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Research Paper

QUALITY CHARACTERISTICS AND FREQUENCY DISTRIBUTION OF FILAMENT AND NON-BROKEN FILAMENT LENGTH OF TROPICAL TASAR COCOONS

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ABSTRACT

Among the different crop seasons and ecoraces of tasar silkworm, *Antheraea mylitta*, significant improvement in both cocoon and shell weight was noticed across 1st to 3rd crops of Daba TV and from 1st to 2nd crops for Daba BV and Raily ecoraces. But, single filament denier remained at par irrespective of three ecoraces and crop seasons. Ascending trend was observed for both filament length as well as non- broken filament length (NBFL) from 1st to 3rd crops of Daba TV and 1st to 2nd crops for Daba BV and Raily cocoons. Maximum NBFL existed below 200 m despite filament length being above 800 m due to excessive breaks during withdrawal of filament from cocoons. Statistical term 'skewness' denotes the asymmetry in distribution of data. For all cocoon varieties, mode values of NBFL were lower than average revealing that maximum frequencies lie in the lower range as compared to average values and hence, the estimated skewness values were positive. This parameter establishes the lower reeling speed of tropical tasar cocoons at about 30 m/min. Since the NBFL is above 150 m, third crop of Daba TV and first as well as second crops of Daba BV and Raily tropical tasar cocoons are considered for commercial reeling purpose.

Key words: Bivoltine, ecorace, filament length, reelability, tasar, trivoltine.