

REDUCED INPUTS AND PIX® PLUS
D. W. Parvin
MAFES/Mississippi State University
Mississippi State, MS

Abstract

Pix Plus appears to enhance net revenue even when growers shift to a system of production based on reduced inputs.

Introduction

The current high cost of producing cotton and its relatively low price has resulted in negative returns for many Mississippi growers. Most growers are adjusting by reducing inputs. When the cost of production is increasing relative to the price of cotton lint, reducing input is consistent with economic theory.

However, some growers are reducing the level of selected inputs to zero. This paper presents the results of a 1999 test of Pix Plus on a farm where the producer had shifted to a production system based on reduced inputs.

Procedure

A grower was selected that planned to reduce inputs in 1999. For example, his nitrogen rate was cut to 67%, Pix was eliminated, and insect and weed thresholds were raised, etc.

An 80-acre field was selected and split. One-half of this field received his reduced system. The other half received the same plus Pix Plus. The grower was provided with sufficient Pix Plus to treat 40 acres at more than his historical level (32 oz.). He was instructed to apply the material consistent with his inputs, weather, and experience. The initial application was four ounces at pinhead, the second was six and the final two were eight, for a total of 26 ounces.

Plants were mapped near mid-bloom and early cut-out. Each block was moduled separately, and yields were obtained for gin records.

Results

The mid-bloom mapping data is summarized in Table 1. The Pix Plus treatment seemed to cause the cotton plant to grow faster. It had more MSN and the bloom had advanced higher up the plant. Consequently, in early August it had more bolls and more squares. And, according to NAWF estimates, had more time until cut-out to produce a higher yield.

The early cut-out mapping data is reported in Table 2. The Pix Plus treatment cut-out higher and in late August had more open bolls and green bolls.

Yield was 984 pounds of lint per acre for the Pix Plus treatment and 911 for the Check. A difference of 73 pounds of lint at \$0.50 per pound for the lint and \$0.05 per pound for the seed (assuming 1.55 pounds of seed per pound of lint), the yield increases is valued at \$42.16 per acre.

Pix Plus varied in price from about \$0.75 to \$1.00 per ounce in 1999. 26 ounces cost \$19.50 to \$26.00 per acre. The difference ranges from \$16.11 to \$22.66 per acre. This grower piggy-backed all Pix Plus applications with other trips-over-the-field.

Limitations

Historically, the test farm has averaged over 1,100 pounds of lint per acre. Certainly there are farms and fields with limited yield potential that should not utilize Pix Plus (or similar products). When Pix Plus is applied alone, an application charge must be included.

Conclusions

Farms that have historically used high rates of Pix or Pix Plus probably should reduce the rate per acre per season if other inputs are reduced, but the rate probably should not be reduced to zero.

Table 1. Mapping data per 100 plants, Pix Plus and Check treatments, south Mississippi Delta, 8-1-99.

	Pix® Plus	Check
Fruiting Sites	3022	2868
Missing Sites	698	836
Squares	930	884
Green Bolls	1394	1148
Open Bolls	0	0
Average # of MSN	21.2	20.3
Average MSN of Bloom	17.6	17.1
NAWF	3.6	3.2

Table 2. Mapping data per 100 plants, Pix Plus and Check treatments, south Mississippi Delta, 8-29-99.

	Pix® Plus	Check
Cut-out %	100	100
Average MSN of cut-out	17.7	16.3
Green Bolls	922	738
Open Bolls	310	148
Open Bolls on Vegetative Branches	61	44