

Overview of Farm Management Issues

2021 Row Crop Short Course
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Outline

- Mississippi Crop Production in 2021
- Cost of Production Estimates for 2022
- Crop Returns Comparison



Mississippi Acreage

Table 1. Change in Crop Acreage from 2020 to 2021

Crop	2020 Acres	2021 Acres	Change
Corn	498,851	710,199	211,348
Upland Cotton	522,525	440,065	-82,460
Long Grain Rice	164,206	100,862	-63,344
Soybeans	2,077,049	2,204,635	127,587



Mississippi Land Values

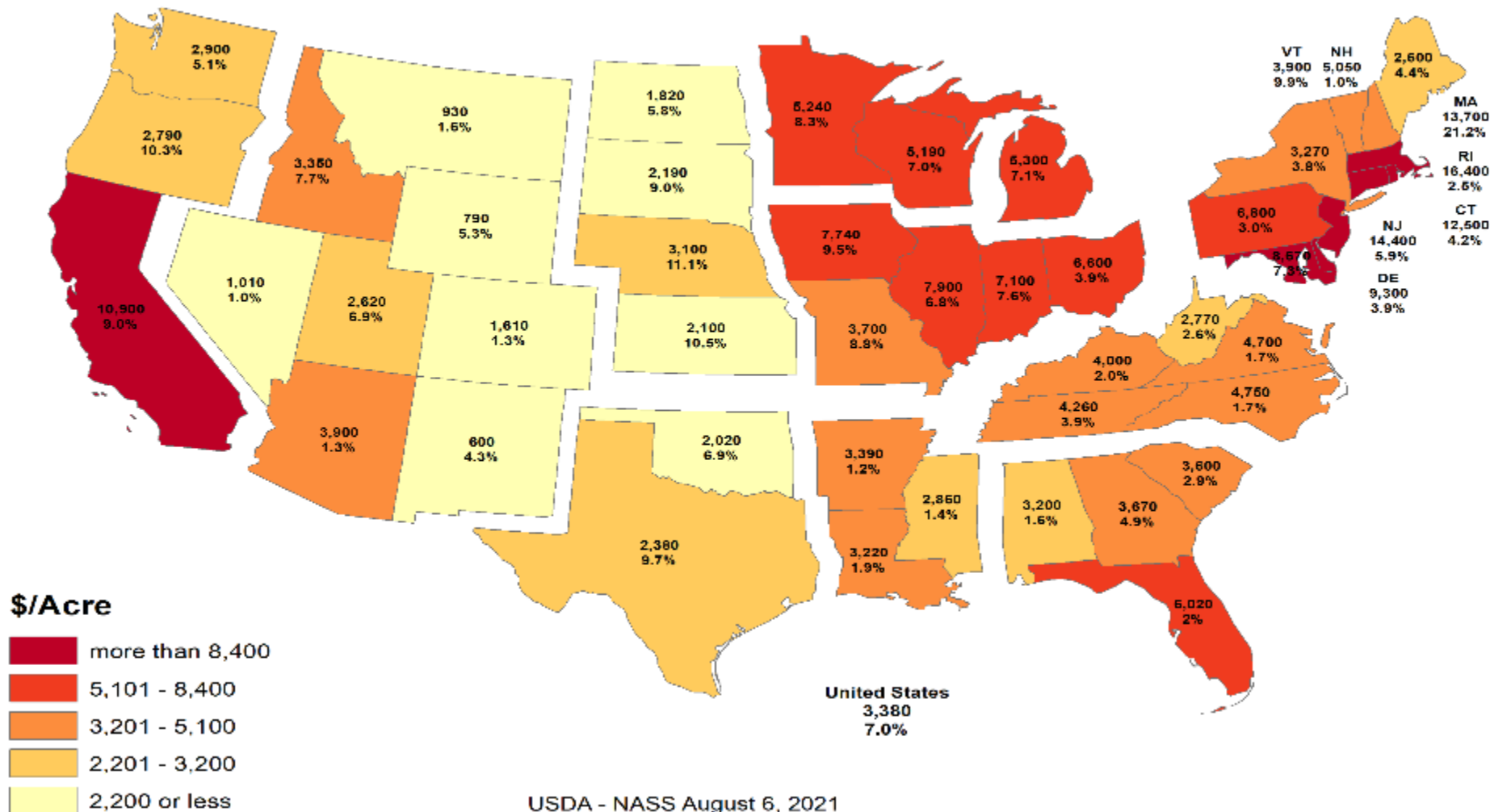
- USDA NASS reported average land value for Mississippi of \$2,860/ac for 2021
- Increase of 1.4% compared to 2020
- U.S. average of \$3,380/ac and 7.0% increase from 2020



