

2021 Mississippi Agricultural Crop Damage Assessment



Adverse weather has caused significant damage to agricultural producers during the 2021 crop year. This publication uses only reported destroyed, damaged, and prevented planting acreage numbers from the USDA Farm Service Agency (FSA) to determine impacted acres and estimate crop losses across the state.

Destroyed acres are where expected yield of the planted crop is zero. Damaged acres are any acres that are expected to have a yield loss, excluding those that are destroyed. In counties where the yield loss on damaged acres was not available, a 20 percent yield loss was assumed. Prevented planting acres are where the producer was not able to plant their intended crop.

Average expected crop yields for each county were also obtained from the FSA. **The row crop and rice prices used to estimate crop losses were the 2021–22 marketing year average (MYA) prices from the July 2021 World Agricultural Supply and Demand Estimates (WASDE) report.** Other crop prices were obtained from the FSA.

Also included in the damage estimate is a replant cost. Due to the timing of the weather events, most of the row crop acreage was replanted to soybeans. The replant cost, obtained from the Mississippi State University Soybean 2021 Planting Budgets, was \$116.91 per acre. Replant was only assumed to occur on corn, cotton, rice, and soybean acres that were destroyed.

In total, 1,493,789 acres across 39 counties and 31 different crops have been impacted by adverse weather in 2021, resulting in \$839,589,517 in damages (Table 1). Most of the acres impacted occurred in the Delta region. Figure 1 shows acres impacted for each county. Figure 2 shows estimated damages for each county. Bolivar County had the highest number of acres impacted at 355,505 acres, followed by Sunflower County with 193,500 acres impacted. Bolivar and Sunflower Counties also had the highest estimated damages with \$176,457,993 and \$128,353,205 in damages, respectively.

Soybeans had the most acres impacted of any crop at 1,017,547 acres, spread across 39 different counties. Bolivar County had the most soybean acres impacted at 250,000 acres, followed by Sunflower and Washington Counties at 150,000 acres each (Figure 3). Estimated damages for all soybean acres impacted were \$569,039,148. Bolivar County had the most soybean damages with \$131,748,750. Damages were estimated assuming a price of \$13.70 per bushel.

Corn had the second-highest number of acres impacted at 241,023 acres. Impacted acres were in 34 different counties in Mississippi, with Bolivar County having the most corn acres impacted at 50,000 acres. However, Tallahatchie County had the most damages at \$28,822,750. Tallahatchie

Table 1. Crop acres impacted and damages from adverse weather in Mississippi in 2021.

Crop	Acres Impacted	Estimated Damages
Corn	241,023	\$160,997,576
Cotton	117,055	\$72,991,131
Rice	69,107	\$37,797,161
Soybeans	1,017,547	\$569,039,148
Other	49,058	\$28,764,501
Total	1,493,789	\$869,589,517

County had 25,000 acres impacted. Tallahatchie County's damage amount is higher because expected corn yield is slightly higher than in Bolivar County and because all the impacted acres in Tallahatchie were destroyed, whereas in Bolivar County the majority of acres were damaged. Figure 5 shows impacted corn acres across the state, and Figure 6 shows crop damages. Damages were estimated assuming a price of \$5.60 per bushel.

Cotton acres had 117,055 acres impacted by weather, which resulted in an estimated \$72,991,131 in damages. The majority of the impacted cotton acres occurred in the Delta region, but 32 counties reported cotton acres impacted by weather. Coahoma County had the most cotton acres impacted at 28,000 acres (Figure 7). Cotton damages in Coahoma County are estimated to be \$28,893,480 (Figure 8). Bolivar County had the second-highest cotton acres impacted at 12,000 acres. Tallahatchie County had the second-highest cotton damages at \$10,131,600. A cotton lint price of \$0.75 per pound was used to estimate damages.

Rice had 69,107 acres impacted, which resulted in an estimated \$37,797,161 in damages. Impacted acres occurred in 10 counties, as rice is produced only in the Delta region (Figure 9). Over half of the rice acres in the state were affected by the storms. Bolivar County again had the highest acres impacted at 40,000 acres. The estimated losses from those impacted acres in Bolivar County were \$16,097,090. Tunica County had 10,719 acres impacted with estimated damages of \$7,592,289. Figure 10 shows estimated rice damages by county. A rice price of \$0.128 per pound was used to estimate damages.

These damage estimates do not include any impact of government program payments or crop insurance. The reported yield losses used to determine damages are estimates; actual yield losses could be higher or lower. Acres that had yield losses but were not reported to the FSA were also not included in these estimates. Therefore, damages could be higher than reported here.

