
Estimated Costs, Yields, and Returns Associated with 8-Row Solid and 12-Row
Skip-Row Cotton Production Systems: A Case Study

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Abstract

Cotton production systems based on wider equipment are more efficient (cost less per acre). They improve net returns if yield can be maintained or the value of the yield reduction (which may or may not occur depending upon planting pattern and soil type) is less than the reduction in cost of production (which will occur).

Keywords: cotton, equipment width, skip-row

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This staff paper expands an article developed for the June, 2000 issue of the Cotton Grower Magazine. Publication as a staff paper allows the authors to attach appendix tables not available in the magazine article. The appendix tables, especially the operations budgets which list the details of every “trip-over-the-field,” will be helpful to producers considering changes of this type.

Current adjustments by producers include new self-propelled and towed equipment. Publication of the authors’ estimates of the technical parameter associated with the new equipment (especially hours per acre) will allow colleagues (and others) an opportunity to improve current estimates.

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**Estimated Costs, Yields, and Returns
Associated with 8-Row Solid and 12-Row Skip-Row
Cotton Production Systems: A Case Study**

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Introduction: This paper examines two production systems: 8-row 38" solid and 12-row 30" 2×1 skip-row. Per acre differences in direct expenses, fixed equipment expenses, and yields are estimated, and their impacts on net returns calculated. Additional equipment width can be achieved by adding rows (8 to 12 in this example) and/or by changing planting pattern (solid to full skip in this example). Table 1 indicates how width is increased when picker and planter size is changed.

The additional width improves equipment efficiency (hours per acre) reducing direct cost per acre. And, just as importantly, increases acres per year, thereby reducing fixed cost per acre. Moving from the narrowest to the widest systems in Table 1 increases acres per hour by more than 230 percent.

Case Study: Jimmy Hargett farms approximately 4,000 acres of cotton in the West Tennessee Brown Loam near Alamo (primarily in Crockett County). Hargett's expected cotton yield is 800 pounds per acre. His typical production system is built around an 8-row 38" solid planter and 4-row picker. In 1999 he produced 450 acres in a system based on a 6-row harvester (6 heads) arranged in a 30" (2×1) skip-row pattern, and a 12-row skip-row planter. The skip-row system yielded 5% more than the solid system in 1999. In this analysis, equal yields are assumed for both systems.

Field operations were identical for both systems. Mississippi growers are cautioned that insect pressure in West Tennessee is less than Mississippi.

Crop Budgets: The budget table, from which all other budget tables are derived, commonly referred to as the micro-table, is organized by rows in chronological order (see Appendix A/B). The rows list production practices (trips-over-the-field performed by the

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producer, such as discing, planting, spraying, etc.); custom operations, such as spreading lime, hauling, ginning, etc.; and fees for insect scouting, genetically modified seed, etc.

Crop Production Practices: The practices or field operations employed to produce each of the two crop production systems are summarized by time of year (fall-spring) or sub-system objective (weed control, insect control, harvest). The budgeting process begins in the fall after harvest and ends with defoliation, harvest, and ginning. Unless specifically noted, the percent of the acre covered is 100 (times over, TO=1.00).

Fall. - During this period the stalks are shred, and lime is custom applied.

Spring. – Fertilizer and Treflan are custom applied and incorporated with a hipper.

Planting. - This period involves two field operations and three fees. The first operation is a do-all. In addition to seed, the planting operation includes a herbicide (Cotoran), an insecticide (Temik), and a fungicide. The fees are for the services of a consulting entomologist and for Bt and RoundupReady (RR) genetically modified seed.

Post plant weed control. – This sub-system includes four sprays.

1. Bladex + MSMA + Cobra in May.
2. Fusilade + Pix in June. Pix is a plant growth regulator.
3. Bladex + MSMA + Cobra (TO=0.50) in July.
4. Roundup in July applied to field borders (TO=0.06).

Post plant insect control. - The plant growth regulator Pix is applied with the insecticides. Five applications with TO=3.56 are included in this sub-system.

1. Custom application of BWACT (boll weevil attract and control tube) in May.
2. Ground application of Baythroid (TO=0.06) in May.
3. Ground application of Baythroid + Pix in June.
4. Ground application of Baythroid + Pix in July.
5. Ground application of Tracer in August (TO=0.50).

Fertilizer. - In addition to the 10-15-25 fertilizer in the spring, Bulldog Soda is applied during the growing season (July).

Defoliation. - The budget indicates an application of Finish.

Harvest. - The harvesting process requires two "trips-over-the-field".

1. Picker supported by boll buggy and module builder.
2. Picker supported by boll buggy and module builder.

Haul and gin. The cost of these two operations is proportional to yield and total \$0.10 per pound of lint.

Procedure: Per acre budgets were constructed for each of the systems of production. “Trips-over-the-field” and type of material applied were constant for each of the systems. Differences in cost were due to equipment width, linear feet of row per acre, and a slight modification in the herbicide program to account for differences in the band width (20” vs. 15”), and treatment of the skip. In the skip-row budget, when a herbicide is listed twice in a single operation, the second listing is for the skip (Appendix A/B).

Results: Table 2 compares the two production systems. The first seven cost items do not vary by systems. The next three items vary as a function of equipment width.

Changes in the cost items labeled “growth regulators” through “RR Fee” are related to differences in planting pattern.

Total direct expenses are \$432.83 per acre for the 8-row solid system. Shifting to the 12-row skip-row system reduces direct expenses by \$82.05 or 19 percent per acre. Fixed expenses for the 12-row skip-row system are \$64.24 or \$36.61 less than the 8-row solid system.

Total specified expenses for the 12-row skip-row system are \$415.02 or 22% less than the 8-row system.

Net returns above specified expenses are \$134.97 for the skip-row system or \$118.66 per acre greater than the 8-row solid system.

Conclusions: Wider is better if yield can be maintained or the value of the yield reduction (which may or may not occur depending upon planting pattern and soil type) is less than the reduction in cost of production (which will occur). Because the current price of cotton is low and the probability of a significant yield increasing set of production practices and/or new technology is nil, growers probably should consider a skip-row pattern. The best skip-row pattern will vary by soil type, and none work well on heavy clay soils (traditionally non-cotton soils). All skip-row patterns reduce costs; the best skip-row pattern for a given soil type maintains yield or keeps the yield reduction to a minimum.

Table 1. Width, performance rate and acres per hour, selected pickers and planters, four cotton production systems (size), Mississippi, 2000.

Operation or tool	Size or description	Width	Per. rate	Acres per hour
		inches	hours/acre	
Picker	4-row - 38"	152	.2000	5.00
	6-row - 38"	228	.1306	7.66
	6-row - 30" (2×1)	270	.1095	9.13
	6-row - 38" (2×1)	342	.0853	11.72
Plant and preemerge	8-row - 38"	304	.0780	12.82
	12-row - 38"	456	.0510	19.61
	12-row - 30" (2×1)	540	.0420	23.81
	12-row - 38" (2×1)	684	.0330	30.30

Table 2. Summary of estimated costs, yields and returns per acre, two cotton production systems, West Tennessee, 2000.

