

ECONOMIC COMPARISON OF COMMERCIAL SCALE STRIPPER AND PICKER HARVEST SYSTEMS IN TEXAS SOUTH PLAINS

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Introduction

Over one-fourth of the cotton produced in the United States since 2002 has been produced in Texas, with most of that coming from the High Plains region. In the past, the Texas High Plains (THP) has been associated with low cost, low quality cotton harvested with cotton strippers, as compared to spindle pickers used throughout the Cotton Belt. The shift to varieties with higher yields and quality, combined with the new, more efficient irrigation technology, has led to a higher acreage of cotton in the THP that is considered suitable for picker harvest. This study conducted an economic analysis of picker and stripper harvest systems in a commercial, large-scale setting on the THP. Results from this project will help answer producer's questions concerning comparative costs and returns between picker and stripper systems.

Objectives

The objectives of this study were to compare a stripper harvest and ginning system and a picker harvest a ginning system. We also wanted to determine the total costs associated with each harvest system, determine the total revenue generated by each harvest system, and to compare the total returns above harvest and ginning costs.

Materials and Methods

Studies were conducted over a two-year period. During both 2008 and 2009, data was collected at Steve and Eddie Verett's farm located in Ralls, TX, and in 2008 from Mimms Farm in Acuff, TX. In 2008, the Ralls study was planted to FiberMax 9180B2F on subsurface drip irrigation. It was harvested on November 13. The picker used was a John Deere 9996 basket picker on lease to USDA from John Deere, and the stripper used was a John Deere 7460 with a field cleaner provided by the cooperators. Ginning was performed at the Muleshoe Co-op Gin. Data were also collected in 2008 in Acuff, TX from the Mimms Farm. At this location, FiberMax 1880B2F was planted on subsurface drip irrigation, and harvested on November 10. The picker used was a John Deere 9986 basket picker provided by a custom harvester, and the stripper used was a John Deere 7460 with field cleaner provided by the cooperators. Ginning was performed at the Acuff McClung Co-op Gin. In 2009, data were collected from the same site in Ralls, TX. FiberMax 9180B2F was planted on May 15 under subsurface drip irrigation. The costs used across all three tests were \$3.00 cwt for ginning costs, \$175/ton for cotton seed, \$0.10/lint lb for custom picker harvesting, \$0.07 for custom stripper harvesting, and the 2010 loan chart was used for all locations.

Results

In 2008 at the Ralls site, there was a higher value for seed cotton, lint, and seed yield with the stripper system compared to the picker system, but there was no difference in revenue between the two. The harvest costs for this site were lower and the ginning costs were higher for the stripper system compared to the picker system, but the total returns above harvest and ginning costs were similar. In 2008 at the Acuff site, there was a higher value for seed cotton, lint, and seed yield for the stripper system compared to the picker system. However, revenue was similar for both systems. The harvest costs were lower and the ginning costs were higher for the stripper system compared to the picker system, and the total returns above harvest and ginning costs were similar. In 2009 at the Ralls site there

was a higher value for seed cotton, lint, and seed yield with the stripper system compared to the picker system, but there was no difference in revenue. The harvest costs were lower and the ginning costs were higher for the stripper system compared to the picker system.

Summary

The harvest costs were higher, but the ginning costs were lower for the picker system compared to the stripper systems across all three tests. There was no difference between the returns above harvest and ginning costs for all three tests. Other studies have indicated that as yields increase and acres harvested per machine increase, the advantage moves toward the picker system from the stripper system.