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BOOK REVIEWS AND NOTES

The Economics of Irrigation in Dry Climates, Colin Clark. Oxford: Agricultural Economics Research Institute, 1960. Pp. 31, 5s. (Stg.).

Colin Clark has a fatal fascination for summarizing large masses of data gathered from a variety of sources and from all parts of the globe. Sometimes this results in an amalgam of rare value; all too often it results in over-simplification and a jumbling of the facts. *The Economics of Irrigation in Dry Climates* must unfortunately be classified in the latter category.

The only clear and logical section of the pamphlet is the summary, where he suggests that irrigation should be used primarily for high value crops and notes that sources of irrigation water are becoming increasingly costly so that in many countries extension of irrigation is only doubtfully economic.

The title of the dissertation is misleading, for Clark has ignored many of the basic factors necessary for a consideration of the economics of irrigation in *any* climate, let alone dry climates. For example, the concept of a production function for crops under different water regimes is only implied in one paragraph on page 9. Indeed, the tables on pages 6 and 7 and pages 10 and 11 (which are extremely difficult to follow anyway) appear to deal with maximum production at "potential evapotranspiration" conditions. Israelson pointed out 40 years ago that optimum returns are obtained at levels of watering below those required for maximum production.

Clark clearly does not like "irrigation engineers and administrators". He suggests their concept that the water used by crops is a function of crop type is wrong. He waxes enthusiastic about Penman's "proof" that all plants in the same climate lose water at the same rate. This concept is more or less valid in humid climates, but, as dry climates impose greater stress on plants and greater amounts of energy are available from the air, so the solar radiation effect which dominates Penman's formula becomes less important. Also the change in evapotranspiration rate with soil moisture becomes increasingly important. Recent research has shown that these factors provide a physical justification for the views of irrigation engineers and administrators and that the Penman formula requires modification for dry climates.

The section from pages 14 to 28 attempts to assess the capital costs of both historic and proposed irrigation schemes throughout the world. It also assesses annual operating costs of various types of irrigation. If the tables previously mentioned were difficult to follow those used to illustrate capital and operating costs are almost impossible.

Clark imparts no clear idea of how irrigation schemes are planned or operated. He devotes only one paragraph to estimates of water losses in transit from reservoir to farm. The balancing of the cost of reducing losses, to the increase in production so gained is a major problem and varying solutions must be included in many of the project costs figures quoted. The importance of drainage, both surface and sub-surface, in irrigation works and the resultant salt balance is widely discussed by

engineers today. Clark mentions it briefly in relation to salting in India and Pakistan only. The whole section on project costs is very poorly planned and poorly argued although it might have formed the most useful part of the whole pamphlet.

A word about Clark's attempt to express results in universal terms. It is puzzling that having propounded the merits of expressing values in terms of 1950 U.S.A. dollars he then proceeded to measure crop returns in the table on page 10 in terms of a wheat standard. The use of metric units for water usage imposes a strain on the reader, who, if he is unaccustomed to using metric measurements finds himself continually reconverting the water usage data back to more familiar units.

In relation to Australian practices two inaccuracies have been noted. On page 28 it is stated that sugar cane is watered from windmills in Ayr, North Queensland, at the rate of approximately half a metre per annum, causing a marked fall in the water table. In fact, windmills have never been used for this purpose, but large pumps of one to six cusecs capacity and it is normal to apply about $1\frac{1}{2}$ metres per annum. The underground basin is subject to local recharge and while the water table reached low levels in 1939 because of a series of dry years it reached record high levels in 1948.

The other inaccuracy involves rice yields. Clark couples Australia with India and Pakistan as countries having low yields of rice (p. 9). In contrast he mentions (p. 25) the skilful rice-growing in Japan, Italy and Spain. The facts are that for the last ten years Australian rice yields have at least equalled those of Italy and Spain and for the last three years have been at world-record levels.

Finally, while many people would agree in general with Clark's conclusions given in the summary, these points do not clearly emerge from the text.

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Report of the Wool Marketing Committee of Enquiry, Canberra: Commonwealth Government Printer, February, 1962. Pp. xxii, 186, 7s.

On January 25, 1961, the Commonwealth Government appointed a Wool Marketing Committee of Enquiry consisting of the Hon. Sir Roslyn Philp, K.B.E. (Chairman), and Messrs. M. C. Buttfield, C.M.G., and D. H. Merry, B.Com. (Members).

The terms of reference were:—

“(1) to enquire into the present system of marketing and of promoting the sale of the Australian wool clip and matters relating thereto and to report upon the efficacy of these systems ;

(2) to report upon the merits of any other systems or of modifications of the present systems which may be advocated to the com-

mittee of enquiry or which the committee itself considers would be of long-term benefit to the woolgrowing industry and in the best interests of the nation."