Land Values

2021 Farm Real Estate Value by State

Dollars per Acre and Percent Change from 2020



Mississippi Cash Rent

Table 2. Average Cash Rent for Mississippi in 2020 and 2021

Land Type	2020	2021	% Change
Irrigated	\$143.78	\$148.94	4%
Non-Irrigated	\$60.40	\$61.67	2%



Mississippi Flood Damages 2021

- Significant flooding in June
- FSA collected data on acres that were damaged, destroyed, or prevented from planting
- MSU Extension estimated crop damages based on reported acres



Mississippi Flood Damages 2021

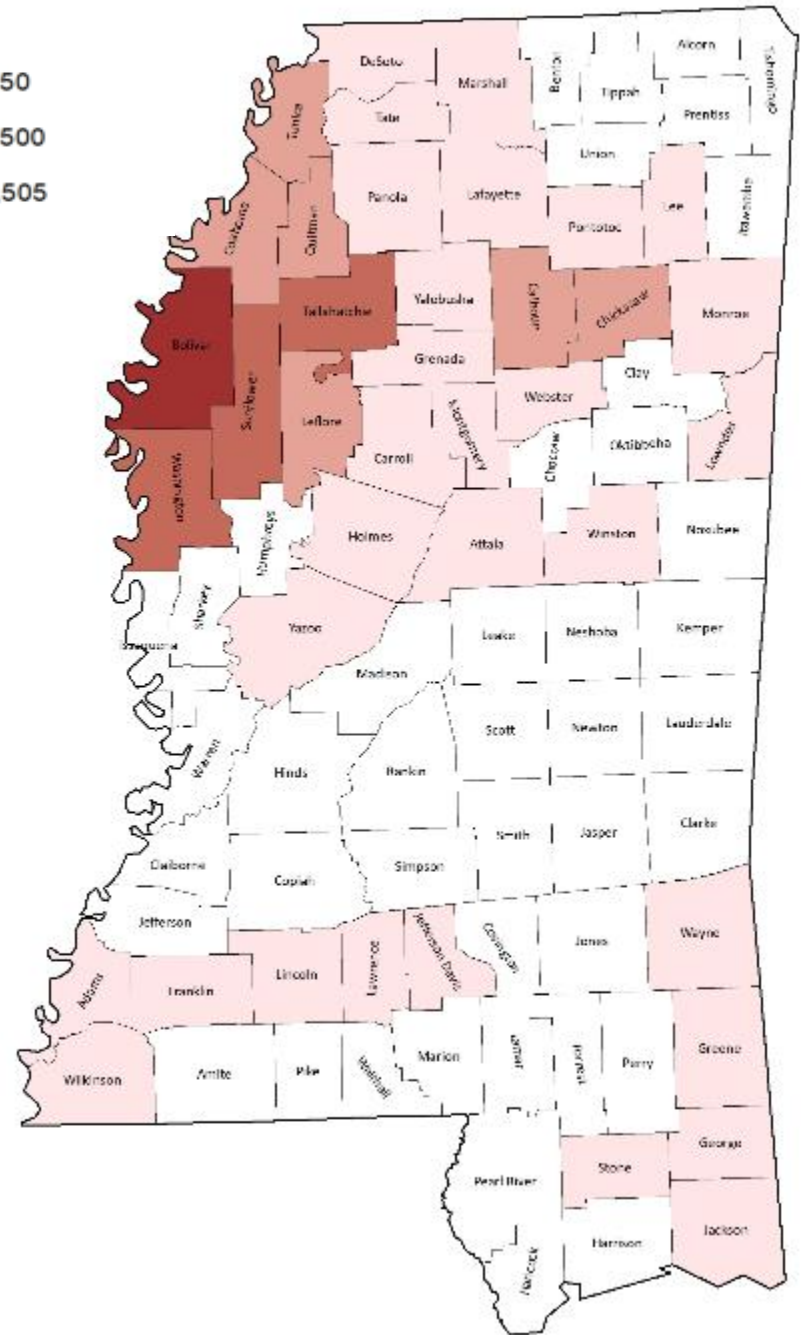
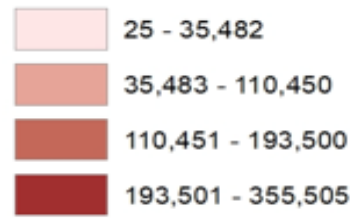
Table 3. Crop Acres Impacted and Damages from Adverse Weather in Mississippi in 2021

