is truly an example of the type of scientist interested in the utilisation of pasture by animals, whom Dr McMeekan once described as a hybrid, standing midway between the keepers of the greensward and the keepers of the animal. His earlier work and that in Armidale involved rumen metabolism and radioisotope studies; he has been involved with surgical work; with calorimetry studies; and in the last 10 years in particular with production investigations, for example: the topping of pastures; grazing management; nitrogen fertiliser use and date of calving effects. In all of these, animal performance has been measured under realistic conditions. Currently he is comparing the performance of herds of high and low breeding index and is gathering information on their performance, intakes, and use of energy. He has also accumulated other original data on grazing management and cow behaviour differences.

He has published 68 papers which report his work and has freely given of his time in helping his staff in their publications. He has been ably assisted throughout his work by a number of highly competent technicians but is a tribute that they have been so willing to work with him.

Few, if any, scientists in New Zealand would have a closer link with the industry they serve than Dr Bryant. He is frequently consulted by the New Zealand Co-operative Dairy and the Rangitaiki Plains companies and co-manages the latter's demonstration farms. He is the current head of MAF's strategic planning group for the dairy industry, and in the past has participated in special investigation groups, such as that on zero grazing.

In New Zealand his association with dairy farmers

and their advisers is particularly wide. He frequently attends discussion group meetings with farmers, and in turn acts as host to them at Ruakura and especially at No. 2 Dairy, on numerous occasions. He has spoken at every Ruakura Farmers' Conference since 1975, and is in keen demand as a speaker at meetings of dairy farmers and the country. One of the reasons for this is that he is one of the best communicators in the agricultural profession – being direct, clear, generally brief and most importantly, knowing farmers' problems and being able to relate the findings of his work to them.

He has also been in keen demand in overseas countries to contribute and has travelled to Australia on a number of occasions, to Eastern and Western Europe, and to Mexico. He has supervised Ph.D. students in Australia as well as New Zealand, and with his interest in an consideration for people, he is generous of his time with staff and colleagues.

The McMeekan Award is given in recognition of service to animal production and to the New Zealand Society of Animal Production. In regard to the latter he was a member of the management committee for several years, and was its president in 1977-78. He has presented papers to every annual conference of the Society since 1975, with the exception of 1982 when he made several contributions to the 'Dairy Production from Pasture' Conference.

It is with great pleasure that the award is made to Dr Bryant, one which I am certain that had he been aware of it, McMeekan would have thoroughly approved.

J. D. J. Scott

THE SIR ARTHUR WARD AWARD 1984

D. G. CLAYTON

Des Clayton was born in Cambridge in 1929 into a family which had deep roots in the Waikato dairyfarming industry. After leaving school he spent 5 years working on dairy farms, including a year on farms in New South Wales and Victoria, before joining the staff of Ruakura Animal Research Station in 1951.

His early involvement was in Dr L. R. Wallace's Nutrition Section at No. 5 Dairy where dairy cow and calf nutrition was intensively studied. This grounding in dairying was intended to be simply a prelude to sharemilking and eventual farm ownership, but in 1959 he was promoted by Dr C. P. McMeekan to Technician-in-Charge of No. 2 Dairy. He thus began a most creative association of over 20 years with the research unit which set the standards of management and productive excellence for the New Zealand dairy industry. In that period he was associated firstly with McMeekan, then Brumby, Carter, Campbell and Bryant. Under these scientists he progressively developed and refined the technical and managerial skills upon which the achievement of consistently high production depended. In addition he also perfected his considerable skills of communicating to farmers and advisors the practical essence of the expanding technology upon which higher production from the experimental dairy farms was based. Regular requests from advisor-led farmer groups to come to No. 2 dairy at critical times in the dairying season have been accommodated over the years. As the New Zealand Dairy Exporter stated in 1979: "Ruakura's high producing No. 2 Dairy has become almost a 'Mecca' for individual farmers and dairy farmer discussion groups". In the same article it went on to state that a particular group had trodden the well-worn track to "where one of the Dairy's 'high priests', Des Clayton, detailed management philosophies". But Ruakura had realised that the mountain would not always come to Mahomet and so Des began visiting discussion groups on farmers' properties as well, better to put his comments into the farmers' own context.

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His involvement in this work increased to the point that problems were emerging for the orderly running of research projects at the dairy. Therefore in 1979 Des became a full-time 'roving ambassador' for the extention of No. 2 dairy philosophy and technology. When invited by consulting officers or farm advisors he would attend farm discussion group meetings, local farmers' conferences and other farmer meetings where aspects of dairying were to be thrashed out.

This was clearly a mission that had to be handled with tact but Des has always been acutely aware that he should not supplant the local standing of advisor or consulting officer. It is clear that, particularly for the new advisor, his approach helped them establish themselves in their own area.

The rapid expansion of requests for his services is a tribute not only to his tact but also to the tremendous value which farmers and advisors alike have gained from being able to draw upon his lifetime of soundly based technical and practical experience. Records show that over the past 4 years Des has attended and spoken at 472 field days, seminars or conferences, and at these has addressed more than 18 500 people. In one memorable, 2-week exercise in Northland in 1980 he attended 20 discussion group meetings and spoke to 664 farmers – approximately 37% of Northland dairy farmers. He has visited all of the main dairying regions in the North Island and more recently the expanding dairying areas of the South Island where no fewer than 77 of his seminars have been conducted. Involvement in the South Island followed the establishment of progressive dairying units on the irrigated mid Canterbury plains and was motivated by the idea that any major constraints to production should be identified. This was a daunting task because in the absence of research facilities he was essentially relying on comparisons of data he could encourage the participating farmer to collect, that which he had available from No. 2 Dairy, and on his own powers of observation. His involvement has acted as a catalyst for

vation. His involvement has acted as a catalyst for discussion and exploration of a wide range of aspects of dairy farm management established and accepted in North Island conditions that could not automatically be assumed to apply in the South.

His endeavours have not been confined solely to New Zealand. Australian visitors to Ruakura have carried home such favourable accounts of Des Clayton's technical and extension capabilities that he has twice been invited across the Tasman, first in 1980 to participate in a series of milk production seminars for the Murray-Goulburn Dairy Co. in Victoria and again for the same purpose in 1982, when his sponsors were the Tasmanian Department of Agriculture and the NORCO Dairy Company of northern N.S.W.

A 6-week expedition to Burma in 1978 and other shorter forays to Thailand and Malaysia have served to spread the gospel of New Zealand pastoral dairy farming to an even wider international audience.

Perhaps the best yardstick of the value placed upon Des Clayton's endeavours is the increasing demand for his services, which now stretch the capabilities of one man, and the requests from groups he has visited for return visits, not just annually but several times in a season. Publications such as the *New Zealand Dairy Exporter, New Zealand Farmer* and the *New Zealand Journal of Agriculture* have continued to feature Des Clayton and No. 2 Dairy. The simple message that high economic dairy production relies on the farmer's ability to master the many skills involved in pasture production and utilisation, grazing management, breeding, animal health and milking management, has been the essence of the Des Clayton philosophy.

It is for this excellence at bridging the gap between scientist and farmer, at having technology adopted in practice to the benefit of the dairy industry that the New Zealand Society of Animal Production recognises Des Clayton as a worthy recipient of the Sir Arthur Ward Award for 1984.

K. E. Jury