

**THE OLIVER PLOW
BOOK: A TREATISE ON
PLOWS AND PLOWING**

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The Oliver plow book: a treatise on plows and plowing by C. A. Bacon

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C. A. BACON

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PLOWS AND PLOWING**

**The
Oliver
Plow
Book**



**A Treatise
on Plows
and plowing**

BY
C. A. BACON

**Published by
Oliver Chilled Plow Works
South Bend, Ind.**

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P.S.

Preface

THE treatment of any farmer's soil is entirely within his hands. Success is measured by his knowledge and the diligence with which he applies those laws of Nature which are related to crop growing.

These laws are universal. A farmer can apply them to meet his own particular need better than acting upon the advice anyone can give him, because he understands his soil conditions. Other people do not.

The purpose of this book is to set forth these laws and explain the causes and effects.

The Oliver Chilled Plow Works has a desire to be of practical value to farmers. Our long experience in building plows and kindred implements for use all over the world has given us an opportunity to observe a great many facts in connection with plows and plowing which should be common knowledge among farmers.

OLIVER CHILLED PLOW WORKS.

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CHAPTER I

Functions of the Plant Organs

THERE is a vast difference between operating a farm and a factory. The process of manufacture from the receiving of the crude materials to the finished product is entirely in the hands of the manufacturer. That is, he can control every step in any process from start to finish. It is not so with the farmer. The farmer can control only the operation of the machinery. He has to have a partner to enable him to successfully grow crops. That partner is mother Earth. He has to depend upon her for everything except the labor, which is his part of the contract.

Obviously the farmer who succeeds best must understand Nature. It is a hopeless task to learn all the whims and caprices of Nature, but it is possible to learn how to treat mother Earth so that she can use these whims and caprices of Nature to bring forth bountifully.

The first step in this process is plowing. Many important historical events offer the strongest evidence that from the time man first began to till the soil he discovered the necessity for stirring it in some manner before any kind of a crop could be grown. Even the greatest authors of antiquity, medieval and modern times, speak of plowing. We have Benjamin Franklin in our own colonial times who advised farmers "to plow deep while sluggards sleep and you will have corn to sell and keep." Pliny spoke in his treatise on agriculture,

of the importance of having the ground properly prepared, and even in the New Testament, in the book of St. Luke, the parable of the sower forcibly illustrates that Christ was a keen observer of the laws of Nature as related to crop growing.

"A sower went out to sow his seed; and as he sowed some fell by the way side; and it was trodden down, and the fowls of the air devoured it.

And some fell upon a rock; and as soon as it was sprung up, it withered away, because it lacked moisture.

And some fell among thorns; and the thorns sprang up with it, and choked it.

And other fell on good ground, and sprang up, and bare fruit a hundredfold."

This quality to observe conditions as they are is just as fundamental to the business success of any man as it is for his religious welfare. There is not such a tremendous amount of difference.

Evidently farmers in Christ's time believed that it was necessary to kill the thorns and to conserve moisture, and they believed still more that it was necessary to have the ground "good." This word "good" involves a great deal. Our modern soil phycisists tell us that we plow to kill weeds, conserve moisture, and to put the ground in a good condition of tilth. By tilth they mean that the land is in shape to be cultivated easily and in such condition as to bring forth abundantly.

Before one can put ground in condition to meet plant growth requirements he must have a thorough understanding of the habits and characteristics of plants he desires to grow, the kind of food that plants require and



A fully matured corn plant showing the parts that have to do with the growth of the plant. Observe the short root system compared with the network of roots of the four hills of growing corn illustrated on page eleven.

the soil conditions necessary for the manufacture, maintenance and proper distribution of that food to the plants as they need it.

Botanists tell us that every part of the plant has functions which it performs for its own development. The functioning of the various organs of the plant is naturally very different from that of the animal, nevertheless, these organs are just as important to the plant as the digestive and breathing organs are to the animal. The greatest of care is exercised in feeding the stock. The proper amount of food and water is given to the animals at the right time. In the summer the green pastures supply the great percentage of food for cows. In the winter they are given foods which produce milk and flesh. If horses are being used in the field they are fed the kind of food that keeps them strong and healthy. The same rule holds true of the entire animal family. No two types of animals ever receive the same kind of food nor even the same portion; that has to be given according to their kind. The same feeding law holds true of plants.

Plant life is different from animal life. The animal is either fed by human hands or goes about searching its own food. The plant is stationary. It, therefore, must subsist upon the food contained in the air and soil within reach of its organs.

All crop producing plants have roots, stems, leaves, and flowers, or the fruit. The farmer is concerned as to the quality and quantity of fruit produced. The quality and quantity of fruit are determined by the growth of the leaf and stem, and also the plant's ability to withstand the evil influences of wind, drouth and excessive rainfall.