Total Crop Acres Impacted

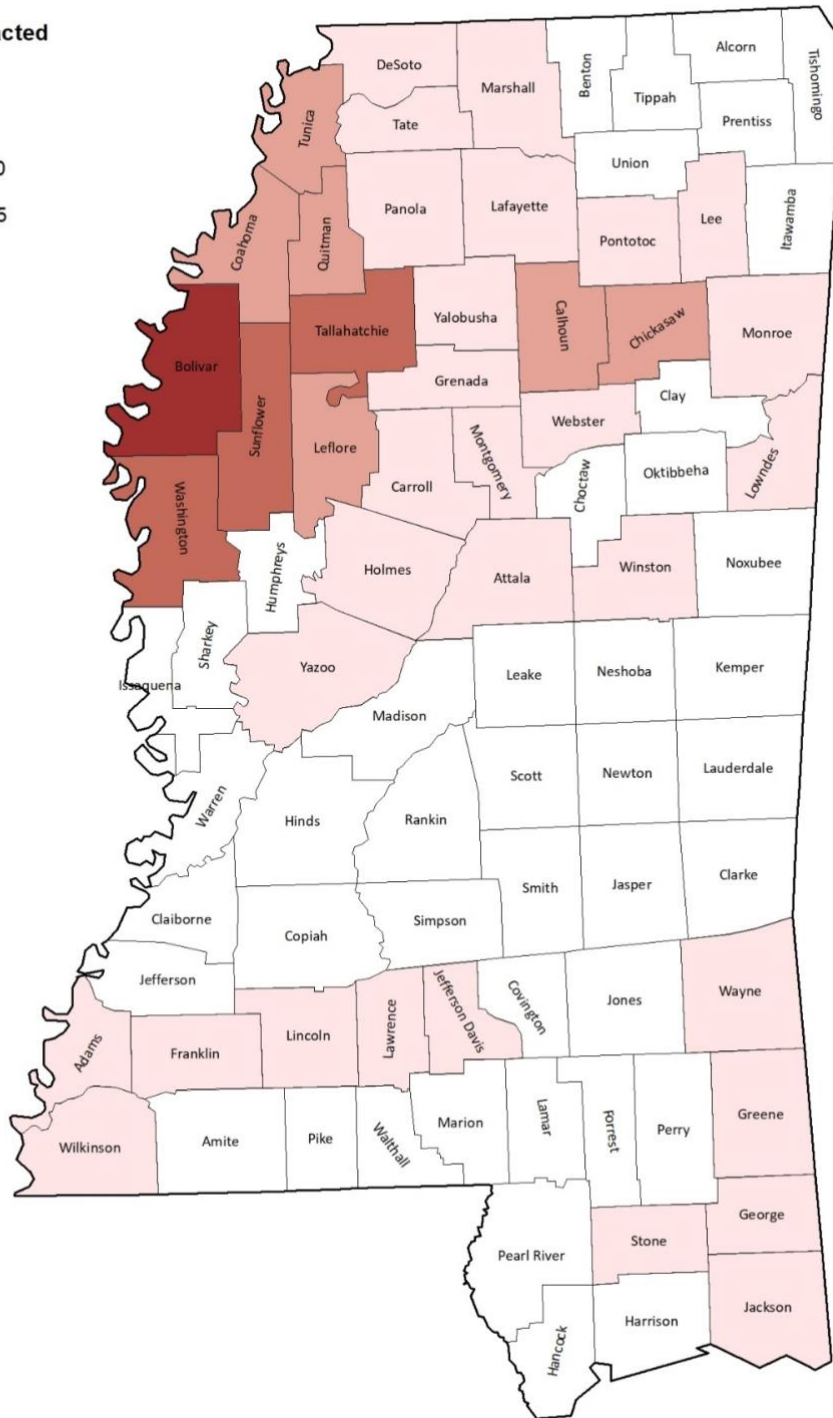
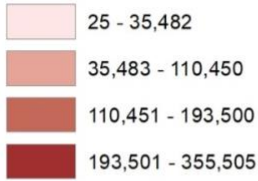


Figure 1. Total crop acres impacted by adverse weather in 2021 for each county in Mississippi.

Table 2. Total crop acres impacted by adverse weather in 2021

Acres Impacted	Counties
25–35,482	Adams, Attala, Carroll, DeSoto, Franklin, George, Greene, Grenada, Holmes, Jackson, Jefferson-Davis, Lafayette, Lawrence, Lee, Lincoln, Lowndes, Marshall, Monroe, Montgomery, Panola, Pontotoc, Stone, Tate, Wayne, Webster, Wilkerson, Winston, Yalobusha, Yazoo
35,483–110,450	Calhoun, Chickasaw, Coahoma, Leflore, Tunica, Quitman
110,451–193,500	Tallahatchie, Sunflower, Washington
193,501–355,505	Bolivar

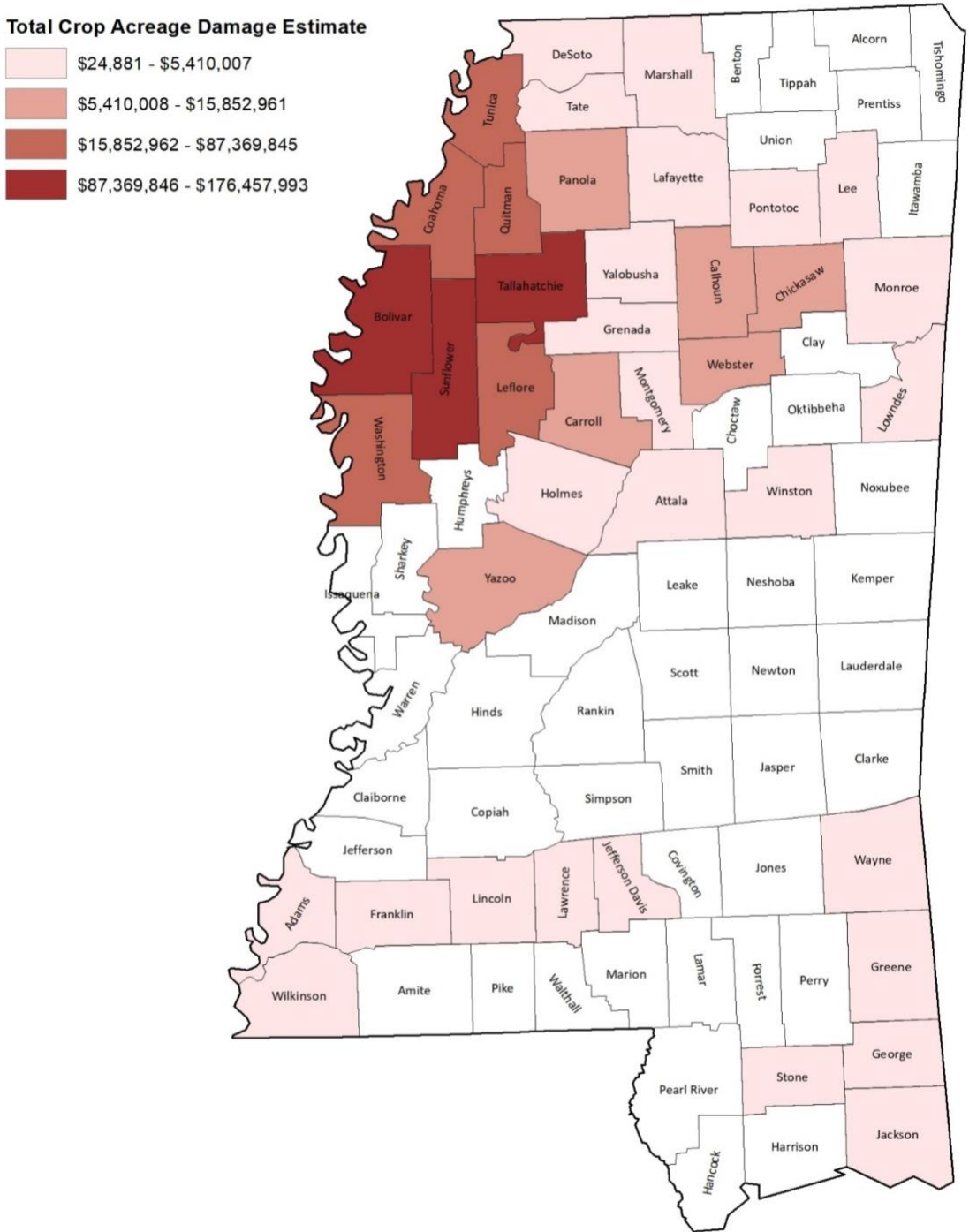


Figure 2. Estimated crop damages caused by adverse weather in 2021 for each county in Mississippi.