Item	8-row - 38"	12-row - 30" (2×1)
	Dollars/acre	
Cotton scout	7.00	7.00
Custom BWACT	5.00	5.00
Haul	16.00	16.00
Gin	64.00	64.00
Fert 10-15-25	55.00	55.00
Treflan	3.63	3.63
Custom lime	13.07	13.07
Operator labor	19.60	10.52
Diesel fuel	11.35	6.20
Repairs and maintenance	44.86	29.13
Growth regulators	10.50	6.99
Harvest aids	14.93	9.32
Fungicides	12.40	8.25
Herbicides	24.05	22.82
Insecticides	26.70	20.30
Seed	9.00	7.92
Bt Fee	22.00	14.67
RR Fee	9.00	6.00
Interest on operating capital	19.94	17.66
Direct expenses	432.83	350.78
Fixed expenses	100.85	64.24
Total specified expenses	533.69	415.02
Yield (lbs. Of lint/a.)	800	800
Income ¹	550.00	550.00
Returns	16.31	134.97

¹Assume 1.55 lb of seed per lb. of lint @ \$0.05, and price of lint = \$0.61 per lb.
Source: Appendix A/B.

Appendix A/B

Appendix Table 1.A Estimated resource use for field operations, per acre, Jimmy Hargett, 8 row-38 inch, Brown Loam, TN, 2000.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	TRACTOR SIZE	PERF RATE	TIMES OVER	MTH	OPER INPUT	EQUIP	TRACT	ALLOC LABOR	UNALL LABOR
						amount	-----hours-----			
Stalk Shredder	12'	190 hp	0.142	1.00	Nov		0.142	0.142	0.142	0.113
Lime (Spread)	ton			0.25	Nov	0.5000				
Disk Harrow	24'	190 hp	0.078	1.00	Mar		0.078	0.078	0.078	0.062
Custom Spread(Truck)	appl			1.00	Mar	1.0000				
Fert 10-15-25	cwt					5.0000				
Treflan EC	pt					1.0000				
Disk Bed (Hipper)	8R-38	190 hp	0.074	1.00	Apr		0.074	0.074	0.074	0.059
Row Cond (Plant)	27'	190 hp	0.073	1.00	May		0.073	0.073	0.073	0.058
Plant & Pre	8R-38	190 hp	0.078	1.00	May		0.078	0.078	0.156	0.062
Cotoran 4L	pt					1.5000				
Temik 15G	lb					3.5000				
Terraclor 2EC	pt					5.0000				
Cotton Seed RR	lb					9.0000				
Insect Scouting	acre			1.00	May	1.0000				
Bt Cotton Fee (TN)	acre					1.0000				
RR Cotton Fee	acre					1.0000				
Custom BWACT	acre			1.00	May	1.0000				
Spray Borders-Hi-boy	60'		0.033	0.06	May		0.001		0.001	0.001
Baythroid 2	oz					0.0768				
Crop Oil (Petroleum)	pt					0.0600				
Spray (Shielded)	8R-38	190 hp	0.071	1.00	May		0.071	0.071	0.106	0.056
Bladex 4L	qt					1.0000				
MSMA6 + Surfactant	pt					1.0000				
Cobra	oz					2.0000				
Hi-Clear Sprayer	60'		0.033	1.00	Jun		0.033		0.033	0.026
Baythroid 2	oz					1.2800				
Pix	oz					6.0000				
Surfactant	pt					1.0000				
Spray (Shield/Spot)	8R-38	190 hp	0.071	1.00	Jun		0.071	0.071	0.106	0.056
Fusilade DX	oz					1.0000				
Pix	oz					4.0000				
Surfactant	pt					0.2000				
Fert Appl (Solid)	8R-38	190 hp	0.078	1.00	Jul		0.078	0.078	0.117	0.062
Bulldog Soda--16.5%N	cwt					2.0000				
Spray (Shielded)	8R-38	190 hp	0.071	0.50	Jul		0.035	0.035	0.053	0.028
Bladex 4L	qt					0.1250				
MSMA6 + Surfactant	pt					0.2500				
Cobra	oz					0.5000				
Spray Borders-Hi-boy	60'		0.033	0.06	Jul		0.001		0.001	0.001
Roundup Ultra 4SL	pt					0.0156				
Hi-Clear Sprayer	60'		0.033	1.00	Jul		0.033		0.033	0.026
Baythroid 2	oz					1.6000				
Pix	oz					4.0000				
Crop Oil (Petroleum)	pt					1.0000				
Hi-Clear Sprayer	60'		0.033	0.50	Aug		0.016		0.016	0.013
Tracer	oz					1.0650				
Crop Oil (Petroleum)	pt					0.5000				
Hi-Clear Sprayer	60'		0.033	1.00	Sep		0.033		0.033	0.026
Finish	pt					2.1300				
Surfactant	pt					1.0000				
Cotton Picker-1st	4R-38		0.200	1.00	Sep		0.200		0.400	0.320
Boll Buggy--.2000	4 bale	190 hp	0.200	1.00	Sep		0.200	0.200	0.200	0.160
Module Builder-.2000	32'	190 hp	0.200	1.00	Sep		0.200	0.200	0.400	0.160
Cotton Picker-2nd	4R-38		0.161	1.00	Oct		0.161		0.322	0.257
Boll Buggy--.1610	4 bale	190 hp	0.161	1.00	Oct		0.161	0.161	0.161	0.128
Module Builder-.1610	32'	190 hp	0.161	1.00	Oct		0.161	0.161	0.322	0.128
Haul Cotton	lb			1.00	Nov	800.0000				
Gin	lb			1.00	Nov	800.0000				
TOTALS							1.902	1.422	2.830	1.811