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



Total Acres Impacted

Total Crop Acres Impacted



- 39 counties and 31 different crops impacted
- 725,5615 damaged acres
- 695,380 destroyed acres
 - Row crops mostly replanted to soybeans



MSU Cost of Production Estimates – 2022 Crop Year

- MSU produces yearly Enterprise and Planning budgets using MSU Budget Generator
- Survey Mississippi companies to determine costs of herbicide, pesticide, fertilizer, equipment, etc
- Multidisciplinary team develops budgets based on common production practices/recommendations



MSU Cost of Production Estimates Changes from Previous Year

- Some recommendation changes from previous year
- Input costs were up significantly from previous year
- Costs will vary for each producer
- Available at agecon.msstate.edu



Corn Input Costs

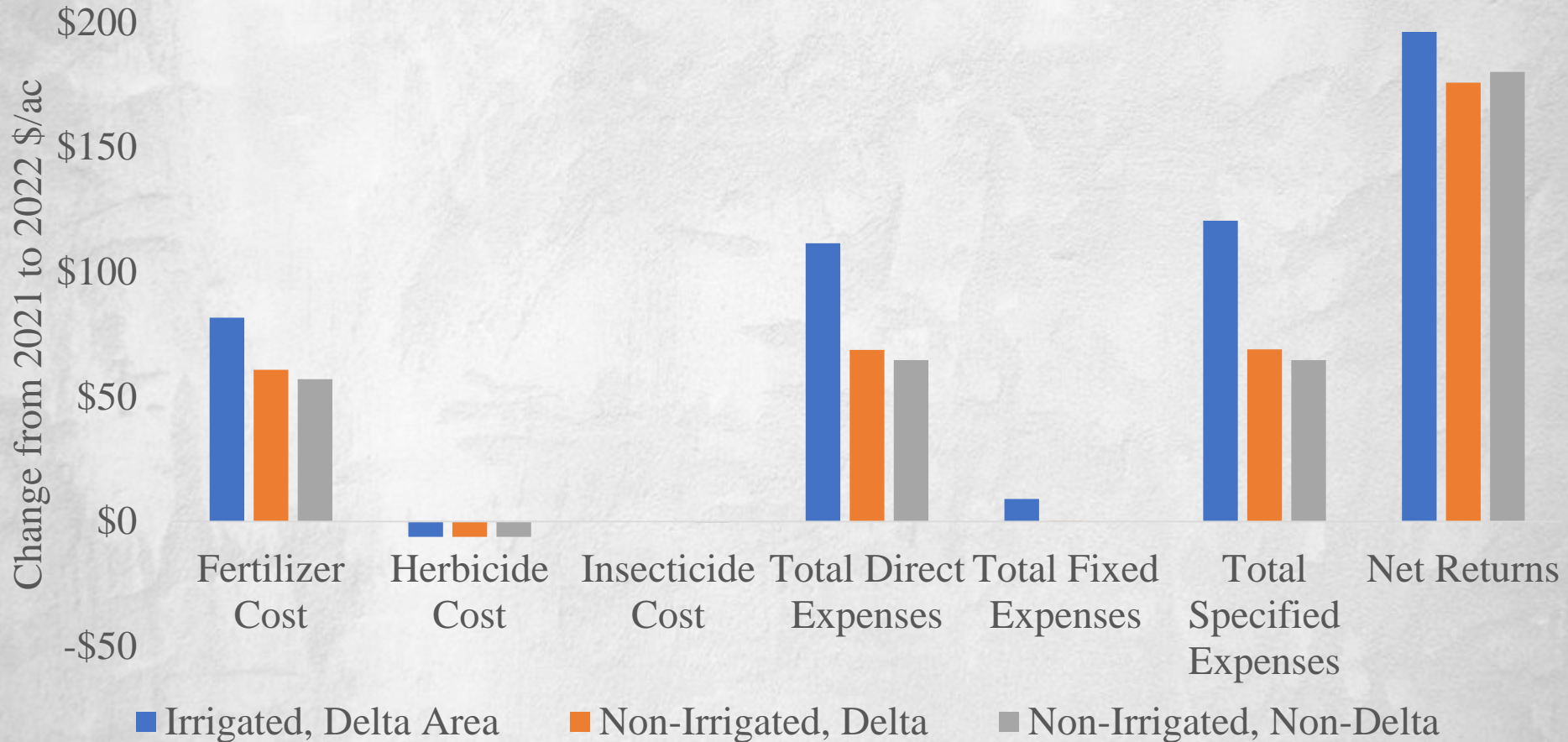
Table 4. Corn Input Costs for 2022 \$/ac

