

INDIA OF TO-DAY

INDIAN AGRICULTURE

By

A. HOWARD, C.I.E., M.A. *and* G. L. C. HOWARD, M.A.

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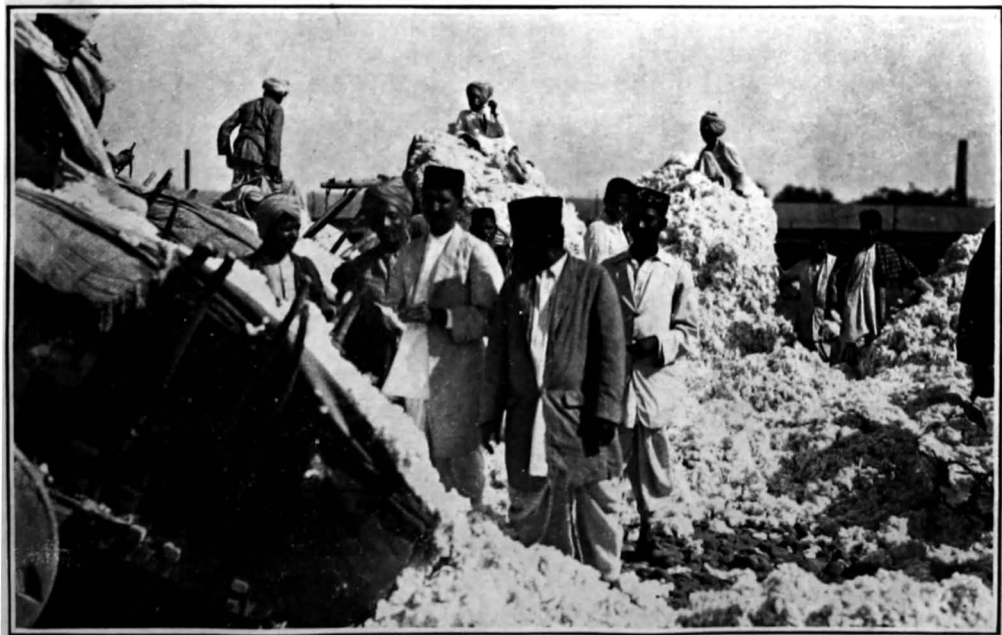
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THE DEVELOPMENT
OF
INDIAN AGRICULTURE

BY

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PREFACE

In 1924 we were requested by the Oxford University Press to prepare a short account of the present position of agriculture in India. The completion of this task has been greatly delayed by the work involved in establishing the new Institute of Plant Industry at Indore in Central India.

The results obtained by the Agricultural and Co-operative Departments during the last twenty years have removed two misconceptions which were current at the beginning of this century, namely (1) that science can teach the cultivator nothing and (2) that even if the villager can be helped, he will never alter his present practices. The work of the Experiment Stations and that done among the people have proved beyond all doubt that great progress is possible.

The question to be settled now is the rate of development in the near future. In this matter the country has arrived at the parting of the ways. On the one hand, a great step forward is possible, provided the various independent departments working in the villages can be welded together into a single efficient agency, dealing with rural India as a whole. On the other hand, very modest progress can be achieved with the present means. It is for India to decide by which of these two roads she intends to travel.

A. H.
G. L. C. H.

INDORE,
April 30th, 1927.

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GENERAL EDITOR'S NOTE

THE opinions expressed in this book are those of the author. No other person shares responsibility for them.

J. COATMAN
General Editor

APPENDIX

A SHORT DIRECTORY OF THE AGRICULTURAL DEPARTMENTS OF BRITISH INDIA

I. IMPERIAL DEPARTMENT OF AGRICULTURE

Agricultural Adviser to the Government of India and Director of the Research Institute, Pusa—Head-quarters at Pusa, Bihar.

