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PASTORAL IMPROVEMENT USING *HEDYSARUM CORONARIUM* L. UNDER SEMI-ARID ENVIRONMENT CONDITIONS OF TUNISIA

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ABSTRACT

This study was carried out to investigate the effect of scarification and/or reseeding on the vegetation cover and dry matter production of rangelands in Sbaihia, Governorate of Zaghouan, Tunisia during 2017-2018. A total of 75 ha degraded rangeland was selected. The experimental design consisted of a randomized block design with six replicates where the following treatments were randomly assigned: i) sulla (Hedysarum coronarium L.) reseeding following soil scarification, ii) soil scarification only and iii) control (no scarification neither sulla reseeding). Dry matter yield (DMY), rain use efficiency (RUE), and the pastoral value (PV) were quantified during the study. For all measured parameters, the highest values were obtained from the improved rangelands with sulla. The DMY, RUE and PV values were 2.3 t DM/ha, 0.83 kg MS/ha/m^3 and 57.3% respectively. These results indicate that combined scarification and reseeding using local well adapted forage species (sulla) has a great potential to improve the value of the natural rangelands even under harsh semi-arid conditions (<225 mm annual rainfall).

Keywords: *rehabilitation, scarification, reseeding, sulla, pastoral value*

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