THE ASIAN JOURNAL OF HORTICULTURE
Volume 7 | Issue 2 | December, 2012 | 310-314

Research Paper

Article history :
Received : 26.03.2012
Revised : 02.09.2012
Accepted : 03.10.2012

Estimation of heterosis for yield and yield contributing traits in bottle gourd [*Lagenaria siceraria* (Molina) Standl]

■ YOGESH CHANDRA YADAV[1] AND SANJAY KUMAR

Members of the Research Forum

Associated Authors:
[1]Department of oApplied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University, LUCKNOW (U.P.) INDIA

Author for correspondence :
SANJAY KUMAR
Department of oApplied Plant Science (Horticulture), Babasaheb Bhimrao Ambedkar University, LUCKNOW (U.P.) INDIA
Email : sanjay123bhu@gmail.com

ABSTRACT : Fifteen parental lines and their 36 F_1 hybrids of bottle gourd obtained from line x tester analysis were studied to investigate the extent of heterosis for yield and its contributing traits. The cross combination DK x NDBG-104 over standard variety and PBOG-22 x Pusa Naveen over better parents showed negative and significant heterosis for early germination. The cross combination VRBG-18 x NDBG-104 over standard variety and DK x Pusa Naveen over better parents showed negative and significant heterosis for early days to first male flower anthesis. The cross combination VRBG-105 x PSPL over standard variety and VRBG-18 x NDBG-104 over better parents showed negative and significant heterosis for early days to first female flower anthesis. Cross combination VRBG-18 x NDBG-104 over standard variety and DK x PSPL over better parents showed negative and significant heterosis for early node number to first male flower. Cross combination PBOG-22 x NDBG-104 showed negative and significant heterosis over standard variety and better parents for early node number to first female flower, the negative and significant heterosis is desirable for above traits. The cross combination AD-1 x NDBG-104 over standard variety and better parents showed positive and significant heterosis for vine length. Cross combination VRBG-1 x PSPL over standard variety and AD-1 x Pusa Naveen showed positive and significant heterosis for number of primary branches per plant. The positive and significant heterosis was recorded for the length of fruit in cross combination VRBG-44 x PSPL over standard variety and VRBG-112 x PSPL over better parents, respectively. The cross combination VRBG-148 x NDBG-104 over standard variety and better parents showed positive and significant heterosis for weight per fruit. The cross combination DK x Pusa Naveen showed positive and significant heterosis over standard variety and better parents for number of fruits per plant. The cross combination VRBG-44 x Pusa Naveen showed positive and significant heterosis over standard variety and better parents for fruit yield per plants. So, these crosses can be used as direct selection for commercial cultivation and exploitation of hybrid vigour.

KEY WORDS : Heterosis, Yield, Traits, Bottle gourd

HOW TO CITE THIS ARTICLE : Yadav, Yogesh Chandra and Kumar, Sanjay (2012). Estimation of heterosis for yield and yield contributing traits in bottle gourd [*Lagenaria siceraria* (Molina) Standl], *Asian J. Hort.*, **7**(2) : 310-314.