October 2024

PRELIMINARY ESTIMATES OF DAMAGE TO FLORIDA AGRICULTURE FROM HURRICANE MILTON

Florida Department of Agriculture and Consumer Services

Commissioner Wilton Simpson

PRELIMINARY IMPACT SUMMARY

Out of **51** Florida counties impacted by hurricane and tropical storm winds, **34 counties** were listed by **FEMA** as disaster areas: Brevard, Charlotte, Citrus, Clay, Collier, DeSoto, Duval, Flagler, Glades, Hardee, Hendry, Hernando, Highlands, Hillsborough, Indian River, Lake, Lee, Manatee, Marion, Martin, (Miccosukee Indian Reservation), Okeechobee, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, and Volusia.

Total crop and infrastructure losses: Hurricane Milton made landfall on October 9, 2024, near Siesta Key in Sarasota County, Florida, as a Category 3 hurricane. On September 22, 2022, Hurricane **Ian** (Category 4) made a landfall in the same area as Hurricane Milton near Fort Myers, and it was estimated to have caused crop production and infrastructure losses of $1.18 to $1.89 billion to the state's agriculture. Hurricane Milton covered a wider agriculture production area of the state. Based on initial reporting and communication with farmers, the **preliminary** total crop and infrastructure losses are estimated at the range of **$1.50 - $2.50 billion*.**

Animals and Animal Products: Major structural impacts to cattle ranches in the affected counties. Early assessments show major impact on dairies and cattle in Citrus, DeSoto, Glades, Hardee, Hendry, Highlands, Manatee and Okeechobee counties. Power outages caused disruptions to milking cows and post-hurricane disruptions affect milk production. Industry reported significant infrastructure damages to the dairy and cattle infrastructure.

Aquaculture: Major damages sustained to the aquaculture industry due to area of impact. FDACS aquaculture division is conducting damage assessment of facilities in the disaster declared counties.

Citrus: The majority of the citrus acreage for the state of Florida is situated in the affected counties with significant production losses expected. Most of these losses are due to fruit drop, damage to branches, and impacts from heavy precipitation and flooding. Growers are also reporting heavy infrastructure damage, and there are major concerns of flood-caused tree mortality in the near-future.

Field Crops: Major impacts to field crops in the affected counties. Cotton, peanut, and rice crops experienced minor to catastrophic damages in affected counties.

Forestry: Hurricane Milton followed similar tracks to Hurricane Ian in 2022. Florida Forest Service is conducting aerial surveys to refine the timber damage assessment.

Fruits (Non-Citrus) and Tree Nuts: Major products in hurricane Milton's track include blueberries, strawberries, and tropical fruits among many others. These commodities may have suffered significant damages, which are still being assessed.

Greenhouse/Nursery: Nurseries and sod farms suffered significant damages in the affected counties including wind damage, power outages, flooding and saltwater intrusion due to the hurricane's storm surge.

Vegetables and Melons: These commodities may have suffered significant damages, which are still being assessed.

These figures are preliminary estimates and may change as additional data are available.

HURRICANE MILTON LANDFALL

Hurricane Milton made landfall on October 9, 2024, near Siesta Key in Sarasota County, Florida, as a Category 3 hurricane. In addition to causing major devastation to Florida's west coast, East coast and central Florida communities, Milton was large and powerful enough to bring hurricane and tropical storm conditions to the majority of Florida counties. Hurricane Milton's path coincided with some of Florida's most productive agricultural landscapes for Aquaculture, Avocados, Bell Peppers, Blackberries, Blueberries, Broccoli, Cabbage, Cattle, Citrus, Christmas Trees, Corn, Cotton, Cucumbers, Equine, Floriculture, Grapes, Leafy Greens, Mangos, Milk, Other Animal Products, Peaches, Peanuts, Pecans, Potatoes, Poultry, Rice, Snap Beans, Soybeans, Strawberries, Sugarcane, Sweet Corn, Tangerines, Tomatoes, Watermelons, etc.

In the wake of this historic storm, the Florida Department of Agriculture and Consumer Services (FDACS) was informed by several industry leaders across the state describing the overwhelming impacts this storm had on not only their current year crop losses, but the further devastation of damaged infrastructure: destroyed fences, shade structures, row crops; uprooted or cracked trees and bushes and damages to the cattle and poultry industries.