Appendix Table 2.A Estimated resource use for field operations, per acre, Jimmy Hargett, 12 row-30 inch 2x1 Full Skip, Brown Loam, TN, 2000.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	TRACTOR SIZE	PERF RATE	TIMES OVER	MTH	OPER INPUT	EQUIP	TRACT	ALLOC LABOR	UNALL LABOR
						amount	-----hours-----			
Stalk Shredder	24'	190 hp	0.068	1.00	Nov		0.068	0.068	0.068	0.054
Lime (Spread)	ton			0.25	Nov	0.5000				
Disk Harrow	42'	190 hp	0.045	1.00	Mar		0.045	0.045	0.045	0.036
Custom Spread(Truck)	appl			1.00	Mar	1.0000				
Fert 10-15-25	cwt					5.0000				
Treflan EC	pt					1.0000				
Disk Bed (Hipper)	12R302x1	190 hp	0.040	1.00	Apr		0.040	0.040	0.040	0.032
Row Cond (Plant)	45'	190 hp	0.043	1.00	May		0.043	0.043	0.043	0.034
Plant & Pre	12R302x1	190 hp	0.042	1.00	May		0.042	0.042	0.084	0.033
Cotoran 4L	pt					1.0000				
Temik 15G	lb					3.0800				
Terraclor 2EC	pt					3.3300				
Cotton Seed RR	lb					7.9200				
Gramoxone Extra	pt					0.3300				
Insect Scouting	acre			1.00	May	1.0000				
Bt Cotton Fee (TN)	acre					0.6670				
RR Cotton Fee	acre					0.6670				
Custom BWACT	acre			1.00	May	1.0000				
Spray Borders-Hi-boy	60'		0.033	0.06	May		0.001		0.001	0.001
Baythroid 2	oz					0.0768				
Crop Oil (Petroleum)	pt					0.0600				
Spray (Shielded)	12R302x1	190 hp	0.038	1.00	May		0.038	0.038	0.057	0.030
Bladex 4L	qt					0.6600				
MSMA6 + Surfactant	pt					0.6500				
Cobra	oz					2.0000				
Bladex 4L	qt					0.3300				
Hi-Clear Sprayer	90'		0.013	1.00	Jun		0.013		0.013	0.010
Baythroid 2	oz					0.8500				
Pix	oz					4.0000				
Surfactant	pt					0.6700				
Spray (Shield/Spot)	12R302x1	190 hp	0.039	1.00	Jun		0.039	0.039	0.058	0.031
Fusilade DX	oz					0.6700				
Pix	oz					2.6600				
Surfactant	pt					0.1300				
Fert Appl (Solid)	12R302x1	190 hp	0.043	1.00	Jul		0.043	0.043	0.064	0.034
Bulldog Soda--16.5%N	cwt					1.3300				
Spray (Shielded)	12R302x1	190 hp	0.038	0.50	Jul		0.019	0.019	0.028	0.015
Bladex 4L	qt					0.1650				
MSMA6 + Surfactant	pt					0.1650				
Cobra	oz					0.5000				
Bladex 4L	qt					0.0800				
Spray Borders-Hi-Boy	90'		0.013	0.06	Jul		0.000		0.000	0.000
Roundup Ultra 4SL	pt					0.0156				
Hi-Clear Sprayer	90'		0.013	1.00	Jul		0.013		0.013	0.010
Baythroid 2	oz					1.0600				
Pix	oz					2.6600				
Crop Oil (Petroleum)	pt					0.6600				
Hi-Clear Sprayer	90'		0.013	0.50	Aug		0.006		0.006	0.005
Tracer	oz					0.7100				
Crop Oil (Petroleum)	pt					0.3300				
Hi-Clear Sprayer	90'		0.013	1.00	Sep		0.013		0.013	0.010
Finish	pt					1.3300				
Surfactant	pt					0.6600				
CottonPicker1Hargett	6R-302x1		0.109	1.00	Sep		0.109		0.219	0.175
Module Builder-.0869	32'	190 hp	0.109	1.00	Sep		0.109	0.109	0.219	0.087
Boll Buggy--.0869	4 bale	190 hp	0.109	1.00	Sep		0.109	0.109	0.109	0.087
CottonPicker2Hargett	6R-302x1		0.088	1.00	Oct		0.088		0.176	0.140
Module Builder-.0699	32'	190 hp	0.088	1.00	Oct		0.088	0.088	0.176	0.070
Boll Buggy--.0699	4 bale	190 hp	0.088	1.00	Oct		0.088	0.088	0.088	0.070
Haul Cotton	lb			1.00	Nov	800.0000				
Gin	lb			1.00	Nov	800.0000				
TOTALS							1.017	0.772	1.524	0.972

Appendix Table 1.B Estimated costs for field operations, per acre, Jimmy Hargett, 8 row-38 inch, Brown Loam, TN, 2000.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----						DIR COST TO DATE	FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	INTER	TOTAL			
-----dollars-----										
Stalk Shredder	12'		0.88	1.13	2.21	0.37	4.61	4.61	3.59	8.20
Lime (Spread)	ton	13.07				1.15	14.22	18.84		14.22
Disk Harrow	24'		0.48	1.07	1.21	0.16	2.94	21.78	2.58	5.52
Custom Spread(Truck)	appl	3.50				0.20	3.70	25.48		3.70
Fert 10-15-25	cwt	55.00				3.23	58.23	83.72		58.23
Treflan EC	pt	3.63				0.21	3.84	87.56		3.84
Disk Bed (Hipper)	8R-38		0.46	0.81	1.15	0.12	2.55	90.12	2.05	4.61
Row Cond (Plant)	27'		0.45	0.97	1.13	0.11	2.68	92.80	2.42	5.11
Plant & Pre	8R-38		0.48	1.31	1.75	0.15	3.72	96.52	3.42	7.14
Cotoran 4L	pt	6.24				0.27	6.51	103.04		6.51
Temik 15G	lb	11.48				0.50	11.98	115.02		11.98
Terraclor 2EC	pt	12.40				0.54	12.94	127.97		12.94
Cotton Seed RR	lb	9.00				0.39	9.39	137.37		9.39
Insect Scouting	acre	7.00				0.30	7.30	144.68		7.30
Bt Cotton Fee (TN)	acre	22.00				0.97	22.97	167.65		22.97
RR Cotton Fee	acre	9.00				0.39	9.39	177.04		9.39
Custom BWACTION	acre	5.00				0.22	5.22	182.26		5.22
Spray Borders-Hi-boy	60'		0.00	0.03	0.03	0.00	0.06	182.33	0.05	0.12
Baythroid 2	oz	0.23				0.01	0.24	182.58		0.24
Crop Oil (Petroleum)	pt	0.04				0.00	0.05	182.63		0.05
Spray (Shielded)	8R-38		0.44	0.61	1.35	0.10	2.51	185.15	1.72	4.24
Bladex 4L	qt	7.18				0.31	7.49	192.64		7.49
MSMA6 + Surfactant	pt	2.23				0.09	2.32	194.97		2.32
Cobra	oz	1.86				0.08	1.94	196.91		1.94
Hi-Clear Sprayer	60'		0.10	0.53	0.51	0.04	1.19	198.11	0.96	2.16
Baythroid 2	oz	3.89				0.14	4.03	202.15		4.03
Pix	oz	4.50				0.16	4.66	206.81		4.66
Surfactant	pt	0.91				0.03	0.94	207.76		0.94
Spray (Shield/Spot)	8R-38		0.44	0.61	1.35	0.08	2.50	210.26	1.72	4.22
Fusilade DX	oz	0.92				0.03	0.95	211.21		0.95
Pix	oz	3.00				0.11	3.11	214.32		3.11
Surfactant	pt	0.18				0.00	0.18	214.51		0.18
Fert Appl (Solid)	8R-38		0.48	1.00	1.48	0.08	3.06	217.57	2.62	5.68
Bulldog Soda--16.5%N	cwt	22.00				0.64	22.64	240.22		22.64
Spray (Shielded)	8R-38		0.22	0.30	0.67	0.03	1.24	241.46	0.86	2.10
Bladex 4L	qt	0.89				0.02	0.92	242.38		0.92
MSMA6 + Surfactant	pt	0.55				0.01	0.57	242.96		0.57
Cobra	oz	0.46				0.01	0.47	243.44		0.47
Spray Borders-Hi-boy	60'		0.00	0.03	0.03	0.00	0.06	243.50	0.05	0.12
Roundup Ultra 4SL	pt	0.07				0.00	0.08	243.58		0.08
Hi-Clear Sprayer	60'		0.10	0.53	0.51	0.03	1.19	244.78	0.96	2.15
Baythroid 2	oz	4.86				0.14	5.00	249.78		5.00
Pix	oz	3.00				0.08	3.08	252.87		3.08
Crop Oil (Petroleum)	pt	0.82				0.02	0.84	253.72		0.84
Hi-Clear Sprayer	60'		0.05	0.26	0.25	0.01	0.59	254.31	0.48	1.07
Tracer	oz	6.24				0.13	6.37	260.69		6.37
Crop Oil (Petroleum)	pt	0.41				0.00	0.41	261.10		0.41
Hi-Clear Sprayer	60'		0.10	0.53	0.51	0.01	1.17	262.28	0.96	2.13
Finish	pt	14.93				0.21	15.15	277.43		15.15
Surfactant	pt	0.91				0.01	0.92	278.35		0.92
Cotton Picker-1st	4R-38		1.15	15.04	6.23	0.32	22.76	301.12	29.07	51.84
Boll Buggy--.2000	4 bale		1.25	2.12	3.11	0.09	6.58	307.71	6.40	12.99
Module Builder-.2000	32'		1.25	2.25	4.49	0.11	8.12	315.83	6.80	14.92
Cotton Picker-2nd	4R-38		0.92	12.11	5.01	0.13	18.19	334.02	23.40	41.60
Boll Buggy--.1610	4 bale		1.00	1.70	2.50	0.03	5.26	339.29	5.15	10.42
Module Builder-.1610	32'		1.00	1.81	3.62	0.04	6.48	345.78	5.47	11.96
Haul Cotton	lb	16.00				1.41	17.41	363.19		17.41
Gin	lb	64.00				5.64	69.64	432.83		69.64
TOTALS		317.45	11.35	44.86	39.20	19.94	432.83		100.85	533.69

