AS> Vol.1 No.1, May 2010

OPEN ACCESS

Motes percentage and ginning outturn as affected with cotton cultivar and location

PDF (Size:1101KB) PP. 44-50 DOI: 10.4236/as.2010.11006

Author(s)

HossamEl-Din H. El-Feky

ABSTRACT

The present study was conducted to analyze cotton cultivar and location differences in motes, and to determine the relationships among these and ginning outturn. Therefore, the seed cotton of five promising hybrids namely; G.77 × Pima S6 and G.84 × (G.74 × G.68) growing in [Kafr El-Sheikh - Kafr El-Dawar - Etay El-Barood - Damietta], G.89 × Pima S6 growing in [El-Sharkia - El-Gharbiya - El-Dakahliya - El-Monofiya], G.83 × (G.75 × 5844) × G.80 and G.90 × Australian growing in [Sohag - El-Minia - Beni-Sueif - El-Faium] were used in this study. The results obtained indicate that the varieties exhibited different behavior responses to environmental conditions. On the whole, environmental factors associated with differences in place of growth, appeared to have much more influence on the number of motes than did varietal factors. Most of the locks for the promising hybrids at the different locations tend to cluster around the mean of 6 or 7 seeds per lock. There is a fairly marked tendency for the lock index, lint weight and lint percentage to decrease as the motes percentage increase. On the other hand, most of the promising hybrids under study tend to increase in the seed index as the motes percentage increase. However, the increasing in seed index as a result of the increasing in motes percentage for some cotton cultivars growing at different environments could be explain the difference in behavior for these cotton cultivars in lint percentage.

KEYWORDS

Cotton Cultivar; Ginning Outturn; Location; Lock Index; Motes; Seed Index

Cite this paper

El-Feky, H. (2010) Motes percentage and ginning outturn as affected with cotton cultivar and location. *Agricultural Sciences*, 1, 44-50. doi: 10.4236/as.2010.11006.

References

[1] Stewart, J.M. (1986) Integrated events in flower and fruit. In: Mauney, J.R. and Stewart, J.M., Ed., Cotton Physiology, The Cotton Foundation, Memphis, 261-300.

[2] Powell, R.D. (1969) Effect of temperature on boll set and development of Gossypium hirsutum. Cotton Growing Review, 46, 29-36.

[3] Fisher, W.D. (1973) Association of temperature and boll set. Proceedings of the Beltwide Cotton Production Research Conference, Phoenix, 9-10 January 1973, National Cotton Council of America, Memphis, 72-73.

[4] Pearson, N.L. (1949) Mote types in cotton and their occurrence as related to variety, environment, position in lock, lock size and number of locks per boll. USDA Technical Bulletins, 1000, U.S. Government Printing Office, Washington, DC.

[5] Davidonis, G.H., Johnson, A., Landivar, J. and Hinojosa, O. (1996) Influence of low-weight seeds and motes on the fiber properties of other cotton seeds. Field Crops Research, 48(2-3), 141-153.

[6] Mangialardi, G.J., Jr. and Meredith, W.R., Jr. (1990) Relationship of fineness, maturity, and strength to neps and seed-coat fragments in ginned lint. Transactions of the American Society of Agricultural Engineers, 33(4), 1075- 1082.

• Open Special Issues
• Published Special Issues
• Special Issues Guideline

AS Subscription

Most popular papers in AS

About AS News

Frequently Asked Questions

Recommend to Peers

Recommend to Library

Contact Us

[7] Davidonis, G.H., Johnson, A. and Landivar, J.A. (2000) Cotton mote frequency under rainfed and irrigated conditions. Journal of Cotton Science, 4(1), 1-9.

[8] Bolek, Y. (2006) Genetic variation among cotton (Gossypium hirsutum L.) cultivars for mote frequency. The Journal of Agricultural Science, 144(4), 327-331.