In total, 51 of Florida's counties were declared as impacted counties by Florida Governor DeSantis: Alachua, Baker, Bradford, Brevard, Broward, Charlotte, Citrus, Clay, Collier, Columbia, DeSoto, Dixie, Duval, Flagler, Gilchrist, Glades, Hamilton, Hardee, Hendry, Hernando, Highlands, Hillsborough, Indian River, Lafayette, Lake, Lee, Levy, Madison, Manatee, Marion, Martin, Miami-Dade, Monroe, Nassau, Okeechobee, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Putnam, Sarasota, Seminole, St. Johns, St. Lucie, Sumter, Suwannee, Taylor, Union, and Volusia.

The following 14 central Florida counties experienced hurricane force winds and coastal flooding:

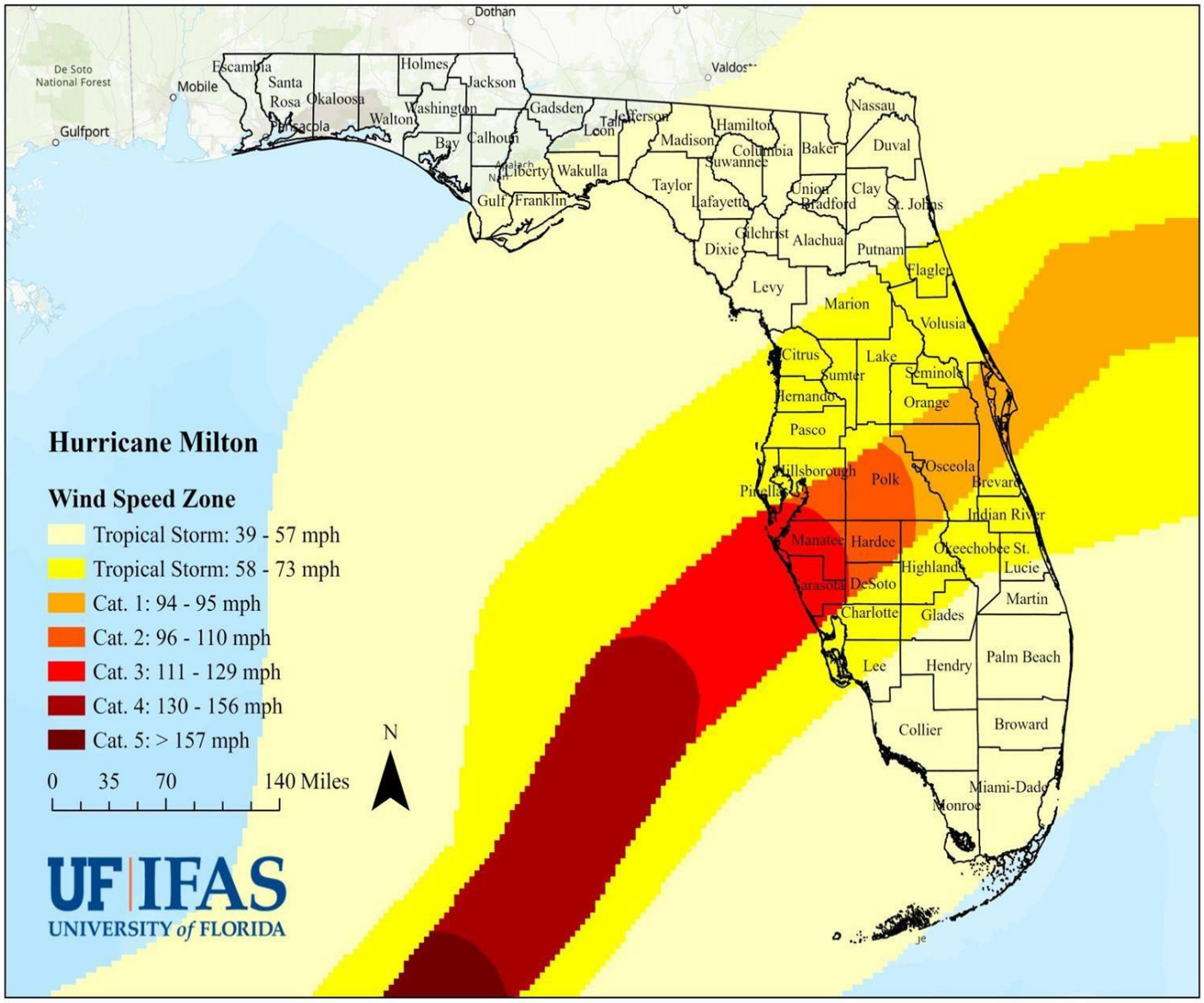
- Polk
- Osceola
- Manatee
- Brevard
- Hardee
- Sarasota
- Hillsborough
- Orange
- DeSoto
- Highlands
- Charlotte
- Pinellas
- Volusia
- Seminole

This document provides an early summary of the estimated losses to Florida's diverse agricultural sectors, accounting for the loss in current year crop production in citrus, fruit and tree nuts, vegetables and melons, field and row crops, horticultural crops, animals/animal products, and forestry, as well as the associated losses to infrastructure.

