

CHRISTIAN AIDTHE BECHUANALAND PROJECTGeneral Background

1. The country covering an area of about 225,000 square miles is sparsely populated; the present population is estimated at 540,000 and is mainly concentrated in the eastern part of the country on either side of the railway line. A recent census suggests that the population has been growing at a rate of 3.4% a year. Continued growth at this rate would double the existing population by 1985. On the basis of the figures recently used by World Bank economists, it is estimated that real per capita income in Bechuanaland is £ 18 p.a. Even allowing for a 25% margin of error (to take account of the paucity of statistics), this indicates that Bechuanaland is one of the poorest countries in Africa.
2. Since 1956, Bechuanaland has been in receipt of a grant-in-aid from the British Government to balance its budget, and it is also heavily dependent upon the British Government for grants and loans for development purposes.

3. Bechuanaland is primarily a cattle country. The total number of cattle was estimated at 1,300,000 head but this has been drastically reduced by the drought, and is now thought to be around 900,000. About 90% of this is owned by Africans and the cattle subsist almost entirely on the natural veld. The remaining 10% is owned by European settlers. Cattle are the principal source of cash income in the economy and account for over 90% of exports. It is the cattle industry which has raised the economy above the bare subsistence level, and so far as can be foreseen, it is the development of the cattle industry to which the country must look for long-term economic development. The industry is, however, continually threatened by drought and outbreaks of disease.

Problems and prospects

4. There is therefore need to diversify the economy so as to reduce the dependence on the cattle industry. The best prospect for achieving this diversification and a relatively quick recovery from the present famine situation lies in the development of arable agriculture. The total arable land in the Territory is estimated at 8,000,000 acres of which only about 800,000 acres are presently under cultivation, mainly in the Eastern region. Most of this acreage is cultivated by African farmers using traditional methods of husbandry with consequent low yields. The Department of Agriculture, through its extension services, has had some success in recent years in encouraging the expansion of crop production but much remains to be done to make maximum use of the natural and human resources available in this field.

5. The Bechuanaland Government has decided that the objectives of the 1965/68 Development Programme must be related to the political and economic necessity of raising real per-capita incomes. This is inevitably a long-term aim, the achievement of which is dependent on such factors as continued political stability. The inter-relationship of economic growth and political stability in a country which is likely to depend on external public and private investment for many years to come make it impossible - even if it were acceptable, which of course it is not - to ignore two secondary objectives, namely the maintenance of an adequate level of social services and the gradual reduction of dependence on outside support for the recurrent budget.

6. 37% of the total amount available under Colonial development in our Welfare Grants in 1965/67 has been earmarked for the productive sector, but expenditure even of this order will not be sufficient to enable the Bechuanaland Government to finance all the requirements which need to be met urgently in order to make a significant impact on the mass of subsistence farmers who eke out no more than a bare existence, and who in times of drought fall below even the minimum subsistence level. The problem is to

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raise the level of agricultural production.

Agricultural Development

7. The answer to the problem is known - expansion of the extension services of the Agricultural Department coupled with the provision of adequate credit and the conservation of water supplies; but the limiting factor is shortage of funds. Within the limits imposed by its own financial position and the need to devote a considerable part of available funds to other vital sectors of the economy, particularly to education, the Bechuanaland Government has made considerable progress in the agricultural field, and will continue to do so during the current development period. But an additional impact could be achieved if a further sum of £ 500,000 were to be made available in this particular field of activity, and it is beyond all doubt that the results which could be so achieved would play a significant part in improving the lot of the people of Bechuanaland.

