DIALLEL ANALYSIS USING HAYMAN METHOD TO STUDY GENETIC ARCHITECTURE OF YIELD AND IT'S COMPONENT IN PEAS (*Pisum sativum* L.) .

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ABSTRACT

This study was carried out during (2010/2011) growing season in the Vegetative Field Research, Department of Horticulture and Landscape Design , College of Agriculture and Forestry , Mosul University . The aim study of this research was to study Diallel Analysis using Hayman Method to study genetic architecture of yield and it's component in Peas (*Pisum sativum* L.) . Seven genetic line peas were used in this study namely (1=G.S.C.22763 , 2=P.S.305301572 , 3= Thomas Laxton , 4= Solara, 5=Pitet Provael , 6= Duna Pea , 7= English) . These genotypes were crossed in all possible combinations (Full Diallels Cross) . The seeds of seven parents and their F1's including reciprocals. Using Randomized Complete Block Design with three replication . The following traits were studies : number of days to 50% flowering , number of flowers per plant, number of days for dry pods, numbers of pods per plant, 100 seeds weight , pod weight and the total seeds yield per donum. Results showed that the value of (a, b1 , b2 , and b3) were significantly for all characters except for pod weight , the $\sqrt{H1/D}$ was les than one for the number of flowers per plant and 100 seeds weight , the value of $(\bar{p}\bar{q})$ was les than 0.25 for all traits except for pod weight , the value of KD/KR was more than one for the number of days to 50% flowering , number of flowers per plant , number of pods per plant and total seeds yield per donum . The broad sense heritability was higher for all characters except the number of days to 50% flowering and pod weight , the line regression between (Wr/Vr) was cut the head line over the original point for all characters.

Key words : Architecture , peas , Hayman method , yield component
Part of Ph . D. of the first researcher.