

**EXPERIMENTAL RESEARCHES ON THE
FOOD OF ANIMALS, AND THE
FATTENING OF CATTLE. WITH REMARKS
ON THE FOOD OF MAN. BASED UPON
EXPERIMENTS UNDERTAKEN BY ORDER
OF THE BRITISH GOVERNMENT**

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Experimental Researches on the Food of Animals, and the Fattening of Cattle. With Remarks on the Food of Man. Based Upon Experiments Undertaken by Order of the British Government by Robert Dundas Thomson

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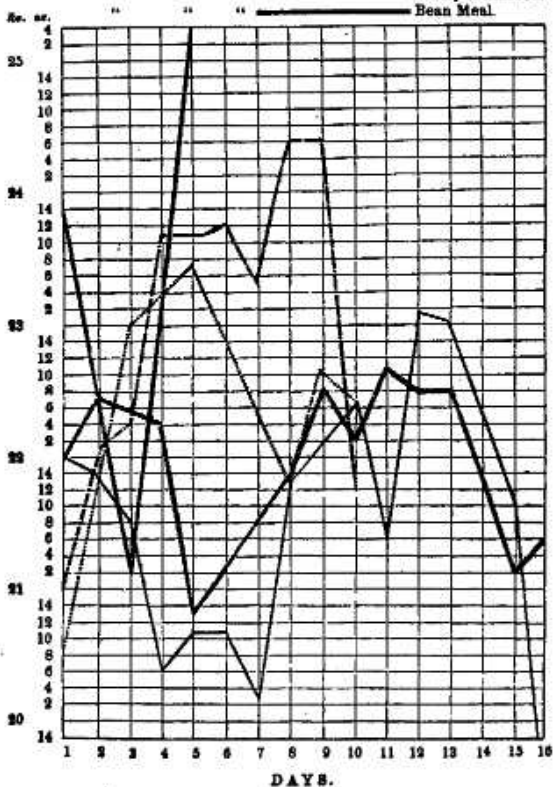
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DIAGRAM

REPRESENTING IN POUNDS AND OUNCES THE AMOUNT OF MILK PRODUCED BY
THE WHITE COW DAILY BY FIVE DIFFERENT KINDS OF FOOD.

The Black Line represents the Malt.

This line represents the _____ Barley.
 " " " _____ Barley & Molasses.
 " " " _____ Barley & Linseed.
 " " " _____ Bean Meal.



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TO
DR. THOMAS THOMSON
AND
BARON LIEBIG,

TO WHOM THE AUTHOR OWES HIS ACQUAINTANCE
WITH THE SCIENCE OF CHEMISTRY,

This Contribution

TOWARDS THE DEVELOPMENT OF THE SUBJECT OF THE
GROWTH OF ANIMALS
IS
AFFECTIONATELY INSCRIBED.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions. It emphasizes that every entry should be supported by a valid receipt or invoice. This ensures transparency and allows for easy verification of the data.

2. The second part of the document outlines the various methods used to collect and analyze data. It includes a detailed description of the sampling process, which was designed to be representative of the entire population. The data was then analyzed using statistical techniques to identify trends and patterns.

3. The third part of the document presents the results of the study. It shows that there is a significant correlation between the variables being studied. This finding is supported by the statistical analysis and is consistent with previous research in the field.

4. The fourth part of the document discusses the implications of the findings. It suggests that the results can be used to inform policy decisions and to guide future research. It also highlights the need for further investigation into the underlying causes of the observed trends.

5. The fifth part of the document concludes the study and provides a summary of the key findings. It reiterates the importance of accurate record-keeping and the value of the data analysis. It also expresses the hope that the findings will be useful to the research community.

PREFACE.

THE present Work is based on an extensive series of experiments which were made at the instance of the Government. The original object of that inquiry was to determine the relative influence of barley and malt in feeding cattle ; but as the opportunity seemed a favorable one for investigating some scientific problems of great importance to physiology, and of extreme value in the physical management of man and animals, advantage was taken of it, by permission, to extend the experiments so as to include these objects.

It is well known to those who have been in the habit of late years of following the researches which have been undertaken to elucidate the nature of the growth of animals, that it is now generally agreed that the muscular part of animals is derived from the fibrinous or nitrogenous ingredients of the food, while the source of animal fat has been disputed. The present experiments seem to demonstrate that the fat of animals cannot be produced from the oil of the food, but must be evolved from the calorificent, or heat-forming portion of the aliment, essentially assisted by its nitrogenous materials. By following out this principle, the author has been enabled to detect an important relation subsisting between the nutritive and calorificent portion of the food, upon the determination of which, for the various conditions of animals, he considers the laws of animal dieting depend. He has endeavored

to apply this law to various articles of human food ; and he trusts that the basis has been laid for future researches, which may be directed to administer to the health and comfort of mankind, and of domesticated animals. In conducting the experiments upon cattle, the author found not only his habitual acquaintance with animals, but also his medical knowledge in continual requisition in consequence of the tendency of the varied conditions of the animal system, from the sudden and frequent changes of diet, to induce symptoms of disease. These were carefully watched, and overcome by such precautions as clearly follow from a due consideration of the principles announced in this work. It was on this account, and to enable the agriculturist to appreciate the advantage which he would derive from physiological and chemical knowledge, rather than to give anatomical instruction to the professional man, that the introductory chapters were written. In a work professing to be the result of entirely original experiments, and where such a mass of figures exist, errors must unavoidably have been overlooked, even although great care has been taken to diminish their number. The author, however, trusts that none will be detected which can materially interfere with the principles deduced from the researches.