Agricultural Training

8. The key to the improvement of the standard of living of the African farmer is the Pupil Farmers' Scheme. The existing facilities for the training of Demonstrators are quite inadequate to produce the number of trained personnel who are needed to bring the benefits of the scheme to the large number of farmers who have indicated a wish to participate in it, and it is now a matter of extreme urgency to build and equip a new school at land which is available at Gaberones. Even if this could be completed by the end of 1966, so that the intake of students in 1967 could be increased from the present figure of 20 to 50 a year, it will probably be impossible to make good normal wastage and build up the number of trained Demonstrators to 250 (which is the very minimum needed) before 1971. It is also intended to develop a Diploma course as soon as suitably qualified students are available. Given that there will be a considerable wastage (due to retirements and the inevitable loss of existing non-local African staff), and also bearing in mind the fact that not all of the School's trainees will necessarily become Demonstrators (there will be room for numbers of suitably trained Africans to take up employment on private farms and estates), there is no doubt that the output of the School can be absorbed for many years to come, and certainly well beyond 1971.

9. Provision for the recurrent costs of the School for 1966/67 has been made by the Bechuanaland Government in its outline proposals for the expenditure of its 1965/67 allocation of Colonial Development and Welfare funds, but a source of funds for the capital expenditure is urgently required. This expenditure is estimated to be of the order of £ 173,000.

10. To complement the work of the Agricultural Demonstrators it is proposed to bring farmers into a rural training centre for short courses, and the existing Training School at Mahalapye will be used for this purpose and for staff in-service training, once the new School has been built at Gaberones. Various courses will be provided, including community development, home economics, short courses for farmers on specialised subjects, and longer training courses for school leavers to prepare them for farming. The estimated capital cost of converting the existing School is £ 38,000.

Agricultural Credit

11. Credit is at present available to African farmers from the American Revolving Loan Fund, which has been administered by the National Development Bank since 1964, and previous to this was administered by the Agricultural Department. This Fund has about £ 50,000 available for loan, and these are effectively the only funds available to the Development Bank for making loans to African farmers. The Fund was derived from money made available to Britain by the U.S. Government under the Marshall Plan, and since the balance available for disbursement by the British Government is now down to about £ 15,000, there is no prospect of any

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further substantial sum being made available to Bechuanaland from this source.

12. The purpose of the Loan Fund is to make short or medium loans to African farmers, and to groups of African farmers, to enable them to increase the productivity of their existing farming operations, through improvement and development for continued sustained yields, by maintaining and building up soil fertility, preventing soil erosion and for soil conservation and reclamation measures. The major use to which it has so far been put is for the purchase of agricultural implements. Up to the present time, the Fund has adequately served its purpose and has been of great assistance in expanding improved farming through the medium of the Pupil Farmer Scheme, but the stage has now been reached when credit must be given much more freely and there must therefore be much more money available for it. In the short term, credit is urgently needed to assist farmers -

- (a) to pay for mechanical ploughing (since their oxen - if still alive - will be far too weak to plough);
- (b) to purchase seed (to replace that lost in the drought and famine); and
- (c) to purchase fertilizers.

There will also be a need for credit to enable farmers to purchase implements and this demand will grow rapidly once oxen are again available to work the land. Field staff have stated that one of the limitations to the expansion of the Pupil Farmers' Scheme and improved methods of farming is lack of agricultural implements, but to supply them at the scale required on the present basis would cost about £ 45,000 over the next three years, and this does not take into account replacement of implements at present in use, which amounts to about £ 1,500 a year. The answer therefore is to make loans readily available so that a farmer can obtain the implements he requires as soon as he joins the Scheme.

13. It is therefore suggested that at the very minimum the size of the existing Fund should be doubled i.e. by the provision of a further £ 50,000 capital, although with the expansion of the Pupil Farmer's Scheme to the extent proposed in earlier paragraphs of this paper it must be accepted that there will inevitably be an early demand for yet more capital.

Water Conservation

14. It has been estimated that every year Bechuanaland experiences a run-off of at least twenty thousand million gallons of water (which is lost except for recharge to river sand) from the Eastern Watershed alone, which includes at least half of the area of better arable land and highest rainfall. Storage dams and weirs would, if properly placed, considerably reduce the annual loss of this water. At present there is no attempt being made to recharge the water bank of Bechuanaland, and all water permitted to flow out of the country is a debit to this account.

15. Properly planned conservation of soil and water could result in the following improvements to agricultural development.

