

The Rearing Results of Parent Silkworm Egg of F1 Hybrid for the Breeding and Examination of Cross Combination Ability

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The silkworm race for farm supply is spread as F1. Thus combining ability test of F1 is essential for selection of good crossbreeding combination. And selected good cross combination is spread to farms after local adaptability test. In the spring of 2001, Japanese races M9525, 9291, 9505 and Chinese races M8306, M9360, 9506 were selected among the excellent lines for the breeding of new silkworm varieties for healthy and heavy cocoon crops. Nine new cross combination were made from selected 3 lines by Topcross method. And 1A (M9525 × M8306), 1B (M9525 × M9360) two of the new combination were superior than the control, Baekokjam in all economic characteristics. Especially, it showed 98.7% and 98.4% of pupa rate which is the standard of healthiness. The Japanese race 1 (M9525 line) showed high GCA (general combination ability) in all characteristics except cocoon filament length, and Chinese races B (M9360) showed high GCA in the cocoon reeling results. 1A (M9525 × M8306) showed high SCA (special combination ability) in pupa rate, cocoon yield from 10,000 3rd molted larvae, reelability, and raw silk rate. 1B showed high SCA in single cocoon weight and cocoon shell rate.