll as expected under normal conditions, observed symptoms are not limited to single plants or localized clusters of plants.

[Below] Healthy hackberry leaves



[Above] Healthy wild grape and choke cherry leaves



**MI** Plant leaves show some cupping or distorted growth, but only on newly emerging leaves, or on older leaves with new leaves showing no symptoms. Soybeans showing minor leaf cupping, bumpy/leathery texture, or pinched tips will likely not experience yield reduction so long as all other growth factors remain favorable (soil moisture, insect or disease pressure, nutrition, heat/cold, additional pesticide exposure). Other symptoms might be leaf bleaching or yellowing, uniform dead spots, stem twisting or tissue discoloration.



[Above] Soybeans with pinched tips



Soybeans with bumpy/leathery texture



[Above] Hackberry with partial leaf cupping



Locust with partial leaf cupping



Grapes with partial leaf margin deformation



**MO** Plants show significant leaf cupping, distortion and stunting, but not on all leaves or branches of the plant. Some flowers or seed pods may be aborted if exposure occurred during flower initiation. Yield may be reduced in sensitive crops. Other symptoms could be whole plant discoloration, leaf drop, “scalping” of one side of tree or bush, or “shepard’s crook” appearance where the ends of branches turn black and become hooked.



Non-dicamba tolerant soybeans showing 50% or more leaves older than third extended trifoliolate leaf with cupping and tip pinching, and plant was likely in bloom at time of exposure. This photo is of non-dicamba tolerant soybeans inter-planted with dicamba tolerant soybeans, allowing for good comparison of the symptoms.



Mulberries with moderate leaf cupping, and many leaf maturity stages are affected.



Bradford pear tree with more than 50% of leaves and blooms showing leaf and stem curling and initiation of leaf tissue death.



**SS** Plants show serious, irreversible leaf damage, some leaves are dead or appear to be dying. Trees may experience significant leaf drop, stems will twist, curl or swell with lesions. Yield will likely be reduced in sensitive crops.



Grapes with serious phenoxy herbicide symptoms. Glyphosate can mimic symptoms, but also includes yellowing leaf tissue and less marginal leaf cupping.



Soybeans killed by contaminated tank mix



Oak leaves affected by corn herbicides