Table 3. Estimated crop damages caused by adverse weather in 2021

Total Damages	Counties
\$24,881–\$5,410,007	Adams, Attala, DeSoto, Franklin, George, Greene, Grenada, Holmes, Jackson, Jefferson-Davis, Lafayette, Lawrence, Lee, Lincoln, Lowndes, Monroe, Montgomery, Pontotoc, Stone, Tate, Wayne, Wilkerson, Winston, Yalobusha
\$5,410,008–\$15,852,961	Calhoun, Chickasaw, Carroll, Marshall, Panola, Webster, Yazoo
\$15,852,962–\$87,369,845	Coahoma, Leflore, Quitman, Tunica, Washington
\$87,369,846–\$176,457,993	Bolivar, Sunflower, Tallahatchie

Soybean Acres Impacted

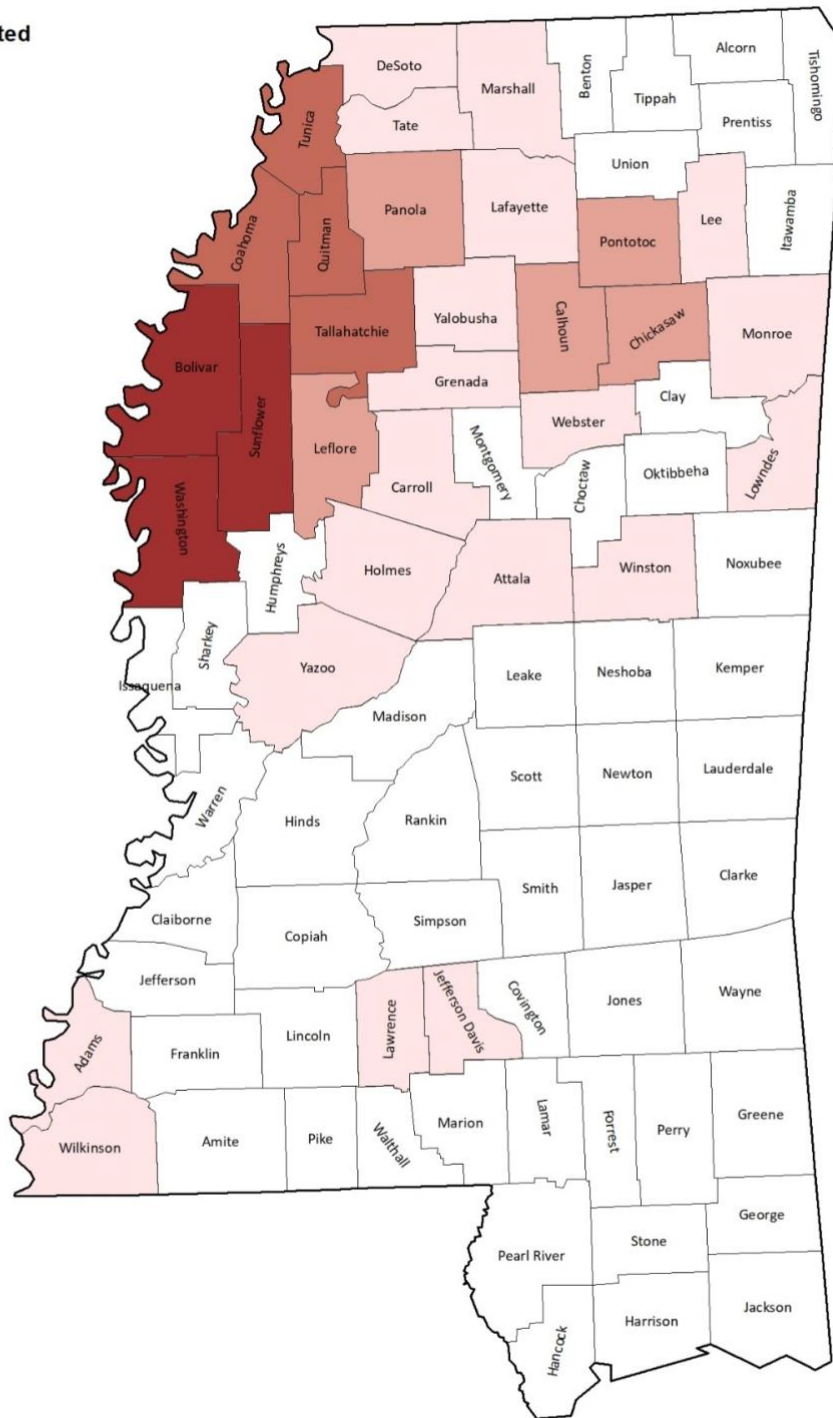


Figure 3. Soybean acres impacted by adverse weather in 2021 for each county in Mississippi.