The report was presented on February 19, 1962 and although it deals with all the major issues involved in the marketing of the Australian wool clip one would have expected a more detailed exposé of these issues, taking into account the large volume of evidence the Committee heard. The Committee obviously went to considerable lengths to discover the facts and investigate the various proposals put forward by interested parties. However, the impression one forms after reading the Report is that the Committee has put a premium on brevity at the expense of elaboration. Perhaps this is to be expected from a Committee which consisted of persons unfamiliar with the industry and the mechanics of its marketing operations. If it has done little else the Report has certainly clarified the "moot points" in the problem of falling prices and rising costs facing the Australian woolgrowing industry.

The section on wool marketing which discusses trends in wool prices since the war, and the apparent causes of the lower prices experienced in the last decade, describes the market situation well and there can be no serious criticism of the Committee's conclusion "that these factors are fundamental to the world market for wool and cannot be influenced by the existing arrangements for selling Australian wool or any alternative arrangement."

In analysing wool price fluctuations the Committee concludes that since the end of the war the length and amplitude of the wool price cycle has been reduced; wool no longer commands a premium over synthetics and the situation now is that the prices of synthetics to some extent set a ceiling above which wool prices can rise for only short periods—in other words the Committee points out that the price elasticity of demand for wool has increased. It then goes on to state in paragraph 102 that although fluctuations in wool prices and farm incomes have been experienced in Australia for a very long time and the industry has of necessity accommodated itself to the situation, it feels that stabilization of prices would be an advantage to the woolgrowing industry. Surely if demand for wool has become more elastic, which the Committee accepts, then the narrower range of price fluctuations resulting from this change would appear to negate the above conclusion.

In its review of the auction system the Committee touches on some important factors that are apparently affecting the level of prices at auction. However it does not recommend any positive action to combat these influences and the analysis concludes with vague statements that lead one to believe the Committee has recommended that the status quo be maintained solely because this is the most cautious course open; the conclusion in this respect does not seem to rest on a thorough examination of the pros and cons of the auction system.

The present level of forward selling is seen by the Committee as not warranting any alteration in the marketing system. The Committee pointed out that "it is argued, forward selling has a depressing effect on prices at wool auctions". It neglects to mention that the woolbuyer has been taking over the role of risk-taker as the merchant is disappearing and the topmaker

is concentrating less on acting as a financier and more on performing his task as a manufacturer. The Committee emphasizes the depressing effect of forward selling on prices at auction but apparently fails to realize that forward selling can also retard price falls and thus qualify as a stabilizing influence. In fact the increase in forward selling may be a result of the declining demand for wool generally and a means by which the buyers attempt to sell wool on a more favourable basis vis-à-vis stable priced synthetics. Forward selling may therefore be an effect and not a cause of lower wool prices. One can thus be thankful that the Committee recommended no alteration in the marketing system to combat forward selling while at the same time treating its supporting arguments with a degree of scepticism.

Combinations among woolbuyers, which are termed "pies", are said by the Committee to have a depressing influence on the market. This is probably true when the average for the whole season's clip is estimated, although it neglects the effect "pies" can have on the day of sale where the consolidation of purchases around a common level stabilizes the price, instead of allowing intense competition on early lots to fall off to a low level as orders are progressively filled. This supposed advantage would certainly not outweigh the price depressing influence "pies" are said to have, but as neither effect is capable of quantitative estimation the Committee's condemnation cannot be regarded as conclusive.

The feasibility of a reserve price scheme with auction selling was studied in great detail by the Committee and many parties were consulted in order to discover the pros and cons of introducing such a scheme. In assessing the real gains and losses to the growers and to the authority which would be necessary to operate such a scheme the Committee states that even though such an authority may make a profit on its operations and that this profit be regarded as woolgrower's profit, there are no grounds for the assumption that a reserve price scheme would result in a net gain to growers due to the presence of many unknown factors in the market. In the light of the available evidence this would appear to be the logical recommendation. The Committee fails, however, to discuss whether there would be justification for lengthy investigations designed to trace possible changes in the elasticity of demand during the cycle of operation of a reserve price scheme. This approach would yield more precise information on the net gains or losses to graziers and also indicate whether any social costs would be involved. Indeed, the Committee did not attempt to hear the views of woolgrowers or their representatives in either New Zealand or South Africa to ascertain whether they were of the opinion they were gaining or losing from the operations of the reserve price schemes. Instead it conferred with buyers at home and overseas, whose role is to buy wool as cheaply as possible and enquiries were made by correspondence only into the workings of the two schemes while one of the Committee followed up these enquiries by a visit to New Zealand. Interviews with a cross-section of woolgrowers in either of these countries would have provided *some* interesting information on the question of hidden gains or losses, even if it was not quantitative or completely reliable. Apparently, the Committee is satisfied to regard the question as entirely unresolved.

