

26/9/85

## ADDRESS FOR THE OPENING OF THE EXPERIMENTAL FISH CULTURE SYSTEM

The practise of fish farming is growing throughout the world at an average rate of eight percent per annum. It is one of the fastest growing industries in <sup>W</sup>western Europe, with annual production valued at five hundred million rands. This development is due to the fact that the fish stocks of the high seas are being fished at, or even beyond, their maximum sustainable yield.

In the developed world there is also an increasing demand for luxury fish products such as salmon, eel, trout, turbot and prawns. Over thirty-five percent of this demand is being met by aquaculture products.

Aquaculture also has important socio-economic implications in the Third World. It is labour intensive, yet profitable, and can play an important role in providing employment and food in rural areas. For the orderly development of the aquaculture industry in South Africa, however, there is a great need for intensive basic and applied research.

The aims of this project are not only to make a contribution to research, but also to further the development of the technology required for profit-orientated and rural subsistence-level aquaculture. The Department of Ichthyology and Fisheries Science and the J L B Smith Institute of Ichthyology are fortunate in having the necessary infrastructure to achieve these aims, such as personnel, advanced research and computing facilities, an excellent library and post-graduate students.



Rhodes University has a long history of ichthyological research and teaching. The Council for Social and Economic Research (CSIR) and the University established the original Department of Ichthyology in 1946 around the scholarship of Professor J L B Smith, the world-renowned ichthyologist. In the early years research in this field concentrated on marine fish taxonomy. Since then the thrust has diversified into the areas of fish ecology, fisheries biology, management and aquaculture.

Aquaculture research was initiated at Rhodes in 1977 when a water re-use system was built adjacent to the Institute of Ichthyology. It incorporated 14 fish growing tanks, a re-conditioning reservoir and a biological filter. The system proved to be successful for the controlled culture of fish. With the introduction of fish culture as part of the Honours degree curriculum in 1981, and the resulting increase in senior post-graduate students of aquaculture, the expansion and modification of the original research unit became necessary.

The new water re-use system which will be opened today was designed with knowledge gained by staff on numerous fact-finding visits to important aquaculture research centres overseas. The most important objective was to establish an integrated unit with the necessary flexibility and environmental control for effective teaching and research. The teaching of the principles of aquaculture is not sufficient in itself to produce the skilled and semi-skilled personnel whom the industry will need in the future. This system, we believe, will allow us to demonstrate the diversity of the fundamentals of aquaculture.



The advantages of a water-recirculating system are five-fold. Firstly, little water is wasted, accurate chemical and physical control is possible, as is accurate replication of experiments. The system is best suited for teaching purposes and lastly, it is an intensive form of aquaculture which has real commercial potential in both rural and urban areas.

The design, development and running of such a teaching and research facility is expensive and would not have been possible without the generous donations in cash or kind made by the private sector. In this regard I should like, on behalf of the University, to thank the Anglo American and de Beers Group Chairmans Fund, the Fisheries Development Corporation of South Africa, African Explosives and Chemical Industries, Clifcor, Appeldoorn Lighthouse Net and Twine, Epol, South African Fishmeal Producers Association and the Hans Merensky Foundation. The University Council, acknowledging the teaching, research and development value of this facility, has also provided bridging finance to complete this first phase of the unit.

In conclusion, I should like to say that the juxtaposition of a teaching department, an ichthyological research institute and a modern experimental fish culture system provides an excellent opportunity to conduct investigations into the culture of freshwater fish in southern Africa, and to make a contribution to the conservation of endangered species. The system will also provide the facilities sorely needed in Africa for the development of the science and the industry. Units such as this are indispensable and are in operation in all countries where aquaculture is successful. Moreover, as it will also be used as a teaching tool, the benefits to the sub-continent as a whole will be widespread and long-term.



We sincerely thank the donors who have made this occasion possible and I now take great pleasure, by switching on the system, in declaring the Experimental Fish Culture System open.

D S Henderson  
VICE-CHANCELLOR

Thursday, September 26, 1985.