Table 4. Soybean acres impacted by adverse weather in 2021

Acres Impacted	Counties
70–10,000	Adams, Attala, Carroll, DeSoto, Grenada, Holmes, Jefferson-Davis, Lafayette, Lawrence, Lee, Lowndes, Marshall, Monroe, Tate, Webster, Wilkerson, Winston, Yalobusha, Yazoo
10,001–43,000	Calhoun, Chickasaw, Leflore, Panola, Pontotoc
43,001–90,000	Coahoma, Quitman, Tallahatchie, Tunica
90,001–250,000	Bolivar, Sunflower, Washington

Soybean Acreage Damage Estimate

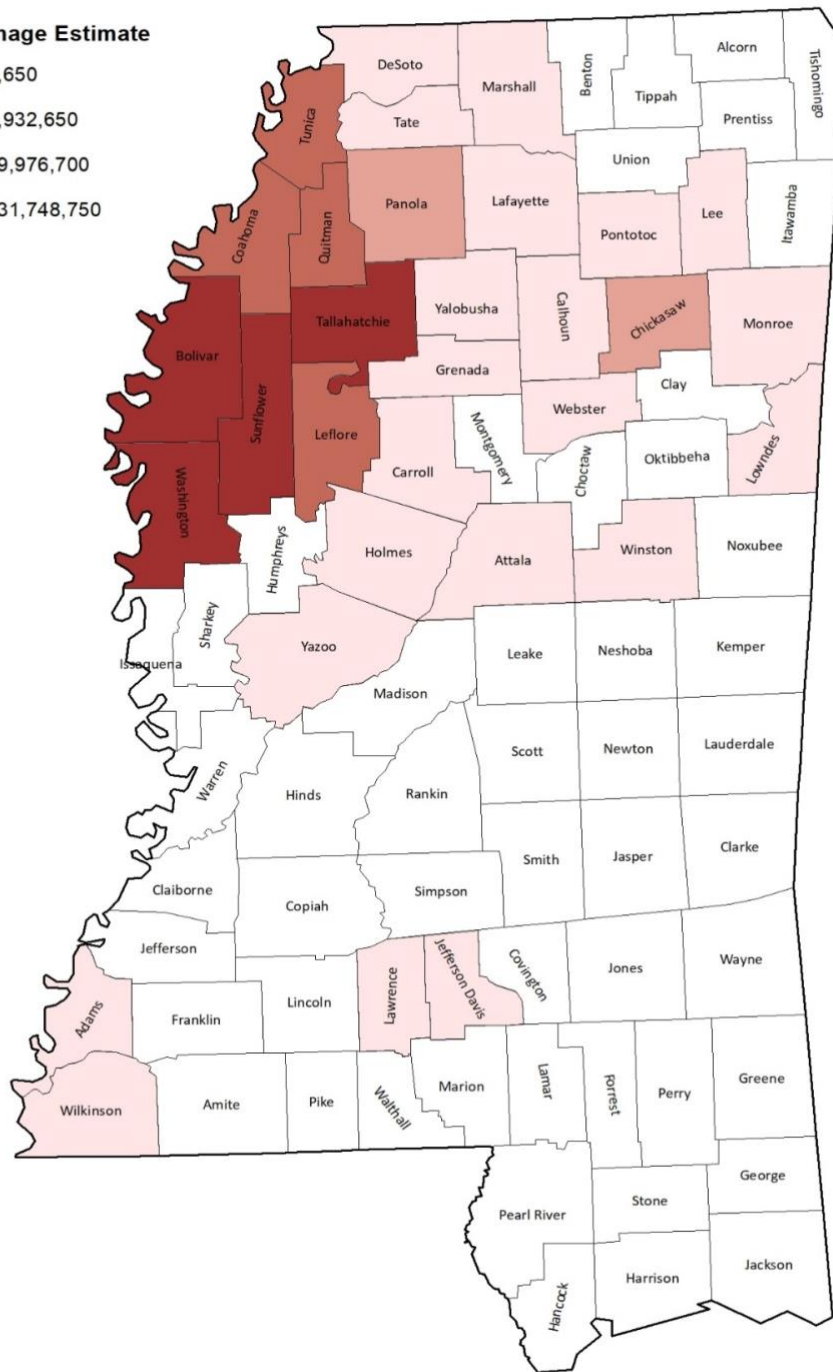


Figure 4. Estimated soybean acreage damages caused by adverse weather in 2021 for each county in Mississippi.

Table 5. Estimated soybean acreage damages caused by adverse weather in 2021

Damages	Counties
\$26,893-\$3,760,650	Adams, Attala, Calhoun, Carroll, DeSoto, Grenada, Holmes, Jefferson-Davis, Lafayette, Lawrence, Lee, Lowndes, Marshall, Monroe, Pontotoc, Tate, Webster, Wilkerson, Winston
\$3,760,651-\$10,932,650	Chickasaw, Panola
\$10,932,651-\$39,976,700	Coahoma, Leflore, Quitman, Tunica
\$39,976,701-\$131,748,750	Bolivar, Sunflower, Tallahatchie, Washington

