

Agricultural Losses and Damages from *Hurricane Idalia*

The purpose of this research study is to rapidly estimate the agricultural impacts resulting from Hurricane Idalia in the state of Florida. Survey results have been combined with a detailed baseline database on agricultural assets in Florida to estimate and communicate agricultural losses and damages in support of informed local, state, and federal decision-making processes related to disaster declaration, response, and relief.

Event Description

The tropical system that would become Hurricane Idalia became a tropical depression on August 26, 2023 as it moved across the western Caribbean Sea. Later, it rapidly intensified, strengthening into a hurricane on August 29, briefly attaining Category 4 strength prior to making landfall at Keaton Beach, FL as a strong Category 3 hurricane. Hurricane Idalia then moved northeast, impacting a broad swath of northern Florida and crossing into southeast Georgia as a Category 2 hurricane.

Impacted Agricultural Acreage

Nearly 3.5 million acres of agricultural lands were affected, of which over 75% was grazing land. Across all commodity groups, around 78% of impacted acreage experienced low-intensity weather conditions (Hurricane Composite Intensity Index [HCII] levels 1-3), 21.5% of impacted acreage experienced moderate-intensity weather conditions (HCII levels 4-9), and only 0.13% of impacted acreage experienced high-intensity weather conditions (HCII levels 10-12). The commodity groups that were most affected (in terms of overall acreage impacted) by Hurricane Idalia (not including grazing land) were Field and Row Crops (442,659 acres), Citrus (206,617 acres), and Vegetables and Melons (65,099 acres).

Production Losses

Estimated production losses for agricultural producers in Florida were over \$276 million. The commodity groups that were most affected in terms of production losses are Vegetables, Melons, and Potatoes (\$134.8 million), Animals and Animal Products (\$87.5 million), and Field and Row Crops (\$28.8 million). There were no reports of significant or widespread losses for citrus crops due to Hurricane Idalia. Losses were generally higher in counties experiencing higher intensity hurricane conditions or where the value of agricultural production in the path of the storm was particularly high.

Infrastructure and Production Damages

Reported damages to infrastructure include perennial plantings, storage structures, aquaculture structures and equipment (bags/cages/floats), irrigation systems, greenhouses and other growing structures, livestock sheds (poultry, cattle, equine, etc.), farm homes, pallets, farm equipment (tractors, implements, vehicles, greenhouse heating/cooling, etc.), fences, and livestock watering points. Survey respondents also reported damages to or destruction of stored agricultural inputs including fertilizer, honey bee feed, feed grain, and seeds as well as to stored harvested products including corn, wheat, rye, hay, haylage, silage, and peanuts.

