

DEDICATION

.To the spirit of my father

,To my mother

,my brothers

my sisters and friends

.I dedicate this work

ACKNOWLEDGEMENT

First and foremost I am grateful to God, for providing me health and
.strength till I completed this work

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.and gratitude to my mother, brothers , sisters and teachers

List of Table

Page No	Table
23	Table (1)Effect of body weight (kg) on linear body -1 measurements in (cm) of Baggara bulls
24	Table (2)Regression of live weight (kg) on linear body -2 measurements (cm) of Baggara bulls ranged <200 — 400 (kg (N=90
25	Table (3)Regression of live weight (kg) on linear body -3 measurements (cm) of Baggara bulls ranged <200 kg ((N=30
26	Table (4)Regression of live weight (kg) on linear body -4 measurements (cm) of Baggara bulls ranged <200 — 305 (kg (N=60
27	Table (5)Regression of live weight (kg) on linear body -5 measurements (cm) of Baggara bulls ranged 205 — 305 (kg (N=30
28	Table (6)Regression of live weight (kg) on linear body -6 measurements (cm) of Baggara bulls ranged 205 — 400 (kg (N=60

List of Figures

Page No	Figures
29	Fig (1) Regression of live weight (kg) on height at -1 .(wither in (cm
31	Fig(2) Regression of live weight (kg) on Heart girth -2 .(in(cm
33	Fig (3) Regression of live weight (kg) on Heart girth -3 .(around the hump in (cm
35	Fig (4) Regression of live weight (kg) on side length -4 .(in (cm
37	Fig (5) Regression of live weight (kg) on body length -5 .(in (cm

Table of Content

I	Dedication
II	Acknowledgments
III	Table of contents
V	List of table
VI	List of figures
VII	Abstract
VIII	Arabic abstract
Chapter one	
1-2	Introduction
Chapter two	
3	Literature review
3	Sudanese cattle -2
3	Northern cattle -2-1
3	kenana cattle -2-1-1
3	Butana cattle -2-1-2
3	White Nile cattle -2-1-3
4	Baggara cattle -2-1-4
4	Decryption of Baggara cattle 2-2
5	Nyalwi 2-2-1
5	Messairi 2-2-2
5	Rizaigi 2-2-3
6	cattle size measurements 2-3-1
7	External body measurements 2-3-2
8	Carcass Measurement -2-3-3
11	live weight 2-4
14	The relationship between body 2-5 measurements
16-18	body measurements 2-6
Chapter three	
	Materials and methods
19	Experimented Animals 3-1
19	live weight measurements 3-2
19	linear body measurements 3-3
20	Height at wither 3-3-1

20	Heart girth 3-3-2
20	Heart girth around the Hum 3-3-3
20	Abdominal Circumference 3-3-4
20	Side length 3-3-5
21	Depth 3-3-6
21	Pelvic width 3-3-7
21	Body length 3-3-8
21	Data analysis 3-4
Chapter four	
	Results
23-38	Body measurements 4-1
Chapter five	
39-42	Discussion -5
43	Conclusion 5-1
44	Recommendation 5-2
45-50	References 3 -5

Abstract

This work was conducted in attempt to study the relationship between live weight and body measurements to predict live weight of Sudanese beef cattle, linear body measurement were taken from 90 western Baggara bulls ranged from <200 kg to 400 kg live weight. The animals were grouped into 3 sub groups according to live weight range (A>200 .(B) 205 — 300 (C) 305 — 400 kg

For the over all bulls the study reveled that heart girth and heart around the hump had the highest coefficient of determination with live .weight ($R^2 = 0.89$ and 0.93), $P < 0.001$ respectively

The heart girth group B & C revealed the lowest coefficient of determination with live weight R^2 0.64 and 0.82 $P < 0.001$ respectively this gave more confidence in the use of the former measurement in prediction of live weight of humped cattle, the calculation of the regression of weight on heart girth around the hump indicated that a straight line relationship existed the regression equation for estimation :live weight of cattle were as follows

$$Y = -516.65 + 5.30x$$

,Where
(Y live weight (kg

(X heart girth(cm

The study revealed that the highest coefficient of determination stand for the heaviest group where increase live weight showed highest correlation coefficient with body measurement while animals with light weights (lower than 200 kg,)had no significant $P < 0.001$ low . correlation coefficient compared by animal oldest weights

ملخص الأطروحة

أجريت هذه الدراسة لمعرفة العلاقة بين الوزن الحي ومقاسات الجسم المختلفة وذلك للوصول إلي معادلة لتقدير هذه الأوزان من مقاسات الجسم للأبقار أخذت مقاسات الحيوان الحية من 90 ثور من أبقار البقارة والتي تراوحت أوزانها بين اقل من 200 إلي 400 كجم أوضحت النتائج أن محيط الصدر ومحيط الصدر حول السنام له ارتباط عالي ومعنوي مع الوزن الحي (0.89, 0.93, $p < 0.001$ على التوالي . قسمت بيانات الحيوانات الحية حسب الأوزان إلي ثلاثة مجموعات كل مجموعة تحوي علي 30 عجل المجموعة (أ) ذات أوزان اقل من 200 كجم المجموعة (ب) ذات أوزان من 205 - 305 والمجموعة (ج) ذات أوزان من 305 - 400 كجم لقد وجد أن محيط الصدر في المجموعتين (ب) و (ج) ذو ارتباط عالي ومعنوي مع الوزن الحي (0.64 , 0.82) $p < 0.001$ علي التوالي وبالتالي فان هذه النتائج تتيح درجة عالية من الثقة في استخدام محيط الصدر لتقدير الوزن الحي للأبقار المدارية باستخدام معادلة الانحدار:-
ص = 516.65 + 5.3 -
حيث إن :-
س = الوزن الحي للأبقار بالكيلو جرام
ص = محيط الصدر .
أظهرت الدراسة انه كلما زاد وزن الحيوان يكون هناك ارتباط مع مقاسات جسم الحيوانات ذات الأوزان الخفيفة (اقل من 200 كجم) .
لا توجد فروق معنوية، ومعامل ارتباطها اقل مقارنة مع الحيوانات ذات الأوزان الثقيلة