One aspect of the scheme the Committee omits to discuss is the effect on our balance of payments when the administering authority finds it necessary to operate a large "buying in" policy, substituting payment in £A.

for valuable foreign exchange. If New Zealand and South African experience can give any guidance on this aspect, the extent of such "buying in" operations may not be great, however. Although this is not to say that the impact may not be different in Australia.

In all, the Committee's evaluation of a reserve price scheme is quite sound in pointing out the costs and risks involved but it has not investigated the possible benefits to weigh against these to this reviewer's satisfaction, particularly in view of the Committee's apparent recognition of the successful operation of reserve price schemes in New Zealand and South Africa.

The discussion of an equalization scheme whereby growers of similar types of wool would obtain equal returns within each season leads the reader to an anti-climax. The advantages extolled in paragraph 418 appear to far outweigh the disadvantages listed in paragraph 419. The Committee cites an example of a voluntary pooling scheme in operation on a small scale in Western Australia during *two* seasons, pointing out that it has not flourished, and then concludes that since no grower organization has shown enthusiasm or advocated its introduction, an equalization or pooling scheme does not offer sufficient improvement over the existing free auction system to warrant its general introduction. One can only describe this as a naïve conclusion which would not seem to follow from previous remarks.

For those lacking knowledge of the intricacies of wool marketing, Part II of the Report supplies a most informative coverage of how the marketing system operates and discusses ways and means of improving the efficiency of the system. The Committee here appears to have been well informed by people familiar with marketing wool and as most of the recommendations refer to technical matters of improving the standards and methods of wool classing, packaging, selling and transport, one cannot but applaud the Committee's sound pronouncements on these important aspects of the industry. Indeed this is one area where the Committee has been more positive and confident in its advocacy, although it is doubted whether much new ground was covered. The members of the Committee were probably wise to refer most of their recommendations to their proposed "Wool Commission" for further investigation.

Wool research and promotion in Part III is seen by the Committee to be lacking a proper degree of integration. Research discoveries remain sterile because there is no effective organization to promote the use by industry of these findings and in addition the Committee is of the opinion that the actual volume of useful discoveries has to date been relatively small. The proposal for setting up a "Wool Commission" stems from this present unsatisfactory situation. The Report emphasizes the importance of increasing promotional efforts to meet the competition of alternative fibres in the textile industries of the world and in particular suggests that this increased promotion should not be exclusively directed towards improving wool's image as a prestige fibre. The Committee feels that increased emphasis on the promotion of approved blends of wool and synthetics to widen wool's market would appear to offer greater prospects of increasing the demand for wool. However, contrary to what the Committee says in paragraph 648 (ii) about the directions of promotion being based on scientifically conducted market research, the reviewer believes that this alone would be insufficient and more detailed demand analyses estimating

elasticities and cross-elasticities will need to be undertaken to ensure that the markets offering more prospects of return receive appropriate attention.

The proposed "Wool Commission" is to be set up to co-ordinate marketing, research and promotion and allocate funds between these three activities. While the reviewer is in favour of this in general and can see considerable advantages in having a single "voice" for the whole industry, the difficulties that the institution of a single authority would present are many. Also to give the "Commission" power to alter marketing methods when price depressing influences seem to appear may not be desirable.

The conclusion one draws from this Report, and especially its proposal for a "Commission" to investigate further the issues cited in the Report, is that the Committee sees no immediate urgency in the problem of rising costs and falling prices currently facing Australian woolgrowers. Whether or not this is an urgent problem remains to be seen.

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Statistical Yearbook, 1961, New York: Statistical Office of the United Nations, Department of Economic and Social Affairs, 1961. Pp. 678, 71s. 3d.

This is the thirteenth issue of the *Statistical Yearbook* prepared by the Statistical Office of the United Nations with the co-operation of the statistical authorities of member countries. As with preceding issues, the publication is in both English and French. An improved statistical coverage has enabled the territorial scope of many of the tables to be widened and more comprehensive and accurate aggregates to be published.

The tables on international tourist travel showing the total number of visitors arriving in countries are reinstated in the current volume and illustrate the growth of this important activity in the post-war period.

The tables in the *Yearbook* contain information received up to the end of 1961 while the majority cover 1948 and up to nine of the most recent years. The metric system of weights and measures is again employed throughout but the British and American equivalents are listed in an appendix.

As usual, a subject index has been inserted to provide the reader with a quick and convenient reference to the various items contained in the *Yearbook*; the country index is again included to assist the reader who wishes to find all the data given in the tables for a particular country.