

## Abstract

This study done aim to investigate effect of mycorrhizal and bacterial bio-fertilizers to quantitative and qualitative usefull three pastural species from poaceae (*Secale montanum*, *Agropyron elongatum* and *Avena fatua*) in the vegetative growth stage by factorial experimentation in completely randomized design with three repeat in the green-house in Bam city. First factor was include of mycorrhizal arbooscolar fungus in four level (unusefull of fungus, *Glomus mosseae*, *G.hoi*, *G.intraradices*) and second factor was include of growth bactries in four level (unusefull of bacteria, phosphate- barvar2 bio-fertilizers, azotobarvar1 bio-fertilizer, composition azotobarvar1 and phosphate-barvar2). Quantities traits including stem diameter, height, leaf number, shoot biomass, root biomass, underground parts and volume and qualities traits including colonization percent of biomass, shoot N, dry matter, ash, organic matter, crude protein and acid detergent fiber were measured and then digestible dry matter percent, metabolisable energy and digestible energy were determined. *G.intraradices* in rye mountain kind and *G.mosseae*+phosphate-barvar2 treatment in tall wheat grass kind obtained the greatest increasing stem diameter. Also control treatment (without fertilizer) in radish and wild rye showed the greatest increasing in stem diameter. *G.intraradices* fungus in radish rye kind and treatments of *G.hoi* and phosphate barvar2 in tall wheat grass kind and control treatment in *A.fatua* kind obtained the greatest increasing high. All of applied treatments in kinds of mountain rye and high wheat grass were ineffective to measure of during leaf therefore combination bio-fertilizers barvar1 and 2 treatments in wild *A. fatuna* kind obtained the greatest increasing measure of length leaf. Also all of studied treatment in tall wheat grass and *A. fatuna* kinds were ineffective to member of leaf therefor combination barvar1 and 2, bio-fertilizers treatment in wild *A. fatuna* kind obtained the greatest increasing leaf member. *G. mosseae* mycorrhiz fungus in mountain rye, *G.mosseae*+barvar2 treatment in tall wheat grass kind and *G. hoi* treatment in wild *A.fantua* kind obtained the greatest increasing of shoot biomass instead control treatment. *G.hoi* mycorrhiz fungus in kinds of mountain rye and wild *A.fantua* and *G.intraradices*+barvar2 treatment in tall wheat grass kind obtained the greatest increasing biomass underground fitness. *G.intraradices* mycorrhiz fungus in mountain rye kind, *G.intraradices*+barvar1 treatment in tall wheat grass and *G.hoi* treatment in wild *A.fantua* obtained the greatest increasing of root volume. All of applied treatments in kindes of tall wheat grass and wild *A.fantua* lead to increase root colonization percent toward the control treatment therefor *G.intraradices*+barvar1 treatment and in wild *A.fantua* kind of *G.intraradices*+barvar1 obtained the greatest increasing of coexistence measure in tall wheat grass kind. Also fungus of *G. mosseae* mycorrhiz, *G.hoi* and *G.intraradices* in mountain rye obtained the greatest coexistence. phosphate-barvar2 treatment in tall wheat grass kind and *G.mosseae*+barvar2 treatment in wild *A. fantua* have the greatest increasing DMD, ME, DE and the greatest quality fodder be obtained by case kinds. As for resulting useful of these treatments remembered two kinds suitable in natural grassland areas in order to increase forage quality. Also this study showed that none of investigated treatments couldn't increase the quality fodder in mountain rye, so useful of case treatments aren't suitable for increase quality fodder and them's performed in rangelands will followed the westage of time, cost and etc.

**Key words:** Bio-fertilizers, Mycorrhiza, Plant Growth Promoting Rhizobacteria, Range Plant, Forag quantity and quality.



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