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Documentation for suspected herbicide drift damage

ALAN G. DEXTER

Extension Sugarbeet Specialist, North Dakota State University and the University of Minnesota.

Herbicide drift to non-target plants can cause damage sufficient to result in a significant monetary loss. If compensation for the loss will be pursued then one should demonstrate that the damage was caused by a herbicide, establish the source of the drift, and establish the amount of loss caused by the damage. Additional information on control of spray drift and field investigation of crop injury can be found in NDSU Extension Circulars W-253, the North Dakota Weed Control Guide, and A-657, Herbicide Spray Drift.

The following information should be collected to document the drift incident.

- 1. Record all possible information related to the suspected drift such as:**
 - a. Date of herbicide application.
 - b. Herbicide name, herbicide rate, and herbicide information.
 - c. Date damage was first observed.
 - d. Wind direction, speed, and temperature during application.
 - e. Shifts in wind direction and temperature change after application.
 - f. Type of applicator, boom height, nozzle type, spray pressure, nozzle orientation, gallons per acre applied.

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g. Crop and herbicide history of the damaged field.

2. Consider all possible causes for observed injury symptoms

- a. Consider diseases, insects, nutrient deficiencies, herbicide residue (carryover), and growing conditions.
- b. Assistance with identification of injury symptoms can be obtained from the local county extension agent, commodity agriculturalists, crop consultants, or plant diagnostic laboratories. Samples taken from the field should be well preserved and should represent a range from no injury to the most severe injury. Addresses for the Plant Diagnostic Laboratories are:

North Dakota State University, 206 Waldron Hall, Fargo, ND 58105; and

Plant Disease Clinic, Department of Plant Pathology, 495 Borlaug Hall, University of Minnesota, St. Paul, MN 55108-6030.
- c. Consider that the drift may have come from other than the closest field or from more than one field. Drift can move one mile or more under some conditions.
- d. Look for injured weeds between the damaged field and the suspected source of drift and document symptoms by species.
- e. Plant tissues and soil can be analyzed for herbicide residues. A list of private laboratories is provided in Circular W-253, the annual North Dakota Weed Control Guide. Also, the NDSU Plant Diagnostic Laboratory offers a soil test for the presence of Pursuit or Raptor and a plant tissue test to determine exposure to Roundup. However, laboratory tests may not provide a definitive answer since some herbicides damage plants at levels lower than detection limits, some herbicides are degraded rapidly in plants and soil, and a single analysis can search for only one herbicide. Thus, soil and tissue analysis can be costly and may not provide useful information for determining the drift source or the amount of yield loss that will be caused by the drift.

3. Make a map of the area

- a. Show the relationship of the damaged field to the surrounding fields and indicate crops, herbicide use, and dates of herbicide use around the damaged field.
- b. Show patterns of injury in the field and indicate severity of injury in various areas. Patterns of injury may help identify the source of drift.

4. Take a large number of quality photographs

- a. Photograph typical injury symptoms of tops and roots of crop and weeds.
- b. Photographs should include closeups of affected portions of plants to clearly illustrate the symptoms. Comparison of non-affected plants to affected plants often is useful.

- c. Aerial photos may be helpful to indicate the pattern, extent, and severity of damage.
- d. Record dates pictures were taken.

5. Visual evaluations

The first visual evaluation of crop damage from spray drift often results in an overestimation of the actual damage. Crops frequently recover and yield better than expected. Visual evaluations of crop damage taken too soon after the injury has occurred can be misleading. The actual extent of crop injury and the proportion of the plants which will die from the injury often can not be accurately assessed until 10 to 20 days after the damage has occurred.

6. Yield loss estimates are needed to establish the extent of the loss

- a. Visual estimates of yield loss are not reliable.
- b. Yield from a damaged area of the field should be compared to yield from an undamaged area.
- c. The comparison should be within the same field because yield comparisons between fields or between years are not reliable.

7. Promptly contact all parties

Promptly contact all parties suspected of being involved in the drift incident and all involved insurance companies so they can visit the field and substantiate that information collected is accurate and came from the damaged field.

8. Forms

North Dakota law requires that a “Report of Loss” form and a “Proof of Service” form must be completed and filed with the Commissioner of Agriculture, the applicator, and the person contracting the work within 60 days from the occurrence of herbicide drift damage and prior to the time when 50 percent of the crop is harvested. Failure to file the forms can result in loss of the right to pursue court action to recover damages. Forms can be obtained from the North Dakota Department of Agriculture, 600 E. Boulevard, Bismarck, ND 58505-20020. Telephone: (800) 242-7535 or (701) 328-2231.

9. Minnesota law

Minnesota law encourages, but does not require, that herbicide drift damage be reported to the Commissioner of Agriculture. A “Request for Inspection” should be obtained from the Commissioner of Agriculture and should detail names and

addresses of the person owning the damaged plants, the person for whom the application was done, and the applicator. The date of application and a description of the damage also should be included. The "Request" should be submitted as soon as possible after the damage has occurred. An agent of the Commissioner of Agriculture can inspect the alleged damages if a timely "Request" is submitted. "Request for Inspection" forms can be obtained from the Minnesota Department of Agriculture, Agronomy Services Division, Telephone: (612) 296-6121.