Appendix Table 2.B Estimated costs for field operations, per acre, Jimmy Hargett, 12 row-30 inch 2x1 Full Skip, Brown Loam, TN, 2000.

OPERATION/ OPERATING INPUT	SIZE/ UNIT	-----DIRECT COST-----						DIR COST TO DATE	FIXED COST	TOTAL COST
		OP INPUT	FUEL	R&M	LABOR	INTER	TOTAL			
-----dollars-----										
Stalk Shredder	24'		0.42	0.63	1.05	0.18	2.30	2.30	2.05	4.35
Lime (Spread)	ton	13.07				1.15	14.22	16.53		14.22
Disk Harrow	42'		0.28	1.02	0.70	0.11	2.12	18.65	2.27	4.40
Custom Spread(Truck)	appl	3.50				0.20	3.70	22.36		3.70
Fert 10-15-25	cwt	55.00				3.23	58.23	80.59		58.23
Treflan EC	pt	3.63				0.21	3.84	84.44		3.84
Disk Bed (Hipper)	12R302x1		0.25	0.49	0.62	0.07	1.43	85.88	1.21	2.64
Row Cond (Plant)	45'		0.26	0.84	0.67	0.07	1.86	87.74	1.99	3.86
Plant & Pre	12R302x1		0.26	0.84	0.94	0.09	2.14	89.89	2.16	4.30
Cotoran 4L	pt	4.16				0.18	4.34	94.23		4.34
Temik 15G	lb	10.10				0.44	10.54	104.78		10.54
Terraclor 2EC	pt	8.25				0.36	8.62	113.40		8.62
Cotton Seed RR	lb	7.92				0.34	8.26	121.67		8.26
Gramoxone Extra	pt	1.32				0.05	1.38	123.06		1.38
Insect Scouting	acre	7.00				0.30	7.30	130.36		7.30
Bt Cotton Fee (TN)	acre	14.67				0.64	15.32	145.68		15.32
RR Cotton Fee	acre	6.00				0.26	6.26	151.95		6.26
Custom BWACT	acre	5.00				0.22	5.22	157.17		5.22
Spray Borders-Hi-boy	60'		0.00	0.03	0.03	0.00	0.06	157.24	0.05	0.12
Baythroid 2	oz	0.23				0.01	0.24	157.49		0.24
Crop Oil (Petroleum)	pt	0.04				0.00	0.05	157.54		0.05
Spray (Shielded)	12R302x1		0.23	0.36	0.72	0.05	1.38	158.92	1.00	2.39
Bladex 4L	qt	4.73				0.20	4.94	163.87		4.94
MSMA6 + Surfactant	pt	1.44				0.06	1.51	165.38		1.51
Cobra	oz	1.86				0.08	1.94	167.33		1.94
Bladex 4L	qt	2.36				0.10	2.47	169.80		2.47
Hi-Clear Sprayer	90'		0.06	0.44	0.20	0.02	0.74	170.54	0.79	1.54
Baythroid 2	oz	2.58				0.09	2.67	173.22		2.67
Pix	oz	3.00				0.11	3.11	176.33		3.11
Surfactant	pt	0.60				0.02	0.63	176.96		0.63
Spray (Shield/Spot)	12R302x1		0.24	0.37	0.74	0.05	1.41	178.37	1.03	2.44
Fusilade DX	oz	0.61				0.02	0.63	179.01		0.63
Pix	oz	1.99				0.07	2.06	181.08		2.06
Surfactant	pt	0.11				0.00	0.12	181.20		0.12
Fert Appl (Solid)	12R302x1		0.26	0.65	0.81	0.05	1.79	183.12	1.69	3.48
Bulldog Soda--16.5%N	cwt	14.63				0.43	15.06	198.18		15.06
Spray (Shielded)	12R302x1		0.11	0.18	0.36	0.01	0.68	198.86	0.50	1.18
Bladex 4L	qt	1.18				0.03	1.21	200.08		1.21
MSMA6 + Surfactant	pt	0.36				0.01	0.37	200.46		0.37
Cobra	oz	0.46				0.01	0.47	200.94		0.47
Bladex 4L	qt	0.57				0.01	0.59	201.53		0.59
Spray Borders-Hi-Boy	90'		0.00	0.02	0.01	0.00	0.04	181.25	0.04	0.08
Roundup Ultra 4SL	pt	0.07				0.00	0.08	181.33		0.08
Hi-Clear Sprayer	90'		0.06	0.44	0.20	0.02	0.73	202.27	0.79	1.53
Baythroid 2	oz	3.22				0.09	3.31	205.59		3.31
Pix	oz	1.99				0.05	2.05	207.64		2.05
Crop Oil (Petroleum)	pt	0.54				0.01	0.55	208.20		0.55
Hi-Clear Sprayer	90'		0.03	0.22	0.10	0.00	0.36	208.56	0.39	0.76
Tracer	oz	4.16				0.09	4.25	212.81		4.25
Crop Oil (Petroleum)	pt	0.27				0.00	0.27	213.09		0.27
Hi-Clear Sprayer	90'		0.06	0.44	0.20	0.01	0.72	213.82	0.79	1.52
Finish	pt	9.32				0.13	9.46	223.28		9.46
Surfactant	pt	0.60				0.00	0.60	223.89		0.60
CottonPicker1Hargett	6R-302x1		0.63	9.85	3.41	0.20	14.10	237.99	19.04	33.14
Module Builder--.0869	32'		0.68	1.23	2.46	0.06	4.44	242.44	3.72	8.17
Boll Buggy--.0869	4 bale		0.68	1.16	1.70	0.05	3.60	246.04	3.50	7.11
CottonPicker2Hargett	6R-302x1		0.50	7.92	2.74	0.08	11.25	257.30	15.30	26.55
Module Builder--.0699	32'		0.55	0.99	1.97	0.02	3.54	260.84	2.99	6.54
Boll Buggy--.0699	4 bale		0.55	0.93	1.37	0.02	2.87	263.72	2.82	5.69
Haul Cotton	lb	16.00				1.41	17.41	272.92		17.41
Gin	lb	64.00				5.64	69.64	342.57		69.64
TOTALS		276.68	6.20	29.13	21.07	17.67	350.78		64.24	415.02

