

**ECONOMIC ANALYSIS OF SOLID VERSUS
SKIP-ROW COTTON: A CASE STUDY
TALLAHATCHIE COUNTY, MS 2000**
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Abstract

Under drought and expected weather conditions, 2' 1 full skip results in superior estimated net returns per acre than solid cotton.

Introduction

The current costs of producing cotton and its low price, which has persisted for several years, has resulted in negative returns for many Mississippi cotton growers. Some growers with the highest whole – farm yields have been able to maintain positive return with conventional practices, but their rate of return has been greatly diminished.

Mississippi growers are examining alternative approaches to cotton production such as no till, reduced tillage, skip – row, ultra-narrow row, etc. Producers are taking a long hard look at cutting production costs as sharply as possible in 2001. The last three years have been unusually dry years and non-irrigated cotton has suffered. Skip-Row cotton has been known in the past as “Poor Man’s Irrigation.”

The objective of this study was to compare per acre returns for two systems of production, solid non-irrigated versus 2' 1 skip-row non-irrigated cotton.

Methodology

During the 2000 production season detailed information on every trip over the field was taken from a commercial farming operation that employed reduced tillage production techniques on a 213-acre block of cotton. Actual prices and yields were recorded. The information was utilized to construct per acre budget tables for the actual practices (8 – Row 38” Solid) and simulated skip-row practices (2' 1 38” Full Skip). All budgets and comparisons in this report are on a land acre basis.

Weather

On July 4, 2000 an excellent crop had been set. But there was no rainfall in the months of July and August 2000 at the test site, resulting in drastically reduced yields. Consequently solid versus 2' 1 was also compared assuming normal yields and the production practices that occurred in 2000.

Results

A summary of selected per acre cost, yields and returns is listed in Table 1 for the solid cotton that was produced and the simulated 2' 1 production. Under drought conditions the 2' 1 yield was assumed to be the same as the solid yield. The income for both production systems was the same (\$323.01). Items associated with linear feet of row were reduced along with items associated with improved performance rates due to the wider equipment.

The cost of planting seed was reduced approximately 33%. Herbicide cost were reduced by 25%. Dollars per acre for operator labor and fuel were reduced 21-24%.

Direct expenses were reduced 11% and fixed expenses by 24%. Total specified expenses, the sum of direct and fixed expenses, were reduced by 13 %. Estimated net returns per acre for the solid system were \$-93.56 versus \$ -40.19 for the 2' 1 system. Even though net returns for both systems were negative, the 2' 1 system improved net returns by \$53.37 per acre.

Table 2 compares the two systems assuming average weather (average yields) and the expected level of inputs. On average, 2' 1 is expected to yield 90 % of solid on a land acre basis. Hence, 2' 1 yield and income are both reduced by 10 %.

The 2' 1 production system reduced solid direct expenses by 14% and fixed expenses by 23%.

Net returns per acre are estimated at \$11.14 for the solid system and \$45.51 for the 2' 1 system. 2' 1 production techniques assuming expected yields and inputs improve solid net returns by \$34.37 per acre.

Conclusions

Under 2000 drought conditions and expected weather conditions 2' 1 production appear to be superior to solid production for the loess soils of Tallahatchie County and 2000 product and input prices. Under drought conditions although net returns to both systems were negative, 2' 1 improved net returns by \$53.37 per acre. Under expected conditions 2' 1 improves net returns by \$34.37, from \$11.14 to \$45.51 per acre.

Table 1. Variety type, Price, Income, Selected Cost Items, & Net Returns, Per acre, solid vs. 2' 1, Cotton, Tallahatchie County, Mississippi, 2000.

Variety		SOLID	2' 1
Yield	lb/acre	BtRR	BtRR
		444	444
Price:			
Lint	\$/lb	.65	.65
Seed	\$/lb	.05	.05
Income	\$/acre	323.01	323.01
Seed	\$/acre	12.30	8.11
Fertilizer	\$/acre	56.14	49.22
Herbicide	\$/acre	40.77	30.54
Insecticide	\$/acre	12.06	8.26
Op. Labor	\$/acre	9.30	7.06
Fuel	\$/acre	5.20	4.10
Direct Expenses	\$/acre	362.27	321.88
Fixed Expenses	\$/acre	54.29	41.30
Total Specified Exp.	\$/acre	416.56	362.19
Net Returns	\$/acre	-93.56	-40.19

Table 2. Yield, Income, Expenses & Net Returns, solid vs. 2'1, Cotton, Expected weather, Tallahatchie County, Mississippi, 2000.

		SOLID	2'1
Yield	lb/acre	825	744
Income	\$/acre	600.19	541.26
Direct Expenses	\$/acre	485.05	415.85
Fixed Expenses	\$/acre	104.00	79.88
Net Returns	\$/acre	11.14	45.51