Agricultural Research Institute, Pusa—The following research officers are attached to the Institute: the Imperial Agricultural Chemist, the Physical Chemist, the Imperial Economic Botanist, the Imperial Mycologist, the Imperial Entomologist, the Imperial Agriculturist, the Imperial Agronomist and the Imperial Agricultural Bacteriologist. There is a farm of 616 acres attached to the Institute which trains post-graduate students and grants its own diploma.

Imperial Institute of Veterinary Research—Head-quarters at Muktesar with a branch station at Bareilly.

The Secretary to the Sugar Bureau—Head-quarters at Pusa.

The Government Sugar-cane Expert and the Second Cane-breeding Officer have their head-quarters at Coimbatore, 90 acres.

The Imperial Dairy Expert—Head-quarters at Bangalore, 258 acres, with out-stations at Wellington, 69 acres, and Karnal 2, 154 acres.

Physiological Chemist—Head-quarters at Bangalore.

II. PROVINCIAL DEPARTMENTS OF AGRICULTURE

ASSAM

Director of Agriculture—Head-quarters at Shillong.

Economic Botanist—Head-quarters at Jorhat.

Deputy Director of Agriculture—Head-quarters at Jorhat, (sugar-cane) 59 acres; with the stations of Upper Shillong (potatoes) 367 acres; Titabor (rice) 120 acres; Karimganj (rice) 80 acres.

BENGAL

Director of Agriculture—Head-quarters at Dacca—also in charge of the farm at Kalimpong, 76 acres.

The following research staff have their head-quarters at Dacca:—The Agricultural Chemist, the First Economic Botanist, the Second Economic Botanist and the Fibre Expert.

Deputy Director of Agriculture, Eastern Circle—Head-quarters at Dacca, 354 acres; with the following out-stations: Kishoregunj, 83 acres; Mymensingh, 20 acres; Faridpur, 20 acres; Comilla, 20 acres; Barisal, 20 acres; Jamalpur (Mymensingh), 27 acres; Dhanbari, 7 acres.

Deputy Director of Agriculture, Northern Circle, in charge of the stations of Rajshahi, 63 acres; Rangpur (cattle) 333 acres; Rangpur (demonstration) 19 acres; Burirhat (tobacco) 52 acres; Bogra, 29 acres; Pabna, 20 acres; Dinajpur, 24 acres; Mainaguri, 25 acres.

Deputy Director of Agriculture, Western Circle, in charge of the stations of Chinsura, 210 acres; Burdwan, 35 acres; Jessore, 5 acres; Gosaba, 8 acres; Berhampore, 44 acres; Bankura, 29 acres; Suri, 33 acres.

Deputy Director of Sericulture, in charge of the Sericultural research stations of Kalimpong, Kurseong and Berhampore.

BIHAR AND ORISSA

Director of Agriculture—Head-quarters at Sabour—also in charge of the farm at Sabour, 190 acres.

The following research officers have their head-quarters at Sabour—the Agricultural Chemist, the Economic Botanist and the Agricultural Engineer.

Deputy Director of Agriculture, North Bihar Range. Head-quarters at Sepaya (cattle breeding and sugar-cane), 379 acres; Siwan, 20 acres.

Assistant Director of Agriculture, Bhagalpur Circle—Head-quarters at Sabour, with the following out-stations: Jamui, 38 acres; Banka, 26 acres.

Assistant Director of Agriculture, Monghyr.—Head-quarters at Monghyr, 200 acres (dairy).

Deputy Director of Agriculture, Patna Circle, Patna.—Head-quarters at Patna with the following out-stations: Gaya, 193 acres; Nawada, 67 acres; Bikramganj, 24 acres.

Deputy Director of Agriculture, Chota Nagpur Circle.—Head-quarters at Kanke, Ranchi, 340 acres; with the following out-stations: Netarhat (potatoes), 193 acres; Purulia, 52 acres; Ramgarh, 43 acres; Chianki, 32 acres; Sambalpur, 32 acres; Chaibassa, 33 acres.

