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agric@tubitak.gov.tr

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Correlation and Path Coefficient Analyses of Seed Yield Components in the Narbon Bean (Vicia narbonensis L.)

Celal YÜCEL\*

Çukurova Agricultural Research Institute, P.O. Box 01321 Doğankent, Adana - TURKEY

**Abstract:** The purpose of this research was to evaluate phenotypic correlation coefficents between seed yield per plant and some yield components, and to determine the direct and indirect effect of 6 components on seed yield per plant in narbon bean (Vicia narbonensis L.) lines. The research was conducted in the area of the Field Crops Research Training Center of the University of Çukurova, in Adana, Turkey, in the 1996/97 and 1997/98 crop years. The randomized complete blocks design with 3 replications was used. Positive and statistically significant (p<0.05) relationships were determined between seed yield per plant and days to flowering, number of pods per plant, number of seeds per plant, harvest index, and 1000-seed weight. There was a negative and significant correlation between seed yield and plant height. Path coefficient analyses indicated that the number of seeds per plant (0.6338), 1000-seed weight (0.3176), harvest index (0.1275), days to flowering (0.1041), and the number of pods (0.0729) had a positive direct effect on seed yield in the narbon bean. The results of this study indicate that number of seeds per plant, 1000-seed weight, days to flowering, number of pods per plant and harvest index affected seed yield per plant and it was concluded that these characters should be considered as significant selection criteria in narbon bean breeding for yield under the regional conditions of Cukurova.

**Key Words:** Narbon bean (Vicia narbonensis L.), phenotypic correlation coefficient, path coefficient, seed yield, yield components

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