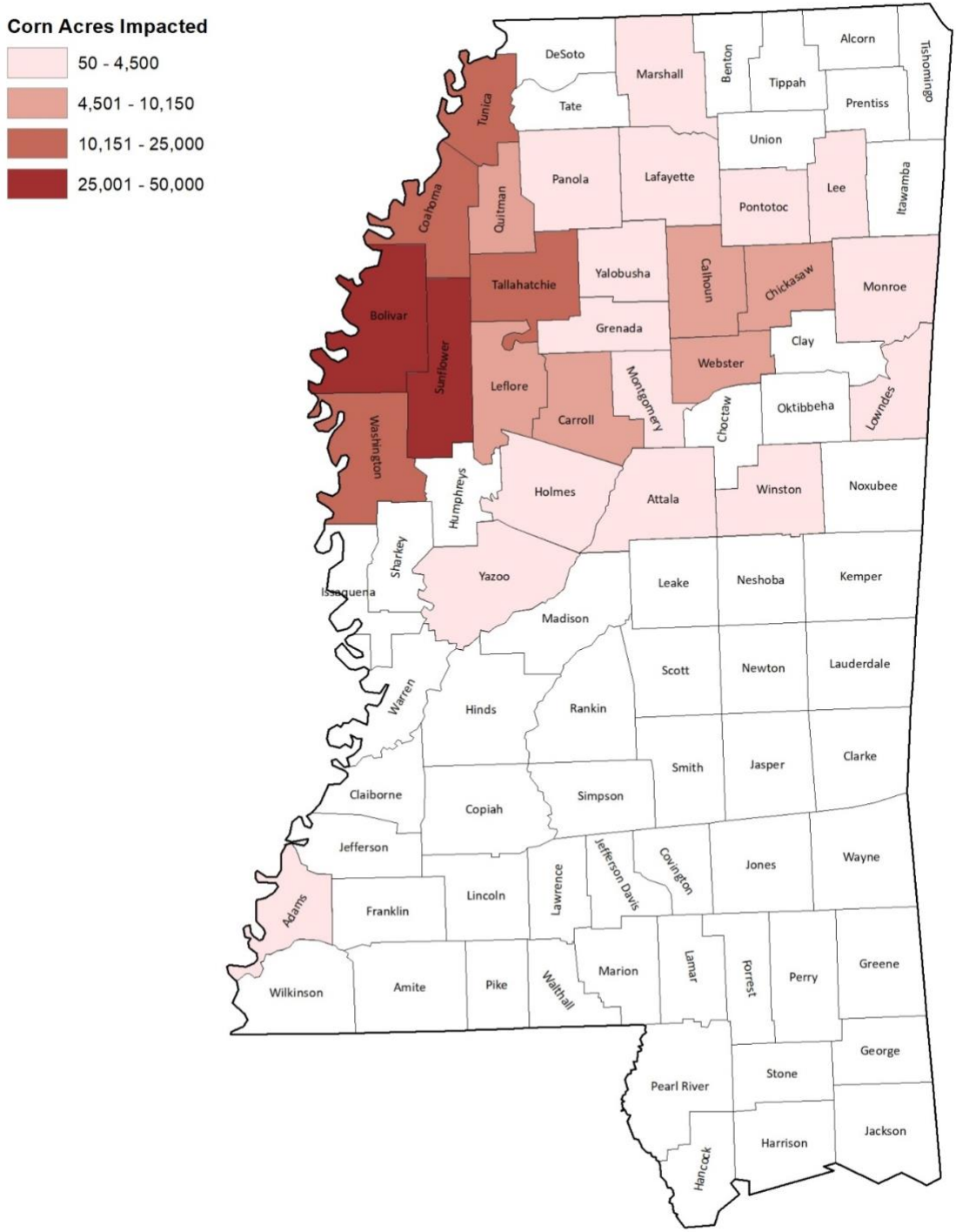


Figure 5. Corn acres impacted by adverse weather in 2021 for each county in Mississippi.

Table 6. Corn acres impacted by adverse weather in 2021

Acres Impacted	Counties
50-4,500	Adams, Attala, Grenada, Holmes, Lafayette, Lee, Lowndes, Marshall, Monroe, Montgomery, Panola, Pontotoc, Winston, Yalobusha, Yazoo
4,501-10,150	Calhoun, Carroll, Chickasaw, Leflore, Quitman, Webster
10,151-25,000	Coahoma, Tallahatchie, Tunica, Washington
25,001-50,000	Bolivar, Sunflower

Corn Acreage Damage Estimate

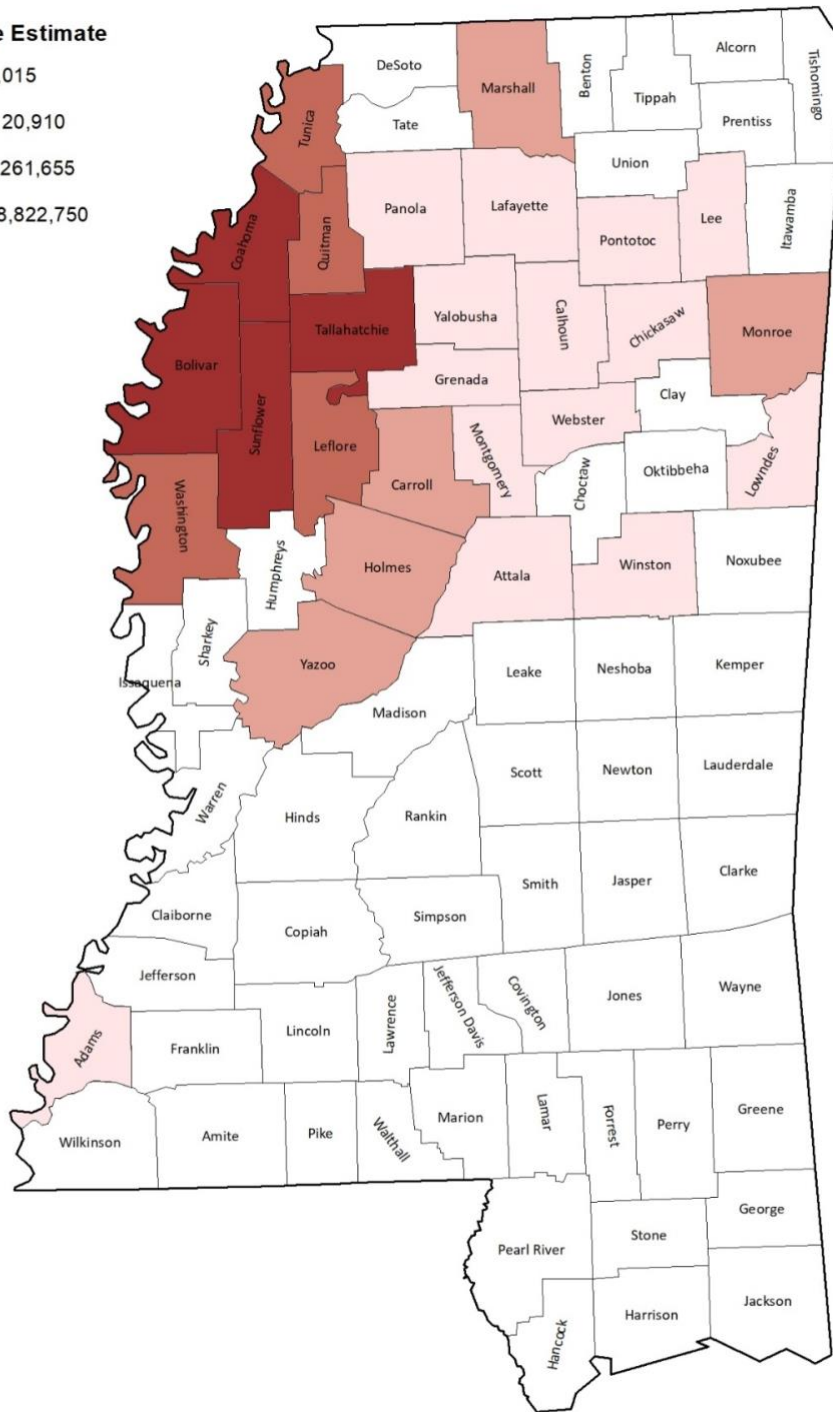


Figure 6. Estimated corn acreage damages caused by adverse weather in 2021 for each county in Mississippi.