Deputy Director of Agriculture, Orissa Circle.—Head-quarters at Cuttack, 150 acres; with the following out-stations: Khurda 31 acres; Balasore, 75 acres; Angul, 47 acres; Puri, 42 acres.

BOMBAY

Director of Agriculture.—Head-quarters at Poona, in charge of the irrigation station at Sakrand, Sind, 234 acres.

Agricultural College and Research Staff, Poona.—In addition to the teaching staff and the Inspector in charge of Agricultural Schools, the following officers engaged in research have their head-quarters at Poona—the Agricultural Chemist, Soil Physicist, Economic Botanist, Botanist for Crops (also in charge of the rice station at Karjat, 7 acres), Plant Pathologist, Horticulturist (also in charge of Ganeshkind, 80 acres; Modi Bag, 11 acres), Agricultural Engineer, Live Stock Expert (also in charge of three out-stations—Charodi, 2,251 acres; Bankapur, 112 acres; Karachi, 800 acres), Land Development Officer. There are about 180 students in residence at the Agricultural College which teaches up to the B. Ag. degree of the Bombay University. Two farms are attached to the College, Poona, 289 acres; Kirkee (dairy), 362 acres.

Deputy Director of Agriculture, Gujerat—Head-quarters at Surat, 292 acres, with the following out-

stations: Amalsad 19 acres; Nadiad (tobacco), 44 acres; Broach, 6 acres; Dohad, 57 acres; Viramgam, 6 acres.

Deputy Director of Agriculture, North Central Division.—Head-quarters at Nasik with the following stations: Jalgaon, 204 acres; Dhulia, 28 acres.

Deputy Director of Agriculture, South Central Division.—Head-quarters at Poona with the following stations: Kopargaon 115 acres; Mohol, 49 acres; Manjri (sugar-cane), 62 acres; Baramati (sugar-cane), 21 acres.

Deputy Director of Agriculture, Southern Division.—Head-quarters at Dharwar, 134 acres; with the following out-stations: Tegur, 370 acres; Gokak Canal, 62 acres; Mugad, 9 acres.

Deputy Director of Agriculture, Konkan.—Head-quarters at Ratnagiri, 102 acres, with the following out-stations: Kumta, 20 acres; Karjat (rice), 7 acres.

Deputy Director of Agriculture, Sind.—Head-quarters at Karachi with the following out-stations: Mirpurkhas, 260 acres; Jacobabad, 300 acres; Larkhana, 65 acres; Sukkur, 30 acres.

BURMA

Director of Agriculture.—Head-quarters at Rangoon. *Agricultural College and Research Institute, Mandalay.*—In addition to the teaching staff, the following research officers have their head-quarters at Mandalay—the Agricultural Chemist, the Economic Botanist, the Entomologist, the Mycologist and the Agricultural Engineer. There are about 50 students in residence at the College which grants its own diploma. A farm of 660 acres is attached to the College.

Deputy Director of Agriculture, Myingyan Circle.—Head-quarters at Meiktila with the stations of Mahlaing, 248 acres and Padu, 105 acres.

Deputy Director of Agriculture, West Central Circle.—Head-quarters at Thayetmyo with stations at Allanmyo, 143 acres; Pwinbyu, 22 acres and Saaing, 12 acres.

Deputy Director of Agriculture, East Central Circle.—Head-quarters at Pyinmana, 55 acres with stations at Tatkon, 106 acres and Yawnghe, 37 acres.

Deputy Director of Agriculture, Southern Circle.—Head-quarters at Rangoon with stations at Hmawbi, 433 acres; Zigon, 21 acres; Nyaunglebin, 16 acres.

Deputy Director of Agriculture, Arakan Circle.—Head-quarters at Akyab, 138 acres with the out-station of Kyaukpyu, 23 acres.

Deputy Director of Agriculture, Irrawaddy Circle.—Head-quarters at Myaungmya, 92 acres.

Deputy Director of Agriculture, Tenasserim Circle.—Head-quarters at Moulmein, with out-stations at Mudon, 88 acres and Thaton.

