

DEVELOPMENT AND WELFARE IN THE BRITISH COLONIES

REPORT FOR 1953-54

THE schemes detailed in the latest return made under the Colonial Development and Welfare Acts, covering the period April 1, 1953-March 31, 1954*, bring the total commitments for development and welfare schemes under the Acts to £110,879,335, of which £14,729,660 was for the year in question, and for research schemes to £12,401,606, of which £716,818 was for the year ended March 31, 1954. Of this last-named sum, £249,596 was for agriculture, £205,312 for medicine, £83,226 for social science, £96,923 for insecticides, £22,100 for tsetse and trypanosomiasis, £32,295 for products research, £7,137 for fisheries and £7,059 for economic research. There were no grants for research fellowships.

Of the actual research schemes, much the largest were £123,743 for the establishment of the West African Council for Medical Research, £110,000 for the continuation of research at the East African Veterinary Research Organization, a supplementary £66,984 for the maintenance of the West Indian Institute of Social and Economic Research and £50,000 for the control of malaria in the hyper-endemic area at Taveta-Pare, East Africa. A supplementary £31,330 was provided for the continuation of sugar technology research at the Imperial College of Tropical Agriculture, Trinidad, while the West Indies also received £23,371 for research into the 'unknown' disease of coconuts and Panama disease of bananas, and £14,300 for banana breeding research (both in Jamaica) and a supplementary £2,444 for research into the control of leaf-scald disease of sugar-cane in British Guiana. East Africa received supplementary grants of £18,750 for the preparation of the "Flora of Tropical East Africa" at the Royal Botanic Gardens, Kew, £16,000 for the establishment of a malarial unit and £8,500 for the establishment of a team in Tanganyika for insecticides research on the control of crop pests.

In West Africa £14,780 was provided for the establishment of a fungicide research unit, £12,250 for the maintenance of the West African Institute

* Colonial Development and Welfare Acts. Return of Schemes made under the Colonial Development and Welfare Acts by the Secretary of State for the Colonies with the Concurrence of the Treasury, in the Period from 1 April, 1953, to 31 March, 1954. (Colonial No. 181.) Pp. 26. (London: H.M. Stationery Office, 1954.) 1s. 3d. net.

for Trypanosomiasis Research, £12,290 for the expansion of the Veterinary Research Laboratory, Vom, Nigeria, and £9,850 for a pilot scheme for tsetse reclamation. £16,022 was provided for an investigation into the control of filariasis in Fiji by insecticidal methods, and £6,975 for the establishment of the Fisheries Research Unit at the University of Hong Kong. In south-east Asia the Federation of Malaya received £14,915 for research on virus and other diseases transmissible from animals to men and £9,334 for the establishment of a Timber Research Station, and North Borneo £9,784 for an investigation of the diseases of the manila hemp plant. A general grant of £13,525 was for the establishment of a pool of Colonial soil surveyors.

Grants of particular scientific interest for development and welfare schemes include the following: £182,101 for the Desert Locust Control campaign in East Africa; £37,000 for the establishment of the agricultural and veterinary training centre at Lilongwe, Nyasaland; £22,300 for the development of medical and health services in Gambia; £474,600 for land planning and soil conservation in the Northern Territories of the Gold Coast; £162,030 for the control of leprosy in Nigeria, for which £181,335 is also provided for a scheme in the Development Plan towards which a supplementary £2,583,551 was granted. Out of that sum, supplementary schemes for agriculture received £273,417, for technical education £347,113, and for medical and health £386,679. £100,000 was provided for tsetse control in the northern region of Nigeria, £68,039 for the geological survey of Sierra Leone, while among other grants the University College of the West Indies and its associated teaching hospital received £120,000 for the main building programme; the Nigerian College of Arts, Science and Technology, Ibadan, £124,410 for the construction of student accommodation; the University College of the Gold Coast, £400,000 for the construction of a hall of residence; University College, Ibadan, £51,600 for the development of the permanent site; and Makerere College, £180,000 for the construction of a men's hall of residence, senior staff housing and science laboratory.

PROFESSIONAL, TECHNICAL AND SCIENTIFIC CIVIL SERVANTS

IN evidence submitted to the Royal Commission on the Civil Service, the Institution of Professional Civil Servants claims that the status and standing of professional, technical and scientific Civil servants in relation to the remainder of the Civil Service should more accurately reflect the relations existing between the administrator and the professional man outside the Civil Service and the importance of the professional man in the life of the country as a whole; they should also be such as to encourage young people to take up professional, scientific and technical careers. At present the heads of the various

sections of the professional Civil Service are in an unsatisfactory position with respect to each other and especially to the administrative class; the highest professional officer is always a grade lower than his administrative colleague, and this relation, applying right down to the lowest technical grades, is a factor in diminishing the attractiveness of such careers.