Appendix C

Appendix Table 1.C Summary of estimated costs and returns per acre, Jimmy Hargett, 8 row-38 inch, Brown Loam, TN, 2000.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Cotton Lint	lb	0.61	800.0000	488.00	_____
Cotton Seed	lb	0.05	1240.0000	62.00	_____

TOTAL INCOME				550.00	_____
DIRECT EXPENSES					
HARVEST AIDS	acre	14.93	1.0000	14.93	_____
GIN/DRY	acre	64.00	1.0000	64.00	_____
FERTILIZERS	acre	77.00	1.0000	77.00	_____
FUNGICIDES	acre	12.40	1.0000	12.40	_____
HERBICIDES	acre	24.05	1.0000	24.05	_____
INSECTICIDES	acre	26.70	1.0000	26.70	_____
SEED/PLANTS	acre	9.00	1.0000	9.00	_____
TECHNOLOGY FEE	acre	36.00	1.0000	36.00	_____
GROWTH REGULATORS	acre	10.50	1.0000	10.50	_____
SERVICE FEE	acre	7.00	1.0000	7.00	_____
ADJUVANTS	acre	3.28	1.0000	3.28	_____
CUSTOM FERT/LIME	acre	16.57	1.0000	16.57	_____
CUSTOM HARVEST/HAUL	acre	16.00	1.0000	16.00	_____
OPERATOR LABOR	hour	8.66	2.2639	19.60	_____
HAND LABOR	hour	6.91	0.5667	3.91	_____
UNALLOCATED LABOR	hour	8.66	1.8111	15.68	_____
DIESEL FUEL	gal	0.64	17.7464	11.35	_____
REPAIR & MAINTENANCE	acre	44.86	1.0000	44.86	_____
INTEREST ON OP. CAP.	acre	19.94	1.0000	19.94	_____

TOTAL DIRECT EXPENSES				432.83	_____
RETURNS ABOVE DIRECT EXPENSES				117.16	_____

TOTAL FIXED EXPENSES				100.85	_____

TOTAL SPECIFIED EXPENSES				533.69	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				16.30	_____

Appendix Table 2.C Summary of estimated costs and returns per acre, Jimmy Hargett, 12 row-30 inch 2x1 Full Skip, Brown Loam, TN, 2000.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
INCOME					
Cotton Lint	lb	0.61	800.0000	488.00	_____
Cotton Seed	lb	0.05	1240.0000	62.00	_____

TOTAL INCOME				550.00	_____
DIRECT EXPENSES					
HARVEST AIDS	acre	9.32	1.0000	9.32	_____
GIN/DRY	acre	64.00	1.0000	64.00	_____
FERTILIZERS	acre	69.63	1.0000	69.63	_____
FUNGICIDES	acre	8.25	1.0000	8.25	_____
HERBICIDES	acre	22.82	1.0000	22.82	_____
INSECTICIDES	acre	20.30	1.0000	20.30	_____
SEED/PLANTS	acre	7.92	1.0000	7.92	_____
TECHNOLOGY FEE	acre	25.67	1.0000	25.67	_____
GROWTH REGULATORS	acre	6.99	1.0000	6.99	_____
SERVICE FEE	acre	7.00	1.0000	7.00	_____
ADJUVANTS	acre	2.18	1.0000	2.18	_____
CUSTOM FERT/LIME	acre	16.57	1.0000	16.57	_____
CUSTOM HARVEST/HAUL	acre	16.00	1.0000	16.00	_____
OPERATOR LABOR	hour	8.66	1.2152	10.52	_____
HAND LABOR	hour	6.91	0.3090	2.13	_____
UNALLOCATED LABOR	hour	8.66	0.9722	8.41	_____
DIESEL FUEL	gal	0.64	9.6980	6.20	_____
REPAIR & MAINTENANCE	acre	29.13	1.0000	29.13	_____
INTEREST ON OP. CAP.	acre	17.67	1.0000	17.67	_____