CENTRAL PROVINCES

Director of Agriculture.—Head-quarters at Nagpur. *Agricultural College and Research Institute, Nagpur.*—In addition to the teaching staff, the following research officers have their head-quarters at Nagpur:—The Agricultural Chemist, the Economic Botanist (also in charge of the Cotton research farm at Akola, 271 acres), the Second Economic Botanist, the Mycologist and the Agricultural Engineer. There are about 100 students in residence at the college which teaches up to the standard of L. Ag. of the Nagpur University. There is a farm of 268 acres attached to the College.

Deputy Director of Agriculture, Western Circle.—Head-quarters at Amraoti with the following stations; Borgaon, 368 acres; Yeotmal, 106 acres; Khandwa, 177 acres; Basim, 109 acres.

Deputy Director of Agriculture, Southern Circle.—Head-quarters at Nagpur with the stations of Sindewahi, 197 acres; Tharsa, 116 acres; Wara-Seoni, 63 acres.

Deputy Director of Agriculture, Eastern Circle.—Head-quarters at Raipur, 229 acres with out-stations at Chandkuri, 333 acres; Bilaspur, 253 acres; Drug, 281 acres.

Deputy Director of Agriculture, Northern Circle.—Head-quarters at Jubbulpore with the following stations :

Adhantal (Jubbulpore), 637 acres; Saugor, 161 acres; Damoh, 152 acres; Powarkhera (Hoshangabad), 528 acres.

Deputy Director of Agriculture in Charge of Animal Husbandry.—Head-quarters at Nagpur with the stations of Telinkheri (dairy) 1,000 acres; Raigarh (cattle-breeding) 1,200 acres.

Assistant Director of Agriculture, Plateau Sub-circle.—Head-quarters at Chhindwara, 69 acres; with out-stations at Seoni, 164 acres and Betul, 161 acres.

MADRAS

Director of Agriculture.—Head-quarters at Madras. *Agricultural College and Research Institute, Coimbatore.*—The following officers engaged in research have their head-quarters at Coimbatore,—the Agricultural Chemist, Economic Botanist, Mycologist, Entomologist, Cotton Specialist, Paddy Specialist and Millet Specialist. There are about 48 students in residence at the Agricultural College which teaches up to the B. Sc. degree of the University of Madras. A farm of 440 acres is attached to the College.

Deputy Director of Agriculture, I Circle.—Head-quarters at Vizagapatam with the following stations: Samalkota, 57 acres and Anakapalli, 41 acres.

Deputy Director of Agriculture, II Circle.—Head-quarters at Guntur, 150 acres.

Deputy Director of Agriculture, III Circle.—Head-quarters at Bellary with the following stations: Hagari, 225 acres and Nandyal, 102 acres.

Deputy Director of Agriculture, IV Circle.—Head-quarters at St. Thomas's Mount with the out-stations of Palur, 64 acres and Palakuppam (ground-nuts) 16 acres.

Deputy Director of Agriculture, V Circle.—Head-quarters at Trichinopoly with a station at Aduthurai.

Deputy Director of Agriculture, VI Circle.—Head-quarters at Madura with the out-station of Koilpatti, 125 acres.

Deputy Director of Agriculture, VII Circle.—Head-

quarters at Tellicherry with stations at Kasargod (coconuts), 106 acres; Taliparamba, 86 acres.

Deputy Director of Agriculture, VIII Circle.—Head-quarters at Coimbatore with an out-station at Nanjanad, Nilgiris (seed potatoes), 36 acres.

Deputy Director of Agriculture, Planting Districts.—Head-quarters at Coimbatore with the following out-stations: Tenmalai, Travancore (rubber), 20 acres; Mooply, Cochin (rubber), 20 acres; Sidapur, Coorg (coffee) 19 acres; Peermade, Travancore (tea), 20 acres.

