

## WELCOMING ADDRESS TO THE WORKSHOP ON HEARTWATER: PAST, PRESENT AND FUTURE

F. J. VAN DER MERWE, Chief Director for Animal Production, Department of Agriculture and Water Supply, Private Bag X116, Pretoria 0001

It is my great pleasure to welcome all here on behalf of the organizing committee and sponsors. I would like to address a special word of welcome to the foreign participants, many of whom have had to make special efforts to attend. I trust they will find the workshop worthwhile both as regards its scientific content and its social opportunities.

Historically, human food has been derived from both plant and animal sources, and this is true today. The craving of people throughout the world for foods of animal origin is indicated by the fact that the proportion of the personal income spent on such foods increases as total income increases. Despite the allegations and controversy surrounding certain aspects of foods from animals, consumers continue to demand these foods in substantial quantities. In South Africa farmers derive about 40 % of their income from livestock while consumers spend about 45 % of their food purchases on meat and dairy products.

While in the USA foods from animals supply 65 % of the protein, in South Africa they supply only 36 % of the 65-gram average daily protein intake of the population. In contrast, grains supplied no less than 56 % of the average daily protein intake. This is substantially higher than the current proportion in developed industrial countries and shows that animal products, especially meat, still enjoy a high income elasticity in this part of the world.

For specific foods or beverages, income elasticities vary greatly, depending on the market segment served and the status of the food product in terms of its ability to satisfy basic needs (e.g. bread or sorghum beer) or more advanced social needs (e.g. beef steak or whisky). It is therefore a gross over-simplification to view food products as a homogeneous group which satisfy only hunger. A hierarchy of food needs can in fact be identified and different food products will satisfy different needs in different ways.

In rural, low-income households, as much as 50 % of their total expenditure is on food. As households move to higher incomes there is a propensity to spend a smaller percentage of income on food and a larger percentage on more durable and higher status products. For the total population, expenditure on foods and beverages rose sharply from R5,4 billion in 1975 to R19,1 billion in 1984. As a percentage of total consumption expenditure it remained fairly constant at 34 %, which is just about double that of the USA but still much more favourable than many other less fortunate populations.

As far as primary food production is concerned the Republic is almost entirely self-sufficient—as a matter of fact we are a net exporter of food. This does not mean that the entire population is well fed. There is a great concern about the extent of under- and malnutrition amongst lower income groups and communities. But this is a fact of life in almost all countries and is almost entirely a socio-economic problem. The farmers and agriculturalists of South Africa have proved that they can do it, and they are convinced that they can even produce sufficient food for a population that is going to double within the next thirty years.

Present production levels will not be possible and the increased levels needed in future will definitely not be reached if it were not for research and the application of

research findings. In this respect it is interesting to note that organized and planned research on behalf of the stock farmers of Southern Africa was probably initiated by the veterinarian when he started investigating the causes and cures of epidemic African diseases before the turn of the century. Today we are fortunate in having a well-developed infra-structure for research and development in animal biology, animal pathology and livestock technology. We also have a tax-paying public who are willing and able to devote about R25 million to animal and veterinary science research per year. This represents 0,83 % of the gross farm animal product. Although this is a rather modest figure compared to what is spent on research in developed countries, it is making an essential contribution to the health care and development of new technology in Southern Africa.

In the procurement and allocation of research funds there is often, in our country, a controversy about who are the beneficiaries and who should pay.

The value of agricultural research and extension includes the direct benefits such as increased yields, reduced costs of production and improved quality. In addition there are extra incomes earned by farmers, relatively lower food prices, and contributions to other research programs and impacts on resource conservation.

Some critics argue that the principal benefits of production improvements are captured by the companies that sell facilities and other products to producers. Some argue that the producers are the principal beneficiaries but almost no one points a finger at consumers. After all consumers merely purchase the products at the prices posted in the supermarket. The fact is, however, that the benefits from scientific advances in animal production are distributed among all three groups, i.e. producers, suppliers of inputs to producers and consumers.

The distribution of benefits between consumers and producers is a vitally important consideration in Research and Development evaluation. The major determinant of the distribution of benefits is, of course, the elasticity of demand.

If the price elasticity of demand is infinite, the social gain from the shift in the supply curve (resulting from the research) will be totally captured by the producers. On the other hand, if the price elasticity of demand is zero, then all the benefits are captured by consumers, in so far as supply is competitive. In reality the elasticity for agricultural products lies between these two extremes with a tendency towards inelasticity. Thus, although most of public (i.e. the tax payers') research funds in agriculture have been allocated to the producer side, it is likely that in the long run most of the benefits have accrued to consumers.

Millions of rands are lost every year by livestock farmers as a result of animal disease. These losses include direct losses from frank disease outbreaks and indirect losses from sub-clinical conditions most of which result from inadequate management.

In South Africa livestock farmers still have much to learn about the positive approach to health management. However, as far as heartwater is concerned, they are anxiously awaiting the development of an effective, easily administered vaccine against this killer disease.

## WELCOMING ADDRESS TO THE WORKSHOP ON HEARTWATER: PAST, PRESENT AND FUTURE

One of the obvious effects of heartwater is the obstacle it places in the way of the importation and upgrading of indigenous stock. The pool of genetic material required to improve meat, milk and animal fibre is generally found in the more developed areas, which are free from heartwater. The introduction of such animals into less developed heartwater areas has often failed to have the desired effect due to their susceptibility to heartwater and man's inability to control the disease.

It is therefore hoped that the present and future research on heartwater that will be discussed will eventually make a contribution to the reduction of the famine which is devastating Africa.

Until recently, most of the research done on heartwater was carried out in South Africa. The apparently insurmountable problems of research in this field, however, resulted in a period of stagnation. More recently, certain advances were made and the unexpected appearance of the disease in other parts of the world, threatening even greater areas, have resulted in a resurgence of interest both in South Africa and elsewhere. This has lead to the formation of a number of research teams throughout the world with the control of heartwater as their ultimate goal, as has this workshop.

In order to achieve this it was felt necessary to improve communication between all interested parties. The two aspects of this are:

1. the dissemination of local knowledge and expertise, much of which cannot be found in the literature;
2. to gain access to the strategies and information planned and gained by researchers elsewhere in the world.

This, it is hoped, will help eliminate unnecessary duplication, consequently hastening the progress made. Clearly, information gained or techniques developed by one institution can generally be used by others as a basis on which to build and reach higher goals.

Once this co-operation, which will no doubt be stimulated by this workshop, has been achieved, it would be a tragedy for it to again come to an end. Continuing communication could perhaps be maintained by means of an inhouse newsletter. Perhaps this workshop's logo and letterhead could be registered for this purpose.

Turning to this week's activities, the opportunities to participate actively must be seized upon by all delegates, most of whom have been carefully selected. They must feel free to give and take at every opportunity. Most often it is not so much the answer but the right question which stimulates further constructive thought on which future research is based. It is only through open, unhindered participation by all present that this workshop can become a success.

Naturally, the workshop is not intended to make Jack a dull boy as is obvious from the venue. The informal contacts, the friends made, and the other activities, will largely determine the success of future co-operation. The organizers and I, therefore, share the hope that this occasion will be both pleasurable and memorable.

Finally, I wish to thank all, who through their enthusiasm, efforts and financial help, have made this historic occasion possible.