DEDICATION

To my father, mother and my husband
To my sisters and brothers
To my friends and colleagues
With my respect

EZDHAR
ACKNOWLEDGEMENTS

First of all, praise to Allah for giving me health and patience to complete this work. Also, I would like to express my deep gratitude and sincere thanks to Dr Atif Elsadig Idris for his guidance, supervision, and great effort he has paid during this study.

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Special words of thanks to University of Khartoum. And section of crop production, Sudan University of Science and Technology My thanks are extended to my friends and colleagues.

I would like to express my deep gratitude and sincere thanks to my father, mother and my husband. Contributed in the work.
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ABSTRACT

The experiment was conducted at the Experimental farm, college of Agricultural studies, Sudan University of Science and Technology, Shombat. Five ratios of intercropping between Rhodes grass and Clitoria were used in this study.

The experiment was laid out in a randomized complete block design (RCBD) with three replications. Seven different characters were measured for consequence cuts. These characters were plant height (cm), leaf area (cm\(^2\)), number of leaves/plant, leaf to stem ratio, fresh forage yield t/ha, dry forage yield t/ha and crude protein for the third cut. The analysis of variance revealed non-significant difference between the four studied ratios for the three cuts for all growth, quality and yield (fresh and dry) except the dry forage yield of the second cut, it was significant (P ≤ 0.05).

For fresh and dry forage yield in all the three cuts for five treatments, the range of the forage yield was 46.83 to 62.66 t/ha for fresh yield and 6.11 to 7.3 t/ha for dry yield. The range of crude protein was 12.25 to 17.50 for the third cut.
الخلاصة

تم إجراء هذه التجربة بالمزرعة التجريبية بكلية الدراسات الزراعية، جامعة السودان للعلوم والتكنولوجيا (شمال). تم استخدام خمس نسب من الزراعة المختلطة بين حشيشة الرودس وعلف الكلايتوريا تم إجراء التجربة باستخدام تصميم القطاعات الكاملة العشوائية بثلاثة مكررات تم قياس سبعة صفات مختلفة لثلاث قطعات متتابعة والصفات هي طول النبات/سم، مساحة الورقة/سم²، عدد الأوراق في النبات، نسبة الأوراق إلى الساق، الإنتاجية للعلف الأخضر بالطن/هكتار، الإنتاجية الجافة للعلف بالطن/هكتار ونسبة البروتين الخام للقطعة الثالثة. أظهر تحليل التباين عدم وجود فروقات معنوية للنسب الخمسة من الزراعة المختلطة لكل صفات النمو والنيوتروع والانتاجية للعلف الأخضر والجاف للثلاثة قطعات في معايير القطع الثانية للانتاجية للعلف الجاف فقد ظهرت بها فروقات معنوية (P<0.05) كان المدى للمجموع الكلي للانتاجية العلف من 46.83 -62.66 بالطن هكتار للعلف الأخضر ومن 6.11 -7.3 بالطن هكتار للعلف الجاف. وكان المدى للبروتين الخام في القطعة الثالثة من 12.25-17.50.