Table 7. Estimated corn acreage damages caused by adverse weather in 2021

Damages	Counties
\$30,965–\$1,746,015	Adams, Attala, Calhoun, Chickasaw, Grenada, Lafayette, Lee, Lowndes, Montgomery, Panola, Pontotoc, Webster, Winston, Yalobusha
\$1,746,016–\$4,120,910	Carroll, Holmes, Marshall, Monroe, Montgomery, Yazoo
\$4,120,911–\$10,261,655	Leflore, Quitman, Tunica, Washington
\$10,261,656–\$28,822,750	Bolivar, Coahoma, Sunflower, Tallahatchie

Cotton Acres Impacted

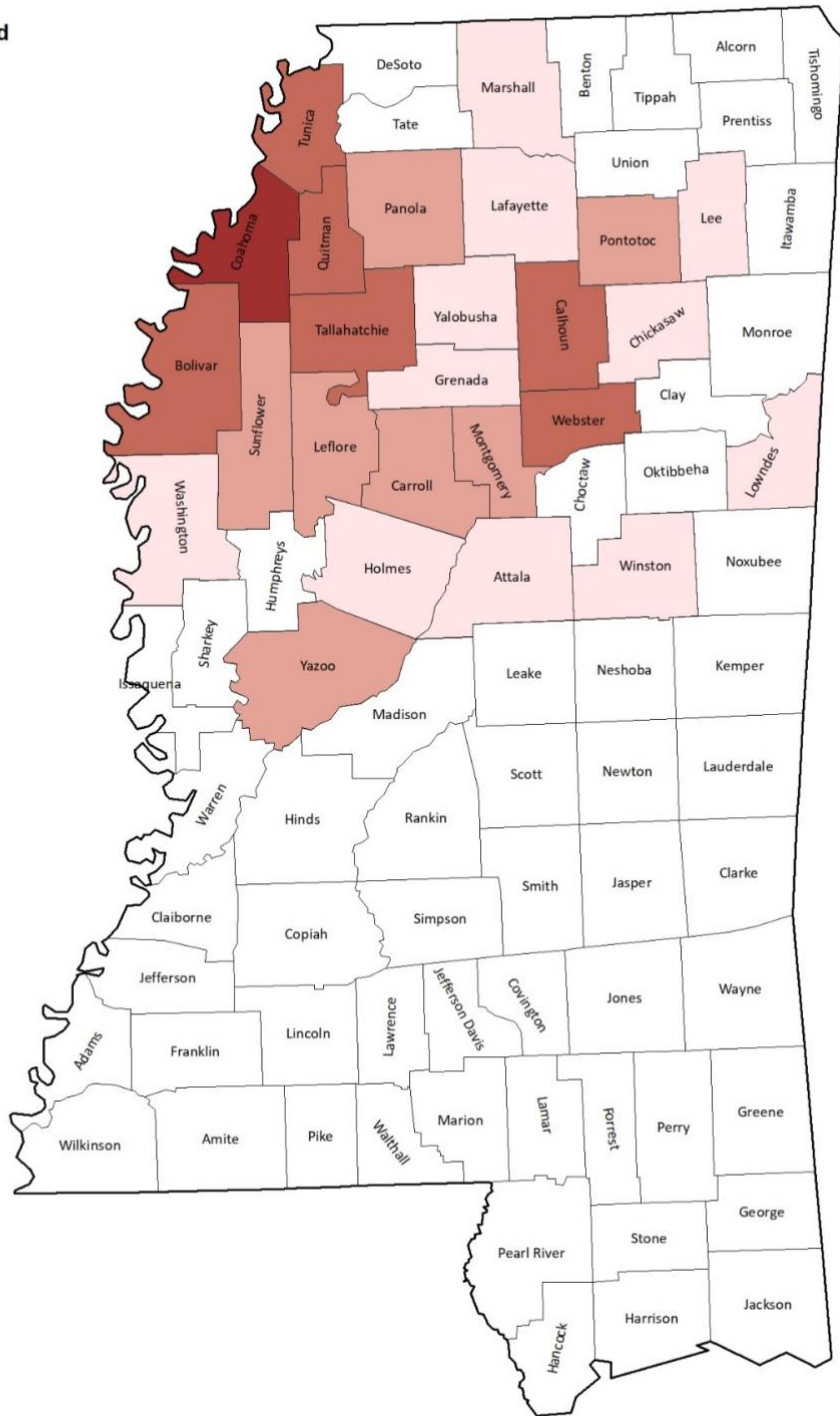
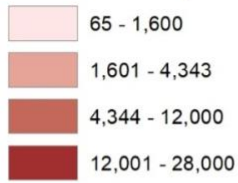


Figure 7. Cotton acres impacted by adverse weather in 2021 for each county in Mississippi.

Table 8. Cotton acres impacted by adverse weather in 2021

Acres Impacted	Counties
65-1,600	Attala, Chickasaw, Grenada, Holmes, Lafayette, Lee, Lowndes, Marshall, Washington, Winston, Yalobusha
1,601-4,343	Carroll, Leflore, Montgomery, Panola, Pontotoc, Sunflower, Yazoo
4,344-12,000	Bolivar, Calhoun, Pontotoc, Quitman, Tallahatchie, Tunica, Webster
12,001-28,000	Coahoma

