

EFFECT OF THE TREATMENT BY GIBBERELIC ACID AND LIQUORICE EXTRACT ON GROWTH AND YIELD OF POTATO .

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ABSTRACT

Bureen cultivar of potato class A was planted during Autumn season 2009 , in loam soil at the right bank of Euphrates in Ramadi ,to study the effect of soaking tubers before planting in Gibberellic acid 5ppm and liquorice extract 5g/l on promoting sprouting . In addition , the effect of once ,twice or thrice foliar application of liquorice extract 5g/l on vegetative growth and yield of potato was studied and compared with untreated control plants . Randomized complete block design RCBD arranged in split-plot with three replicates for each treatment was adapted . Gibberellic acid significantly hastened field emergence of sprouts and gave the best germination percentage . higher means of plant length , stems number per plant , potassium content in leaves were found when potato tubers were soaked in gibberellic acid . Soaking in liquorice extract , increased drymatter and starch in tubers. Soaking treatments had no significant effect on vegetative dry weight , tubers number per plant and nitrogen and protein percentages in tubers . Foliar application of liquorice extract significantly increased plant length , dry weight of plant , potassium content in leaves ,and nitrogen and protein percentages in tubers . In addition , it gave higher means of total and marketable yield for all treatments compared with control . Foliar application had no significant effect on stems/plant , marketable tubers/plant , tuber mean weight and percentages of dry matter and starch in tubers during growth season . The inter action between treatments was significantly only for potassium content in leaves and nitrogen and protein percentages in tubers .

Key words: potato , GA , liquorice .