These estimates are based on data obtained from the UF-IFAS Preliminary Assessment of Hurricane Milton, USDA National Agricultural Statistics Service, the Florida Census of Agriculture, USDA My Market News, Timber Damage Estimates prepared by the Florida Forest Service, and the early communication conducted by FDACS with industry leaders and individual producers.

The purpose of this document is to inform policymakers on the preliminary extent of the damage and losses experienced and expected by agricultural producers in Florida in the wake of Hurricane Milton. The estimates are based on the best available information, including satellite imagery, published agricultural statistics, and early surveys with agricultural producers who are currently engaged in large-scale recovery efforts. These estimates will be updated as additional information is gathered and becomes available. Most importantly, this is not a funding request to the State or Federal government; rather it is meant to inform policymakers.

HURRICANE MILTON WIND SWATH



Source UF IFAS

Figure 1. *Wind swath pattern of Hurricane Milton as it impacted Florida. Source: Geospatial data on the wind swath of Hurricane Milton are derived from NOAA NHC (*https://www.nhc.noaa.gov/gis/*).*

FEMA DISASTER DECLARATION MAP

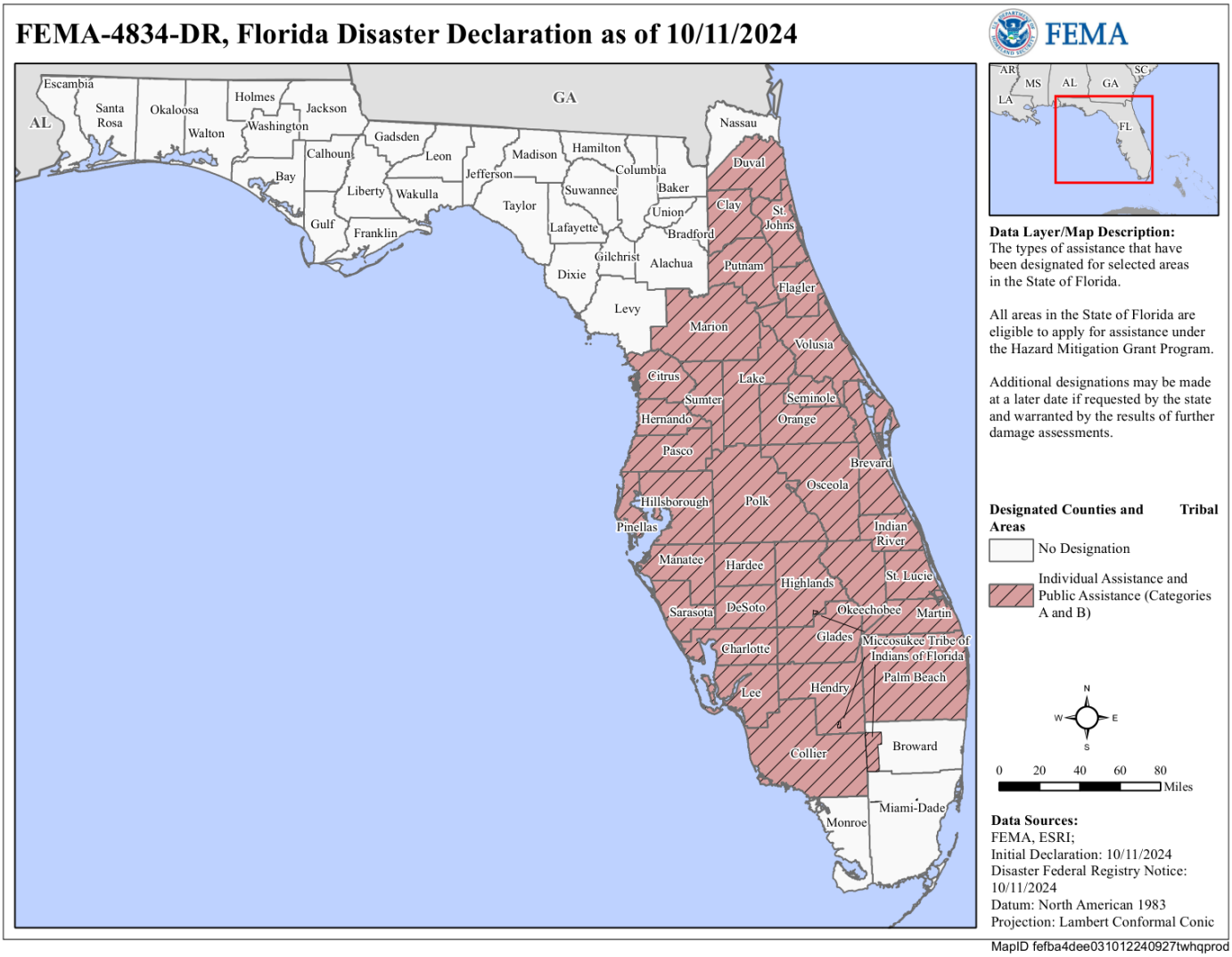
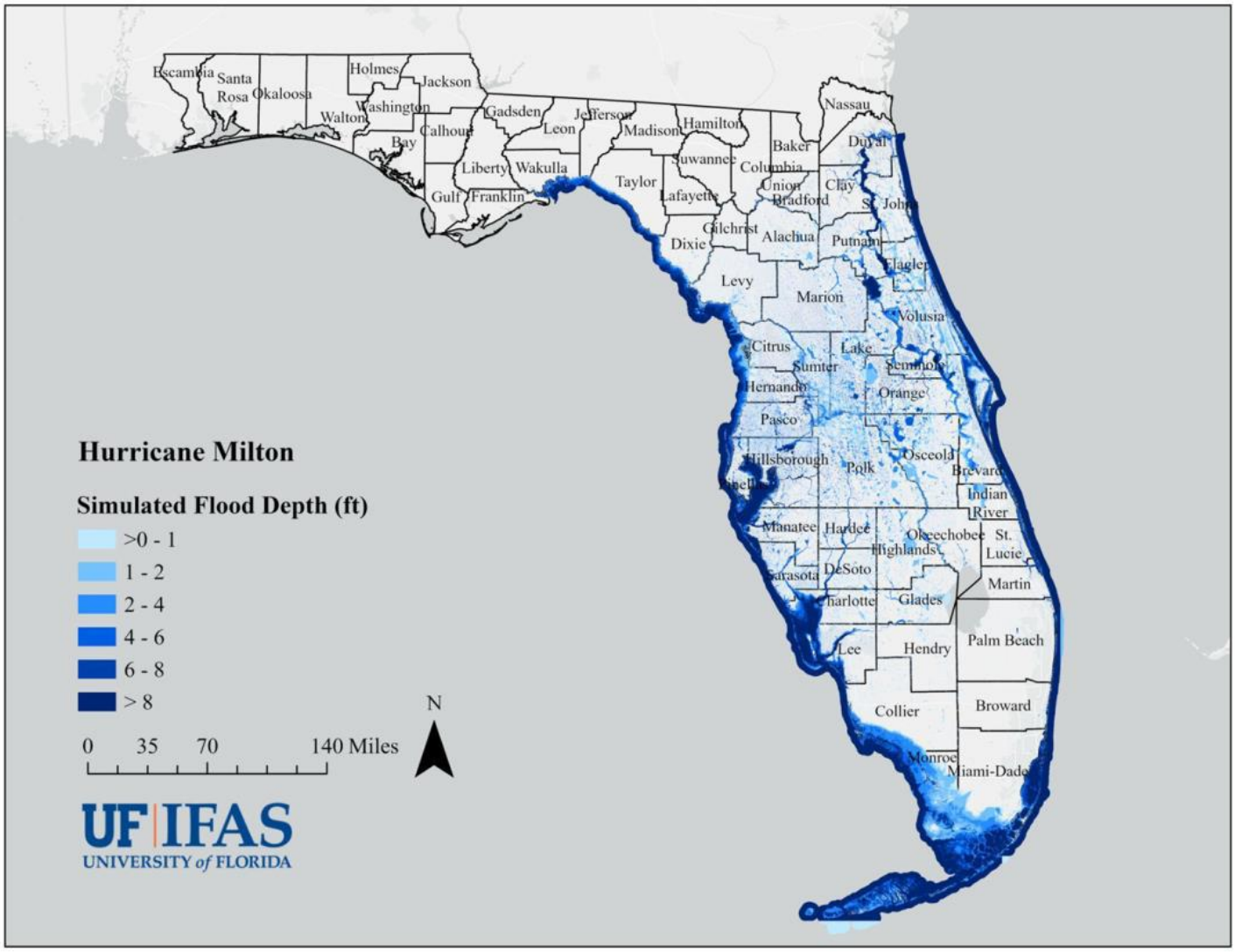


