### SUDAN UNIVERCITY OF SCIENCE AND TECHNOLOGY COLLAGE OF GRADUATESTUDIES

# PHENOTYPIC AND GENOTYPIC CHARACTERIZATION OF ERASHY CATTLE TYPE IN EL-GASH AREA (KASSALA STATE-SUDAN)

A thesis submitted to the Sudan University of Science and Technology in fulfillment of the requirements for the Degree of Philosophy

By

Fatima Mohammed Edriss Ali

**Supervisor** 

Prof. Dr Abdelaziz Makkawi Abdelrahman Co-Supervisor

A associated Prof. Dr. Salah Eldein Sid A. Ahmed

December 2013

#### بسم الله الرحمن الرحيم

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