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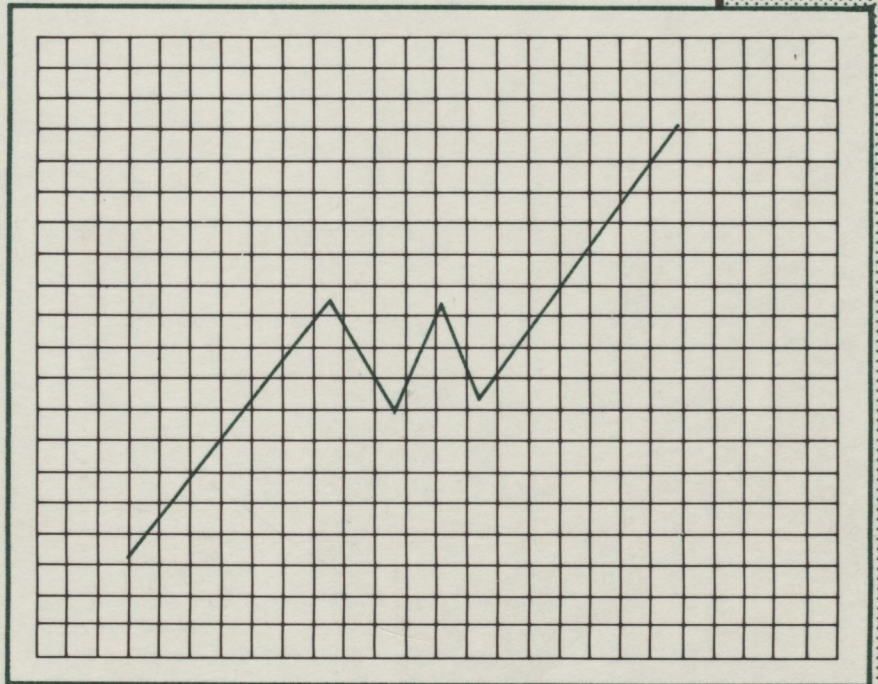
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PRESIDENTIAL ADDRESS: IMPORTANT THEMES IN AGRICULTURAL ECONOMICS*

by C.J. VAN ROOYEN**

EVALUATION

Agricultural economics in Southern Africa is at present in the grip of inevitable and fundamental changes. This is reflected, *inter alia*, in the themes of numerous conferences, symposia, studies and publications of the past few years. The Agricultural Economic Association of Southern Africa (AEASA) has also made its contribution here. "Agricultural Policy" was under consideration in Bloemfontein in 1985, for instance; the subject of discussion in Durban in 1986 was "Changes in the Agricultural Sector"; and last year during the conference in Johannesburg the view was advanced that agricultural economists could play a significant part in "Determining the Future of Agriculture". Topical questions are also addressed at AEASA regional gatherings.

This year the theme is "Agricultural Management", with the emphasis on both the macro and the micro aspects. It would appear that the time for reflection and questioning is past and that we have enough information, knowledge and relevant agricultural economic techniques to embark upon the future with confidence and direct it successfully. Indeed, the direction in which we are moving is implicit in the theme of "Agricultural Management", with the further implication that the final destination is more or less known and that there is sufficient knowledge of objectives, alternatives, limitations on resources and expected relative prices.

I suspect, however, that this view, although not untimely, is nevertheless optimistic. The scrutiny of numerous papers, studies and articles on agricultural economics which have appeared during the past few years leaves one with the impression that there has been a lot of theorising about policy and adjustments, about the potential role and contribution of the agricultural sector to sustained economic growth, about the influence of macro-economic forces on the agricultural industry and about factors which directly and indirectly determine the performance of the agricultural sector in the regional context. Very little has been said about the impact on agriculture of expected fundamental changes within the Southern African political economy. Furthermore, analytical frameworks and techniques for dealing with such

fundamental changes within the context of agricultural economic analysis have not yet been properly developed. I am also basing these views on the apparently inadequate analysis of economic benefits and costs of expected changes, brought about by the current approach of market-directed production and privatisation. To the best of my knowledge, the concept of compensation to the "losers" in this economic game has not yet been clearly spelled out. The inadequate policy framework for liaison between developed and less developed agriculture is a further example. It would appear that structural changes in the agricultural sector, such as those related to the financial crisis, like the switch from field crop production on marginal soils to the establishment of pasture crops, have not yet been properly analysed in terms of benefits and costs and the interdependence of the agricultural market. Another factor that contributes to my opinion is the persistence of the view that agricultural research can be meaningfully dealt with as an "own affair".

However, before I am accused of taking too negative an attitude, it should be clearly stated that structural change of this kind is being discussed in many other countries at present and the same type of questions are being asked.

Furthermore, I am firmly convinced that the discipline of agricultural economics, with its thorough knowledge of micro economics and production relationships, can make a notable contribution in assisting policy-makers, planners, business leaders and farmers with decision-making.

