९३ क्षार्ट के THE WEALTH AND WELFARE OF THE

BENGAL DELTA

THE WEALTH AND WELFARE OF THE BENGAL DELTA

[Comprising the Districts of Mymensingh, Dacca, Bogra, Pabna, Faridpur, Bakargani, Tippera and Noakhali]

Thesis approved for the Degree of Doctor of Science (Economics) in the University of London.

By

S. G. PANANDIKAR, M.A. (Bom.), Ph.D. (Econ., London.),

Indian Educational Service,
Professor of Economics, Elphinstone College, Bombay,
Sometime (1921-23) Professor of Economics, University of Dacca.



CALCUTTA UNIVERSITY PRESS 1926

PRINTED BY BHUPENDRALAL BANERJEE AT THE CALCUTTA UNIVERSITY PRESS, SENATE HOUSE, CALCUTTA

Reg. No. 79B-19-4-26-1,000.

PREFACE

When the writer joined the Dacca University in Eastern Bengal in 1921, the fact, of which he had already been aware, that there was no good book dealing with the economic organisation of Bengal, came more forcibly to his The only book on the subject is the late Mr. Jack's "Economic Life of a Bengal District." It is an admirable exposition of certain aspects of the economic life of the Faridpur District, but it deals only with this district, and even then is incomplete in that certain other important aspects of that life find no place in it. Its main purpose was the vindication of the British Rule in Bengal from the economic point of view, and it hardly deals with the shortcomings of the economic organisation of the province and their causes. For these deficiencies of the book, however, Mr. Jack was not responsible. He had an unrivalled personal knowledge of a large part of Bengal, combined with high intellectual capacity and keen insight, and if he had had the necessary time, there can be no doubt that he would have produced a far better book. The book in question was written by him in London in 1915 entirely within five short days, largely from memory as most of the material which he had collected had been left behind in India, just before he went to the war front and was killed. Even a genius could not have done justice to the subject under such circumstances. But it is rather surprising that no one has yet come forward to carry further the work which Mr. Jack had begun so well, especially as in the other major provinces of India substantial work has already been done in rural economics. Bombay, Mr. Keatinge, the late Director of Agriculture, has written "Rural Economy in the Bombay Deccan" and

"Agricultural Progress in Western India"; in Madras Dr. Gilbert Slater, Professor of Economics in the University. has brought out "Some South Indian Villages"; in the United Provinces, Mr. Martin Leake, the Director of Agriculture, has written "The Bases of Agricultural Practice and Economics in the United Provinces"; and in the Punjab Mr. Calvert, the Registrar of Co-operative Societies, has produced "The Wealth and Welfare of the Punjab." The present writer therefore commenced a close and first-hand study of the economic conditions of rural Bengal as soon as he joined the Dacca University and continued it without intermission for more than two years. As the whole province of Bengal would have been too large an area for this study, and as the natural and economic conditions materially differed in East, West and North Bengal, he selected for his study the deltaic portion of the province, comprising the districts of Mymensingh, Dacca, Bogra, Pabna, Faridpur, Bakargani, Tippera and Noakhali, in which these conditions were more or less uniform; and the phrase "the Bengal delta" used throughout the following pages refers only to this tract and not to any other part of Bengal. The writer has travelled throughout this delta, and these pages are very largely the result of his own personal observations and investigations, but he has also drawn on the experience of many men, both official and non-official, who have given it out in the course of discussions and conferences and in Government reports and other writings, and to whom the writer is much indebted.

The ignorance of rural economics, on the part of the intelligentsia of Bengal as of the other parts of India, even of those whose homes are in villages, and their apathy towards agriculture are great, yet the working out of the new system of Government, whose paramount object must be the improvement of the economic conditions of the great mass of population deriving its livelihood from agriculture,

is in their hands. There is therefore a considerable risk of mistakes being made, unless a sound knowledge of rural economics can be spread among them. History shows how easy it is to advocate and adopt wrong remedies, which promise good results to the ignorant, but which produce the effect of aggravating economic ills instead of curing them. These pages will not have been written in vain, if they arouse the interest of at least a few members of this class, in the economic problems of rural Bengal, and if they stimulate them to consider the remedies that they advocate.