Cotton Acreage Damage Estimate

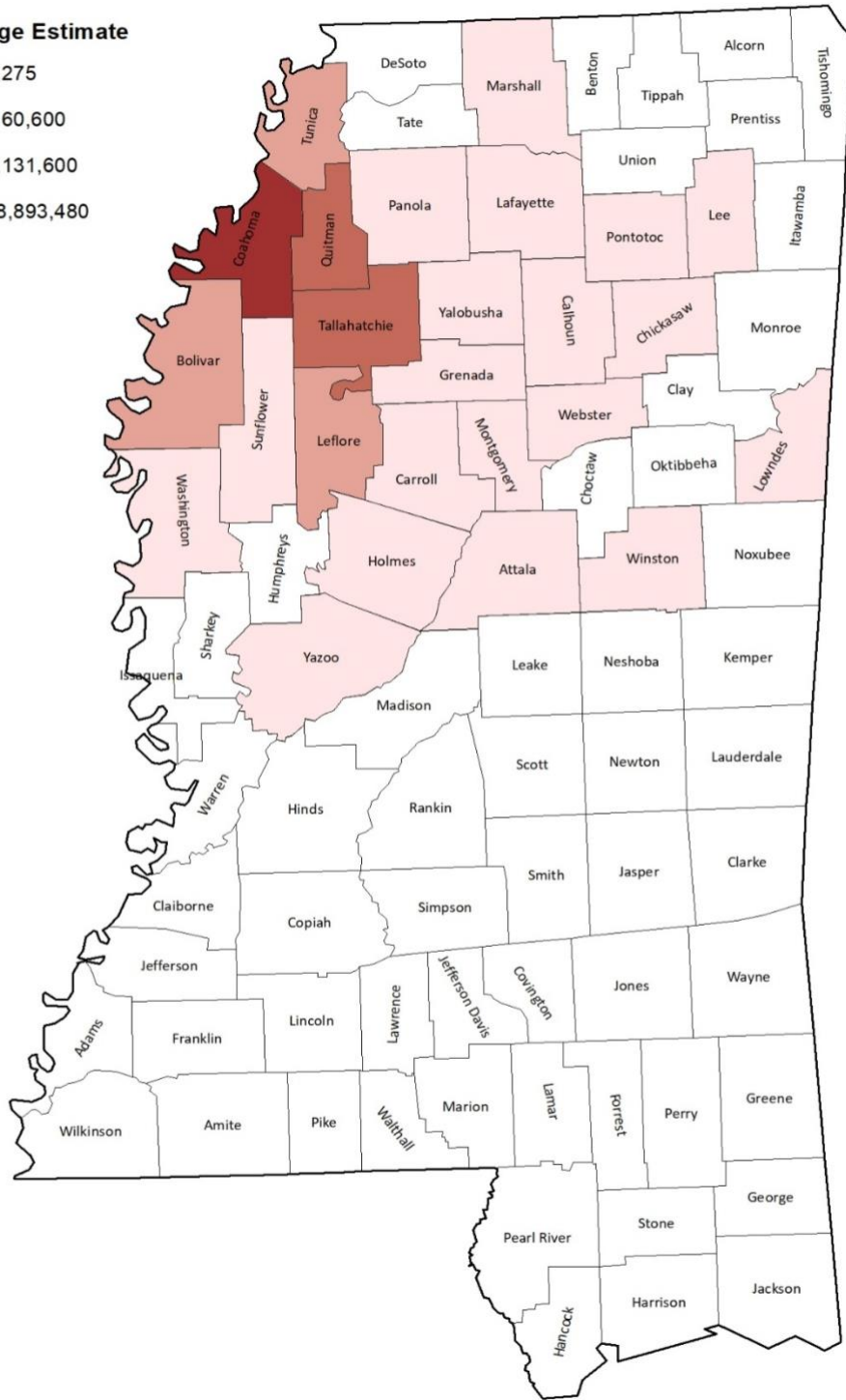


Figure 8. Estimated cotton acreage damages caused by adverse weather in 2021 for each county in Mississippi.

Table 9. Estimated cotton acreage damages caused by adverse weather in 2021

Damages	Counties
\$34,710–\$2,212,275	Attala, Calhoun, Carroll, Chickasaw, Grenada, Holmes, Lafayette, Lee, Lowndes, Marshall, Montgomery, Panola, Pontotoc, Sunflower, Washington, Webster, Winston, Yalobusha, Yazoo
\$2,212,276–\$5,160,600	Bolivar, Leflore, Tunica
\$5,160,601–\$10,131,600	Quitman, Tallahatchie
\$10,131,601–\$28,893,480	Coahoma

Rice Acres Impacted

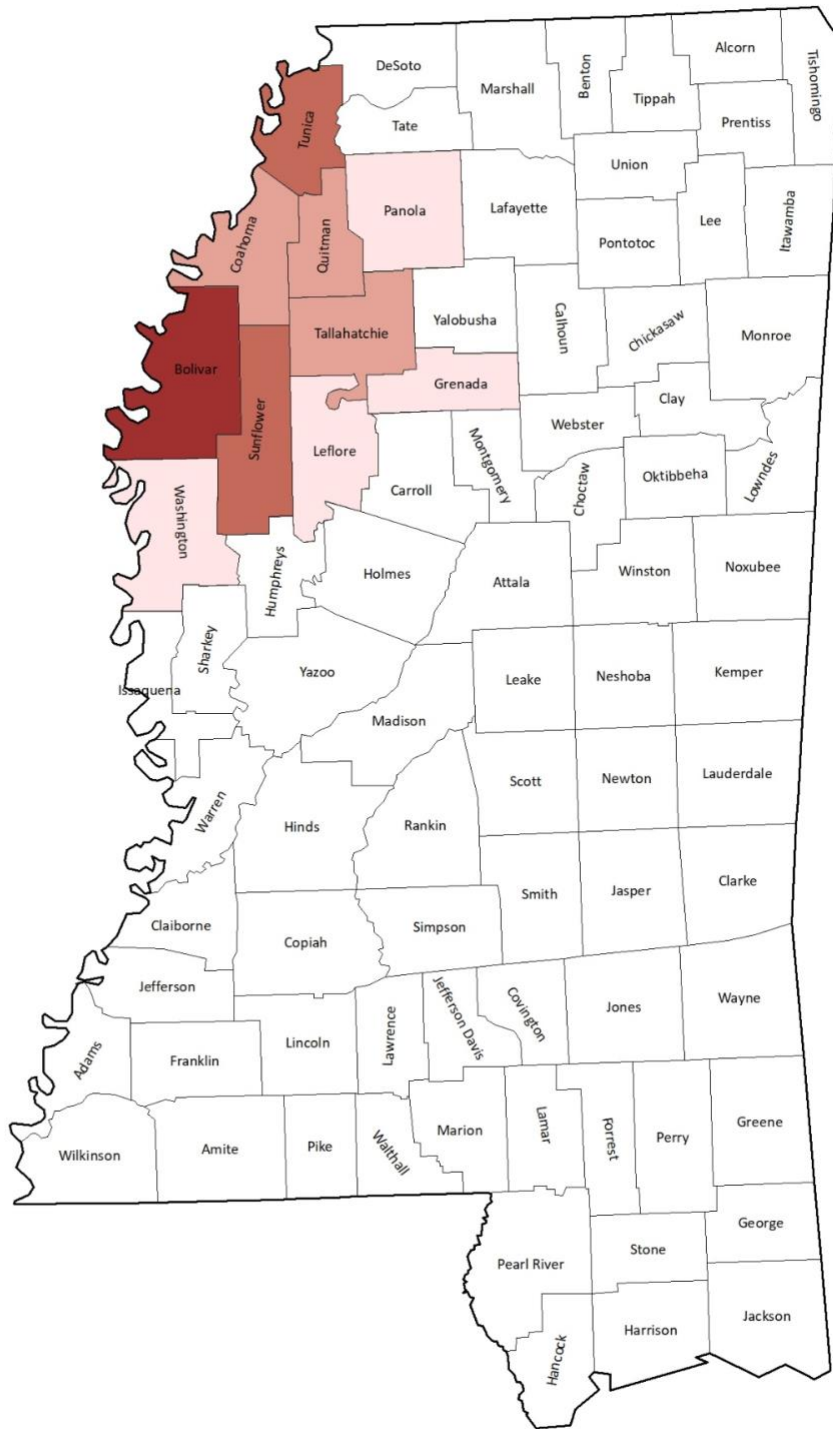
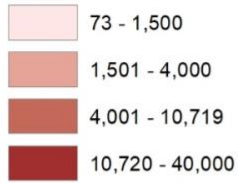


