

9-29-2009

## Update on Hail Damaged Grain


Charles R. Hurburgh

*Iowa State University*, tatry@iastate.edu

Alison E. Robertson

*Iowa State University*, alisonr@iastate.edu

Follow this and additional works at: <http://lib.dr.iastate.edu/cropnews>

 Part of the [Agricultural Science Commons](#), [Agriculture Commons](#), [Agronomy and Crop Sciences Commons](#), [Meteorology Commons](#), and the [Plant Pathology Commons](#)

---

### Recommended Citation

Hurburgh, Charles R. and Robertson, Alison E., "Update on Hail Damaged Grain" (2009). *Integrated Crop Management News*. 536.  
<http://lib.dr.iastate.edu/cropnews/536>

**The Iowa State University Digital Repository provides access to Integrated Crop Management News for historical purposes only. Users are hereby notified that the content may be inaccurate, out of date, incomplete and/or may not meet the needs and requirements of the user. Users should make their own assessment of the information and whether it is suitable for their intended purpose. For current information on integrated crop management from Iowa State University Extension and Outreach, please visit <https://crops.extension.iastate.edu/>.**

---

# Update on Hail Damaged Grain

## **Abstract**

The situation with the hail damage to crops in north central Iowa is becoming clearer. On Aug. 9, 2009 an intense storm travelled approximately 150 miles from western Sac and Ida counties to eastern Grundy County. The hail swath was about ten miles wide, between Highways I-175 and US-20, with three miles in the middle being almost completely lost. The stones were large, which created major damage to both plants and developing grain. Earlier storms in northeast Iowa also created large losses but the grain itself was less developed.

## **Keywords**

Agricultural and Biosystems Engineering, Plant Pathology

## **Disciplines**

Agricultural Science | Agriculture | Agronomy and Crop Sciences | Meteorology | Plant Pathology

Subscribe to Crop News






#### Archives

[2015](#)
[2014](#)
[2013](#)
[2012](#)
[2011](#)
[2010](#)
[2009](#)
[2008](#)
[Previous Years](#)

#### ISU Crop Resources

[Extension Field Agronomists](#)
[Crop & Soils Info](#)
[Pesticide Applicator Training](#)
[Agronomy Extension](#)
[Entomology Extension](#)
[Plant Pathology Extension](#)
[Ag and Biosystems Engineering Extension](#)
[Agribusiness Education Program](#)
[Iowa Grain Quality Initiative](#)
[College of Agriculture and Life Sciences](#)
[ISU Extension](#)

# Integrated Crop Management NEWS

 PRINT STORY  
 EMAIL STORY  
 ADD TO DELICIOUS  
 ATOM FEED  
 FOLLOW ON TWITTER

## Update on Hail Damaged Grain

By Charles R. Hurburgh, Department Ag and Biosystems Engineering;  
Alison Robertson, Department of Plant Pathology

The situation with the hail damage to crops in north central Iowa is becoming clearer. On Aug. 9, 2009 an intense storm travelled approximately 150 miles from western Sac and Ida counties to eastern Grundy County. The hail swath was about ten miles wide, between Highways I-175 and US-20, with three miles in the middle being almost completely lost. The stones were large, which created major damage to both plants and developing grain. Earlier storms in northeast Iowa also created large losses but the grain itself was less developed.

For corn, the marketing concern is the mold damage created by bruising. Mold on standing corn is often accompanied by one or more mycotoxins. See [www.extension.iastate.edu/CropNews/2009/0818robertsonmunkvold.htm](http://www.extension.iastate.edu/CropNews/2009/0818robertsonmunkvold.htm) and other information at [www.iowagrains.org](http://www.iowagrains.org). Producers and grain handlers affected by the hailstorm can go through a short checklist to aid in making decisions.

### 1. Scout fields for damaged corn

- If mold damage appears on more than 10 percent of kernels (approximately)
  - Contact crop insurance first to determine what quality loss procedures apply. Adjustment must be made in the field or immediately at harvest by the adjuster. Timely adjustment is important for an accurate settlement.
  - At harvest; if you are storing the corn temporarily or feeding the corn, take a composite sample per field (a pound or more per load). Test composite for toxins; work with nutritionist or veterinarian. Storage beyond the fall is not recommended.
- If mold damage appears on fewer than 10 percent of kernels, toxins may be present but are less likely. Storage and grading will still be issues.

2. Damage grading at local markets (elevator or processor) is difficult at harvest; and often is controversial.

- A two-probe sample should be taken per load, with only mechanical division (Boerner divider, etc.) to get the approximately 125 grams to be examined.
- Damage should be sorted on a wheat colored tabletop, with comparison to the USDA photographs.
- Discounted samples should be retained until the grain is settled.
- Use the local USDA-GIPSA service point ([see list](#)) to settle disputes, using the retained sample. Periodically send some of the retained samples to GIPSA for comparison.
- If there is a question over the grade, sellers should raise it and ask for the Official test right away because samples do not keep.

- Even if average damage levels are not high enough to create discounts, keep daily composites of the inbound receipts, and grade them each day. This will allow inventory records to be accurate.
- If toxins are measured, a minimum of 5 pounds per sample is required. If a positive toxin test occurs, whether from a crop insurance adjustment, a market test, or a personal test, the corn must be used/marketed for use according to the FDA advisory levels.

### 3. Storage on-farm or at commercial markets

- Assign grain to storage by test weight; lighter corn will not store well, needs to be dryer and needs more aeration. Light corn should be the first sold; any corn less than 50 lb/bu is a very high storage risk, even in the winter.
- To determine average quality of the grain in a bin, use a combined sample of 1 pound or more taken per load.
- Cool and dry immediately, but expect more breakage in handling. Corn already moldy should be stored at 1-2 percent lower moisture than sound corn.
- Clean any corn known or suspected to contain toxins. This will likely reduce levels. Three-sixteenths inch square mesh screens will take out most broken kernels. For high toxin levels, one-quarter inch mesh may have to be used, but some whole kernels will pass through. If the screenings are to be fed, get a complete toxin test first through a nutritionist or veterinarian.
- Remove center cores of bins. This will take out much of the remaining fine material.

Many of these recommendations are good grain management practice in any situation, but they are more important when quality has been deteriorated in the field.

For more information on this topic refer to the ICM News article on [adjusting hail-damaged crops for crop insurance reporting](#) written by William Edwards, extension economist.

*Charles Hurburgh is a professor of Agricultural and Biosystems . He can be contacted at (515) 294- or by email at [tatry@iastate.edu](mailto:tatry@iastate.edu). Alison Robertson is an assistant professor of plant pathology with research and extension responsibilities in field crop diseases. Robertson may be reached at (515) 294-6708 or by email at [alisonr@iastate.edu](mailto:alisonr@iastate.edu).*

---

This article was published originally on 9/29/2009 The information contained within the article may or may not be up to date depending on when you are accessing the information.

---

Links to this material are strongly encouraged. This article may be republished without further permission if it is published as written and includes credit to the author, Integrated Crop Management News and Iowa State University Extension. Prior permission from the author is required if this article is republished in any other manner.