

LAND MANAGEMENT IN THE PUNJAB FOOTHILLS

Land Management in the Punjab Foothills.
By R. MacLagan Gorrie, D.Sc. (The Punjab Government Press, Lahore). Pp. vi + 78 + xii. Price Re. 1-6-0.

THE reviewer has found this booklet exceptionally interesting and worthy of careful study even by those who may not be directly concerned with the main subject, viz., the prevention or correction of erosion. The author's object is certainly fulfilled, viz., "to place in the hands of all who may be concerned with the administration of land a concise statement of the true aims of land management in language which can be understood by those who have not had a scientific training in agriculture or kindred subjects".

On almost every page some questions of importance are raised either directly or incidentally. The impact of these questions on the reader will depend on his particular view-point. To the present reviewer the outstanding impression was the sad effect on the whole agricultural economy of India of the constant quest after cheapness. This indeed is apparent even in the get-up of the booklet where economy in printing has been sought at the cost of the practical destruction of the effectiveness of the excellent photographs taken evidently with great care by the author.

Apart from the naturally depressing effect on the artistic photographer the reader is deprived of the satisfaction arising from the contemplation of good work, and there is left in fact once more the suggestion of the essential "katchaness" of Indian work. The suggestion, it may be said, if largely true, is quite unnecessary; since good work can be done in this country if only requisite measures are adopted.

At any rate this trouble should not arise with Government publications intended to stimulate better work in their own sphere by those for whom these publications are issued. In relation to the subject of the booklet the trouble of cheapness finds its main expression in the uncontrolled grazing of unlimited herds of very inferior cattle. No doubt poverty and other excuses may be found, but surely what is needed is a strong handling of the whole question, sympathetic understanding being combined with resolute firmness. The aim of necessary education should be, apart from its ultimate ethical basis, which means an awakening of social consciousness at present entirely dormant, to show the ultimate benefit accruing to all and sundry by the adoption of rational methods of cattle breeding and feeding. A few carefully selected and stall-fed animals would bring directly more profit to the farmer and indirectly would prevent great ultimate loss in the ruin of fertile areas of land.

This same principle of spending more on less, as against spreading available expenditure so thinly that its ultimate effect is virtually nil, applies not only to the problem of land management but in many other directions where public money is concerned. Thus in a sphere with which the reviewer is familiar, viz., water supply and sewage disposal, it is

of little use to spread available money so thinly that real purification of the water before and after use is not attained. If the money was intensively spent so that complete purification of a portion was actually realized, this would really give better results than the same amount of money thinly spread, not only for technical reasons which need not be here discussed but also for what is perhaps of equal importance, viz., that the portion properly handled would provide a standing model to be followed in later developments.

It is of interest to compare the recommendations in the booklet under review with those made many years ago in the famous report on the "Improvement of Indian Agriculture" by the reviewer's late and highly esteemed friend, Dr. J. A. Voelcker. Many of Dr. Voelcker's suggestions have since been carried out with great benefit to the country and in other directions it can be seen from Dr. Gorrie's pages that these recommendations have been developed still further. Thus, for example, in the necessary production of organic manure the old-new method of "composting" has resulted, if scientifically carried out, in a great increase of valuable fertilizer without in many cases an entire deprivation of cowdung cakes for fuel purposes. For this last much criticised practice good excuses may sometimes be found, viz., in the absence of other fuel, especially it may be said under war conditions, and in the peculiarly slow-burning efficacy of cowdung.

The distinction made between the valuable qualities of sheep and goats is almost reminiscent of Scripture. Yet it appears that even goats have very special uses provided they are intelligently bred and controlled. No one who has had charge of a woodland or even a garden will deny for a moment the absolute wickedness of the ordinary goat, who will destroy a valuable tree very quickly by eating round the bark everywhere within reach. Unfortunately it is not only four-footed goats who are guilty of this practice, but surreptitious two-legged seekers after cheap fuel who chop the bark from the lower portions of magnificent old trees, entirely reckless of their possible ultimate destruction. This kind of thing which every dweller in the Indian countryside, or country property owner, has met sometimes, raises the question whether the excessive "respect for property", the evil of which is now becoming widely recognized by thoughtful people, may not at one time at any rate have had some useful basis in preventing indiscriminate stealing. No one would justify the harsh laws formerly existing in England against sheep-stealing and theft in general, but it is possible that it may not have been without effect in developing subconsciously a regard for the Eighth Commandment.

