

THE CONSERVATION OF FOOD ENERGY

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649338993

The Conservation of Food Energy by Henry Prentiss Armsby

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.

Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

www.triestepublishing.com

HENRY PRENTISS ARMSBY

**THE
CONSERVATION
OF FOOD ENERGY**



The Conservation of Food Energy

By

Henry Prentiss Armsby, Ph.D., LL.D.

*Director of the Institute of Animal Nutrition of
The Pennsylvania State College*

*Expert in Animal Nutrition
United States Department of Agriculture*

*Foreign Member
Royal Academy of Agriculture of Sweden*

Philadelphia and London

W. B. Saunders Company

1918

A 2-7

Copyright, 1918, by W. B. Saunders Company

PRINTED IN AMERICA

FOR many years investigators in this and other countries have been engaged in studying the values of foods and feeding stuffs as sources of energy. The following pages are submitted in the belief that the accumulated results of the researches in this and other laboratories are capable of useful application and should if possible be made of service in the present food situation.

THE PENNSYLVANIA STATE COLLEGE,
INSTITUTE OF ANIMAL NUTRITION.

July, 1918

CONTENTS

	PAGE
INTRODUCTORY.....	7
Crude Products Inedible.....	7
Two Methods of Utilization.....	8
Their Relative Efficiency.....	8
CHAPTER I	
THE MEASURE OF FOOD VALUES.....	11
What Food Supplies.....	11
Food Energy.....	12
Availability.....	13
Other Factors.....	13
CHAPTER II	
ENERGY IN HUMAN FOODS.....	16
How Determined.....	16
Energy Values.....	17
CHAPTER III	
THE EFFICIENCY OF THE ANIMAL.....	18
Recovery of Energy.....	18
Net Energy Values.....	19
Value of Forage.....	20
CHAPTER IV	
FOOD VALUE OF INCREASE BY ANIMAL.....	22
Not All Edible.....	22
Cattle.....	22
Sheep.....	23
Pigs.....	23
Dairy Cows.....	24

CONTENTS

	CHAPTER V	PAGE
THE OVERHEAD FEED COST.....	25	
Maintenance.....	25	
Maintenance by Forage Crops.....	26	
Forage Crops for Production.....	28	
CHAPTER VI		
WHEAT.....	29	
Feeding Directly.....	29	
Milling.....	30	
Whole Wheat Flour.....	32	
CHAPTER VII		
CORN.....	34	
Feeding Directly.....	34	
Milling.....	35	
Starch and Glucose.....	37	
Distilling.....	38	
Food Value of Alcohol.....	39	
CHAPTER VIII		
BARLEY.....	42	
Feeding Directly.....	42	
Milling.....	42	
Brewing.....	43	
CHAPTER IX		
RYE.....	46	
Feeding Directly.....	46	
Milling.....	46	
Distilling.....	47	
CHAPTER X		
OATS. RICE. BUCKWHEAT.....	48	
Feeding or Milling.....	48	

	CONTENTS	5
CHAPTER XI		
COTTONSEED	PAGE	49
Feeding Directly.....		49
Oil Extraction.....		49
Cottonseed Flour.....		50
CHAPTER XII		
PEANUTS	51	
Feeding Directly.....	51	
Oil Extraction.....	52	
CHAPTER XIII		
MILK	53	
Butter Making.....	53	
Cheese Making.....	54	
CHAPTER XIV		
SUMMARY	56	
Loss in Feeding.....	57	
Comparison of Animals.....	57	
Inedible Products Saved.....	58	
Milling vs. Feeding.....	58	
Vegetable Oils.....	59	
Brewing and Distilling.....	59	
—		
INDEX	61	