Cost	Irrigated, Delta Area	Irrigated, Non-Delta	Non-Irrigated, Delta	Non-Irrigated, Non-Delta
Fertilizer Cost	\$262.10	\$197.39	\$205.56	\$197.39
Herbicide Cost	\$49.38	\$49.38	\$49.38	\$49.38
Insecticide Cost	\$4.92	\$7.13	\$4.92	\$7.13
Total Direct Expenses	\$676.01	\$567.00	\$522.65	\$516.45
Total Fixed Expenses	\$115.31	\$119.33	\$48.09	\$50.52
Total Specified Expenses	\$791.32	\$686.33	\$570.74	\$566.97
Net Returns	\$346.08	\$451.08	\$308.16	\$311.93
Expected Break-Even Price	\$3.60	\$3.12	\$3.36	\$3.34



Corn Input Costs

Corn Budget Changes from 2021 to 2022



Cotton Input Costs

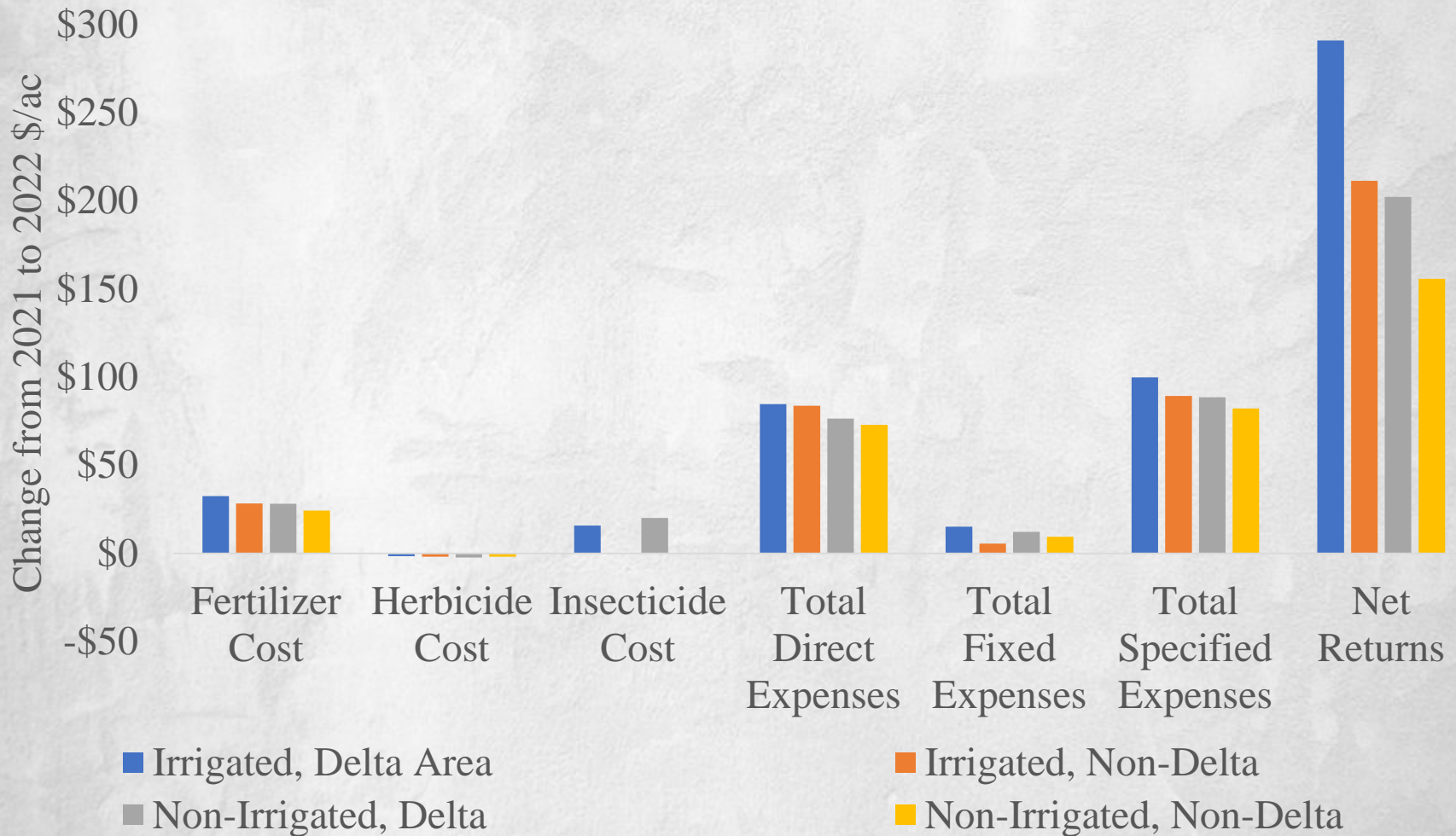
Table 6. Cotton Input Costs for 2022 \$/ac