Figure 9. Rice acres impacted by adverse weather in 2021 for each county in Mississippi.

Table 10. Rice acres impacted by adverse weather in 2021

Acres Impacted	Counties
73–1,500	Grenada, Leflore, Panola, Washington
1,501–4,000	Coahoma, Quitman, Tallahatchie
4,001–10,719	Sunflower, Tunica
10,720–40,000	Bolivar

Rice Acreage Damage Estimate

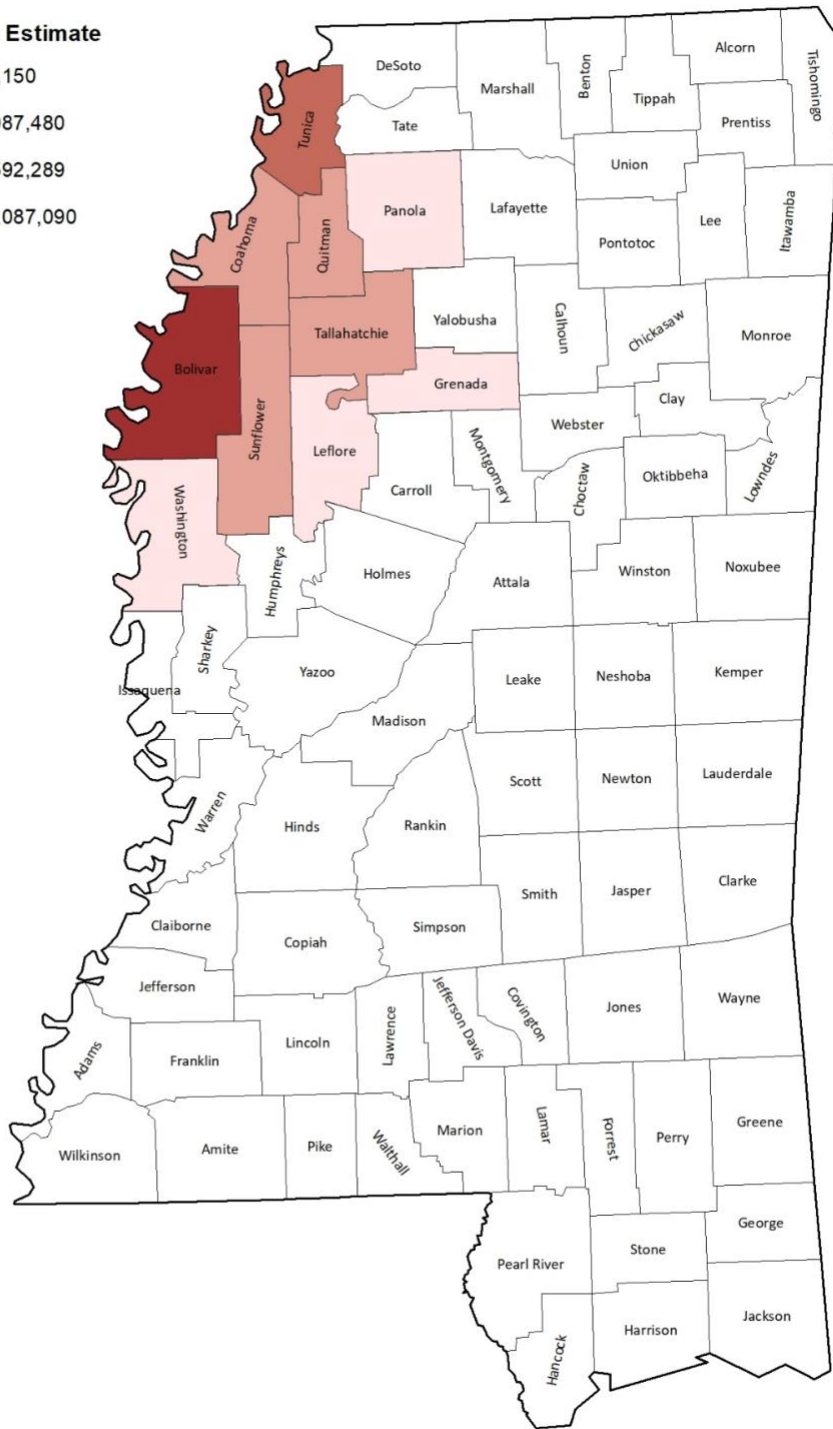


Figure 10. Estimated rice acreage damages caused by adverse weather in 2021 for each county in Mississippi.

Table 11. Estimated rice acreage damages caused by adverse weather in 2021

Damages	Counties
\$72,261-\$1,071,150	Grenada, Leflore, Panola, Washington
\$1,071,151-\$4,087,480	Coahoma, Quitman, Sunflower, Tallahatchie
\$4,087,481-\$7,592,289	Tunica
\$7,592,290-\$16,087,090	Bolivar

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