Summary

Six cotton varieties were evaluated for lint quality and yield. The six varieties evaluated were DP 12R249 B2R2, FM 1830 GLT, PHY 333 WRF, PHY 499 WRF, ST 4946 GLB2, and ST 6448 GLB2. The varieties were planted to sufficient acreage in order to module each variety. ST 4946 GLB2 had the highest yield at 1164 lint lbs/A. FM 1830 GLT had the highest loan value of $.551788. ST 4496 GLB2 and PHY 333 WRF had the highest gross return at $622.71 and $616.62, respectively.

Objective

Cotton producers are confronted with reduced monetary returns due to low prices. Lint quality characteristics have a greater impact on gross return per acre when cotton prices are low. The focus of this demonstration was to evaluate yield, quality characteristics and analyze gross return per acre. The main emphasis of the study was to evaluate quality.

Materials and Methods

Six commercial cotton varieties were planted to sufficient acreage to module each variety. Cultural practices were the same for all varieties. DP 12R249 B2R2, FM 1830 GLT, PHY 333 WRF, PHY 499 WRF, ST 4946 GLB2, and ST 6448 GLB2 were planted to sufficient acreage of each variety to be moduled. The acreage harvested for each variety was six acres.

The plot was planted on April 10. Total units of N-P-K was 90-46-0. Foliar insecticide applications were the same for each variety. All other production practices were equal. The row spacing for this trial was 30 inches. The previous crop planted was corn. The plot was harvested on September 11 with a John Deere brush stripper. Each variety was moduled and ginned. Within the ginning process, to compensate for overlap of modules for fiber quality, the beginning and ending bales were not sampled for fiber quality.
Results and Discussion

Lint quality appears to have a greater impact on gross return per acre when producers experience low prices. Higher yielding varieties have a greater impact on gross return per acre when lint prices are high.

The average yield, loan value and gross return for each variety were: ST 4946 GLB2 at 1164 lint lbs/A x $.534978 = $622.71, PHY 333 WRF at 1157 lint lbs/A x $.532948 = $616.62, PHY 499 WRF at 1078 lint lbs/A x $.507504 = $547.09, FM 1830 GLT at 935 lint lbs/A x $.551788 = $515.92, ST 6448 GLB2 at 996 lint lbs/A x $.510815 = $508.77, and DP 12R249 B2R2 at 975 lint lbs/A x $.507999 = $495.30. FM 1830 GLT had the highest loan value of $.534978 compared to the next highest ST 4946 B2RF and PHY 333 WRF at $.534978 and $.532948 respectively. One other area of interest was the average staple length of PHY 333 WRF and FM 1830 GLT was 35.00 and 34.90 compared to the next longest staple ST 4946 GLB2 at 34.00. Seed companies will continue to introduce new varieties with high yield and high fiber quality. Future test will need to be conducted to determine which of these varieties will produce the highest gross return per acre when yield and quality characteristics are both considered.

Conclusions

Yield and lint quality are utilized to determine a producers gross return per acre. ST 4946 GLB2 and PHY333 WRF had a gross return of $622.71 and $616.62. Evaluating lint quality FM 1830 GLT had the highest loan value of $.551788. This test was a strip test and not a replicated study. For producer adopting of new and existing varieties, they should be evaluated over a period of several years.

Acknowledgements

Appreciation is extended to Richard and Jonathan Holy for establishing this test. Special appreciation is extended to Jason Hejl, Jonathan Holy and Kyle Miller for harvesting this study. Special thanks to Gerry and Lisa Kasberg of Birome Gin for ginning these varieties separately. Appreciation is also extended to the seed companies. The interest, hard work and cooperation from these people were instrumental in conducting this test.
Farmers’ Name and Location: Richard and Jonathan Holy, Cottonwood  
Date Planted: April 10, 2014  
Last Crop: Corn 
Fertilizer: 90-46-0  
Row Spacing: 30 inches  
Herbicide: Caparol-3pts. Broadcast  
Date Harvested: September 11, 2014  
Harvest: Machine 

Table #9: Comparison of Lint Quality and Yield for Cotton Varieties with Higher Fiber Quality. 

<table>
<thead>
<tr>
<th>Variety</th>
<th>Fiber Quality*1</th>
<th>Average Lint lbs/A</th>
<th>Average Loan Value/Bale</th>
<th>Gross Return/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>ST 4946 GLB2</td>
<td></td>
<td>1164</td>
<td>53.4978</td>
<td>622.71</td>
</tr>
<tr>
<td>PHY 333 WRF</td>
<td></td>
<td>1157</td>
<td>53.2948</td>
<td>616.62</td>
</tr>
<tr>
<td>PHY 499 WRF</td>
<td></td>
<td>1078</td>
<td>50.7504</td>
<td>547.09</td>
</tr>
<tr>
<td>FM 1830 GLT</td>
<td></td>
<td>935</td>
<td>55.1788</td>
<td>515.92</td>
</tr>
<tr>
<td>ST 6448 GLB2</td>
<td></td>
<td>996</td>
<td>51.0815</td>
<td>508.77</td>
</tr>
<tr>
<td>DP 12R249 B2R2</td>
<td></td>
<td>975</td>
<td>50.7999</td>
<td>495.30</td>
</tr>
</tbody>
</table>

*1 Module averaging was utilized to determine values.

*Each variety was moduled then ginned separately. (Birome Gin)