After referring to Lord Cherwell's statement for the Government in 1943, and the representations made in the Barlow Report and by the Parliamentary and Scientific Committee, the Institution urges that the Commission has the opportunity to place science

on an equality with administration and that this would constitute a major advance. It suggests that there is complete justification for the claim that the post of deputy chief scientific officer should rank with that of under-secretary in the administrative class; that of senior principal scientific officer should rank with that of assistant secretary, while the senior scientific officer grade should be abolished or combined with that of principal scientific officer to rank with that of principal in the administrative class. The scientific officer grade should rank with that of assistant principal, and a considerable increase in the number of posts in grades above that of principal scientific officer is necessary to make the career open to the scientist sufficiently attractive compared with that open to the administrator.

As regards the works group of professional classes, whose position was reviewed by the Gardiner Committee in 1951, the Institution submits that a wholesale change is necessary to put such professional officers on a basis that reasonably recognizes the degree of responsibility they carry compared with that of the administrative class. It is suggested that the main grade should be equated with the administrative principal, the senior grade with the assistant secretary and the superintending grade with the under-secretary in the administrative class. As regards the experimental officer class, the Institution submits that a broad comparison should be made between the assistant experimental officer and the executive officer, the experimental officer and the higher executive officer, the senior experimental officer and the senior executive officer and between the chief experimental officer and the chief executive officer, with salary scales favouring the experimental officer class in view of the higher standard of qualification, the inferior promotion prospects and the increased responsibilities. For the assistant (scientific) class, the Institution submits that the assistant (scientific) and the senior assistant (scientific) grades should be placed on salary scales sufficiently higher than those of clerical officer and higher clerical officer to be attractive in competition with the careers and salaries available to officers in those grades. It is also submitted that to provide a proper career for technical officers it is imperative to increase the scales of these classes to a basis of parity with the executive class. Other proposals relate to the admission to the appropriate professional scales of those who have obtained professional qualifications after entry to the Civil Service and for the simplification and reduction of the number of salary scales.

BRITISH WELDING RESEARCH ASSOCIATION

THE ninth annual general meeting of the British Welding Research Association was held on July 14 at the Association's Engineering Research Station at Abington, near Cambridge, under the chairmanship of the president, Sir William J. Larke. At the subsequent luncheon, a toast to the Association was proposed by Dr. O. Wansbrough Jones, chief scientist, Ministry of Supply, and acknowledged by Sir Charles S. Lillierap, chairman of the Council. In his speech, Sir Charles made reference to the annual income, which had reached £113,000 (being an increase of £20,000 over that for the previous year), and also to the new terms of the grant from the

Department of Scientific and Industrial Research, which had again been agreed for the next two years at the level of £100 for each £100 of membership subscription. Nevertheless, it was pointed out that, in order to qualify for this grant after the end of the period, it would be necessary for the annual subscription income to be raised by £10,000 to £50,000. He was sure that this would be possible, if the goodwill of members was secured. Mention was also made of the Association's intention to move the metallurgical researches from London to Abington in the near future. For this purpose a provision of £40,000 has been made for new laboratories, and a housing association has been formed.

During the day an exhibition was staged of metallurgical work in progress, and the engineering laboratories were open to view. The metallurgical work is to be the subject of a separate open day in the autumn, and the examples illustrated were confined to the micro-analysis of hydrogen in metals and weld deposits, and the development of a suitable cracking test for light alloy welds with various parent materials and filler alloys. Associated work has shown the important influence of silicon dilution of the filler alloy by the parent plate, as a cause of cracking in welds made in the heat-treatable aluminium alloy H.10.

In the fatigue laboratory tests were shown in progress on butt welds in heavy sections of steel plate and tube. Various welding methods are being investigated, together with the effect of deliberately introduced faults. An interesting effect of one such fault—lack of penetration—which introduces the equivalent of a sharp notch, is that although the joint fatigue strength is much impaired, the relative scatter of results is reduced to negligible proportions. In another test, conducted co-operatively with the Department of Metallurgy, University of Cambridge, large steel specimens which have been fatigue-tested to destruction have been sub-divided so as to avoid the main fracture faces, for further fatigue tests on a smaller scale. Such specimens have shown no diminution of fatigue life as compared with otherwise identical control specimens taken from the unstressed ends of the larger specimens.

Although the work of Prof. J. F. Baker and others at the Department of Engineering, University of Cambridge, on the plastic design of welded steel frames has reached fruition, in that buildings so designed are giving satisfactory service (including the fatigue laboratory already mentioned), full-scale investigations continue to take place. On an outdoor site a full-scale portal frame was shown which had been loaded to destruction. This particular test convincingly demonstrated that the additional stiffening effect of fully encastered feet could be obtained with simple and economical concrete foundations.

In past years the use of welding has made possible the construction of pressure vessels and pipelines to suit exacting operating conditions in the steam, oil and chemical industries. In such cases the technicalities of welding and design are inseparable, and much attention is paid by the Association to stress analysis, particularly with regard to the reinforcement of openings in pressure vessels, and the behaviour of pipeline components such as bends and branches where expansion movements have to be sustained. Tests on a number of such components were on view. Experiments on the reinforcement of openings were represented by a steam drum for