## Foreword

Throughout the developing countries the dairy industry stands tall relative to other ruminant industries, when measured in terms of the extent of potential socio-economic impacts and contribution to nutritional and food security. One outstandingly successful example of this fact is the Anand model of India's 'Operation Flood', involving some 13 million farming families and processing about 90 million kg of milk per year mainly from dairy buffaloes. The scheme makes farmers shareholders of the whole chain of marketing and processing of milk, with resultant significant improvements to their livelihoods. Milk consumption is rapidly on the increase, and is reflected in FAO data that the annual per capita consumption of milk in the developing countries is projected to increase from 46 kg in 2002 to 67 kg in 2030.

It is appropriate therefore that most governments have given dairy development very high priority for two main reasons. Firstly, there are direct benefits to enhancing poverty-reducing impacts, improved livelihoods and the nutrition of adults and children. Secondly, considerable opportunities are created for small farmers and the landless to enter improved dairy farming, diversify agricultural production, increase income, enhance food security and achieve levels of self-sufficiency.

One direct consequence of this thrust is interest and expansion of dairy production in most countries, involving increased investments in infrastructure and germ plasm. Given the generally low quality of indigenous dairy cattle and weak breeding programs, major attention was given to the convenience of importing purebred cattle and also riverine buffaloes to boost milk production.

A historical sweep and analyses of the results of these various dairy cattle importations in Asia suggest that, in general, there have been more failures than successes. The consistent reasons were over-investments in infrastructure, poor understanding of production systems, and inefficient management and capacity for dairying. In other words, the requirements of the imported improved animals and their specific needs were not matched by adaptation to the local environmental outlays.

In many situations, the limitations and resulting unsuccessful dairy production continue to persist, often exacerbated by lack of well-informed knowledge on the subject. This particular situation has now been admirably fortified by the publication of *Managing High Grade Dairy Cows in the Tropics*. Along with three other companion books on the same subject, access to these most useful, relevant and practical sources of information should henceforth stimulate improvements and increase productivity from dairy cattle. Few scientists in Australasia have the deep knowledge and experience in practical dairy science as John Moran, and I congratulate him for his enthusiasm and tremendous efforts.

Together with the valuable sources of information, the book also serves as a training manual. I have no doubts that it will be of much interest to dairy scientists, dairy farmers, university and college students, extension personnel, farm mangers and dairy advisors in the tropics and elsewhere.

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