County-Level Agricultural Losses from

Hurricane Stelene

The tropical system that would become Hurricane Helene developed into a tropical storm on September 24, 2024 in the northwest Caribbean Sea near the Yucatan Peninsula and then strengthened into a hurricane the next day as it moved into the Gulf of Mexico. It rapidly intensified, attaining Category 4 strength with 140 mph winds prior to making landfall near Perry, FL (Taylor County) on September 26. After landfall, Helene continued moving northnortheast, impacting north-central Florida and the southwestern peninsula. It weakened to a Category 2 hurricane after crossing into Georgia, and then further downgraded as it moved through the Appalachian region, affecting parts of South Carolina, North Carolina, Virginia, and Tennessee. Hurricane Helene was associated with high winds, heavy rainfall, significant storm surge, and moderate inland flooding.

Hurricane Helene affected nearly 6.1 million acres of agricultural lands across 62 counties in Florida. The annual value of agricultural production on these affected lands is estimated over \$8.7 billion statewide. Preliminary statewide estimates of agricultural production losses in Florida associated with Hurricane Helene range from \$40.3 million to \$162.2 million (Court, Qiao, Koeneke, & McDaid, 2024). The estimated losses vary across counties as illustrated in the maps below. The highest estimated losses occurred in northern and southwestern Florida, concentrated in areas with extensive, high value agricultural production and/or regions exposed to the most intense weather conditions.

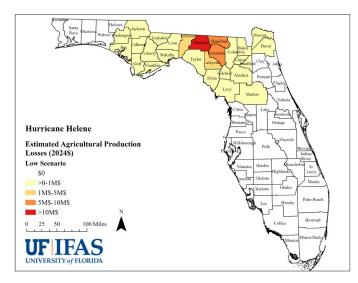


Figure 1. Estimated low scenario for agricultural losses (2024\$) due to Hurricane Helene in each county of Florida.

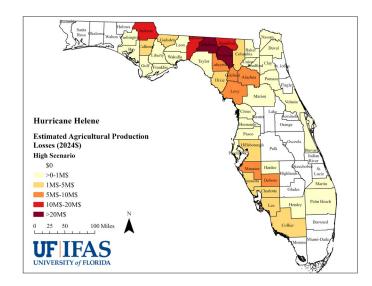


Figure 2. Estimated high scenario for agricultural losses (2024\$) due to Hurricane Helene in each county of Florida.





Table 1. Estimated county-level affected acreage, value of annual production on affected lands (2024\$, Thousands), and range of estimated agricultural production losses (2024\$, Thousands) due to Hurricane Helene.

County (Listed in descending order by Estimated Agricultural Production Losses - High Scenario)	Affected Agricultural Lands (Acres)	Estimated Annual Value of Production on Affected Agricultural Lands (2024\$, Thousands)	Estimated Agricultural Production Losses - Low Scenario (2024\$, Thousands)	Estimated Agricultural Production Losses – High Scenario (2024\$, Thousands)
Suwannee	128,219	\$268,805	\$9,905	\$28,329
Madison	98,178	\$126,795	\$12,580	\$24,687
Hamilton	46,691	\$58,878	\$5,800	\$11,829
Jefferson	44,914	\$54,367	\$4,001	\$11,013
Jackson	153,544	\$118,926	\$975	\$10,895
Lafayette	41,033	\$82,381	\$4,134	\$9,729
Levy	147,142	\$131,314	\$711	\$8,850
Gilchrist	66,812	\$100,275	\$699	\$6,856
Manatee	119,968	\$508,280	\$-	\$6,784
DeSoto	224,616	\$222,245	\$-	\$5,792
Alachua	125,024	\$94,414	\$212	\$5,006
Gadsden	29,553	\$81,987	<\$100	\$4,659
Charlotte	118,621	\$117,624	\$-	\$4,522
Columbia	63,604	\$53,109	\$234	\$3,656
Hillsborough	87,679	\$251,810	\$-	\$2,710
Lee	41,565	\$102,748	\$-	\$2,697
Collier	108,987	\$567,727	\$-	\$2,630
Calhoun	35,943	\$28,476	\$188	\$2,507
Dixie	29,068	\$14,056	\$199	\$1,264
Sarasota	67,953	\$65,427	\$ -	\$1,106
Washington	22,190	\$11,293	<\$100	\$995
Marion	222,914	\$155,894	<\$100	\$941
Taylor	19,471	\$4,569	\$368	\$678
Pasco	82,908	\$51,849	\$-	\$539
Hernando	34,449	\$26,745	\$-	\$502
Leon	13,835	\$6,516	<\$100	\$489
Union	23,924	\$14,059	<\$100	\$411
Hardee	227,867	\$224,757	\$-	\$321
Bay	24,469	\$5,113	<\$100	\$316
Wakulla	5,704	\$4,118	<\$100	\$305
Liberty	6,149	\$3,484	<\$100	\$286
Gulf	28,495	\$2,495	<\$100	\$258
Citrus	29,729	\$11,020	\$-	\$246
Pinellas	534	\$2,141	\$-	\$108
Putnam	52,408	\$52,597	<\$100	<\$100 <\$100
Bradford	25,488	\$22,632	<\$100 <\$100	<\$100 <\$100
Baker	12,880	\$17,296	<\$100 <\$100	<\$100 <\$100
Franklin	135	\$17,296	<\$100 <\$100	<\$100 <\$100
Nassau	18,773	\$14,885	<\$100 <\$100	<\$100 <\$100
Duval	14,017 145,495	\$14,598 \$217,305	<\$100 \$-	<\$100 <\$100

Note: Losses less than \$100,000 are represented as '<\$100' in the table.

Reference

Court, C. D., Qiao, X. Koeneke, R., & McDaid, K. (2024). Preliminary County-Level Assessment of Agricultural Production Losses Resulting from Hurricane Helene. UF/IFAS Economic Impact Analysis Program, Food and Resource Economics Department, University of Florida.