Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.
STUDIES

ON THE THYROID GLAND

OF CATTLE

Thesis Submitted by No. 391 for the Animal Husbandry
Section of the M.Agr.Sc. Examination, 1946
# Table of Contents

**Introduction**

**Anatomy of the Thyroid Gland**

Review of Literature

General Anatomy of the Thyroid Gland  4

The Weight of the Thyroid Gland in Cattle  5

Experimental

Methods  8

Results  9

**Functioning of the Thyroid Gland**

Review of Literature

Chemistry of the Thyroid Hormone  15

Relation of Iodine to the Thyroid Gland  16

Regulation of Thyroid Activity  17

Physiologically Active Iodinated Proteins

(a) Discovery  17

(b) Physiological Effects of Artificial Thyroproteins  18

Experimental

Potency of Thyroprotein  20

General and Histological Technique  25

Measurement of the Height of the Epithelial Cells  29

Effects of Thyroprotein

(a) General Effects  38

(b) Effects on Acinar Cell Height and Thyroid Gland Weight  38
Review of Literature on Goitrogenic Substances

Nature of Goitrogenic Substances

Mode of Action of Goitrogenic Substances

Toxic Effect of Goitrogenic Substances

Experimental

Effects of Thiourea on Dairy Cows

(a) Methods
(b) General Effects
(c) Effect on Acinar Cell Weight and Thyroid Weight

DISCUSSION

SUMMARY

BIBLIOGRAPHY

APPENDICES