The title of the book was first suggested by Prof. Pigou's famous "Wealth and Welfare." But before it could be completed, the writer found that by a curious coincidence, the same title had independently suggested itself to Mr. Calvert also. However, as the title indicates most effectively the main purpose of these pages, it has been retained.

The writer is deeply indebted to the late Sir Asutosh Mookerjee, the Vice-Chancellor and the Syndicate of the Calcutta University for taking up the publication of the work at the beginning of 1924, but owing to the pressure of work on the University Press, it could not be published till the middle of 1926.

CONTENTS

Снартеі	R.			P	PAGE.	
	Preface	***		•••	\boldsymbol{v}	
	Introduction	•••	•••		, 1	
I.	The Physical Cha	racteristics of	the Delta		7	
II.	The Agricultural Wealth of the Delta					
✓ III.	The Commercial	and Industria	l Wealth o	f the		
	Delta	•••			49	
iv.	The Land and Re	evenue Systen	ns of the I	Delta:		
	Historical De	evelopment	•••		78	
v.	The Land and Re	evenue System	ns of the $\dot{f I}$	Delta:		
	Present Prob	lems	• • •	•••	109	
VI.	The Standard of	Living of the	Inhabitants		145	
VII.	The Defects in	the Economi	c organizati	on of		
	the Delta: A	gricultural el	asses	•••	175	
VIII.	The Defects in	the Economic	c Organizat	ion of		
	the Delta:	Non-Agricult	ural Classes	and		
	General	•••			206	
✓ IX.	The Remedies: 1	Population an	d Industries		248	
X.	The Remedies:	Agriculture	•••	•••	278	
XI.	The Remedies:	The Landl	ord and T	enant		
	System, Co-o	peration and	Local Admir	nistra-		
	tion		•••	•••	307	
	Conclusion	•••	***	•••	345	

BIBLIOGRAPHY

Baden Powell-The Land Systems of British India; 3 Vols.

—A Short Account of the Land Revenue and its Administration in British India.

Calvert-Wealth and Welfare of the Punjab.

Carr-Saunders-The Population Problem.

✓ Carvour—Principles of Rural Economics.

Clapham—Economic Development of France and Germany.

Curtler-A Short History of English Agriculture.

- Enclosure and Redistribution of our Land.

District Officer—Village Self-Government in Bengal. (Cambray & Co.)

Dutt, R. C .- Famine and Land Assessments.

" —India in the Victorian age.

-Open Letters to Lord Curzon.

Field—Landholding and Relation of Landlord and Tenant in various countries.

George—France in the Twentieth Century.

Gillette-Constructive Rural Sociology.

Guha A. C.—A Brief Sketch of the Land Systems of Bengal and Bihar.

Hall-Agriculture after the War.

Harington—An Elementary Analysis of the Laws and Regulations enacted by the Governor-General-in-Council.

Hunter, W. W.—Introduction to Bengal Manuscript Records.

—British Empire.

Jack—Economic Life of a Bengal District.

Jevons—Economics of Tenancy Law and Estate Management. Jouzier—Economic Rurale.

Kale, V. G.—Introduction to the Study of Indian Economics.

Keatinge-Agricultural Progress in Western India.

-Rural Economy in the Bombay Deccan.

Kenny-Intensive Farming in India.

Leake—Bases of Agricultural Practice and Economics in the U. P.

Leroy Beaulieu-La Question de la Population.

Long-Small Farm and its Management.

Lynch—French Life in Town and Country.

Mackenna-Agriculture in India.

Mann—Land and Labour in a Deccan Village; 2 Studies.

Mitra, Sarada Charan - The Land Laws of Bengal.

Mookerjee, Radha Raman—Occupancy Right: Its History and Incidents.

Moreland-Agriculture in the U. P.

Newsholme-Vital Statistics.

Orr-Agriculture in Oxfordshire.

Phillips—The Law relating to the Land Tenures of Lower Bengal.

Plunkett-Rural Life Problems of the United States.

Prothero—The Pleasant Land of France.

Rampini—The Bengal Tenancy Act; Fourth Edition. Edited by Digambar Chatterji.

Ray, S. C.—Agricultural Indebtedness.

—Permanent Settlement of Bengal.

