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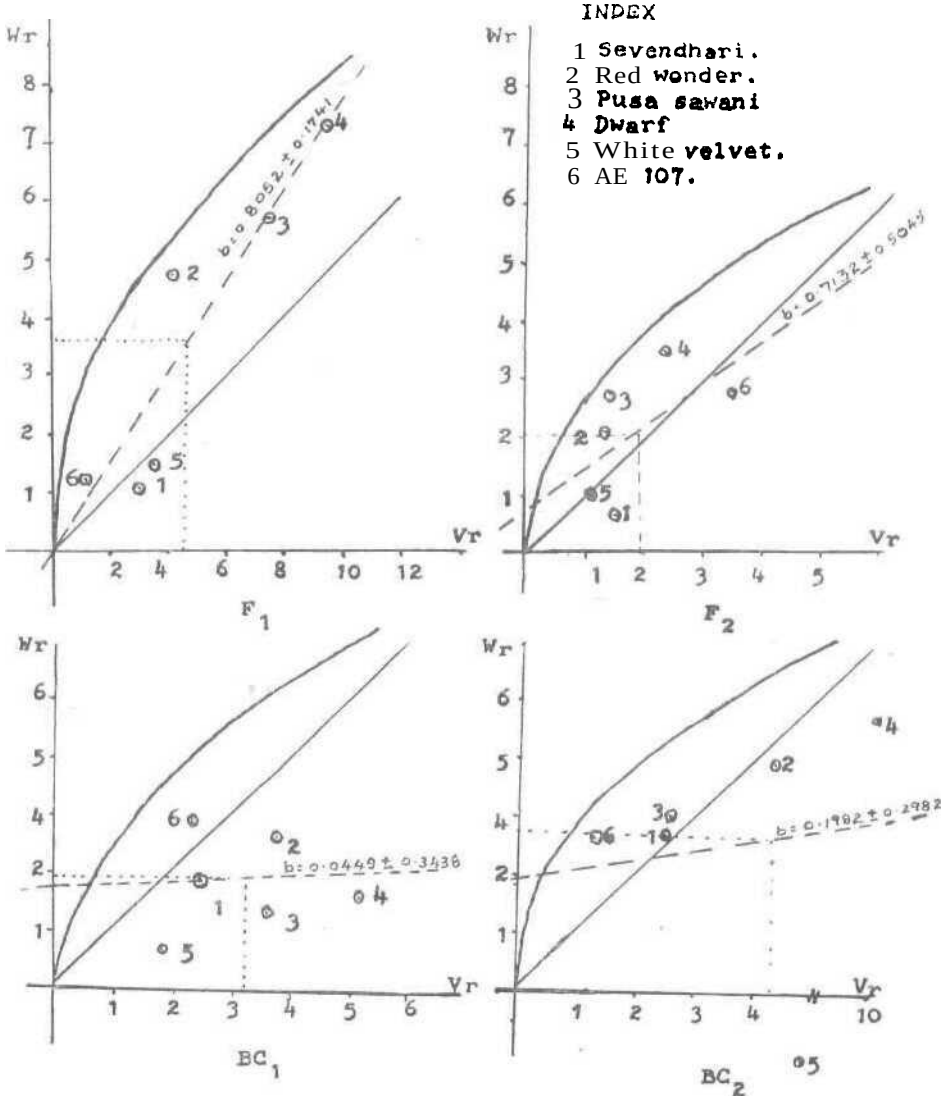
INHERITANCE OF NUMBER OF PODS IN BHINDI *ABELMOSCHUS ESCULENTUS* L. MOENCH

Yield in bhindi directly depends on the number of pods (Ramu, 1974 and Kulkarni 1975). An attempt was made to know the pattern of inheritance of this character by graphic analysis (Hayman, 1954), The F_1, F_2 and first back cross generations of a diallel set (excluding reciprocals) of six bhindi varieties viz. Sevendhari, Red wonder. Pusasawani, Dw3"f green, White velvet and AE 107 were grown in randomized block design with 3 replications at Agriculture College, Dharwar, during kharif 1974. One row each of parents and F s, while 12 and 4 rows of F and back crsos generations respectively were grown in 3 m long rows with a spacing of 45 x 30 cm. Number of pods were recorded on 5 plants in parents and F_1s and on all the plants in F, and back cross generations. Data were analysed following the method cf Hayman (1954).

(Wr, Vr) graphs of different generations have been constructed for number of pods in bhindi and are presented in Fig. 1. The fulfilment of the assumptions of diallel was confirmed by the t test and the uniformity of Wr, Vr values over arrays. Complete dominance was observed in F_1 as the regres sion line passed through the origin and the dominance order of parents was 6-1-5-2-3-4 based on their nearness to origin. Regression coefficient (0.8052) being not significantly different from unity indicated additive gene action. Negative correlation of Yr and Wr + Vr suggested that tha dominance was in the direction- of higher number of pods.

F, analysis revealed incomplete dominance and the order of dominance among parents was 1-5-2-3-4-6. AE 107 had more number of reccessive genes in contrast to the F_1, while Sevendhari and White velvet were consistent with the F_1 finding, Correlation coefficient value between Yr and Wr + Vr was negative thereby suggesting that the dominance was acting for lower number of pods.

In back cross generations the regression line intersected the Wr axis aobve the origin indicating partial dominance with 5-1-6-3-2-4 and 5-6-1-3-2-4 in BC_1 and BC generations as the order of dominance of parents. In BC_1 and BC, negative correlation coefficients of Yr and Wr + Vr indicated dominance for higher number of pods.



1. Wr, Vr graphs of different generations for Number of pods *in* Bhindi

സംഗ്രഹം

വെണ്ടച്ചെടിയിൽ വ്യൽക്രമങ്ങൾ ഒഴിവാക്കിക്കൊണ്ടുള്ള 63(33 സംപൂർണ്ണ ഡയലിൽ സെറാറിൽ ഗ്രാഫിക്കരീതിയനുസരിച്ച് കായ്കളുടെ എണ്ണം നിശ്ചയിക്കുന്ന ജീൻപ്രവർത്തനത്തെ വിശ്ലേഷണവിധേയമാക്കുകയുണ്ടായി. F_1 ൽ പൂർണമായ പ്രകടത്വവും F_2, BC_1, BC_2 എന്നിവയിൽ അപൂർണമായ പ്രകടത്വവും നിലവിലുള്ളതായികണ്ടു. ffieiajoo" വെൽവെറ്റ്, സെവന്ധരി AE 107 എന്നീ ഇനങ്ങളിൽ കൂടുതൽ എണ്ണം പ്രകടജീനുകളുടെ സാന്നിദ്ധ്യം തുടർച്ചയായി കാണപ്പെട്ടു. F_1 ൽ സംയോജിതരൂപത്തിലും F_2, BC_1, BC_2 എന്നിവയിൽ എപ്പിസ്റ്റാസിസ് രൂപത്തിലും ജീൻപ്രവർത്തനം നടക്കുന്നതായി കണ്ടു.

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