ELEMENTARY AGRICULTURE

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649570102

Elementary Agriculture by William Lewis Nida

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

WILLIAM LEWIS NIDA

ELEMENTARY AGRICULTURE





Fig. 1. Every stock form needs its shade and water easily accessible.

Elementary Agriculture

By

William Lewis Nida, Ph. B. Superintendent of Schools, River Porest, Ill.

A. Flanagan Company CHICAGO Educe T 6759, 13, 610

MANUARD DOLLEGE LIBRARY
GIFT OF THE
GHADUATE SCHOOL OF FOUCATION

COPYRIGHT, 1918

BY

A. FLANAGAN COMPANY

PREFACE

If country boys and girls are to be kept on the farm, it is incumbent on parents and school authorities to enlist their interest in scientific farming and stock raising at the carliest possible age. A text on Agriculture for grade or rural schools should, therefore, begin with a discussion of farm animals, because it is vastly easier to stir up enthusiasm among children over the raising of fine stock than it is over soil elements or even fine crops.

Many texts have reversed this order, because certain farmers' organizations have so recommended. However, if education is our object, the child mind should receive first

consideration in presenting any subject.

The author was born and reared on an Obio farm and taught in rural schools for several winters. He was later a supervisor of township schools. His knowledge of actual farm life and rural schools on the one hand, and of the child on the other, is offered in explanation of this attempt to place before the children of the common schools a simple

and stimulating introduction to scientific farming.

Grateful acknowledgments are due to the U. S. Department of Agriculture for a number of fine photographs and for much valuable material from which the author has drawn freely. The anthor and publishers also desire to express thanks to the Agricultural Extension Department of the International Harvester Company for a number of fine plates and half tones chiefly of animals and farm scenes, selected by the author, and for valuable suggestions. To others who have kindly aided us with photographs, credit has been given in the body of the book.

WILLIAM L. NIDA.

CONTENTS

PART I. FARM ANIMALS
CHAPTER I. THE HORSE1-15
Taming the Wild Horse—Horses Introduced in America— Draft Horses—Coach Horses—Roadsters—Use and Care of Horses—Breaking the Colt
CHAPTER II. CATTLE16-28
Taming of Cattle—The Ox at Work—Beef Cattle—Dairy Cows—Building Up a Fine Herd
CHAPTER III. MILK AND BUTTER29-33
Milk as Food—Care of Milk—Butter-fat—Churning— Cheese-making—By-products
CHAPTER IV. SHEEP
Origin of Sheep—Their Care—Merinos—Mutton Types— Sheep-shearing
CHAPTER V. SWINE4448
The Wild Boar—Development of Good Types—Their Care and Feed—Lard and Bacon Types—Hog Cholera
CHAPTER VI. POULTRY
Origin of Chickens—Value to the Farmer—Kinds and Uses of Fowls—Their Care and Feeding—The Young Brood—Poultry Pests
CHAPTER VII. TURKEYS, DUCKS, AND GEESE58-60
Raising Turkeys—Ducks on the Farm—Geese
CHAPTER VIII. INSECTS
Insect Enemies—Insect Friends—Parts of an Insect—Biting Insects—Sucking Insects—Insect Growth—Larva Stage—Pupa Stage—Life of Insects.
CHAPTER IX. THE BEE
The First Sugar Makers—Taming the Bee—Making Honey —The Bee Family—Care of Bees for Profit—Other Services of Bees
CHAPTER X. BIRDS
Birds of Killingworth—Service to Farmers—Grosbeaks— Protecting Crops—Paying Their Way

