Research Paper

EVALUATION OF ERI SILKWORM (*SAMIA RICINI* DONOVAN) GENOTYPES USING GGE BIPLOT TECHNIQUES

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ABSTRACT

Five genotypes of eri silkworm (*Samia ricini* Donovan) *viz*., Borduar, Dhanubhanga, Khanapara, Nongphoh and Titabar were studied with an objective to find out the productive and adaptable genotype for Tamil Nadu climatic conditions. The selected five genotypes were reared in all seasons for a period of two years (2012-14). The data were analysed using GGE biplot analysis (Yan, 2001) which is a recent biometrical application and widely used in developed countries for multi-environment trials (METs). The results generated in graphical forms represented three important aspects *viz.*, i) which-won-where pattern, ii) inter-relationship among environments and iii) mean performances and stability of genotypes. Biplot analysis revealed that the genotype, Dhanubhanga had high stability for high survival and Borduar, Nongphoh and Titabar possessed superior economic characters of cocoon. Therefore, using these genotypes as parents, appropriate breeding techniques can be drawn to evolve a productive hybrid of eri silkworm with high survival and better cocoon traits in order to sustain and popularise ericulture in South India, especially Tamil Nadu.

Key words: Biplot analysis, eri silkworm, genotype-environment interaction, GGE biplot, *Samia ricini* (Donovan).