Rowntree—Land and Labour: Lessons from Belgium.

Rural Reconstruction in Ireland.

Shah—Sixty Years of Indian Finance.

Slater—Some South Indian Villages.

Spencer, Herbert-Principles of Biology.

Taussig—Principles of Economics.

Thompson-Population, A Study in Malthusianism.

Vernede-An Ignorant in India.

Vogt—Introduction to Rural Sociology.

Wattal-Population Problem in India.

Westermarck—History of Human Marriage.

Wolff-Rural Reconstruction.

" -Future of Agriculture.

Wright-Population.

Special Reports.

Affairs of the East India Company. Fifth Report of the Select Committee of the House of Commons on—.

Agriculture of the Dacca District. A. C. Sen's Report on the System of—.

Agricultural Department, Bengal. Bulletins of-

Cattle of Bengal. Blackwood's Report on the Survey and Census of—.

Censuses of India and Provinces, 1901, 1911, and 1921. Reports on—.

Cottage Industries of Bengal. Ascoli's Monograph on—.

District Administration Committee, Bengal, 1913-14. Report of—.

District Gazetteers.

District Survey and Settlement Reports.

Foreign Office Handbooks on Countries of Continental Europe.

Gazetteer of Bengal.

Gazetteer of India, Vol. III.

Industrial Commission, Indian, 1916-18. Report of ...

Industrial Development of Bengal, Swan's Report on-

Industrial Position and Prospects in Bengal, 1908. Review of-

Industries and Resources of Eastern Bengal and Assam.

G. N. Gupta's Report on the Survey of-

Industries Department, Government of India. Bulletins of ...

Land Revenue Policy. Resolution of the Government of India on—.

Primary Education in Bengal,. Biss' Report on

Son Canals. Report of the Committee on-

Sugar Committee, Indian. Report of-

Sugarcane Industry of Eastern Bengal and Assam. B. C. Basu's Report on—.

Tenancy Act, Bengal. Report of the Bengal Legislative Council Committee to consider the amendment of—. Water Hyacinth Committee. Report of—.

Annual Reports.

Administration of Bengal. Reports on-

Agricultural Department, Bengal. Reports of

Agricultural Department Board, Bengal. Proceedings of the Conferences of—(now discontinued).

Agricultural, Industries and Co-operative Departments of Bengal. Minutes of the Conferences of----.

Co-operative Societies in Bengal. Reports on the working of—. Co-operative Societies in Bengal. Minutes of the Conferences of—(now discontinued).

Indian Economic Association. Proceedings of the Conferences of—

Industries Department, Bengal. Reports of—. Moral and Material Progress of India. Reports on—. Sanitary Commissioner of Bengal. Reports of—.

Journals.

Agricultural Journal of Bengal.

Agricultural Journal of India.

Indian Industries and Labour. Journal of---.

GLOSSARY OF INDIAN WORDS

Abwabs-Illegal exactions by landlords from tenants

Aman paddy-Paddy harvested in winter.

Aratdars—Brokers.

Aus paddy—Paddy harvested in autumn.

Bhadralog—The respectable and educated class.

Beparis—Petty traders.

Baid—Depressions in table-land.

Barga-Produce-rent.

Bigha $-\frac{1}{8}$ of an acre.

Bil-Marsh.

Boro paddy—Paddy harvested in spring.

Chamar-Low-class Hindu.

Char-Alluvial island.

Chaukidar—Village policeman.

Hat-Village market.

Hookah-A kind of smoking-pipe.

Ijaradars—Contracting agents of landlords for the management of market places.

Jheel-Marsh.

Kachuri-Water-hyacinth weed.

Kala Azar-A type of fever prevalent mainly in Assam.

Kanango-Recorder of rights in land in villages.

Katcha-Temporary.

Khal-Canal.

Khatian-Document in which rights in land are recorded.

Khas mahals—Government estates.

Mahajan-Money lender.

Pacca—Permanent.

Pagree-Turban.

Paradanashin—Kept behind a curtain and not allowed to unveil in the presence of strangers.

Pargana—Part of a district.

Patwari-Village Accountant.

Raiyat or Ryot-Landholder.

Sanad-Legal document conferring some office or privilege.