Figure 2. *FEMA Florida Disaster Declaration as of 10/11/2024*
Source: ***dec_4828.pdf (fema.gov)***

MODELED FLOODING ASSOCIATED WITH HURRICANE MILTON

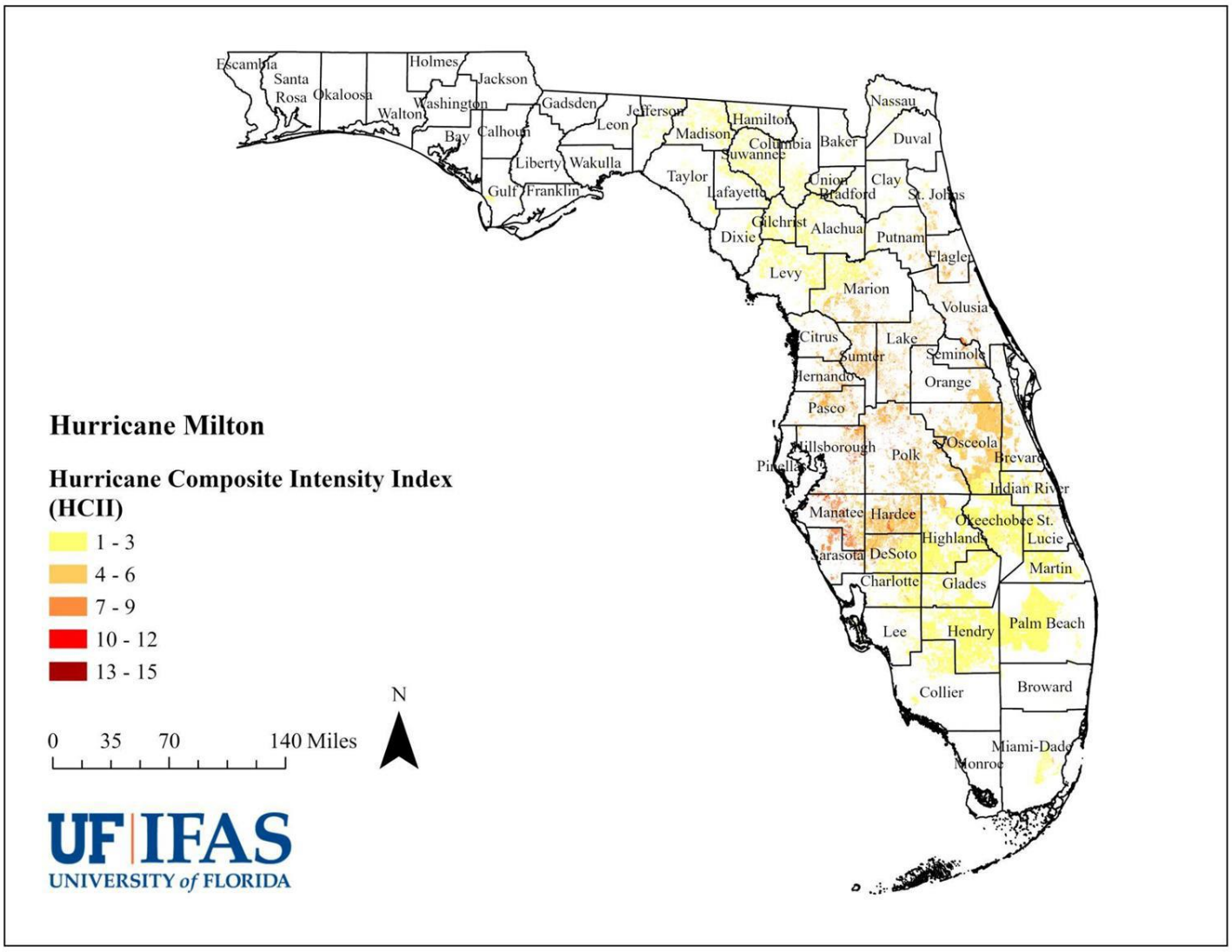


Source UF IFAS

Figure 3. *Estimated flood inundation depth caused by Hurricane Milton in Florida.*