TOTAL DIRECT EXPENSES				350.78	_____
RETURNS ABOVE DIRECT EXPENSES				199.21	_____

TOTAL FIXED EXPENSES				64.24	_____

TOTAL SPECIFIED EXPENSES				415.02	_____
RETURNS ABOVE TOTAL SPECIFIED EXPENSES				134.97	_____

Appendix D

Appendix Table 1.D Estimated costs per acre, Jimmy Hargett, 8 row-38 inch, Brown Loam, TN, 2000.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
HARVEST AIDS					
Finish	pt	7.01	2.1300	14.93	_____
GIN/DRY					
Gin	lb	0.08	800.0000	64.00	_____
FERTILIZERS					
Fert 10-15-25	cwt	11.00	5.0000	55.00	_____
Bulldog Soda--16.5%N	cwt	11.00	2.0000	22.00	_____
FUNGICIDES					
Terraclor 2EC	pt	2.48	5.0000	12.40	_____
HERBICIDES					
Treflan EC	pt	3.63	1.0000	3.63	_____
Cotoran 4L	pt	4.16	1.5000	6.24	_____
Bladex 4L	qt	7.18	1.1250	8.07	_____
MSMA6 + Surfactant	pt	2.23	1.2500	2.78	_____
Cobra	oz	0.93	2.5000	2.32	_____
Fusilade DX	oz	0.92	1.0000	0.92	_____
Roundup Ultra 4SL	pt	4.99	0.0156	0.07	_____
INSECTICIDES					
Temik 15G	lb	3.28	3.5000	11.48	_____
Baythroid 2	oz	3.04	2.9568	8.98	_____
Tracer	oz	5.86	1.0650	6.24	_____
SEED/PLANTS					
Cotton Seed RR	lb	1.00	9.0000	9.00	_____
TECHNOLOGY FEE					
Bt Cotton Fee (TN)	acre	22.00	1.0000	22.00	_____
RR Cotton Fee	acre	9.00	1.0000	9.00	_____
Custom BWACT	acre	5.00	1.0000	5.00	_____
GROWTH REGULATORS					
Pix	oz	0.75	14.0000	10.50	_____
SERVICE FEE					
Insect Scouting	acre	7.00	1.0000	7.00	_____
ADJUVANTS					
Crop Oil (Petroleum)	pt	0.82	1.5600	1.27	_____
Surfactant	pt	0.91	2.2000	2.00	_____
CUSTOM FERT/LIME					
Lime (Spread)	ton	26.15	0.5000	13.07	_____
Custom Spread(Truck)	appl	3.50	1.0000	3.50	_____
CUSTOM HARVEST/HAUL					
Haul Cotton	lb	0.02	800.0000	16.00	_____
OPERATOR LABOR					
Tractors	hour	8.66	1.4225	12.31	_____
Self-Propelled Eq.	hour	8.66	0.8414	7.28	_____
HAND LABOR					
Implements	hour	6.91	0.5667	3.91	_____
UNALLOCATED LABOR					
	hour	8.66	1.8111	15.68	_____
DIESEL FUEL					
Tractors	gal	0.64	13.9120	8.90	_____
Self-Propelled Eq.	gal	0.64	3.8344	2.45	_____
REPAIR & MAINTENANCE					
Implements	acre	6.81	1.0000	6.81	_____
Tractors	acre	8.94	1.0000	8.94	_____
Self-Propelled Eq.	acre	29.10	1.0000	29.10	_____
INTEREST ON OP. CAP.	acre	19.94	1.0000	19.94	_____
TOTAL DIRECT EXPENSES				432.83	_____
FIXED EXPENSES					
Implements	acre	18.35	1.0000	18.35	_____
Tractors	acre	26.52	1.0000	26.52	_____
Self-Propelled Eq.	acre	55.97	1.0000	55.97	_____
TOTAL FIXED EXPENSES				100.85	_____
TOTAL SPECIFIED EXPENSES				533.69	_____

Appendix Table 2.D Estimated costs per acre, Jimmy Hargett, 12 row-30 inch 2x1 Full Skip, Brown Loam, TN, 2000.

ITEM	UNIT	PRICE	QUANTITY	AMOUNT	YOUR FARM
		dollars		dollars	
DIRECT EXPENSES					
HARVEST AIDS					
Finish	pt	7.01	1.3300	9.32	_____
GIN/DRY					
Gin	lb	0.08	800.0000	64.00	_____
FERTILIZERS					
Fert 10-15-25	cwt	11.00	5.0000	55.00	_____
Bulldog Soda--16.5%N	cwt	11.00	1.3300	14.63	_____
FUNGICIDES					
Terraclor 2EC	pt	2.48	3.3300	8.25	_____
HERBICIDES					
Treflan EC	pt	3.63	1.0000	3.63	_____
Cotoran 4L	pt	4.16	1.0000	4.16	_____
Gramoxone Extra	pt	4.02	0.3300	1.32	_____
Bladex 4L	qt	7.18	1.2350	8.86	_____
MSMA6 + Surfactant	pt	2.23	0.8150	1.81	_____
Cobra	oz	0.93	2.5000	2.32	_____
Fusilade DX	oz	0.92	0.6700	0.61	_____
Roundup Ultra 4SL	pt	4.99	0.0156	0.07	_____
INSECTICIDES					
Temik 15G	lb	3.28	3.0800	10.10	_____
Baythroid 2	oz	3.04	1.9868	6.03	_____
Tracer	oz	5.86	0.7100	4.16	_____
SEED/PLANTS					
Cotton Seed RR	lb	1.00	7.9200	7.92	_____
TECHNOLOGY FEE					
Bt Cotton Fee (TN)	acre	22.00	0.6670	14.67	_____
RR Cotton Fee	acre	9.00	0.6670	6.00	_____
Custom BWACT	acre	5.00	1.0000	5.00	_____
GROWTH REGULATORS					
Pix	oz	0.75	9.3200	6.99	_____
SERVICE FEE					
Insect Scouting	acre	7.00	1.0000	7.00	_____
ADJUVANTS					
Crop Oil (Petroleum)	pt	0.82	1.0500	0.86	_____
Surfactant	pt	0.91	1.4600	1.32	_____
CUSTOM FERT/LIME					
Lime (Spread)	ton	26.15	0.5000	13.07	_____
Custom Spread(Truck)	appl	3.50	1.0000	3.50	_____
CUSTOM HARVEST/HAUL					
Haul Cotton	lb	0.02	800.0000	16.00	_____
OPERATOR LABOR					
Tractors	hour	8.66	0.7720	6.68	_____
Self-Propelled Eq.	hour	8.66	0.4432	3.83	_____
HAND LABOR					
Implements	hour	6.91	0.3090	2.13	_____
UNALLOCATED LABOR					
hour	hour	8.66	0.9722	8.41	_____
DIESEL FUEL					
Tractors	gal	0.64	7.5501	4.83	_____
Self-Propelled Eq.	gal	0.64	2.1478	1.37	_____
REPAIR & MAINTENANCE					
Implements	acre	4.89	1.0000	4.89	_____
Tractors	acre	4.85	1.0000	4.85	_____
Self-Propelled Eq.	acre	19.39	1.0000	19.39	_____
INTEREST ON OP. CAP.	acre	17.67	1.0000	17.67	_____
TOTAL DIRECT EXPENSES				350.78	_____
FIXED EXPENSES					
Implements	acre	12.59	1.0000	12.59	_____
Tractors	acre	14.39	1.0000	14.39	_____
Self-Propelled Eq.	acre	37.25	1.0000	37.25	_____
TOTAL FIXED EXPENSES				64.24	_____
TOTAL SPECIFIED EXPENSES				415.02	_____

Appendix E

Appendix Table 1.E Powered equipment: estimated performance rate, useful life, annual use, purchase price, repair cost, fuel consumption rate, and direct and fixed cost per hour and per acre, Mississippi, 2000.