Deputy Director of Agriculture, Live Stock.—Head-quarters at Hosur, 1,635 acres with out-stations at Chintaladevi, 850 acres and Guntur (buffaloes), 150 acres.

There is also a Pomological station at Coonoor.

NORTH-WEST FRONTIER PROVINCE

Agricultural Officer.—Head-quarters at Tarnab (Peshawar), 200 acres, with an out-station at Haripur, 20 acres.

PUNJAB

Director of Agriculture.—Head-quarters at Lahore.

Agricultural College, Lyallpur.—In addition to the teaching staff, the following research officers have their head-quarters at Lyallpur:—The Agricultural Chemist, the Economic Botanist (also in charge of the botanical area, Lyallpur, 120 acres), the Entomologist, the Agricultural Engineer and the Cotton Specialist. There are over 200 students in residence at the College which teaches up to the standard of the M.Sc. (Agr.) of the Lahore University. There is a students' farm of 78 acres attached to the College and the Professor of Agriculture is in charge of the Agricultural Farm, Lyallpur, 473 acres and the Risalwala farm, 1078 acres.

Deputy Director of Agriculture, Gurdaspur.—Head-quarters at Gurdaspur, 161 acres with out-stations at Sargodha, 657 acres; Chillianwalla, 250 acres; Beas, 43 acres; Kala Shah Kuk, 146 acres; Gujarat, 50 acres.

Deputy Director of Agriculture, Hansi.—Head-quarters at Hansi, 589 acres with an out-station at Sirsa, 419 acres.

Deputy Director of Agriculture, Multan.—Head-quarters at Multan, 530 acres.

Deputy Director of Agriculture, Lyallpur.—Head-quarters at Lyallpur with the station of Harappa Road (saline soil reclamation), 560 acres.

UNITED PROVINCES

Director of Agriculture.—Head-quarters at Shah-jahanpur.

Agricultural College and Research Institute, Cawnpore.—In addition to the teaching staff the following research officers have their head-quarters at Cawnpore:—the Agricultural Chemist, the Economic Botanist, (also in charge of the Cotton research farm at Raya, Muttra), the Second Economic Botanist, the Entomologist, the Plant Pathologist, the Agricultural Engineer and the Second Agricultural Engineer. There are about 120 students in residence at the College which grants its own diploma of L. Ag. A large farm and a model dairy are attached to the College.

Deputy Director of Agriculture, Central Circle.—Head-quarters at Cawnpore, 71 acres with out-stations at Kalianpur, near Cawnpore, 263 acres; Etawah, 61 acres; Hardoi, 55 acres; Mainpuri, 53 acres.

Deputy Director of Agriculture, Eastern Circle.—Head-quarters at Partabgarh, 90 acres with out-stations at Naugawan, Sultanpur, 400 acres; Fyzabad, 206 acres; Benares, 78 acres; Rae Bareilly, 12 acres; Lucknow (sullage farm), 75 acres.

Deputy Director of Agriculture, Western Circle.—Head-quarters at Aligarh, 88 acres with out-stations at Kalai, Aligarh, 142 acres; Muzaffarnagar, 100 acres; Agra, 100 acres; Muttra, 36 acres; Bulandshahr, 25 acres.

Deputy Director of Agriculture, North Eastern Circle, Gorakhpur.—Head-quarters at Gorakhpur, 110 acres with an out-station at Bahraich, 21 acres.

Deputy Director of Agriculture, Rohilkhand Circle.—Head-quarters at Shahjahanpur, 163 acres with out-stations at Nawabganj, Bareilly, 119 acres; Jeolikot, Naini Tal, 52 acres; Nagina, Bijnor, 77 acres.

Deputy Director of Agriculture, Bundelkhand Circle.—Head-quarters at Jhansi with out-stations at Atarra, Banda, 171 acres and Jaitpur, Hamirpur, 31 acres.

Deputy Director of Agriculture in charge of cattle breeding operations in charge of Madhuri farm, 613 acres.

Deputy Director of Government Gardens with head-quarters at Agra.

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