Source: Estimated flood inundation data are retrieved from Pacific Northwest National Laboratory's Rapid Infrastructure Flooding Tool (https://open-rift-pnnl.hub.arcgis.com/documents/0dcc98b06bb8478c8ff708df796fe047/about)

AGRICULTURAL LANDS AFFECTED BY HURRICANE MILTON



Source UF IFAS

Figure 4. *Hurricane Composite Intensity Index (HCII) level for agricultural lands impacted by Hurricane Milton in Florida.*

Source: The agricultural lands geospatial data are from the Florida Statewide Agricultural Irrigation Demand (FSAID) Agricultural Lands Geodatabase (ALG) developed by the Florida Department of Agriculture and Consumer Services (FDACS) (https://www.fdacs.gov/Agriculture-Industry/Water/Agricultural-Water-Supply-Planning).

REFERENCES:

Table 2. Estimated acreage of affected agricultural lands by commodity group and HCII level for Hurricane Milton.

Commodity Group	Hurricane Composite Intensity Index (HCII)					Total
	1~3	4~6	7~9	10~12	13~15	
Animal and Animal Products	2,333,393	1,468,482	334,672	28,850	453	4,165,850
Citrus	148,235	131,412	38,737	4,927	223	323,535
Field and Row Crops	897,031	54,868	11,914	1,263	10	965,085
Fruit (Non-citrus)	16,967	1,212	128	10	0	18,318
Greenhouse/Nursery	49,606	25,224	4,302	231	-	79,363
Vegetables, Melons, and Potatoes	145,286	30,240	25,593	185	2	201,306
Total	**3,590,518**	**1,711,438**	**415,347**	**35,466**	**688**	**5,753,457**

Notes: [1] Animals and Animal Products acreage includes grazing land. [2] Field and Row Crops acreage includes field crops, hay, and sugarcane. The acreage of cotton is adjusted with the county level harvested acres of cotton from USDA 2022 Census data. [3] Citrus acreage includes non-bearing acreage and was adjusted to reflect the 2023 Commercial Citrus Inventory Preliminary Report from USDA NASS. [4] The acreage of pecan in the Fruit and Tree Nuts group is adjusted with the county level bearing and non-bearing acres of pecan from USDA 2022 Census data.

Source UF IFAS

******These figures are preliminary and may change as additional data are available. ******

Table 3. *Estimated annual value of production ($2024) on agricultural lands affected by Hurricane Milton by commodity group and HCII level.*

Commodity Group ($2024)	Hurricane Composite Intensity Index (HCII)					Total
	1~3	4~6	7~9	10~12	13~15	
Animal and Animal Products	$ 1,125,745,000	$ 443,233,000	$ 128,400,000	$ 13,303,000	$ 308,000	$ 1,710,990,000
Citrus	$ 294,360,000	$ 260,954,000	$ 76,923,000	$ 9,783,000	$ 443,000	$ 642,464,000
Field and Row Crops	$ 1,411,047,000	$ 41,429,000	$ 9,786,000	$ 1,161,000	$ 10,000	$ 1,463,433,000
Fruit (Non-citrus)	$ 110,550,000	$ 9,058,000	$ 976,000	$ 97,000	$ -	$ 120,681,000
Greenhouse/Nursery	$ 1,303,071,000	$ 911,561,000	$ 187,699,000	$ 14,080,000	$ -	$ 2,416,411,000
Vegetables, Melons, and Potatoes	$ 1,612,280,000	$ 338,929,000	$ 361,818,000	$ 2,441,000	$ 18,000	$ 2,315,486,000
Total	**$ 5,857,053,000**	**$ 2,005,164,000**	**$ 765,603,000**	**$ 40,865,000**	**$ 780,000**	**$ 8,669,466,000**

Source UF IFAS

******These figures are preliminary and may change as additional data are available. ******

DATA SOURCES

1. Florida Agriculture Overview and Statistics / Agriculture Industry / Home - Florida Department of Agriculture & Consumer Services (fdacs.gov)

2. List of Reports and Publications | 2022 Census of Agriculture | USDA/NASS

3. Food and Resource Economics Department - University of Florida, Institute of Food and Agricultural Sciences - UF/IFAS (ufl.edu)

Prepared and submitted by:
Florida Department of Agriculture and Consumer Services
Division of Marketing and Development
Bureau of Strategic Development
Marketing.Reports@fdacs.gov