ITEM NAME	SIZE	PERF	USEFUL	ANNUAL	PURCHASE	REPAIR	FUEL	--DIRECT COST--		--FIXED COST--	
		RATE	LIFE	USE	PRICE	COST	CONS	\$/hr	\$/ac	\$/hr	\$/ac
		hrs/ac	years	hours	dollars	percent	/hour				
Cotton Picker-1st	4R-38	0.200	10	200	188,100	80	9.00	81.00	16.20	145.38	29.07
Cotton Picker-1st	4R-40	0.181	10	200	188,100	80	9.00	81.00	14.66	145.38	26.31
Cotton Picker-1st	6R-38	0.130	10	200	225,000	80	9.00	95.76	12.50	173.91	22.71
Cotton Picker-1st	6R-40	0.124	10	200	225,000	80	9.00	95.76	11.92	173.91	21.65
Cotton Picker-1st	6R-302x1	0.109	10	200	225,000	80	9.00	95.76	10.48	173.91	19.04
Cotton Picker-1st	6R-382x1	0.085	10	200	225,000	80	9.00	95.76	8.16	173.91	14.83
Cotton Picker-2nd	4R-38	0.161	10	200	188,100	80	9.00	81.00	13.04	145.38	23.40
Cotton Picker-2nd	4R-40	0.152	10	200	188,100	80	9.00	81.00	12.31	145.38	22.09
Cotton Picker-2nd	6R-38	0.105	10	200	225,000	80	9.00	95.76	10.06	173.91	18.27
Cotton Picker-2nd	6R-40	0.100	10	200	225,000	80	9.00	95.76	9.59	173.91	17.42
Cotton Picker-2nd	6R-302x1	0.088	10	200	225,000	80	9.00	95.76	8.42	173.91	15.30
Cotton Picker-2nd	6R-382x1	0.068	10	200	225,000	80	9.00	95.76	6.56	173.91	11.93
Hi-Clear Sprayer	60'	0.033	8	350	57,000	80	5.00	19.48	0.64	29.22	0.96
Hi-Clear Sprayer	90'	0.013	8	350	120,000	80	8.10	39.40	0.51	61.53	0.79
Spray Borders-Hi-boy	60'	0.033	8	350	57,000	80	2.00	17.56	0.57	29.22	0.96
Tractor 40-59 hp	50 hp		14	600	21,700	75	2.57	3.58		4.59	
Tractor 60-89 hp	75 hp		14	600	31,000	75	3.86	5.23		6.56	
Tractor 90-119 hp	105 hp		14	600	50,200	60	5.40	7.04		10.63	
Tractor 120-139 hp	130 hp		14	600	67,200	60	6.69	9.08		14.23	
Tractor 140-159 hp	150 hp		14	600	74,300	60	7.72	10.24		15.74	
Tractor 160-179 hp	170 hp		14	600	79,400	60	8.75	11.27		16.82	
Tractor 180-199 hp	190 hp		14	600	88,000	60	9.78	12.54		18.64	
Tractor 200-219 hp	210 hp		14	600	97,800	50	10.80	12.73		20.72	
Tractor 220-229 hp	225 hp		14	600	117,600	50	11.58	14.41		24.91	

Appendix Table 2.E Towed Equipment: estimated performance rate, useful life, annual use, purchase price, repair cost, and direct and fixed cost per hour and per acre, Mississippi, 2000.

ITEM NAME	SIZE	PERF	USEFUL	ANNUAL	PURCHASE	REPAIR	--DIRECT COST--		--FIXED COST--	
		RATE	LIFE	USE	PRICE	COST	\$/hr	\$/ac	\$/hr	\$/ac
		hrs/ac	years	hours	dollars	percent				
Boll Buggy--.0686	4 bale	0.068	10	200	17,340	50	4.33	0.29	13.40	0.91
Boll Buggy--.0853	4 bale	0.085	10	200	17,340	50	4.33	0.36	13.40	1.14
Boll Buggy--.0880	4 bale	0.088	10	200	17,340	50	4.33	0.38	13.40	1.17
Boll Buggy--.1051	4 bale	0.105	10	200	17,340	50	4.33	0.45	13.40	1.40
Boll Buggy--.1095	4 bale	0.109	10	200	17,340	50	4.33	0.47	13.40	1.46
Boll Buggy--.1306	4 bale	0.130	10	200	17,340	50	4.33	0.56	13.40	1.75
Boll Buggy--.1520	4 bale	0.152	10	200	17,340	50	4.33	0.65	13.40	2.03
Boll Buggy--.1610	4 bale	0.161	10	200	17,340	50	4.33	0.69	13.40	2.15
Boll Buggy--.1810	4 bale	0.181	10	200	17,340	50	4.33	0.78	13.40	2.42
Boll Buggy--.2000	4 bale	0.200	10	200	17,340	50	4.33	0.86	13.40	2.68
Cult & Post (Early)	8R-38	0.105	12	200	15,750	80	5.25	0.55	10.89	1.14
Cult & Post (Early)	8R-40	0.100	12	200	15,750	80	5.25	0.52	10.89	1.08
Cult & Post (Early)	12R-38	0.067	12	200	17,190	80	5.73	0.38	11.89	0.79
Cult & Post (Early)	12R382x1	0.044	12	200	17,590	80	5.86	0.25	12.17	0.53
Cult & Post (Late)	8R-38	0.071	12	200	15,750	80	5.25	0.37	10.89	0.77
Cult & Post (Late)	8R-40	0.067	12	200	15,750	80	5.25	0.35	10.89	0.73
Cult & Post (Late)	12R-38	0.046	12	200	17,190	80	5.73	0.26	11.89	0.54
Cult & Post (Late)	12R382x1	0.030	12	200	17,590	80	5.86	0.17	12.17	0.36
Disk & Incorporate	32'	0.061	10	200	29,250	80	11.70	0.71	22.60	1.37
Disk & Incorporate	42'	0.047	10	200	40,600	80	16.24	0.76	31.38	1.47
Disk Bed (Hipper)	8R-38	0.074	10	160	9,490	80	4.74	0.35	9.16	0.67
Disk Bed (Hipper)	8R-40	0.070	10	160	9,490	80	4.74	0.33	9.16	0.64
Disk Bed (Hipper)	12R-38	0.048	10	160	13,900	80	6.95	0.33	13.42	0.64
Disk Bed (Hipper)	12R302x1	0.040	10	160	12,080	80	6.04	0.24	11.67	0.46
Disk Bed (Hipper)	12R382x1	0.031	10	160	14,300	80	7.15	0.22	13.81	0.42
Disk Harrow	24'	0.078	10	180	16,830	80	7.48	0.58	14.45	1.12
Disk Harrow	42'	0.045	10	180	37,230	80	16.54	0.74	31.97	1.43
Fert Appl (Deep)	8R-40	0.074	15	100	18,870	100	12.58	0.93	23.16	1.71
Fert Appl (Liquid)	8R-38	0.078	8	150	11,120	50	4.63	0.36	13.30	1.03
Fert Appl (Liquid)	8R-40	0.074	8	150	11,120	50	4.63	0.34	13.30	0.98
Fert Appl (Liquid)	12R-38	0.051	8	150	11,720	50	4.88	0.24	14.02	0.71
Fert Appl (Liquid)	12R382x1	0.033	8	150	12,120	50	5.05	0.16	14.50	0.47
Fert Appl (Solid)	8R-38	0.078	15	100	12,260	80	6.53	0.51	15.04	1.17
Fert Appl (Solid)	12R302x1	0.043	15	100	16,840	80	8.98	0.38	20.67	0.88
Field Cultivate	32'	0.045	10	100	14,280	65	9.28	0.41	22.07	0.99
Field Cultivate	50'	0.027	10	100	28,666	65	18.63	0.51	44.31	1.22
Module Builder-.0686	32'	0.068	10	200	19,890	50	4.97	0.34	15.37	1.05
Module Builder-.0853	32'	0.085	10	200	19,890	50	4.97	0.42	15.37	1.31
Module Builder-.0880	32'	0.088	10	200	19,890	50	4.97	0.43	15.37	1.35
Module Builder-.1051	32'	0.105	10	200	19,890	50	4.97	0.52	15.37	1.61
Module Builder-.1095	32'	0.109	10	200	19,890	50	4.97	0.54	15.37	1.68
Module Builder-.1306	32'	0.130	10	200	19,890	50	4.97	0.64	15.37	2.00
Module Builder-.1520	32'	0.152	10	200	19,890	50	4.97	0.75	15.37	2.33
Module Builder-.1610	32'	0.161	10	200	19,890	50	4.97	0.80	15.37	2.47
Module Builder-.1810	32'	0.181	10	200	19,890	50	4.97	0.90	15.37	2.78
Module Builder-.2000	32'	0.200	10	200	19,890	50	4.97	0.99	15.37	3.07
Plant & Pre	8R-38	0.078	12	150	27,350	70	10.63	0.82	25.23	1.96
Plant & Pre	8R-40	0.074	12	150	27,350	70	10.63	0.78	25.23	1.86
Plant & Pre	12R-20	0.098	12	150	30,750	70	11.95	1.17	28.36	2.78
Plant & Pre	12R-38	0.051	12	150	35,990	70	13.99	0.71	33.20	1.69
Plant & Pre	12R302x1	0.042	12	150	35,590	70	13.84	0.58	32.83	1.37
Plant & Pre	12R382x1	0.033	12	150	36,390	70	14.15	0.46	33.57	1.10
Row Cond (Plant)	27'	0.073	10	100	9,440	75	7.08	0.51	14.59	1.06
Row Cond (Plant)	45'	0.043	10	100	17,960	75	13.47	0.57	27.76	1.19
Spin Spreader	4 ton	0.042	8	100	7,140	80	7.14	0.30	12.81	0.53
Spray (Shield/Spot)	8R-38	0.071	12	200	8,200	70	2.39	0.16	5.67	0.40
Spray (Shield/Spot)	12R302x1	0.039	12	200	11,400	70	3.32	0.12	7.88	0.30
Spray (Shielded)	8R-38	0.071	12	200	8,200	70	2.39	0.16	5.67	0.40
Spray (Shielded)	12R302x1	0.038	12	200	11,400	70	3.32	0.12	7.88	0.29
Stalk Shredder	12'	0.142	10	185	7,960	40	1.72	0.24	6.65	0.94
Stalk Shredder	24'	0.068	10	185	13,810	40	2.98	0.20	11.53	0.78
Subsoiler	3 shank	0.188	15	100	3,110	100	2.07	0.38	3.81	0.71