Taktaposh—Low rude wooden platform.

Zamindar—Landlord or landowner.

Zamindari-Landed Estate.

INDEX

Abwabs, 139, 189. Act of 1859 for protecting rights of raiyats,	Bullocks, for ploughing, 27. Burma, emigration to, 256.
provisions of, 94. defects of, 95.	Button industry, 64.
Act of 1885 for protecting rights of raiyata,	Calcutta, depôts for sale of industria
amendments of, 105, 317.	products in, 274.
defects of, 136.	Carpentry, 68.
enhancement of rent under, 10L	Castes, cottage industries hampered by, 203
occupancy rights under, 98.	Hindu, 148, 149.
principles of, 97.	Mohammedan, 148.
Administration District,	restrictions relating to marriage, 233.
organisation of, 327.	Cattle, breeding of, 29, 288.
defects of, 328.	export of, 293.
Administration, Local,	farms, 288.
improvement of, 332.	fodder for, 28, 290.
improvement of finances of, 334.	industry, 281, 292.
weakness of, 241.	slaughter of, 291.
causes of weakness of, 246.	Cess, see Abwab.
Agents of landlords, exactions of, 193, 206.	Chandpur, centre of jute trade, 53.
numbers of, 194.	proposed jute factories at, 275.
Agriculture, college of, 307.	location of, 7.
commercialisation of, 30, 149, 347.	Charka, 301.
Department of, 282, 288, 290, 295, 301,	Char, 10.
303, 306.	Chaukidari Panchayats, 242, 332.
education in, see Education.	Chittagong, proposed jute factories at, 275.
improvements in state's responsibility	Cholera, prevalence of, 155.
to, 135.	Climate, effect upon density of population, 223
intensive, 258, 279.	effect upon energy of population, 203.
methods of, in the delta, 24, 166.	Clothing, 161.
productivity of, 222.	Commercial development adversely affected
Alluvion, old, 8.	by Permanent Settlement, 127.
Alluvion, new, 8.	Communications, by railways, 19.
Amusements, 167, 168.	by roads, 19.
Artisan classes, industrial training of, 266.	by water, 18.
Assam, emigration to, 255.	improvement of, 344.
,	hampered by water hyacinth, 31.
Bakargani, administration not quite strong	Conch shell industry, 63.
in, 195.	Co-operation, rural leadership provided by
location of, 7.	326.
prevalence of abwabs in, 182.	Co-operative agricultural associations, 284.
Barga system, characteristics of, 149, 186,	Co-operative credit, measures to speed up
188.	progress of, 323.
checking of, by amending Act of 1885,	slow progress of, 183.
319.	statistics of, 184.
Barind, 8.	to be supplemented by land mortgage
Barisal, location of, 7.	bank, 325.
Belgium, intensive agriculture in, 280.	Co-operative Department, 273, 289, 294, 296
Lessons from, 352.	323,
Bhadralok class, see Middle class.	Co-operative societies, for assisting cottage
Birth rate in the delta and other countries,	industries, 271, 273, 301.
236.	for cattle breeding, 289.
Boot-building industry, 68.	for consolidation of holdings, 294.
Bogra, location of, 7.	liquidation of, 322.
Brahmaputra, description of, 12.	Contraception, 261.
location of, 7.	Cornwallis' arguments in favour of Perma-
silt-depositing action of, 9, 10.	nent Settlement, 82-

Cost of agricultural labour, 46. Cottage industries, causes of decline of, 71. causes of survival of, 73. improvement of, 73, 75, 258, 265. for agriculturists, 301. methods of production of, 72. to be promoted by co-operation, 271, 273, 301. Cottage workers, economic conditions of, 71. Cotton. cultivation of, 303. cultivation of, substituted by that of jute, 29. Cotton seeds, research in, 285. Cotton weaving industry, 57, 60. statistics of, 58. Crops, financial importance of, 37. relative importance of area of, 33. rotation of, 29. Cultivated area, total, 22. per worker, 202. possibilities of extension of, 257, 278. Cultivation, cost of, 45, 150. intensive, 258, 279. Culturable area, total, 22. Cutlery, manufacture of, 68. Cyclones, 16. Dacca, Central Government Farm, 308. depôt at, for sale of industrial products, proposed, 274.

location of, 7. muslins, 59. production of jute in, 41. University, 308 Death rate in the delta and other countries. Debt, causes and results of, 175. reduction of, 322. statistics of, 180. Delta, formation of, 8. Denmark, intensive agriculture in, 280. Lessons from, 352. Depôts for sale of industrial products. proposed, 274. Design, school of, proposed at Dacca, 270. Diet, see Food. Distribution of wealth, 169, 173. District Administration, see Administration District. District Boards, organisation of, 382. income of, 241, 243.

leather factory at, proposed, 276.

