Acknowledgement

I thank Allah for giving me the health and strength which enabled me to complete this study.

I sincerely thank my supervisor Dr.Abdalla Elsheikh Abdelrahman for his professional guidance support and advice throughout the process of this study.

I would also like to thank all the engineers and workers in elgunid sugar factory.

Also my great thank to Sudan university for science and technology.

Last but not least I thank my family and friends for their support and encouragement

Dedication

Always there is a light even when there is a long night So father. . . let this work shine to you

As you continue doing to me

My mother. . . . . .

Who gave me the power

To my teachers

To my friends, for their great support

I dedicate this work with great love to all of them

To my brothers and my sisters and their lovely kids

I dedicate this works with my love

Najla

ملخص الدراسة

أجريت هذه الدراسة بمشروع سكر الجنيد في الفترة من نوفمبر (2014 إلى ابريل 2015) لتقييم الأداء الحقلي لحاصده قصب السكر من حيث :السعه الحقلية النظرية، السعه الحقلية الفعلية ، الكفاءة ، استهلاك الوقود ، فواقد ما بعد الحصاد ، الأعطال أثناء الحصاد و الإنتاجية.

وتوصلت الدراسة للنتائج التالية: السعه الحقلية النظرية 4.14 فدان/ الساعة، السعه الحقلية الفعلية 3.03 فدان/الساعة ، الكفاءة 73.18% ، استهلاك الوقود 16.86/لتر/فدان، الفقد ما بعد الحصاد 1.76169 طن/فدان، الإنتاجية 11782.72طن للموسم لمساحة 4.300 فدان للموسم و لم تواجه أي أعطال رئيسيه.

Abstract

This research was conducted in Algnied sugar scheme during the period from (November 2014 to April 2015) the objective of the research was to evaluate the field performance of sugarcane harvester. The criteria which were taken include:

actual and theoretical field capacities , the field efficiency, fuel consumption , losses after harvest , and productivity .

The results obtained were found to be :Actual field capacities 3.03fed/hr , theoretical field capacities 4.14 fed/hr and efficiency 73.18% , fuel consumption 16.86 liter/fed , harvest losses 1.76 ton/fed , productivity 11782.72 tons for an area of 4300 feddan and no major troubles were faced .

INDEX OF CONTENTS

INDEX OF TABLES