PART II. SOILS AND FARM CROPS
PAGES
CHAPTER XI. SOILS
CHAPTER XII. PLANTS AND HOW THEY GROW96-102 Parts of the Plant—The Work of Roots—The Stem— Leaves—Flowers—Pollination—Variety in Plant Life— Dissemination of Secds
CHAPTER XIII. TILLAGE AND FARM MACHINERY 103-112
Tilling in Ancient Times—Teachings of Jethro Tull—What Tillage Does—The Dust Mulch—Dry Farming—Irrigation —Better Machinery—Iron Toola
CHAPTER XIV. CORN
Origin of Corn—Importance to the Pioneer—Indian Farming—The Corn Belt—Choosing Seed Corn—What Constitutes a Prize Ear—Curing the Seed—Testing Seed Corn—Preparation for the Crop—Getting a Good Stand—Cultivation—Harvesting—The Silo—Other Uses of Corn
CHAPTEE XV. WHEAT126-137
Origin of Wheat—Introduction of Whoat Into America— Kinds of Wheat—The Crop—Wheat in Rotation—Enemies of Wheat—Harvesting Tools—Animal Power—The Resper —Self Binder—Combined Harvesters—Uses of Wheat
CHAPTER XVI. THE FIELD OR IRISH POTATO 138-144
Origin of the Potato—A Tuber—Kinds of Seeds—How to Choose Seed—Soil and Cultivation—Diseases and Enemies —Machinery
CHAPTER XVII. THE SWEET POTATO145-146
A True Root-Origin-Climate and Soil-The Crop
CHAPTER XVIII. COTTON147-155
Climate—Soil—Rotation—Cultivation—Harvesting—Boll Weevil
CHAPTER XIX. THE HAY CROP
Timothy—Clovers—Harvesting Red Clover—Alsike Clover—Alfalfa—Cowpeas.

30

PAGES
CHAPTER XX. ORCHARDS164-173
Convenience to Market—Hill Country for Orchards—Best Slopes—Influence of Water—Soil—Preparation for Plow- ing—Setting Trees—Tilling the Orchard—Pruning—Spray- ing—Harvesting
CHAPTER XXI. SUGARS AND OTHER CROPS
Cuttings of Sugar Cane for Seed—Planting Sugar Cane— Harvesting—Sugar Beet—Cultivation and Harvesting— Rice—Tobacco—Oats, Barley, Rye, and Buckwheat
CHAPTER XXII. THE FARM GARDEN182-200
The Boy's Experiment Farm—Preparation for Garden Soil —Garden Tools—Mulching—Window Boxes—Hot Beds— Cold Frames—Transplanting—Peas and Beans—Beets, Tornips, Carrots, Parsnips, Radishes—Chard, Asparagus— Sweet Corn—Cabbage, Lettnce—Cucumbers, Melons, Squashes—Onions, Tomatoes, Egg-plant—Grapes—Rasp- berries and Blackberries—Strawberries—Currants and Gooseberries
CHAPTER XXIII. COUNTRY EGADS201-212
Bearing Upon Farmers' Profits—Bearing Upon Sociability —Good Roads and Schools—Interest of City People— Roman Roads—Working Out the Road Tax—Paying Road Taxes in Cash—The Macadam Road—Effect of Surface on Loads—Effect of Grade on Loads—Surfacing Clay and Sandy Roads—Loam Roads—The Split-log Drag—Brick Boads
CHAPTER XXIV. PRESERVING FOODS213-215
Germs Which Help and Hinder—The Yeast Plant—Making Bread—Mold—Canning Fruit—Smoking Meats—Cold Stor- ago—Preserving Fruits—Bacteria in Butter and Cider
CHAPTER XXV. FARM SANITATION216-224
Location and Surroundings of the Farm House—Water Supply—Sewage and Disease—Mosquitoes and Malaria—The House Fly and Typhoid—Fighting Flies—Milk a Germ Carrier—Ventilating the Barn—Principles of Ventilation—Heating and Ventilating the Home—Fresh Air in the School Room
CHAPTER XXVI. THE FARMER'S COLLEGE225-228
The Department of Agriculture—Helps from Pamphlets— State Experiment Stations—Colleges of Agriculture
PART III. APPENDIX
QUESTIONS-USEFUL INFORMATION-INDEXvii-xxxv