

EFFECT OF PARTITION OF POTASSIUM APPLICATION IN FIELD AND
PHYSIOLOGICAL CHARACTERS OF CORN (Zea Mays L.)

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ABSTRACT

On the purpose of finding the effect of partition application of potassium on some field physiological characters of corn. A field experiment was carried out at the research farm of college of Agric University of Baghdad during the spring and autumn seasons of 2002. A split plot arrangement in R. C. B. D. with three replications of genotypes (Bohoth 106, IPA 012 , IPA 3001 and IPA 3003) were assigned in the main plots , while four application time of potassium 120 kg K/ha (all potassium applied after emergence as a control) and three other treatments include the partition of potassium (five , four , three parts) were assigned in sub plots. The field physiological traits , number of days to 75% tasselling and silking , height of plant and ear , number of plant leaves and its area , crop growth rate and dry weight at anthesis and mature. Partition application potassium fertilizer every two weeks (five parts) led to shortening the period flowering tassel (2 day) and silk (1 day) in spring. The percent of increasing in weight of dry matter at physiological mature was 2% and leaves area was 3% , and crop growth rate when comparison with control treatment. Lowest plant height and ear height while the number of leaves increase to 16 leaf for autumn. The hybrid IPA 3003 gave highest crop growth rate (2.33 and 2.61 gm/cm² / day) and highest weight of dry matter at flowering (189.79 , 57.20 gm) in

both season , respectively ,and higher weight of dry matter at physiological mature (274.57 gm)
for spring season.