Cost	Irrigated, Delta Area	Irrigated, Non-Delta	Non- Irrigated, Delta	Non- Irrigated, Non-Delta
Fertilizer Cost	\$111.60	\$100.21	\$102.56	\$89.15
Herbicide Cost	\$89.24	\$76.12	\$88.46	\$76.12
Insecticide Cost	\$91.10	\$56.47	\$83.92	\$48.97
Total Specified Expenses	\$1,030.97	\$941.81	\$850.83	\$773.72
Net Returns	\$406.87	\$256.39	\$192.01	\$174.86



Cotton Input Costs

Cotton Budget Changes from 2021 to 2022



Rice Input Costs

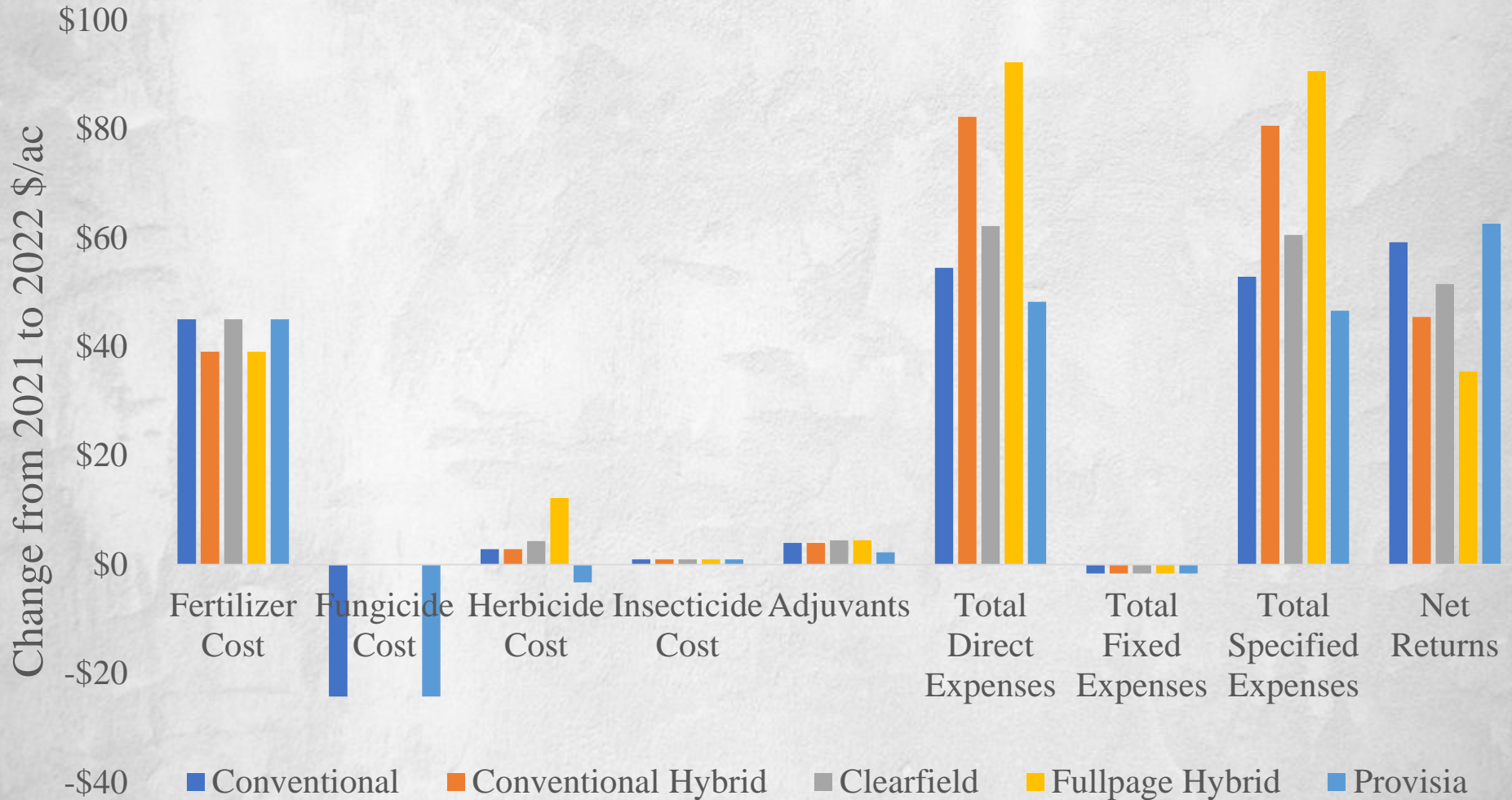
Table 8. Rice Input Costs for 2022 \$/ac

