

EVALUATION OF ADAPTABILITY AND YIELD STABILITY IN SOME HYBRID CORN VARIETIES IN QUANG NGAI PROVINCE

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Summary

The objective this research was to evaluate the adaptability and yield stability of some new medium maturity hybrid corn varieties in Quang Ngai province. The research was done continuously for 3 seasons (Summer-autumn 2014 and winter-spring 2014-2015 and summer-autumn 2015) and was arranged in three districts of Quang Ngai, which are Son Tinh, Nghia Hanh and Son Ha. Results showed that all nine hybrid corn varieties of medium maturity group with the growth period ranging from 93 to 98 days in summer-autumn crop and 100-106 days in winter-spring crop can adapt well with seasonal structure in Quang Ngai province. The actual yield of these varieties in the summer-autumn 2014 crop varied from 75.1 to 90.4 quintals/ha. CP12105 had the highest yield, followed by AIQ1268 and PAC037. AIQ1265 had the lowest yield; The actual yield in the winter-spring 2014-2015 crop was from 78.8 to 91.4 quintals/ha. CP1261 had the lowest yield. Otherwise, PAC037 had the highest yield. In the summer-autumn 2015, the actual yield was from 71.6 to 89.7 quintals/ha. CP12105 had the highest yield, followed by AIQ1268 and PAC037 and CP1103 had the lowest yield. An evaluation of the yield stability based on the regression coefficient (b_i) and deviation from regression line (S^2_{di}) in the summer-autumn and the winter-spring showed that in the summer-autumn 2014 crop, all of the tested varieties had stable yields in the experimental environment. CP1261, PAC022, PAC037, AIQ1268 adapted to all environments; CP1103 AIQ1265 X40A054 adapted to favorable environment, with highly intensive farming conditions; AIQ1266 and CP12105 adapted to difficult environments. In the winter-spring 2014-2015 crop, all varieties had stable yields in the experimental environment; AIQ1266 and CP12105 varieties adapted to all environments; AIQ1265, CP1103, PAC022 and X40A054 adapted to favorable environment; AIQ1268, CP1261, PAC037 adapt in hard environments. Summer-Autumn 2015 crop, AIQ1265, AIQ1266, AIQ1268, CP1261, CP1103, CP12105, PAC037 yielded stability in all experimental environment while PAC022 and X40A054 yielded unstability. AIQ1268 and PAC037 adapted to all environments; AIQ1266, CP1261, CP1103, X40A054 adapted to hard environments while AIQ1265, CP12105, PAC022 adapted to a favorable environment. Assessment of environmental indicators at experimental sites, Son Tinh has the favorable environment whereas Son Ha and Nghia Hanh are unfavorable or unclear environment.

Keywords: *Medium maturity variety, stable yield, adapt.*