Herbicide Crop Injury, Herbicide Residual Injury

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Outline

1. Causes of Crop Injury
2. Diagnosing Herbicide Injury
3. Pictures of Drift Injury
4. Pictures of Residual Injury
5. Field Pictures

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1. Causes of Crop Injury

A. Long residual herbicides - carryover.
B. Incorrect use of Roundup - drift.
C. Incorrect use of very active herbicides.
D. Use of inappropriate or unregistered herbicides.
E. Big farms constraints.

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A. Long Residual Herbicides

- Sulfonylureas: Accent, Beacon, Permit, Matrix
- Imidazolinones: Scepter, Pursuit, Raptor
- Sulfonamides: Broadstrike, Firstrate
- Clomazone: Command
B. Incorrect use of Roundup

Spraying in windy weather
C. Incorrect Use of Active Herbicides

- Rate too high
- Overlapping passes
- Inattention to plant back restrictions.

Always read the label in full
D. Use of Inappropriate or Unregistered Herbicides

- Similar names, e.g. Lorox Plus - mix of Lorox + Classic (SU).

- Herbicides that are registered on related field crops - e.g. Balance (field corn, not sweet corn)
E. Big Farms Constraints

• Pressure to cover many acres in limited time - spray in bad weather.

• Poor cleaning of large equipment.

• Lack of understanding of potential problems.
2. Diagnosing Herbicide Injury

- Document everything
- Observe the site ASAP
- Take photos of crops, weeds, drift patterns
- Collect injured and non-injured plant samples
- Collect spray mix, containers, water from source.

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2. Diagnosing Herbicide Injury

• Obtain weather data from nearest weather station
• Obtain herbicide history of field for current and previous years
• Observe lay of land, elevation, source of irrigation, prevailing wind, condition of farm
• Observe crop and weed symptoms
• Observe weed control by species.
3. Pictures of Drift Injury

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Dicamba drift injury in Tomato
2,4-D drift injury in Watermelon
2,4-D drift injury in Cucumber
4. Pictures of Residual Injury
Maverick was applied on Wheat
No Herbicide Residue
Maverick Residue Injury on Pumpkin
5. Field Pictures
Fertilizer Injector
Irrigation Switch – no bending
Watermelon
Cabbage
Cantaloupe/Rye
Pepper
Tomato - Early Season
Tomato - Mid-Season