Change in	Conventional			Fullpage	
	Conventional	Hybrid	Clearfield	Hybrid	Provisia
Fertilizer Cost	\$152.10	\$133.33	\$152.10	\$133.33	\$152.10
Fungicide Cost	\$25.10	\$0.00	\$0.00	\$0.00	\$25.10
Herbicide Cost	\$142.37	\$142.37	\$133.97	\$156.50	\$101.26
Insecticide Cost	\$8.22	\$8.22	\$8.22	\$8.22	\$8.22
Adjuvants	\$12.49	\$12.16	\$20.72	\$20.39	\$17.37
Total Specified Expenses	\$899.19	\$964.56	\$951.93	\$1,011.02	\$929.57
Net Returns	\$28.81	\$79.44	-\$23.93	\$32.98	-\$24.77
Break-Even Price	\$5.62	\$5.36	\$5.95	\$5.62	\$5.96



Rice Input Costs

Rice Budget Changes from 2021 to 2022



Soybean Input Costs

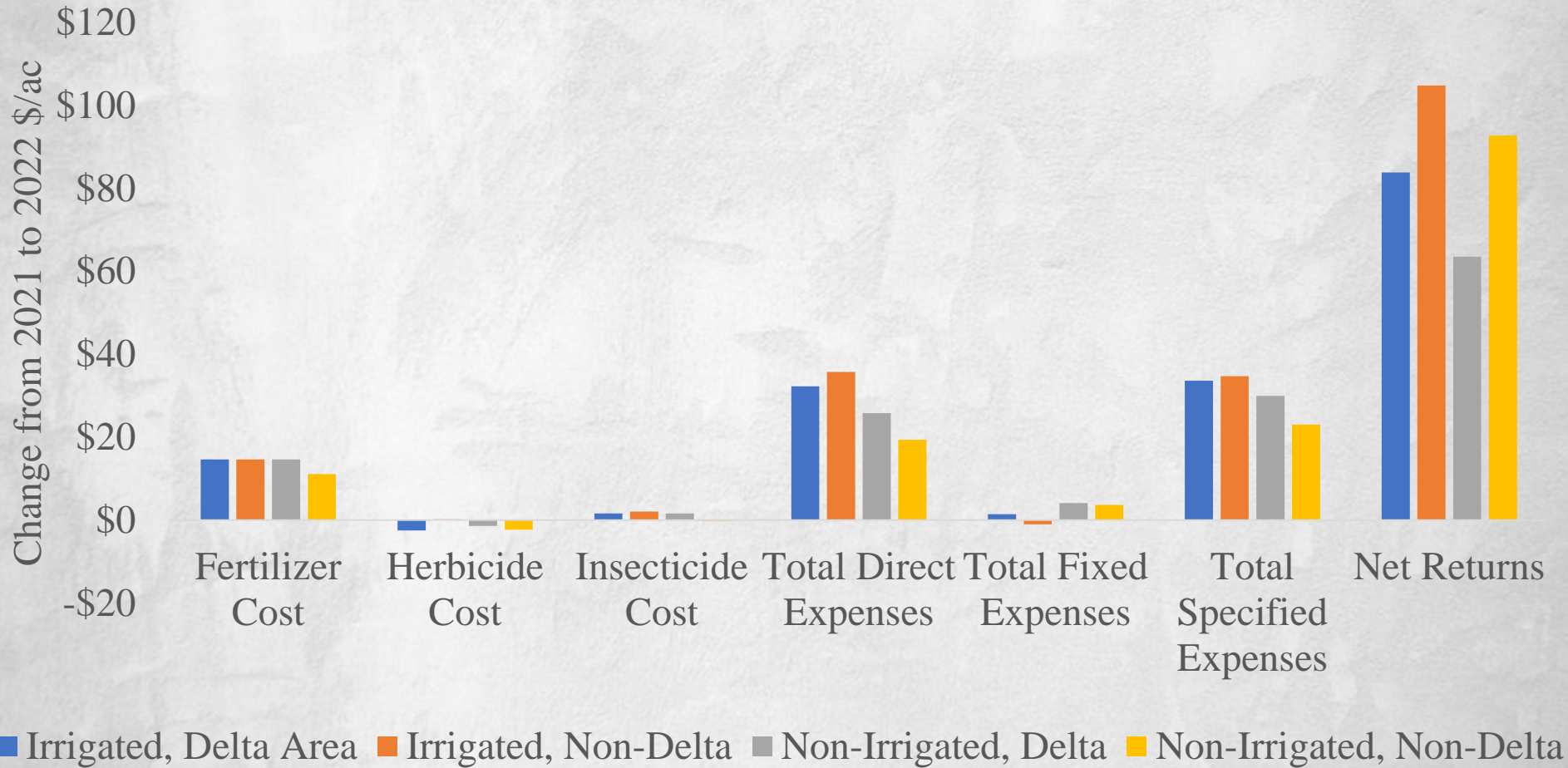
Table 10. Soybean Input Costs for 2022 \$/ac

