AP6101 AND AP410 3

M.E. Gilbert
Cotton Breeder
AgriPro Seeds, Inc.
Casa Grande, AZ

Abstract

Cotton varietal release of two new highly adaptable cotton cultivars aimed at increased grower profitability. First two varietal releases bred and developed by AgriPro Cotton Breeding program.

Introduction

Adaptability is perhaps the most important attribute any variety could possess. AP6101 and AP4103 have, thus far, performed consistently well in widely varying conditions beltwide. Adverse conditions, often are where these two varieties are most impressive. Explain :adaptability: in relation to the development of experimental material aimed at varietal improvement. Unique characteristics of AP6101 and AP4103 and identifying how best to utilize each variety in realizing optimal yield levels will be reviewed in "discussion."

Discussion

AP6101 and AP4103 are high yielding widely adapted cotton varieties that are both capable of introducing significant yield improvements along with fiber quality improvements in all growing regions in the U.S. Cotton Belt, excluding San Joaquin and High Plains stripper markets.

AP6101 is an early-mid maturing cotton with an indeterminate fruiting habit. Actual maturity of AP6101 is equal to SG125 and ST474 but is much less determinate. This allows for added management options, tailored toward optimizing varying environments in a year to year basis within a given region, as well as a region to region basis within a given year. Both go together, which is crucial to growers individually. A high yielding adaptable variety, such as AP6101, is capable of consistent, stable yields across varying soil conditions along with other unique applications encountered each season on most farming operations. AP6101 has competed very well with all Mid-South standard varieties in that region, as well as Southeast growing region. In Arizona, AP6101 avoids cut-out normally encountered by other earlier varieties. AP6101 will typically backfruit during periods if shed experienced by other varieties due to cut-out and periods of extreme heat and humidity, occurring simultaneously. Under such extreme conditions AP6101 will typically demonstrate complete lateral terminal growth by initiating multiple fruiting branches (3-4) that are very long (1-2 feet). Most reproductive sites will attempt to set 2 bolls in terminal fruiting branches. This allows for a huge top crop to be set very quickly and efficiently. A late application of pix will initiate or further exagerate this unique characteristic. Fiber quality on AP6101 is excellent. Length and strength consistently improve upon most standard check varieties, outside of San Joaquin Valley. HVI averages on AP6101 are as follows.*

STRENGTH	GRAMS/TEX	30.0
LENGTH	25 SPAN	1.15
MIC	4.5	
UNIF.	84.0	

*Averages are derived from compiled data generated from both public and in-house trials spanning 2 years.

AP4103 is a mid-maturing cotton with an open cluster plant type. The term "open cluster" is in reference to a specific plant structure that combines the positive characteristics of a true delta-type and a semi cluster. An open-cluster typically demonstrates fruiting capabilities up the main stalk as well as laterally on short fruiting branches. This fruiting habit is very efficient in that it balances fruit retention, boll fill, and vegetative growth equally throughout the growing season. This results in a variety that is very adaptable across many regions and/or soil types. Again adaptability is the key to the success realized thus far by AP4103 across widely varying conditions beltwide. Excellent seedling vigor is also possessed by AP4103. Early aggressive root development is a foundation to consistent high yields. AP4103 is an excellent yielding variety in the Low Desert Valleys, Southeast and most dryland applications beltwide. AP4103 typically excels in adverse conditions such as: poor soils, drought and disease tolerance. Fiber quality on AP4103 is very good.

HVI data is as follows:

Length	1.14
Strength	29.0
Mic	4.6
UNIF.	84.5

Summary

The commercial release of AP6101 and AP4103 represent the first varieties derived from the AgriPro Cotton Breeding Program, which was initiated in 1992. The focus of this program is aimed at increased profitability through varietal improvement on a beltwide basis. A huge number of lines are generated and screened regionally with the goal to bring on the yield and quality improvement necessary to keep growers consistently profitable in the fast changing industry that challenges each of us today.

Reprinted from the *Proceedings of the Beltwide Cotton Conference*
Volume 1:47-48 (1998)
National Cotton Council, Memphis TN