Eastern Bengal Railway, 19.
Economic revolution in India, 1, 350.
Economic revolution in the delta, 347.
Education, primary, provision of, 338.
primary, cost of, 341,
agricultural, provision of, 338, 340, 341.
of artisans, 266.

ar relation to population, 234.

Dutt, Romesh Chandra, on advantages of

Permanent Settlement, 128.

on charity of Zemindars, 130.

leather factories to be managed by, 277.

Diwani, meaning of, 78.

Emigration, 250, 255. Ensilage, 291. Eugenics, 249. Europe, Continental, countries of lessons from, 352. Expectation of life, 239. Famines, absence of, 163. Famines, in relation to Permanent Settlement, 129. Faridpur, administration not quite strong in, 195. location of, 7. production of jute in, 41. Fecundity, 233, 239. Fevers, prevalence of, 155. Fishing industry, 65. Fishermen, economic condition of, 66. Fishing as amusement, 168. Fish as food, 163. Floods, 14. Fodder, shortage of, 290. Food in western countries, 157. in the delta, 162, 163. France, intensive agriculture of, 279, 280.

Ganges, description of, 11.
location of, 7.
silt-depositing action of, 9, 10.
Gardens, produce of, 37, 43.
Germany, industrial success of, 274.
Goslundo, location of, 7.
Guha on working of Act of 1885, 102.
Gur industry, 69, 302.

Haftam Regulations, 88.
Hats, see Markets,
Hides, see Leather.
Hindu castes, 148, 149.
Hindus, proportion to Mohammedans, 147, 231.
Holding, agricultural,
average, 170, 198.
fragmentation of, 197.
sub-division of, 196.

subsistence, 170.
uneconomic, 196, 199, 280, 293.
Home Industries Association, 76.
Homesteads, 156, 159, 160.
Human factor, importance of, 347.
Humidity, 204.
Hyacinth, water, 30, 298.

Immigration into the delta from the U. P. and Bihar, 225.
Immobility of labour, 257.
Implements, agricultural, 26.
Income, of cultivators, 169.
of non-cultivators, 174.
Industrial development adversely affected by Permanent Settlement, 127.
Industrial schools, 266.
Industrial schools, 266.
Industrial Department, 266, 273, 275, 301.
Indian Political Economy, 3, 349.
Infant mortality in the delta and other countries, 237.

Interest, rates of, 179.

Inundations, 16. Iron industry, 67. Irrigation in other parts of India for relieving pressure of population in the delta, 252.

Jamuna, location of, 7. Jaggery, see gur. Japan, industrial success of, 274. intensive agriculture of, 279. manure problem in, 282. uneconomic boldings in, 293.

Jute, causes of lack of manufacturing industry in, 54. factories, 275. financial importance of, 37. importance of area of, 33. increase in area under and value of, 149. methods of cultivation of, 41. price of, 149. qualities of fibre of, 53. rival of autumn rice, 150. seeds of Kakya Bombai variety, 282, 285. , superior seeds of, 282, 286.

Kachuri, 30. Kakya Bombai jute seeds, 282, 285.

trade, 52.

substitution of, for cotton, 29.

Labour, immobility of, 257. Lakhira j estates, 106. Land Records Department, organisation of, 329

absence of competent subordinate staff in. 329.

creation of efficient staff in, 331.

Landlord, ee Zeminder relation to tenants in England of, 115. Land Mortgage bank, 325. Lariness of cultivators, 201. Leather, factory at Dacca, proposed, 276.

manufacturing industry of, 57. methods of trade in, 56. Leisure for cultivators, 165, 281, 301. Local administration, see Administration local.

