

DEDICATION

To soul of my father

With my sincere supplication

A CKNOWLEDGEMENTS

Praise is to Allah who gave me health, strength and patience to conduct this work. I would like to express my gratitude and appreciation to my supervisor Dr. **EL-nougomi –Abelgader-Omer** for his consistent supervision and patience, invaluable advice and guidance throughout the course of the study.

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ABSTRACT

The experiment was conducted at AGADI Blue Nile State rainfed sector. The main objectives of this study were the modification of the transmission system in JACTO self propelled spraying machine and the performance test of the sprayer.

To avoid the frequency rupture of the transmission chain from the drive shaft to rear axle another chain and two sprockets were added to the system to enforce it

The results obtained from this modification showed that the modified sprayer when operating with two chains and sprockets cover an area of about 3000to 4000feddans without any brake down whereas and the area covered was about 1000 to 1200 feddans when using a single chain after this period the chain was subjected to break down

The other factors measured during the sprayer were field performance test such as fuel consumption, field efficiency and slippage no significant difference were recorded when compared with the sprayer before modification

الخلاصه

اجريت هذه الدراسه بمنطقه ا قدي بولايه النيل الازرق في القطاع المطري وكان الغرض من هذه الدراسه هو تعديل نظام ن قل القدره في رشاشه المبيد ذاتيه الحركه (جاكتو) واختبار الاداء الح قلي للرشاشه .لتفادي الانقطاع المتكرر للجنزير النا قل للحركه من عمود ن قل الحركه للمحاور الخلفيه تمت اضافته جنزير اخر وطارتين لتقويه النظام .

النتائج المتحصله من التعديل اوضحت ان الرشاشه عندما تعمل بجنزيرين وطارتين تغطي مساحه

قدرها 3000-4000 فدان بانتظام ودون حدوث اي عطل في الم قابل فانها تغطي فقط حوالي 1000-1200 فدان بنظام الجنزير الواحد بعد ذلك يتعرض الجنزير للقطع .

العوامل الاخرى المتعلقه باداء الرشاشه والتي تم اختبارها مثل استهلاك الوقود والكفاءه الح قليه والانزلاق لم تظهر اختلاف عند م قارنتها بادائها بعد التعديل