

THE ROAD AHEAD

THE ROLE OF THE FERTILIZER INDUSTRY

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Ladies and Gentlemen,

In trying to sum up the gist of today's papers and indicate the fertilizer industry's attitude to the road ahead for agricultural development in the African homelands, I can do no better than repeat the words of a namesake of mine, Mr R G Anderson, of the United States. In a paper to the 1975 meeting of ISMA in San Francisco dealing with the fight for survival of civilisation he concluded with the following:

"The problem of population growth vs food supply should receive the attention of all the best brains from whatever walk of life they may follow. If it is not solved we will live to see economies crumble, business decay and wars and chaos involve one nation after another. We must not be short-sighted and go for immediate gains and lose it all. You, gentlemen, are leaders in the fertilizer business. I know that your companies must make a profit but you must also ensure that in so doing you have a regard for the future. Your product will be needed in ever-increasing amounts. It is important that some method of approach be taken which considers the desperate plight of many millions in many countries. A hungry man watching his children die is a very angry man indeed. Given desperation and no hope, they may turn to destruction."

In our own South African homelands alone, 18 million people are expected by 2 000 AD, with food presently only being produced in these areas for less than one million people. Exports from white areas could bridge the gap but only at the expense of foreign earnings. With only 13 per cent of the land area of the Republic, the homelands' potential, however, is estimated to be 20 per cent of the whole.

A sound agricultural economy producing more than three million tonnes of grain is required (an increase of 1 000 per cent from present level of 300 000 tonnes). In the last forty years there has been an increase of 50 per cent. Very roughly this could require some 200 000 tonnes of plantfood nutrients or more than one million physical tonnes of fertilizer, excluding lime.

The private sector has been actively, albeit on a small scale, trying to promote sound farming and fertilization practices for the last fifteen years.

It has

- promoted an ENPEKA scheme for fertilizers - to avoid confusion between brands
- conducted fertilizer demonstrations
- held cultural/fertilizer/plant density demonstrations
- conducted research experiments
- conducted short courses on fertilization, soil fertility, etc.
- provided material for extension officers and others, eg films, slides, handbooks, pamphlets, advertisements
- supported education in agriculture (bursaries, prizes, research grants)
- surveyed soil potential in certain areas
- helped to plan projects
- arranged soil analysis and fertilizer recommendations.

The results of all these efforts have been really negligible in the light of what is required. What have been missing are *realistic*, pre-planned, well-defined, co-ordinated programmes to replace ad hoc efforts of the past.

In 1973, a memorandum was submitted by the Society, after discussions, to the Deputy Minister of Bantu Development, Mr Raubenheimer, along the following lines:

- 1) That there was a need for co-ordinated, purposeful programmes to combine the efforts of the central Government, the homeland authorities and the private sector.
- 2) The central authorities should be responsible for the control and development of these programmes, but joint committees, with all interested bodies represented on them, should be established.
- 3) Separate, but similar, broad programmes should be drawn up for each homeland. Full-time officials should be appointed by the state authorities to direct each programme.

- 4) That an essential part of each programme would be the establishment of the means of developing credit facilities and distribution channels.
- 5) In addition to the Fertilizer Society (private sector) contribution to these organisational/planning activities, the following consequential activities could also be added:
 - (a) The translation of existing research results to the homeland situation.
 - (b) The carrying out of total 'crop production' demonstrations illustrating fertilization, plant density, planting time, type of cultivar, etc.
 - (c) Holding of short courses for the extension officials and farmers.
 - (d) Publications, films, advisory services, assistance with training, farming competitions — all to aid dissemination of the Foundation and improve expertise.
- 6) It was further suggested that a few large-scale pilot schemes, capable of illustrating that drastic change in existing practice was able to induce large improvements in land utilisation, crop production and therefore profitability, in a short period, be introduced.

