

Fruiting behaviour in Egyptian Cotton *Gossypium barbadense* L.

K.P.M. Dhamayanthi and K.Rathinavel, CICR, Regional Station, Coimbatore.

Germplasm offers the basic genetic source material. Proper evaluation and utilization to broaden the genetic base is the prime requisite for any crop improvement programme. In cotton, *Gossypium barbadense* commonly known as Egyptian cotton or Extra Long Staple (ELS) is grown in about 10 % of the cotton area and supplies about 4% of the current world production. There are about 320 *G. barbadense* germplasm accessions available at CICR, Regional Station, Coimbatore. During the course of morphological characterization, 14 distinct fruit bearing pattern were identified and recorded. Normally, *G. barbadense* produces long sympodial branches which have 4 -5 bolls at each alternate node. But some of the Egyptian collections are short branch types and have cluster fruit bearing habit. Different fruit positions also were sorted out (Fig.1). The short branching types attaining a height of about 3-4 meters and their fruit bearing habits are entirely different from other *G. barbadense* accessions. The number of bolls appear in a cluster varies from 2-5. The position of the bolls varied widely in fourteen accessions. NDGB -2 is a tall (3.2 m), short branching type bearing cluster bolls at the axil of the branch and the number of bolls ranges from 3-5 per cluster (Fig.2).

Expression of single auxiliary bolls is common in ICB-26, ICB-34, ICB-46, ICB-50, ICB-57 ICB- 66, ICB-103, ICB-177 and ICB-279. These lines are Long Branch types and the sympodia starts from the same axil, where it bears a single boll and produces 5-6 bolls at each node (Fig.3). However, ICB-2, ICB-9, ICB-22 and ICB-143 (Fig.4) are having alternate single boll in their axils. The accession ICB-143 is a short branch type bearing top clusters of 3-5 fruits (Fig.5). Twin fruits are the common features in ICB-17 and ICB-133 (Fig.6) where the axil bears a single boll and the other short branch produces only a pair of boll or twin fruits. Assessment of quality parameters of the cluster fruit bearing types are under progress. Further, variability was observed in boll shape and size also. Information concerning the fruit distribution pattern, boll characters and other similar variability observed may be helpful for the effective utilization of *G. barbadense*, L. germplasm in the breeding programme.



Fig.1. Different fruiting position of *G. barbadense* L.



Fig. 2. NDGB-39. Top cluster of four

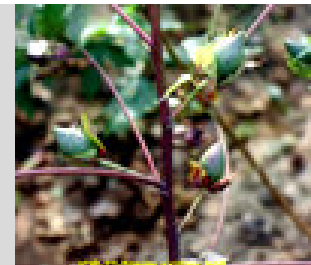


Fig.3. ICB-22-Single axillary boll

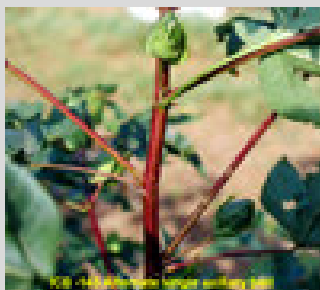


Fig.4. ICB-143 Alternate single axillary boll

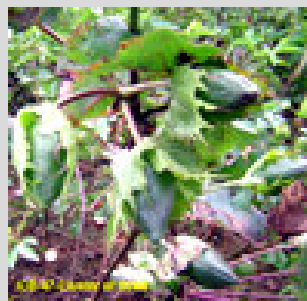


Fig.5. ICB-47-Cluster of three

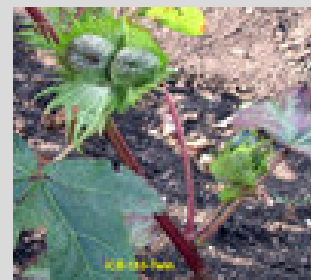


Fig.6. ICB-133-Twin