Local Boards, position of, 333. income of, 242.

Madhupur jungle, 8. Mahajans, see Money-lenders. Malaria, prevalence of, 154. Malthusianism, 248, 260. objections against, 263. Manure problem, 25, 281. Markets as a musements, 49, 51. organisation of, 49, 51. for cottage industry products, 274. for agricultural products, 280. Marriage, abstinence from, 248.

consummation of, 235. early, 238. longevity in relation to, 248. postponement of, 249. restraint in consummation of, 259.

mentally fit, 249. statistics of Hindu and Mohammedan, 232, 234

Marriage, restricted to the physically and

universality of, 234. Marshes, 8, 9, 11.

Medical relief, 342. Meghas, description of, 12

location of, 7.

silt-depositing action of, 9. Metal industries, 66.

Middle class, economic condition of, 209. effect of sub-infendation on, 219. interessed in industrial development. 269.

promoted by Permanent Settlement, 131.

Migration to the towns, 205. Mohammedana, castes, 148, increase of, 148, 231.

proportion to Hindus, 147. Moisture in the climate, 204.

Money-lenders, 62, 182.

in relation to cottage industries, 271, 274.

Municipalities, to manage leather factories, 277.

Muslin Dacca, 59. Mymensingh, fishing industry in, 63. location of, 7.

leather factory proposed at, 277. production of jute in, 41.

Narayanganj, centre of jute trade, 53. jute factories proposed at, 275. Neo-Malthusianism, 261.

objections against, 263. Noakhali, location of, 7. Non-Occupancy tenants, 104.

Occupancy tenant rights, partially protected by Act of 1885, 138.

proposed legal modification of, in the interests of agriculture, 144,

transferability of, not regulated by Act of 1885, 138,

transferability of, to be regulated by Act of 1885, 316.

to be bought in by zamindars, 313. to be extended by amendment of Act of 1885, 318.

Oilseeds, cultivation of, 33.

Oil industry, 70.

Orchards, produce of, 37, 43.

Pabna, leather factory proposed at, 277. location of, 7.

production of jute in, 41.-Paddy, see Rice.

Padma, description of, 11. location of, 7.

Pancham Regulations, 89.

Paterson, David, description of methods of cultivation in 1787 by, 24.

Permanent Settlement of Land revenue, Raiyats, rights of, protected by Act of 1859, absence of competent land records staff caused by, 329. unions against zemindars, of, 316. advantages attributed to, 128. Record of Rights, allowed by Act of 1885, annulment of, 133. 105. failure of, to remove agrarian disturbcausing sub-infeudation, 126. ances, 196. charity of zemindars under, 130. commercial development hampered by, given greater authority by Act of 1907, Cornwallis in favour of, 82. prepared in the delta, 132, 137. Cornwallis' safeguards for protecting up-to-date maintenance of, necessary, rights of raiyats under, 85. 331. desirability of the annulment of, 120. absence of up-to-date maintenance of, 153. 137. difficulties of making, 122. Rent Law Commission of 1879, 97. failure of the hopes of makers of, 125. Rent, legal regulation of, necessary, 144. famines in relation to, 129. of non-occupancy raivats regulated by Act of 1885, 104. industrial development hampered by, 127. nature of, in the delta, 99, 139, 140. lack of necessity and desirability of paid in produce, 186. making, 120. raised by landlords cum moneylenders. loss of revenue resulting from, 122. loyalty of zemindars under, 130. regulation of, by Act of 1885, 100. middle class promoted by, 131. standard of life influenced by, 141, 142. Rice crop, importance of, 33. Shore's objections to, 83. standard of living influenced by, 128. winter, 37, 38. State's right of annulment of, 110, 134. winter, transplanted, 39. Plague, immunity from, 156. autumn, 37. Population, density of, in the delta, 7, 145. autumn, rivalled by jute, 150. economic effects of density of, 224. boro, 40. factors determining density of, 221. superior seeds of, 282, 286. education in relation to, 234. trade in, 56. Road and Public Works cess, 335. further increase of, unnecessary in the Rotation of crops, 29. delta, 227. . increase of, 146, 231, 240. Rural leadership, 117, 326. increase of Mohammadan, 148. Rural organisation, in the delta, 2. industrial, small proportion of, 49. in other parts of India, 2, 4. irrigation in other parts of India for relieving pressure of, 252 Sanitation, 343. proportion of agriculture, 147. Scarcity, of agricultural labour, 228. of industrial labour, 229, 230. proportion of Hindu and Mohammdan, 147, 231. Seed, farms, 284. remedies for checking increase of, 248. selection of, 25. superior varieties of, 282, 285. Pottery industry, 69. Prices in the delta, 349. stores, 285. Primary Education Act of 1919, 338. Settlement of land revenue, periodical, dis-Produce rent, see Barga system. advantage removed, 132. Provincial Co-operative Bank, to finance Shore's objections to Permanent Settlement, depots for sale of industrial products, 83. 275. Silo, 291. Pulses, cultivation of, 33. Silt, deposits of, 8, 9, 14. Sites of villages, 157. Purdah system, 169, 205. Soil, fertility of, in the delta, 17, 223. Rabi crops, 44. want of fertility of, in Western Rainfall, 14, 17. countries, 17. Raiysts, classification of, under Act of 1885, Spinning wheel, 301. Spring crops, 44. Standard of life, examined by circle officers, definition of, under Act of 1885, 98. effect of Permanent Settlement on relations towards Zemindars of, 129. importance of, 5, 6. eviction of, by zemindars, 90. improvement of, in the delta, compared protection against eviction by Act of with that in North Italy, 152. improvement of, compared with that 1885 to, 103. in other parts of India, 157. improvement of, dependent upon rack-renting of, by zemindars, 91. relations towards zemindars of, 113. 130. increase of local taxation, 136, 234,

