

Key Highlights

A Storm, Measured in Bushels

The model yield forecast fell 26 bu/ac after the July 26 hail event: roughly 1,900 forecast bushels across the 74.7-acre field.

Evidence for the Claim

Dated pre- and post-storm flights, paired with the field weather record, give the grower objective support for a crop-insurance claim.

Scouting, Targeted

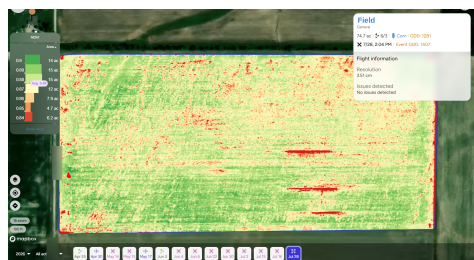
NDVI and yield forecast declined in the same row-aligned streaks, sending scouts straight to the hardest-hit zones.

Hail Damage | Weather Event

Before-and-After Drone Imagery Documents 1,900 Bushels Lost to a Single Hail Event

Background:

This Illinois corn grower's 74.7-acre field was evaluated with high-resolution drone imagery collected before and after a significant weather event: a pre-event flight on July 16, 2026, and a post-event flight on July 28. The corn was at roughly V12 when a thunderstorm accompanied by hail moved through on July 26. The storm hit on the hottest day of the reviewed weather window, with a high of 95°F and 0.49 inches of recorded precipitation.



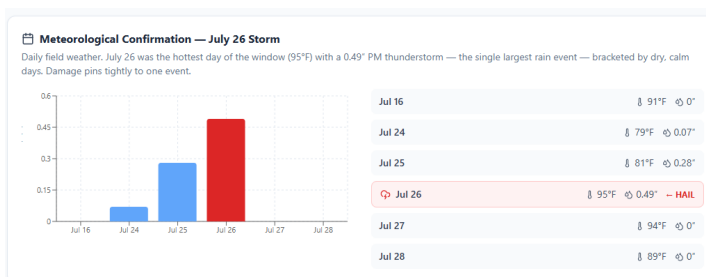
NDVI on July 16 (left) and July 28 (right). The field average slipped from 0.91 to 0.88, and acres in the stressed band more than tripled after the storm.

Challenge:

Following the July 26 storm, the grower and agronomy team needed answers: how much of the field had been affected, whether the apparent damage represented a meaningful change in crop health and yield potential, where the damage was concentrated, and whether there was sufficient objective evidence to support scouting, harvest planning, and an insurance claim.

A conventional field inspection could identify visible damage, but consistently quantifying the field-wide change, and comparing conditions immediately before and after the storm, is difficult from the ground. The primary concern was that hail-related canopy or stalk damage had reduced the field's yield potential. Without a reliable before-and-after comparison, the grower would have limited ability to document the scale of the loss or prioritize the most severely affected areas for ground-truthing.

One storm, one before-and-after comparison: 26 bu/ac off the forecast, and roughly 1,900 bushels documented for the insurance conversation.



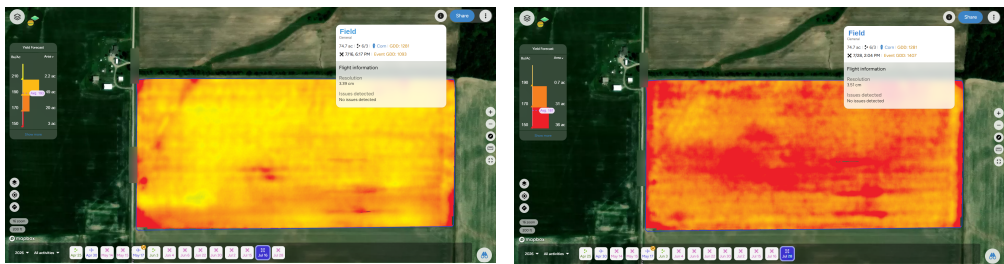
The July 26 storm in the field weather record: 95°F and 0.49 inches of rain, bracketed by dry, calm days, pinning the damage to a single event.

Before-and-After Drone Imagery Documents 1,900 Bushels Lost to a Single Hail Event

Solution:

AGMRI provided a dated, high-resolution comparison between the July 16 pre-storm flight and the July 28 post-storm flight, evaluating field-average NDVI, acres in stressed NDVI classifications, the field-average model yield forecast, acres across yield-forecast tiers, and the field-level weather record surrounding the July 26 event. The imagery showed row-aligned damage patterns in which declining NDVI and declining yield forecasts were co-located throughout the field.

Field-average NDVI slipped from 0.91 to 0.88 while the model yield forecast fell from 193 bu/ac to 167. Acreage forecast at 190 bu/ ac or better collapsed from 51.7 acres to just 0.7, while acreage at 150 bu/ac or lower grew from 3.0 acres to 36.0. The before-and-after view let the team identify the hardest-hit portions of the field and set targeted areas for additional scouting and stand evaluation.



Yield forecast on July 16 (left) and July 28 (right). The field average dropped from 193 bu/ac to 167, and 190-plus-bushel acreage collapsed from 51.7 acres to 0.7.

Before → After (drone-measured, viewer values)				
Metric	Jul 16 (pre)	Jul 28 (post)	Change	%
NDVI (field avg)	0.91	0.88	-0.03	-3.3%
Yield Forecast	193 bu/ac	167 bu/ac	-26 bu/ac	-13.5%
Stressed acres (NDVI ≤0.86)	5.8 ac	18.8 ac	+13.0 ac	+224%
Low-yield acres (≤150 bu)	3.0 ac	36.0 ac	+33.0 ac	+1100%

The before-and-after comparison at a glance: every drone-measured metric moved against the field after the July 26 storm.

Results:

The post-event analysis put hard numbers on the storm: **26 bu/ac of forecast yield reduction** and roughly **1,900 total forecast bushels lost**. NDVI and yield forecast moved in directional agreement across every evaluated classification: a 3.3% NDVI decline corresponding with a 13.5% forecast decline, demonstrating the amplified yield effect of crop injury at a sensitive reproductive stage.

The documented flights, combined with the July 26 weather record, provide **objective supporting evidence for a potential crop-insurance claim**, and the maps enable targeted ground-truthing: scouts can focus on the hardest-hit zones to determine whether affected plants are lodged and potentially recoverable, or permanently damaged. The reported values are model forecasts rather than measured harvest yield, so final impact should be validated with harvest data, but at \$4.00–\$5.00 corn, the estimated economic exposure already runs roughly **\$7,600–\$9,500**.

-26 bu/ac

FORECAST DROP AFTER THE HAIL

~1,900 bu

FORECAST BUSHELS DOCUMENTED

51.7 → 0.7 ac

190+ BU ACRES, BEFORE VS. AFTER