### **Abstract**

Phenology is one of the topics of broad ecology. Phenology of nutritional programs for palatability and nutritional value of animal and plant species at different stages of understanding the vital food needs of animals are met to perfection. The aim of this study was to investigate the effects of four different phenological stages on forage quality of the halophyte plant Hahn, called Artiplex loucoclada, Aeluropus lagopoides, Loulium perenne and Avena fatua Sistan was conducted in pastures. After harvesting, drying, and then grinding plant samples according to the standard methods to test the factorial method  $(4 \times 3)$  was performed in a completely randomized design. The chemical composition of the dry matter (DM), organic matter (OM), (ASH), Neutral detergent fibre (NDF), Acid detergent fibre (ADF), ether extract (EE), crude protein (CP) and minerals (Na, p, Ca and K) were determined. Also to measure the percentage of digestible dry matter degradability of plant species in different phenological stages were studied using the nylon bag technique Fystvlh investment (in situ) and the emissions test was gas production (in vitro) used. Measure the chemical were used. The results show that the most representative indicators of forage quality traits, vegetative and phenological stages of plant development, reduced protein levels during vegetative, flowering and seeding, respectively, 21.59, 16.66 and 15.38 percent of which was development stage, the amount of crude protein CP) and reduced the rate of degradation and the amount is added to the cell wall. The results showed that the plant can Hahn can provide the nutritional requirements of livestock

Key words: Phenology, Digestibility, In situ, Sistan and Metabolizable energy



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## The Thesis Submitted for the DegreeM.Sc In the Field of Animal Nutrition

## Title:

# Study of nutritive quality of four forage species of Sistan in different phenological stages

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