Standard of Life, influenced by Permanent | Western countries, meaning of, 5. Settlement, 128. in relation to population, 240, 265. low, owing to density of population. 225. of non-agricultural classes, 174. of poverty-stricken cultivators, 164, pressure of, see Density. rent in relation to, 141, 142. Standard of production in the delta and Western countries, 5. Sub-infeudation, nature of, 210. promoted by Permanent Settlement, 126, 131, 212, results of, 219. To be checked by legislation, 321. Sugarcane, cuttings superior, 282. industry, 69. possibilities of extending cultivation of, 302. Sundarbans, 258. Surface, configuration of, in the delta, 17, 223. Survey of land, made, 132. provided by Act of 1885, 105,

Taxation, local, liability of Zemindars to, 134, 136, 337. increase of, 246, 334. Tenants-at-will, 94. Tensmis, see Raiyats. Tenure-holder, definition of, by Act of 1885, Thatching grass, used for covering roofs, 24. Tippera, location of, 7. production of jute in, 41.

Trade, carriage of, 50. collecting, 49. distributing, 49. Tradesmen, peripatetic, 52.

Under-raivate, regulation of rent and eviction of, by Act of 1885, 104. Union Boards, improvement of finances of, 335. income of, 242.

organisation of, 332. work of, 344. Union Committees, income of, 242. organisation of, 332.

Union rate, 336.

Veterinary Fepartment, 289, 344. Villages, absence of 246. Village Self-Government Act of 1919, 332. defects of, 336. Village sites, 157.

Wages, of agricultural labour, 46, 47, 228. of industrial labour, 229. Water supply, improvement of, 344. Weaving industry, position of, 57. statistics of, 58. Weavers, economic condition of, 61. Wages of, 63. Western countries, intensive agriculture in, 280.

standard of living in, 5, 152. standard of production in, 5.

Zemindara

∆ beenteeism of, 124, 206. in relation to abwabs, 189, 192. agents of, 193, 206. training of agents of, 314. as capitalists for cottage industries, 272 in relation to barga system, 186. cattle improvement by, 289, 312. consolidation of holdings by, 310. charity of promoted by Permanent Settlement, 130. conditions favouring the existence of a class of, 118. desirability of expropriation of, 116. distressed condition of, 209, 322. duties of, towards the improvement of agriculture, 117, 307, 311. duties of, towards the improvement of estates, 308. economic objects of revenue settlement with, 112. failure of, to improve agriculture, 130. failure of to improve conditions of tenants, 124. Government management of cetates of, 316. indebtedness of, 206, 208. influence of Permanent Settlement on relation to tenants of, 129. increase in powers of, against tenants, 312, increase in taxation of, 334. improvement of communications by, 309.

