

بسم الله الرحمن الرحيم

Sudan University of Science and Technology
College of Graduate Studies

**Effect of some Tillage Packages and Irrigation Water Regimes on
(Growth and Yield of Sunflower (*Helianthus annuus* L
Under Dongola Area Conditions**

تأثير بعض طرق تحضير الارض مع مستويات الري المتعددة
علي نمو وإنتاجية محصول زهرة الشمس
(تحت ظروف منطقة دنقلا)

**A Thesis Submitted in Fulfillment for the Requirements of the
Degree of Ph.D in Agricultural Engineering**

By

Abdel Rahim Mohamed Sid Ahmed

Supervisor: Dr. El Sadig El Mahdi Ahmed

Co- Supervisor: Professor. Sami Mohammed Tampal

2014