POTENTIALITY OF SOME BERSEEM CLOVER (*Trifolium alexandrinum, L.*) VARIETIES AS AFFECTED BY VARIOUS LEVELS OF PHOSPHORUS FERTILIZATION.

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ABSTRACT

Two field experiments were carried out at the Experimental Research Center, Faculty of Agriculture, Moshtohor, Benha University, Kalubia Governorate during two growing seasons (2010/2011 and 2011/2012) to investigate the potentialities of five Berseem (*Trifolium alexandrinum, L.*) varieties (Gemaiza 1, Sakha 4, Helali, Giza 6 and Serw 1) fertilized with various phosphorus fertilization levels (0, 22.5 and 45 kg P_2O_5/fed). Experiments were designed and implemented to evaluate their fresh and dry forage yield as well as the vegetative growth behavior of the studied varieties. Experiments were designed and layed out in a split plot design where phosphorus fertilization levels were randomly distributed in the main plots and Berseem varieties in the split plots. Five individual cuts were obtained during each of the two growing seasons and their total yield. Combined analysis of the two season was done after insuring the validity of partlet test (Steel and Torrie ,1981).Results could be concluded as follows: Over the applied phosphorus fertilization levels, results of the combined analysis indicate significant differences in total fresh forage yield among the studied Berseem varieties. The highest productive fresh and dry forage was for B_3 (Helali) whereas, the lowest one was for B_5 (Serw 1) with significant differences of different magnitudes.therefor, the highest number of shoots/m^2, leaf / stem ratio and the tallest plants were obtained for Helali variety. Over the grown Berseem varieties, data clarified that total forage and dry yield, number of shoots/m^2, leaf:stem ratio and plant height were substantially increased as phosphorus fertilization levels increased from 0 to 22.5 and up to 45 kg P_2O_5 /fed, respectively.

Key Words: Berseem Clover, Phosphorus Fertilization, Fresh, Dry Forage Yield.