liability of, to pay local taxes, 134, 136. loyalty of, promoted by the Permanent Settlement, 130. mismanagement of estates by, 87. modification of occupancy tenancies in relation to, 144. as moneylenders, 183. number of, 208.

occupancy rights to be bought in by, 313. political objects of revenue settlement with, 112.

permanent improvements by, 3 9. position of, at the time of Cornwallis,

position of, as established by the Permenent settlement, 85. powers of, against tenants before Aet of 1859, 92.

justification of grant of proprietory rights to, 111.

relations of, towards the raiyate, 113, seed farms, to be organised by, 284.

transferability of occupancy rights to,

unions of tenants against, 316. union rate to be paid by, \$36.

INDEX OF AUTHORITIES

Ascoli, 62, 71, 77, 269.

Baden Powell, 83, 111, 125, 330.
Bakarganj Survey and Settlement Report,
181, 211, 220, 321.

Basu, P. C., 293. Basu, B. C., 302. Biss, 339, 341. Blackwood, 288.

Board of Agricultural Department, proceedings of, 283, 290.

Bengal Agricultural Journal, 291. Bengal Agricultural Department Reports,

3C5, 306.

Bengal Administration Reports, 84, 93, 97,

241. Bengal District Administration Committee's

Report, 332, 333.
Bengal Census Reports, 50, 147, 155, 156,

194, 208, 226, 232, 246. Bengal Records, 83, 84, 86, 88. Burma Census Report, 256.

Calvert, 6, 18, 157, 177, 178, 187, 203, 252, 330, 348, 294.

Carr-Saunders, 261. Carvour, 6, 347.

Census of India, 221, 233, 239, 252.

Clapham, 306. Colebrooke, 113.

Conborough, 301.
Conference of Agricultural, Industries and
Co-operative Departments, 286, 288, 292.

Cornwallis, 82.

Dacca Survey and Settlement Report, 177, 181, 183, 188.
District Officer, 333, 337.
Dutt, R. C., 128, 130, 131.

Evans, 304, 305.

Field, 78, 80, 89, 138, 91. Fifth Report, 79, 82. Finlow, 287. Fuller, Sir B., 124.

Gillette, 6. George, 261. Grant, 81. Guha, 83, 94, 103, 125, 129. Gupta, 275, 277. Hall, 205. Hamilton, 235. Harington, 81, 85. Hunter, 88, 227.

Imperial Gazetteer of India, 123, 105. Indian Industrial Commission's Report, 267, 270, 272.

Jack, 174, 185, 246, 324, 325. Jevons, 119, 309, 311, 314, 317. Jouzier, 198.

Kale, 264. Keatinge, 198, 200, 294, 298.

Land Revenue Policy of Indian Government, 114, 125, 130, 132. Lynch, 261. Leroy-Beaulieu, 262.

Mann, 198.
Mitra, Sarada Charan, 84.
McLean, 300.
Moral and Material Progress Report, 230.
Montague-Chelmsford Report, 328.
Mukerji, Radhakamal, 3.
Mukerji, Radharaman, 90.

Newsholme, 155.

Panandikar, 1. Phillips, 107, 127. Plunkett, 326. Punjab Census Report, 253, 254. Prothero, 261.

Rampini, 100. Ranade, 3, 4. Ray, S. C., 111, 134, 135. Risley, 227. Rowntree, 18, 280.

Sarkar, 130, 131.
Sen A.C., 151.
Seton Karr, 112.
Shab, 251.
Shore, 79.
Sidgwick, 143.
Sone Canal Committee's Report, 254.
Spencer, Herbert, 233.
Sugar Committee's Report, 303.
Statistical Society, Journal of, 249.

364

INDEX OF AUTHORITIES

Taussig, 115, 250. Thompson, 201, 261, 262, 319. Trunnier, 224.

A

Vernede, 155.

Water Hyacinth Committee, 300.

Wattal, 225, 228, 231, 233, 240, 249. Westermarck, 234, 249. Wilson, Sir James, 198. Woodburn, 125, 130.

Young, Arthur, 279.