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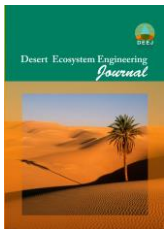

# An investigation on the effects of mechanical and biological improvement practices on rangeland soil characteristics (Case study: Dasht KalpushGolestan province

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**Abstract**

After the devastating floods in early seventies in Golestan Province, many biomechanical operations for the restoration of vegetation and decrease the amount of runoff in branches Gorganrood Extensive were done, many studies are needed to evaluate the results of these operations. The purpose of this study is the investigation of effect of biomechanical practice in some soil characteristics in dasht kalpush. After preparing working unit in GIS, soil sample were taken in each work unit in operation area (farrow and Atriplex planting in them, between furrow and Atriplex) and control area. In order to, in each theater (between furrow and Atriplex, furrow and Atriplex in them, control rangeland) soil samples in 0-15 cm depth of soil and in five repeat in five slope position (summit, shoulder slope, back slope, foot slope, toe slope), finally 25 repeat were taken in each theater, and were study some soil physical and chemical characteristic in each theater. For analyzing data was used ANOVA and tucky test. Result showed the percentage of soil moisture and soil stability in all of the slope position and clay in under the Atriplex have significant decreased and in other hand EC and CaCo3 have significant increase in some soil position compare with control area.

**Keyword**: soil characteristic, bio-mechanical practice, dasht kalpush.

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