

Dedication

**To My parents,
My wife
Brothers,
With my love for ever**

Acknowledgements

First and last I thanks Allah for his gracious, merciful and innumerable bounties. My sincere thanks to my supervisor Prof. Yassin I. M. Dagash for his capable assistance, careful guidance, patience, advice and unlimited support throughout the period of the research.

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Abstract

The experiment was conducted at the experimental farm, College of Agricultural Studies, Sham bat, Sudan University of Science and Technology season 2011. Four doses of phosphorus fertilizer viz. (control, 100 (kg/ha), 150 (kg/ha) and 200 (kg/ha)) on Mung bean, Lablab bean and Clitoria were used in this study.

The experiment was laid out in a spilt plot arrangement with three replications. Four characters were measured for one cut. These characters were plant height (ern), number of leaves / plant, fresh forage yield kg/ha, dry forage yield kg/ha.

The analysis of variance revealed high significant difference among the four doses on number of leaves / plant and forage dry yield (kg/ha) in all forages; significant differences ($p \leq 0.05$) in plant height (cm) and forage fresh yield (kg /ha) in all forages. Lablab bean performed better than others while 150 (kg/ha) phosphorus was the recommended dose.

الخلاصة

اجريت هذه التجربة بالمزرعة التجريبية بكلية الدراسات الزراعية ، شمبات ، جامعة السودان للعلوم والتكنولوجيا موسم 2011م.

استعملت 4 جرعات من سماد الفسفور وهي (0 ، 100 ، 150 ، 200 كجم/هكتار) على علف اللوبيا الذهبية ، اللبلاب ، الكلابيتوريا في هذه التجربة .

تم إجراء هذه التجربة بإستخدام نظام القطع المنشقة في ثلاث مكررات . تم قياس اربع صفات هي: طول النبات (سم) ، عدد الاوراق في النبات ، و الانتاجية الطازجة (كجم/هكتار) ، و الانتاجية الجافة للعلف (كجم/هكتار).

اظهر التحليل وجود فروقات معنوية عالية في طول النبات و الانتاجية الطازجة في كل من الاعلاف . و وجود فروقات في عدد الاوراق في النبات و الانتاجية الجافة للعلف في كل من الاعلاف التي تمت دراستها . و قد كان علف اللبلاب هو اكثراً الاعلاف استجابة بينما كان معدل التسميد 150 (كجم /هكتار) هو الافضل في كل الاعلاف.