- (a) Recharge of sub-surface water leading to more reliable water supplies from boreholes.
- (b) Storage dams located in arable areas would result in the cattle and work oxen being held at the arable land areas in the early winter. The farmer could then practise winter ploughing - an essential technique for dry land agriculture and he could also feed his crop residue to these stock. At present the farmer and his stock have to depart when the pans and other temporary water supplies dry up. The farmer would also have a better

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supply of natural manure to apply to his arable lands. Permanent water supplies at the arable lands all the year round would result in the farmer being able to live at his lands all the year round and practice an integrated arable and livestock system. It would also help to break the present customary practice of moving from arable lands to cattle post to village which is, in fact, the direct result of lack of permanent water supply at the arable lands area.

- (c) If the farmer were permanently settled at his arable lands area with his stock in the vicinity, there would be better contact with the field extension staff and other services. There is a great wastage of extension staff potential at present due to the distances between arable lands and cattle posts and villages,
- (d) Water from larger dams and weirs on the many rivers that run from the Eastern Watershed would be available for irrigation which has been proved in Bechuanaland to ensure a crop which gives high yields and returns per acre. Farmers practising irrigated farming would be available to diversify the crops that they grow and would therefore be able to have a more varied diet, and an ample supply of foodstuffs and fodder could be grown, which could be used during the period when veld grazing is at premium i.e. August to November. This would ensure strong work oxen for ploughing at the start of the rains, also a better calf crop. The breeding cows would not suffer the annual loss of condition during this period,

16. The order of expenditure which is considered to be necessary over the next five years in the field of soil and water conservation and land use planning is £ 875,000.

17. Included within this programme is a large capital intensive scheme for the building of small dams (with a maximum of 25 feet of water at full spill-way level) and sand river weirs by the provision of mechanical units. The capital costs provide for the formation of two such units, but the Bechuanaland Government at present have no funds at their disposal for this purpose. Indeed, it is understood that owing to lack of funds the one small unit (comprising small tractors) which was being operated by the Agricultural Department in 1965 is no longer functioning. This work is considered to be vital to any plan for expanding arable agriculture and achieving self-sufficiency in basic food production, and it is considered that provision of capital of the order of £ 180,000 to set up one unit (See Annex C) would make a considerable contribution to the programme for the development of African agriculture in the country. There is without doubt enough work to occupy two units, but the provision of capital for one unit would enable a start to be made on this vital and urgent scheme. It would, of course, be necessary for the Bechuanaland Government to find the money to cover recurrent costs, and it is also felt to be necessary to the success of the whole project that a well-qualified Conservation Officer be recruited to take charge of it. He will need to be a man who is trained in all aspects of land use planning, soil conservation and the design and construction of small earth dams and weirs. It is thought that staff to man the equipment used by the unit could be found locally; contractors have been working in and around Gaberones for 2/3 years now, and local Africans have been found to be quite competent at operating the sort of machinery involved.

Summary

To sum up, the most urgent need in the productive sector of the Bechuanaland economy is to improve the standard of African arable agriculture. This need has been made even more urgent by the drought.

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There are three important elements in the plan to attack this problem:

(a) Agricultural Training	£
(i) New Agricultural Training School - funds sought:	173,500
(ii) Conversion of Mahalapye Training School: funds sought:	38,000
(b) Agricultural credit - funds sought:	50,000
(c) Soil and water conservation: funds sought:	180,000

Without doubt, the provision of these amounts of money for the purpose outlined in this paper would achieve, in a comparatively short space of time, the objective which the United Kingdom of the Freedom from Hunger Campaign are understood to have in view.

19. Were further funds to be available, over and above the sum of about £ 440,000 covered by the items listed above, it is for consideration whether they might be made available for the establishment of mechanical ploughing units. The drought in Bechuanaland has taken a severe toll of the cattle population and such working oxen as remain are extremely weak. It is essential that winter ploughing should be carried out extensively in the territory to ensure that maximum benefit is obtained from early rains, and this will call for the widespread introduction of mechanical ploughing.