Cost	Irrigated, Delta Area	Irrigated, Non-Delta	Non-Irrigated, Delta	Non-Irrigated, Non-Delta
Fertilizer Cost	\$59.12	\$59.12	\$59.12	\$44.62
Herbicide Cost	\$86.12	\$53.22	\$95.09	\$85.20
Insecticide Cost	\$14.44	\$35.62	\$14.44	\$4.52
Total Specified Expenses	\$531.90	\$465.91	\$417.61	\$363.87
Net Returns	\$172.10	\$157.09	\$105.71	\$153.23
Expected Break-Even Price	\$9.43	\$9.32	\$9.94	\$8.80



Soybean Input Costs

Soybean Budget Changes from 2021 to 2022



Crop Returns Comparison

- Net Returns Comparison Tool available on agecon.msstate.edu
- Allows for comparison of returns between any corn, cotton, rice, or soybean budgets
- Can edit costs to match farm's situation



Net Returns Comparison Calculator

Mississippi State University Extension Service

Developed by Brian Mills and Will Maples, Department of Agricultural Economics



Crop 1		
	Crop	Budget
Choose crop and budget	Corn	1. Corn, stale seedbed, BtRR, 16-row 30", 220 bu yield goal - Furrow Irrigated, 13 ac-in., Delta Area

	bu/ac		Soybean Yields bu/ac	Difference in Returns Between Corn and Soybeans \$/ac							
Expected Yield	220			<i>Corn Yields bu/ac</i>							
					205	210	215	220	225	230	235
	\$/bu			45	\$ 262	\$ 287	\$ 311	\$ 336	\$ 361	\$ 385	\$ 410
Expected Price	\$5.17			50	\$ 201	\$ 226	\$ 250	\$ 275	\$ 300	\$ 324	\$ 349
				55	\$ 140	\$ 165	\$ 189	\$ 214	\$ 239	\$ 263	\$ 288
Corn Yield Increment	5			60	\$ 79	\$ 104	\$ 128	\$ 153	\$ 178	\$ 202	\$ 227
				65	\$ 18	\$ 43	\$ 67	\$ 92	\$ 117	\$ 142	\$ 166
Crop 2				70	\$ (43)	\$ (18)	\$ 6	\$ 31	\$ 56	\$ 81	\$ 105
				75	\$ (104)	\$ (79)	\$ (55)	\$ (30)	\$ (5)	\$ 20	\$ 44

	Crop	Budget
Choose crop and budget	Soybeans	2. Soybeans, full-season, Enlist E3, stale seedbed, 16R 30", Furrow irrigated, 9 ac-in., Delta Area
	bu/ac	
Expected Yield	60	
	\$/bu	
Expected Price	\$12.46	
Soybean Yield Increment	5	

Any value in white, Crop 1 has higher returns than Crop 2. Any value that is red, Crop 1 has lower returns than Crop 2.



