

The Imperial Council of Agricultural Research

MECHANICAL CULTIVATION IN INDIA

**A History of the Large Scale Experiments
carried out by Burmah-Shell Oil Storage and
Distributing Company of India Limited.**

BY

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FOREWORD.

I have been asked to write a foreword to this Monograph which describes the large scale experiments in mechanical cultivation carried out by Burmah-Shell Oil Storage and Distributing Company of India in Bombay, Hyderabad and Sind. I comply with this request with pleasure as I consider that "Burmah-Shell" have not only shown marked foresight and enterprise in undertaking this work but have displayed considerable public spirit in casting their bread on the waters in the hope that it may be returned to them after many days. The experiments themselves have been conducted on a scale more extensive than has hitherto been the case in India, and what is perhaps quite as important, the results are of special value because of the accurate record of costs which has been maintained. A technical Sub-Committee of the Imperial Council of Agricultural Research examined the results and recommended their publication in the form of a monograph in view of their value to agriculturists throughout India.

I am aware that the agricultural depression through which the world is passing has produced doubts as to the value of wholesale mechanization in farming. It may also be argued that while the conditions for mechanized cultivation are ideal in countries like Canada, Australia, the United States, Argentina and present-day Russia, they are different in India which is largely a country of small holdings. On the other hand there are large areas in India suitable for mechanical cultivation and there is a definite future in India for tractors of a type adapted for Indian conditions. As a general-purpose tool, for the eradication of deep-rooted weeds, for the breaking up of new lands, and for other special purposes, the modern tractor has a value which we cannot afford to ignore. Co-operation in India, apart from credit, is still in its infancy, but when the co-operative principle is developed and extended to the sphere of agricultural production, there will be further scope for mechanization.

T. VIJAYARAGHAVACHARYA.

SIMLA,

The 27th July, 1934.

INTRODUCTION.

This monograph on " Mechanical Cultivation " in India by the Burmah-Shell Company gives the history of what is probably the most extensive pioneer investigation into the costs of tractor cultivation, on a large scale, ever undertaken in India and describes the difficulties and obstacles which may be encountered in such a lengthy and extensive set of operations. It shows clearly what a large quantity of exceptionally valuable information with regard to tractors can be obtained by such continued investigation and the urgent necessity for further and continuous work on the same lines if India is ever to obtain conclusive data on this most important subject.

This investigation has had the all-important advantage of a fearless finance policy and although in course of perusal criticisms may be levelled at costs, points arise on which opinions may be divided and in some places theories appear to be advocated to which we cannot whole-heartedly subscribe, yet the fact remains that a very large amount of valuable information has been obtained by this work and India owes a deep debt of gratitude to the " Burmah-Shell " for their contribution to our knowledge on this subject, and the immense amount of time, expense and trouble which has been expended on this valuable piece of voluntary research.

We feel further that the publication of this work may possibly mark the turning point in the attitude of India towards such voluntary research and influenced by this example private enterprise may feel it a national duty to assist the Government in such work and thus come into line with other countries in this respect to the good of all concerned.

WYNNE SAYER.
D. P. JOHNSTON.
R. G. ALLAN. }

*The Editorial Sub-committee of the Tractor Committee of the Imperial
Council of Agricultural Research.*

PREFACE.

In the preparation of this Monograph, we have received great assistance from various firms and gentlemen, and would particularly thank the following for their permission to reproduce extracts from reports, catalogues and photographs and other information :—

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,, Jessop & Co., Ltd.
,, Marshall Sons & Co. (India), Ltd.
,, William Jacks & Co.
Mr. Goslin of Messrs. Cockshutt Plough Co.
Mr. Pashabhai Patel.

We are also indebted to Mr. A Rowlison, Representative in India of the International Harvester Company, for reading through the draft chapters on tractors and ploughs and for certain valuable suggestions and criticisms. Very great assistance was also given by Dr. Burns, Director of Agriculture, Bombay, and Mr. Salimath, Deputy Director of Agriculture, Dharwar District, Bombay Presidency, in the compilation of statistics relating to the Dharwar Ploughing Project.

To Dewan Bahadur Sir T. Vijayaraghavacharya, K.B.E., Vice-Chairman of the Imperial Council of Agricultural Research, we also wish to express our grateful appreciation of the consideration shown to us throughout the period of our investigation covered by this monograph, and of his courtesy in inviting us to attend the annual meetings of the Advisory Council which greatly encouraged us in our work.

Finally, the help and assistance given by Mr. Burt, C.I.E., Agricultural Expert, and by the Sub-Committee appointed by the Imperial Council of Agricultural Research consisting of Messrs. Wynne Sayer, Allan and Johnston have been of incalculable value to us and we would express our sincere gratitude for the time they have devoted to the consideration of the draft manuscript.

E. MILLER,

BOMBAY, } *General Manager in India, Development Department*
} *Burmah-Shell Oil Storage and Distributing*
Dated the 25th January 1934. } *Co. of India, Ltd.*

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Savanur State.—Cotton on tractor ploughed land in background. Cotton on bullock ploughed land in foreground.