crops. Using non-labeled pesticides is illegal and could cause crop phytotoxicity and yield loss to occur.

● Destroy all post-harvest crop residue and weedy vegetation to eliminate overwintering quarters for pests and subsequently build populations during the fall.

● Double-cropping cotton after winter wheat should be given special consideration due to the delay in planting, crop development, and eventual harvest. The double-cropped fields remain attractive to arthropod pests after most other local cotton fields have reached harvest maturity. An "island" effect is created in which many of the pests in that area funnel into the attractive double-cropped fields. In some instances, persistent and high populations can occur and require numerous and costly pesticide applications to obtain satisfactory control. The same concerns also exist for any late-planted cotton fields.

Summary

Southern agriculture will continue to evolve with annual fluctuations in the value of all available crops. Successful producers will capitalize on the profitability and stability of multi-cropping systems. This change to multi-crop production systems will also influence the diversity and severity of arthropod pest problems. A "common-sense" approach to pest management strategies is necessary to optimize farm income from cotton, as well as other crops. Agricultural consultants and producers are forewarned to recognize the direct relationships of cotton pest problems and specific plant hosts in multi-crop production systems and to adjust their pest control tactics accordingly.

▸ Performance Of New Cotton Varieties In The North Delta

Presented by Dr. Chris Main

Extension Cotton and Small Grains Specialist, University of Tennessee

Presented by Andrea Phillips

University of Missouri

Presented by Fred Bourland

University of Arkansas

The release of cotton varieties with the latest biotechnology traits has researchers and p roducers scrambling to find varieties that perform as well as first generation biotechnolog y trait varieties. Beyond obvious yield goal, intangible benefits of these new technologies are driving their adoption. The increased flexibility for weed management and the ability t o use a natural refuge with Roundup Ready Flex and two gene Bt traits has producers look ing towards these new varieties for time savings and reductions in input costs. In this pres entation we investigate the performance of recently released cotton varieties in the North Delta states of Arkansas, Missouri, and Tennessee.

Table 1. Top ten varieties in Arkansas and Tennessee OVT's for 2005, 2006, and 2007.

	Arkansas			Tennessee			
Rank	2005	2006	2007	2005	2006	2007'A'	2007'B'
1	PHY 310R	DP 117B2RF	PHY 370WR	DP 432RR	ST 5599BR	DP 444BG/RR	DP 444BG/RR
2	DP 393	ST 4664RF	DP 454BG/RR	ST 5599BR	ST 5242BR	PHY 375WRF	ST 5599BR
3	DP 432RR	ST 5599BR	DP 515BG/RR	ST4575BR	PHY 370WR	DP 445BG/RR	PHY 370WR
4	DP 445BG/RR	DP 147RF	PHY 310R	ST 5242BR	DP 432RR	ST 4498B2RF	ST 5327B2RF
5	DP 434RR	PHY 425RF	FM 1900LL	ST 4554B2RF	ST 4427B2RF	ST 5599BR	DP 432 RR
6	ST 4892R	DP 143B2RF	ST 5242BR	ST 4686R	FM 960BR	ST 5242BR	CG 3220B2RF
7	DX 25105N	DP 444BG/RR	DP 445BG/RR	DP 444BG/RR	PHY 425RF	ST 4427B2RF	AMX 1550B2RF
8	DP 455BG/RR	DG 2520B2RF	PHY 485WRF	ST 4664RF	ST 5327B2RF	PHY 310R	DP 161B2RF
9	ST 4575BR	CG 3520B2RF	ST 5599BR	BW 4630B2RF	DP 444BG/RR	PHY 370WR	ST 4596B2RF
10	ST 4686R	DP 164B2RF	DP 117B2RF	STX 416B2RF	DP 147RF	ST 4554B2RF	DP 515BG/RR

Table 2. Top ten varieties in Missouri OVT's for 2005, 2006, and 2007.

	Missouri					
Rank	2005	2006	2007 Senath	2007 Sikeston	2007 Delta RR	2007 Delta Clay
1	DX 25105N	DP 445BG/RR	ST 4498B2RF	DP 455BG/RR	PHY 315RF	ST 4498B2RF
2	DP 445BG/RR	PHY 370WR	DP 174RF	FM 9058F	ST 5242BR	DP 117B2RF
3	ST 4554B2RF	DP 117B2RF	ST 4664RF	ST 5458B2RF	PHY 375WRF	ST 5242BR
4	ST 4575BR	ST 5242BR	PHY 315RF	ST 5242BR	ST 5283RF	ST 4427B2RF
5	XBCG1404	DP 434RR	AMX 1550B2RF	ST 4664RF	ST 4664RF	DP 174RF
6	ST 4664RF	ST 5599BR	ST 5458B2RF	FM 9060F	PHY 370WR	ST 5458B2RF
7	ST 5599BR	PHY 310R	ST 5283RF	FM 1740B2F	PHY 310R	FM 1740B2RF
8	CX621	DP 444BG/RR	DG 2383B2RF	ST 4498B2RF	CG 3220B2RF	PHY 310R
9	PHY 310R	FM 966LL	ST 4427B2RF	FM 958LL	CG 3035B2RF	ST 4678B2RF
10	ST 4686R	DG 2490B2RF	ST 4357B2RF	DP 164B2RF	DP 432RR	CG 3035B2RF

While yields for these new cotton varieties have lacked stability, fiber quality is typicall y equal to or better than the first generation biotech cotton varieties. To better understand p erformance of these new varieties the presentation will focus on yield stability models and fiber quality evaluations for several of the more popular cotton varieties grown in the Nort h Delta region.

Net Return Comparison Of No Tillage And Minimum Tillage Cotton-Corn Rotations

Presented by Dr. Steven W. Martin
Associate Professor, Mississippi State University
Presented by James Hanks

Crop rotations have been shown to have agronomic benefits. An increasingly common crop rotation in the Mid–South is cotton rotated with corn. Many previous studies have focused on tillage systems or crop rotations. Few have evaluated a combination of the two (crop rotations and tillage) especially from an economics perspective. Field studies were conducted at Stoneville, MS for the period 2001-2006. Treatments included no-till continuous cotton, minimum till continuous cotton, one year corn followed by two years cotton no till, one year corn followed by two years cotton minimum till, one year corn-one year cotton no till and one year corn-one year cotton minimum till. Results revealed that cotton yields were increased in all four systems rotated with corn. Lower risk was associated with minimum till cotton. Gross returns were higher in a monoculture minimum till cotton system. Net returns were larger in a system that included minimum tillage and a corn rotation. The highest net returns and lowest risk were obtained from a minimum till system of cotton rotated with corn every other year. For those producers required to use a no-till system, a one year corn-two year cotton rotation provided the highest net returns and least risk.

Table 1. Average Treatment Yields for the period 2001-2006, Stoneville, MS.

Treatment	Yield
NTC	992
MTC	1006
Corn/NTC/NTC	1097
Corn/MTC/MTC	1096
Corn/NTC/Corn	1138
Corn/MTC/Corn	1182