Net Returns Comparison Calculator

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Crop 1	Crop	Budget
Choose crop and budget	Rice	6. Conventional hybrid straight levee rice, Flood irrigated, 27 ac-in., Delta Area

bu/ac	
Expected Yield	180
\$/bu	
Expected Price	\$5.80
Rice Yield Increment	5

	Difference in Returns Between Rice and Soybeans \$/ac							
	Rice Yields bu/ac							
		165	170	175	180	185	190	195
Soybean Yields bu/ac	45	\$ (24)	\$ 2	\$ 27	\$ 52	\$ 77	\$ 103	\$ 128
	50	\$ (84)	\$ (59)	\$ (34)	\$ (9)	\$ 17	\$ 42	\$ 67
	55	\$ (145)	\$ (120)	\$ (95)	\$ (70)	\$ (44)	\$ (19)	\$ 6
	60	\$ (206)	\$ (181)	\$ (156)	\$ (131)	\$ (105)	\$ (80)	\$ (55)
	65	\$ (267)	\$ (242)	\$ (217)	\$ (192)	\$ (166)	\$ (141)	\$ (116)
	70	\$ (328)	\$ (303)	\$ (278)	\$ (253)	\$ (227)	\$ (202)	\$ (177)
	75	\$ (389)	\$ (364)	\$ (339)	\$ (313)	\$ (288)	\$ (263)	\$ (238)

Crop 2	Crop	Budget
Choose crop and budget	Soybeans	2. Soybeans, full-season, Enlist E3, stale seedbed, 16R 30", Furrow irrigated, 9 ac-in., Delta Area
bu/ac		
Expected Yield	60	
\$/bu		
Expected Price	\$12.46	
Soybean Yield Increment	5	

Any value in white, Crop 1 has higher returns than Crop 2. Any value that is red, Crop 1 has lower returns than Crop 2.



Net Returns Comparison Calculator

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Crop 1	Crop	Budget
Choose crop and budget	Corn	1. Corn, stale seedbed, BtRR, 16-row 30", 220 bu yield goal - Furrow Irrigated, 13 ac-in., Delta Area
Expected Yield	bu/ac	220
Expected Price	\$/bu	\$5.17
Corn Yield Increment		10

Seedcotton Yields (Lint + Cottonseed)

	Difference in Returns Between Corn and Cotton \$/ac							
	Corn Yields bu/ac							
	190	200	210	220	230	240	250	
3495	\$ (225)	\$ (176)	\$ (126)	\$ (77)	\$ (28)	\$ 22	\$ 71	
3505	\$ (230)	\$ (181)	\$ (131)	\$ (82)	\$ (32)	\$ 17	\$ 66	
3515	\$ (235)	\$ (185)	\$ (136)	\$ (87)	\$ (37)	\$ 12	\$ 62	
3525	\$ (240)	\$ (190)	\$ (141)	\$ (91)	\$ (42)	\$ 7	\$ 57	
3535	\$ (244)	\$ (195)	\$ (146)	\$ (96)	\$ (47)	\$ 3	\$ 52	
3545	\$ (249)	\$ (200)	\$ (150)	\$ (101)	\$ (52)	\$ (2)	\$ 47	
3555	\$ (254)	\$ (205)	\$ (155)	\$ (106)	\$ (56)	\$ (7)	\$ 42	

Crop 2	Crop	Budget
Choose crop and budget	Cotton	2. Cotton, 12R-38" solid, conservation tillage, furrow irrigated, B3XF variety, 10.5 ac-in., Delta Area
Expected Yield	Lint lbs/ac	1500
Expected Price	Lint \$/lb	\$0.85
Cotton Yield Increment		5

Any value in white, Crop 1 has higher returns than Crop 2. Any value that is red, Crop 1 has lower returns than Crop 2.



Summary

- Flooding had a large impact on Mississippi in 2021
- Input prices are up significantly from last year but higher prices could lead to higher returns
- Important to determine which crop is going to be the best for your situation



Questions?

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