These would stimulate interest, be viable in themselves, be able to generate infrastructure development, propagate knowledge and spawn satellite schemes on their periphery. Such schemes would require the active co-operation of all parties, the Government departments in the Republic and the homelands, the chiefs and headmen of the area chosen, agricultural colleges, schools, etc, and the private sectors, both individually and through the medium of our Society.

An example of the type of project contemplated could be the development of the 11 000 hectares of high-potential arable land in Besotho QwaQwa (Witsieshoek). Maize production could be increased from less than 0,5 t/ha to more than 3,0 t/ha on at least 70 per cent of the area within five years, with other crops on the remainder. Such a project would embrace a survey of crop production potential, explanation to selected farmers on cultivation methods, the making of all necessary arrangements for supply of farming inputs and the marketing of crops, the monitoring of progress etc.

Subsequent discussions and events have led us to the belief that developments along these lines are now imminent.

In fact last year, inter alia, we have been involved in discussions, particularly in Bophuthatswana and South West Africa regarding future large-scale farm projects aimed at dramatic increases in food production.

And now, again, from the papers we have heard today, we feel much more certain about the causes of past lack of progress and the necessary lines for future action.

As private and semi-public sector representatives, it would be presumptuous and wrong for us to prescribe cures for socio-economic factors which are mitigating against more rapid development, eg land tenure systems, the overcoming of tribal customs, poor basic education, resistance of headmen, lack of capital and others. However, we do believe we are competent and responsible in advocating:

- (a) The development of co-ordinated planning under the initiative of the States, central and homeland. Here again I would like to quote Mr Anderson:

"How can technology be adapted and transferred? This is a very complex question but I would like to refer briefly to how it was done in a particular case with which I was intimately concerned viz the increase in wheat production in India in the late 60's up to the present. There are some prerequisites to success. The government must place a high priority on increasing production and be prepared to support the effort above other activities. There must be trained personnel available. A plan of action must be prepared and the economic aspects must be so arranged that the farmer can make more money than was possible previously. Most important, the technology must be available and presented in a form that can be used."

- (b) In looking at developments in other countries of the world, there have been two types of approach — the 'first things first' approach in which, as each successive step is taken, creates a vacuum which must be filled and this moves along the whole line of activities. This happened in India with wheat in just this fashion and in my opinion it forms a basic structure on which later modifications and improvements can be made; or a more sophisticated approach of drawing up the entire large-scale programme in which budgeting is required for all of these factors at once. The government officials look at the bill and, not yet having developed a faith in the approach, throw up their hands and say it is impossible. Yet taken gradually, they are able to pay the same bill and be glad to do it.

I favour an intermediate approach whereby certain large-scale schemes are developed for each of the homelands which can pioneer change and demonstrate the bene-

fits of proper farming practices and act as the start of an agricultural revolution. Such schemes, I repeat, must be self-financing and not dependent upon the charitable grants of such inputs as seed, machinery, fertilizers, etc.

I believe that we are fortunate in that little basic research is necessary, success can be rapid through the translation of existing knowledge, aided by fairly rapid studies of soil types and potentials.

We see development following similar lines to that of the Republic itself, following the initial research done some fifteen to twenty years ago — namely, the rapid application, via extension work through projects and soil potential analysis, of existing know-how. What has been essential for this application of knowledge is:

- 1) Credit facilities (ie Land Bank) *NOT* supplied by the private sector
- 2) Co-operatives of one kind and another, to supply requisites and in the marketing of crops.

We do not believe the fertilizer industry can help significantly in the above two aspects. Previous experience in South Africa reinforces this, but we do see it aiding significantly in the technical aspect of

- overall planning and determination of priorities
- project selection, planning and monitoring
- project execution through training, soil analysis, etc, etc.
- developing technical and managerial expertise
- assisting with satellite development.

Initially much of this will be done through, or co-ordinated through, the Fertilizer Society of South Africa until projects and general developments reach a commercial scale, when the normal competitive activities of our member companies will take over both technical advice and supply of fertilizers.