

# الآية

بسم الله الرحمن الرحيم

قال تعالى :-

قَالَ تَزْرَعُونَ سَبْعَ سِنِينَ دَأْبًا فَمَا حَصَدْتُمْ فَذَرُوهُ فِي سُنْبُلِهِ إِلَّا قَلِيلًا مِمَّا تَأْكُلُونَ ﴿٤٧﴾

صدق الله العظيم

سورة يوسف الآية 47

# DEDICATION

TO MY FATHER AND MY MOTHER WITH GREAT  
LOVE

AND RESPECT TO MY BROTHERS, SISTERS,  
FRIENDS

AND ALL THOSE WHO LOVED AND HELP ME  
SINCERELY WITH END LESS LOVE AND RESPECT

## *ACKNOWLEDGEMENT*

*FIRSTLY THANKS AND PRAISE BE TO ALLAH FOR GIVING  
ME PATIENCE AND STRENGTH TO ACCOMPLISH THIS  
RESEARCH AM VERY GRATEFUL TO MY SUPERVISOR D.*

*gAFAR ALI FARAH FOR HIS CLOSE SUPERVISION,  
GUIDANCE, SUPPORT AND ENCOURAGEMENT.*

*SINCERE THANKS ARE ALSO EXTENDED TO ALL THE  
STAFF MEMBERS OF college of Agriculture STUDIES,  
SUDAN UNIVERSITY OF SCIENCE AND TECHNOLOGY*

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## ABSTRACT

The experiment conducted in season 2016/2017 in the experimental farm of the college of agricultural studies Sudan University of science and Technology - Shambat, to study the effect of different fertilizers (compost, urea and Di ammonium phosphate) on growth and yield of three genotypes of the sunflower (V1=0.398, V2=Sirana and V3=MR1362). The experiment carried out at factorial experiment ranged in randomized complete design (RCBD).

Traits under study included indicators of growth and yield (plant height (cm), number of leave per plant, leave area (cm<sup>2</sup>), stem diameter (cm), disc diameter (cm) and seed yield (kg/ha). the results showed that significant differences in plant height (cm), number of leave per plant, leave area (cm<sup>2</sup>), stem diameter (cm), and seed yield (kg/ha) but no significant differences among treatments in disc diameter (cm). Also the interaction between treatments and genotypes had no significant difference in all parameters except the yield.

## ملخص الأطروحة

أجريت التجربة في موسم 2016-2017م في المزرعة التجريبية لكلية الدراسات الزراعية جامعة السودان للعلوم والتكنولوجيا – شمبات بغرض دراسة تأثير ثلاثة أنواع من الأسمدة (كميوست, يوريا و الفوسفات ثنائي الامونيوم (داب). علي نمو وإنتاجية ثلاثة أصناف من نبات زهرة الشمس (V1=0398 , V2=Sirana , V3=MR1362). أجريت التجربة كتجربة عاملية بتصميم القطاعات العشوائية الكاملة في اربعة مكررات. الدراسة شملت مؤشرات النمو و الانتاجية (طول النبات (سم), عدد الاوراق بالنبات, مساحة الورقة (سم<sup>2</sup>), سمك الساق (سم), قطر القرص (سم), الانتاجية (كيلوجرام/الهكتار).

أظهرت النتائج وجود فرق في انواع الاسمدة علي كل من طول النبات (سم) عدد الاوراق بالنبات, مساحة الورق (سم<sup>2</sup>), وسمك الساق (سم), والانتاجية (طن/هكتار). بينما لا توجد فروقات معنوية في قطر القرص (سم), وكما لا يوجد فرق معنوي في التداخل بين الاصناف والاسمدة في الصفات المقاسة ما عدا الانتاجية.