

Upland Regional Cotton Variety Test at the Maricopa Agricultural Center, 1998

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Abstract

Thirty six upland cotton varieties were grown at the Maricopa Agricultural Center as part of the national cotton variety testing program. Lint yield, boll size, lint percent, plant populations, plant heights and fiber properties are presented in this paper.

Introduction

An upland cotton variety test was conducted as part of the national cotton variety testing program. This program allows varieties from many sources to be evaluated at various locations across the cotton belt. Included in the test were four national standards, sixteen regional standards and fourteen other varieties from across the cotton belt. The national standards are grown in five other tests across the cotton belt. The national standards are Maxxa, Paymaster HS 26, SG 125 and STV LA 887.

Materials and Methods

This test was located in a level basin field with 660 foot runs and was arranged in a randomized complete block design replicated four times. Plots were 4 rows wide, 43 feet long, with 40 inch spacing. The cotton was planted with cone planters in dry soil and irrigated up on 27 April. Fifty hand picked boll samples taken out of two reps were used to determine lint percent and boll size. The same sample was ginned and twenty grams of lint were analyzed for fiber properties. Following is a crop history on how the crop was managed:

Crop History

Previous crop: Cotton
Planting date: 17 April
Herbicides: Prowl preplant (1pt/acre) and Staple on 03 June (1.8oz/acre)
Fertilizer: 92 lbs of N

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Irrigation

Dates: 27 April, 8 June, 1 July, 13 July, 27 July, 5 August, 17 August, 31 August and 14 September

Pix Applications: None

Insecticide

Applications: Vydate on 27 June (2pts/acre), Orthene on 10 July (1 lb/acre), Knack on 4 August (8oz/acre), Vydate on 4 August (2pt/acre), Orthene on 14 August (1 lb/acre), Larvin on 14 August (2 pts/acre), Lorsban on 14 August (2 pt/acre), Orthene on 28 August (1 lb/acre)

Defoliation: Ginstar on 21 October (10 oz/acre), Ginstar + Def on 5 November (10 oz/acre + 1 pt/acre)

Heat units: 4191 (80/55 degrees) from 17 April to 21 October

Rainfall: 0.83 inches from 17 April to 21 October

Harvest Date: 25 November

Results and Discussion

Results of the test are shown in Table 1. Yields ranged from 640 to 1596 lbs lint/acre. Once again the 1998 growing season was characterized by heavy Lygus infestations. Three and four year averages of lint yield of some varieties are represented in Tables 2 and 3, respectively. Fiber properties (HVI) are listed in Table 4.