The whole outlook on economics especially in relation to social welfare demands far more attention than it is yet receiving by the general public. At the same time it is encouraging to know that the movement for a rational view-point and for a true concept of wealth

is now finding utterance in the British Parliament, and the Economic Reform Club and Institute of London beginning in a small way is now greatly increasing its scope and usefulness. All these large questions of land management dealt with in the booklet under review would be far more easily and promptly handled if the bogey of financial stringency was not always raised. The enormous expenditure on war material now going forward is opening the public's eye to the fact that money is only a token which under proper public management, as apart from profit-making banking companies, can be made to correspond with the labour and other services required for these measures of improvement. The instance given in the booklet of valuable results from co-operative labour shows how when there is a will and understanding great things are possible.

It may be hoped that Dr. Gorrie's booklet will be of value not only in India but in other parts of the world where erosion problems have to be faced. In the Federated Malay States, for example, it was pointed out to the reviewer many years ago that owing to the accumulation of flood-borne silt the beds of several of the rivers had risen to the arches of the bridges. Apart from suitable training of such rivers the value in many cases of the

silt as manure should not be forgotten. This point is made by Dr. Voelcker but possibly because the conditions are not comparable in the areas referred to in the booklet, this aspect of the question is not emphasised by Dr. Gorrie.

A word may finally be said with regard to fodder reserve. It is rather curious that while at one time the value of spineless cactus was recognised and much advertisement was given to Luther Burbank's efforts in developing such a plant, work which has been done in India in comparatively recent years seems to have been forgotten. Reference may be made to a valuable article by Dr. Burns in *Indian Farming* for October 1940 in which he mentions several efforts made in former years to develop spineless cactus in India, amongst others an attempt by the present reviewer and his colleagues at the Indian Institute of Science. This was so far successful that an excellent growth of the plant was still spineless after nearly fifteen years.

Altogether it will be seen that the booklet is full of practical and at the same time thought-provoking proposals and it may be hoped that it will have a wide circulation not only amongst specialists, but, as the author hopes, among the educated public generally.

GILBERT J. FOWLER.

CENTENARIES

Potter, Nathaniel (1770-1843)

NATHANIEL POTTER, an American epidemiologist, was born at Easton in 1770. He graduated in medicine in 1796 from the University of Pennsylvania. He became the first professor of medicine in the Medical College of Maryland on its establishment in 1807 and kept that position till his death. He wrote profusely and was Editor of *Baltimore medical and philosophical lycaum* (1811) and joint-editor of *Maryland medical and surgical journal* (1840-43). The fame of Potter rests largely on his service to the epidemiology of yellow-fever. He established its non-contagiousness by lending himself to experimentation. In 1797 he tied up around his head a piece of muslin dipped in the perspiration of a patient dying with yellow-fever and keeping it all the night. In 1798, he inoculated himself with the perspiration of a yellow-fever patient in the last stages of the disease. Potter died at Baltimore, January 2, 1843.

Fitch, John (1743-1798)

JOHN FITCH, an American inventor, was born at Windsor, Hartford county, January 21, 1743. After spending five years in an elementary school, he was put on his

father's farm even when he was but ten. As he was a weak child, farm work made his life unhappy and so after five years, he changed over to the service of a shop-keeper. Finding this too unsuitable, he shifted from one calling to another, until at last he turned his attention to the invention of steam-boat in 1785. By 1787, his first steam-boat was launched on the Delaware river at Philadelphia in the presence of the members of the Congress. In 1788 he launched a bigger boat, 60 feet long, and carried as many as 30 passengers, covering 20 miles in about 3 hours. In 1790, he built a still larger boat and this was put to regular service and Fitch got a patent from the U.S.A. and from France. In 1791, he started work on his fourth boat, named *Perseverance*; but it was destroyed before completion by a violent storm. This disaster virtually ended his career. After sojourning for four years in France and other places in search of a more favourable opportunity to realise his ambition, Fitch died in disappointment at Bandstown, July 2, 1792.

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University Library,
Madras,
January 4, 1943.