

**THE PRINCIPLES OF  
AGRICULTURAL  
PRACTICE AS AN  
INSTRUCTIONAL SUBJECT**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649246632

The principles of agricultural practice as an instructional subject by John Wrightson

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INSTRUCTIONAL SUBJECT.

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Third Edition.

LONDON: CHAPMAN AND HALL, LD.

1893.

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## PREFACE.

THE province of the teacher is to communicate elementary as well as advanced knowledge. Whatever he may do in the form of original and elaborate research, to his pupils he must ever appear as a patient expounder of first principles. The following chapters actually embody a course of lectures delivered to science teachers last summer. The intention was to open up the subject of agriculture in such a manner as to indicate to them the many aspects from which it may be viewed. It has always been difficult to accurately define the position which *agriculture* occupies in relation to other branches of knowledge. Sometimes it has been called a science, and at other times an art. It has been viewed as a trade and as a profession, but it is neither one nor the other, and in order to be correct we must take refuge in such ambiguous expressions as occupation, pursuit, or calling. Agriculture is too dependent upon circumstances, and too uncertain in its results, to be viewed as a science, and too natural to be called an art. It is not, strictly speaking, a trade, and is not included among the professions. It is more ancient than knowledge, and lies fundamentally at the basis of our very existence. In addition to hunting as a means

of sustenance, some rough-and-ready control of vegetation appears as the next step in the direction of regular supplies of food, and Agriculture emerges from the shadow of the forest, or descends from the mountain slopes to take possession of the plain. Cain was a tiller of the ground before Tubal Cain became an instructor of artificers in brass and iron, and the two branches of grazing and tillage were twin-born.

Agriculture seems to have always been the recipient of benefits from both art and science, but has preserved her individuality throughout. She has hoarded up maxims, perfected processes, improved her products, and adapted herself to all descriptions of soil and climate. She has subjugated animals, and modified their forms, habits, and aptitudes. She has invented implements, contrived rotations, and discovered fertilizers. She is the mother of Horticulture. Those who would study the principles of Agriculture must learn her maxims, become familiar with her processes and products, and master her variations; they must be familiar with her implements, courses of cropping, fertilizers, and methods; they must to some extent be able to exercise sound judgment upon her ways, and offer their share of suggestion. It is this broad knowledge of agriculture which it is my object to inculcate. I have endeavoured to show that agriculture is in itself a large and varied subject, not to be mastered in the laboratory or the lecture-room, but rather in the field and in the fold; that the Professor of agriculture must be a Professor of farming as well as an adept at science; and that he must never fail in his allegiance, or forget that he is



retained in the service of improved cultivation. Let others throw side-lights upon his subject, and let him thankfully accept the helpful ray; but let him beware of being dazzled by the light, and of removing his eye from where it falls, to wander in search of its source. This is the grand evil of the application of science to agriculture, and it has proved a pit-fall both for those who profess and for those who study her. A theorist or a scientific agriculturalist are too often synonyms for those who are ignorant of agriculture as a pursuit, and who pose rather as scientists explaining phenomena, than as enlightened agriculturalists teaching old and new methods.

The following pages only deal with a small and fundamental portion of the vast subject of agriculture. So far as they go, they are intended to point out the principles which guide the practice of agriculturalists and the considerations which weigh with them. They are intended also to gratefully acknowledge and appreciatively notice the bearings of science upon our pursuit. A chemist cannot profess agriculture, and an agriculturalist cannot profess chemistry; but the interdependencies as well as the individuality of each subject must be acknowledged and respected.

I must ask my readers' indulgence for the method of treatment, which is somewhat different from what would have been adopted had these pages emanated entirely from the pen. They were delivered orally, and are published by request. They are consequently popular in style, and a certain amount of summary and repetition became necessary.

The chapters are indeed lectures, and each chapter opens with a reference to what had previously occupied attention. Omissions of certain principles made during the delivery of one lecture were often supplied upon the next occasion, whereas in the ordinary course of writing, an exhaustive treatment would have been preferred. It is my hope to follow up the present volume with another, and to open up, to the best of my ability, the proper lines upon which the principles of the whole art of Agriculture should be taught.

JOHN WRIGHTSON.

*Downton, April, 1888.*

# CONTENTS.

## CHAPTER I.

	PAGE
NARROW AND INCOMPREHENSIVE METHODS OF TEACHING AGRICULTURE—BEARINGS OF VARIOUS BRANCHES OF SCIENCE ON AGRICULTURE—THE BOUNDARIES AND LIMITS OF AGRICULTURE PROPER—ITS HISTORY—"COMPARATIVE AGRICULTURE"—PROCESSES OF AGRICULTURE—RULES AND AXIOMS OF AGRICULTURISIS—STATISTICAL ASPECT—ROTATIONS OF CROPS—DESIGNING OF BUILDINGS—TILLAGE—IMPLEMENTS—LABOUR—COSTS—DAIRYING—BREEDING AND MANAGEMENT OF ANIMALS—ORIGIN AND DISTRIBUTION OF SOILS—FERTILITY—MANURING—MISLEADING TEACHING—THE BEST GUIDES FOR TEACHERS—JOURNALS OF THE SOCIETIES—SYLLABUS OF THE SCIENCE AND ART DEPARTMENTS ...	1

## CHAPTER II.

AGRICULTURE AS A SUBJECT—DEFECTIVE TREATMENT OF IT—PROPER FUNCTION OF THE AGRICULTURAL TEACHER—STUDY OF THE SOIL ... ..	17
---	----

## CHAPTER III.

STUDY OF THE SOIL ( <i>continued</i> )—ITS COMPLICATED CHARACTER—SOLUBLE MATERIAL—FINE IMPALPABLE MATERIAL—QUARTZOSE MATERIAL—CALCAREOUS MATERIAL—VEGETABLE MATTER—STONES—COMPLEX FUNCTIONS OF SOILS—CONDITIONS OF FERTILITY—INDICATIONS OF FERTILITY ...	26
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