Appendix Table 3.E Operating inputs: estimated prices, Mississippi, 2000.

ITEM NAME	UNIT	PRICE
dollars		
ADJUVANTS		
Crop Oil (Petroleum)	pt	0.82
Surfactant	pt	0.91
CUSTOM FERT/LIME		
Custom Spread(Truck)	appl	3.50
Lime (Spread)	ton	26.15
CUSTOM HARVEST/HAUL		
Haul Cotton	lb	0.02
CUSTOM SPRAY		
App by Air (2 gal)	appl	2.20
App by Air (5 gal)	appl	3.25
FERTILIZERS		
Amm Nitrate (34% N)	cwt	9.19
Anhy Ammonia (82% N)	cwt	9.33
Bulldog Soda--16.5%N	cwt	11.00
Fert 0-20-20	cwt	11.08
Fert 10-15-25	cwt	11.00
Fert 10-34-0	cwt	11.00
Fert 13-13-13	cwt	10.60
Fert 5-20-20	cwt	10.57
Potash (60% K2O)	cwt	8.83
UAN (32% N)	cwt	5.93
FUNGICIDES		
Fungicide	lb	2.25
Ridomil PC	oz	0.52
Ridomil PC 11G	lb	1.79
Terraclor 2EC	pt	2.48
Terraclor Super X EC	pt	3.07
Terraclor Super X G	lb	2.25
GIN		
Gin	lb	0.08
GROWTH REGULATORS		
PGR IV	oz	1.51
Pix	oz	0.75
HARVEST AIDS		
Def 6	pt	5.43
Dropp 50 WP	lb	54.74
Finish	pt	7.01
Gramoxone Extra	pt	4.02
Prep	pt	6.29
HERBICIDES		
Bladex 4L	qt	7.18
Bladex 90DF	lb	6.50
Blazer 2L	pt	7.49
Caparol 4L	pt	3.51
Cobra	oz	0.93
Cotoran 4L	pt	4.16
Cotoran DF	lb	7.12
Fusilade DX	oz	0.92
Gramoxone Extra	pt	4.02
MSMA6 + Surfactant	pt	2.23
Select 2EC	oz	1.32
Staple 85%	oz	20.28
Treflan EC	pt	3.63
INSECTICIDES		
Baythroid 2	oz	3.04
Bidrin 8L	oz	0.68
Curacron 8E	pt	12.61
Karate Z	oz	3.79
Orthene 90S	lb	9.37
Temik 15G	lb	3.28
Tracer	oz	5.86
Vydate C-LV	oz	0.47
SEED		
Bt Cotton Seed	lb	1.02
Cotton Seed	lb	0.94
Cotton Seed RR	lb	1.00
SERVICE FEE		
Insect Scouting	acre	7.00
TECHNOLOGY FEE		
Bt Cotton Fee	acre	32.00
Custom BWACT	acre	5.00
Eradication Zone 1/2	acre	22.00
Eradication Zone 3	acre	24.00
Eradication Zone 4	acre	20.00
RR Cotton Fee	acre	9.00
RRBt Cotton Fee	acre	41.00

Appendix Table 4.E Estimated fuel prices, labor wage rates, and interest rates, Mississippi, 2000.

ITEM NAME	UNIT	PRICE
		dollars
FUEL TYPES		
Diesel Fuel	gal	0.64
Gasoline	gal	1.05
LABOR TYPES		
Operator	hour	8.66
Hand	hour	6.91
Irrigation	hour	6.91
INTEREST RATES		
Short-term	%	8.82
Intermediate-term	%	8.82