The contribution made by agricultural economists in the domestic arena is not underestimated. Their influence is clearly discernible in the way in which numerous matters are dealt with in the economic and financial sectors. In a certain sense the profession is already leaving its imprint.

The intellectual and operational challenge facing the profession is, however, enormous. The problems are diverse, complex and interdependent and it is therefore important that we, as agricultural economists, should be incisive in our thinking and should discuss these problems with one another. I should now like to share a few thoughts with you that, in my opinion, could make a contribution. It would not only be arrogant but also extremely irresponsible on my part to attempt to provide a comprehensive set of references within the scope of this short address, and particularly within the scope of my limited intellect and knowledge. I do, however, feel that I must share the responsibility of making a contribution, so that the profession of

*Comments by Dr Nick Vink, Honorary Secretary of AEASA, are acknowledged with appreciation

**Development Bank of Southern Africa

agricultural economics and take its rightful place with regard to the task facing us. My ideas have been greatly influenced by my interaction, in my capacity as an agricultural economist, with a number of experts, some of whom are in the audience today.

These people need not, however, accept any share of the responsibility for any nonsensical views I may express. It should also mention that my contact with the international agricultural economic community, especially during the conference at Malaga in Spain in 1985 and at the recent conference in Buenos Aires, has been very important (Papers of the Conferences of the International Agricultural Economics Association 1985 and 1988). I occasionally borrow directly from the papers delivered and the discussions held. I should like to add that not only do I consider it a very special privilege to represent AEASA at these international conferences but I would advise every agricultural economist to attend an occasion of this kind at least once.

I now turn my attention to a number of themes which, in my opinion, are especially relevant to our situation in Southern Africa. I shall begin by discussing themes relating to agricultural growth that connect the determinants of agricultural growth with macro-economic effects and the political economics of agricultural policy. I shall then consider themes relating to land as a production factor and conclude with a short set of references to farming systems, farming decision-making and environmental affairs, particularly resource conservation and ecology.

DETERMINANTS OF AGRICULTURAL GROWTH, MACRO ECONOMIC EFFECTS AND THE POLITICAL ECONOMY

Productivity and growth in the agricultural sector depend on changes in the capital/labour ratio within the agricultural sector as well as between agriculture and other economic sectors (Mundlak, 1988). Capital represents all non-labour inputs and includes both "hard" capital or infrastructure and "soft" or human capital. According to the capital/labour ratio, growth takes place if production is increased as a result of an increase in capital inputs relative to labour inputs or a decrease in labour inputs relative to capital inputs.

Inter-sectoral and intra-sectoral growth is likely to take place where productivity is greatest. In the Southern African agricultural sector the effect of these determinants of growth will be significantly influenced by the type of farming production model. In the large-scale commercial white agricultural sector, where the real wages of farm labourers are in general lower than wages in the non-agricultural sectors, increases in productivity will be chiefly the result of the shrinking labour force on farm units (Fényes & Van Rooyen, 1985; Fényes, 1988). Increased productivity will therefore be achieved indirectly by increased capital intensity, e.g. mechanisation in all aspects of the farming enterprise. The trend towards higher interest rates and deteriorating rates of exchange may constitute a serious obstacle to these options, however (Van Zyl

& Vink, 1988).

In the developing agricultural sector growth is more likely to take place through a direct increase in the capital factor, especially through increased investment in basic infrastructure (roads, irrigation, human capital) and in other "soft" capital (research, extension, training etc). In view of the relative inability of small farmers in this sector to invest in capital items of this nature, there is a case for a proactive contribution by the public sector which would result in a transferral of public funds in favour of small farmers (Van Rooyen, Vink and Christodoulou, 1987; Van Rooyen, 1988).

It would, however, be an error to relate agricultural productivity and growth solely to sector-specific policy measures. Recent research has indicated strongly that macro-economic factors often have a greater effect on rural and agricultural productivity (Kruger, 1988). The linkage between macro-economic forces and agricultural growth and productivity operates mainly through real exchange rates and real interest rates. Changes in these mechanisms affect the growth potential of commodity groups in the agricultural sector, largely because the terms of trade and capital intensity are affected (Snape, 1988; Schu, 1988). Weaker terms of trade for the agricultural sector, as a result of subsidies for urban development and industrial decentralisation may have an adverse effect on agricultural growth and result in rural poverty, excessive urbanisation and visible unemployment. On the other hand a policy of regional development and inward industrialisation may stimulate linkage effects and increase the demand for certain agricultural commodities, which would alter the terms of trade in favour of agriculture and the rural population again.

Within the above frame of reference a number of pertinent questions now present themselves. The first is the question of the part played by prices in achieving optimal capital/labour relations. On the basis of the well-known formula $\frac{\Delta Y}{\Delta X} = \frac{PX}{PY}$ and production possibility curves, it is evident what part prices play. The trouble with prices is that they are difficult to predict and that agricultural prices in particular tend to fluctuate greatly. Furthermore, external factors, such as the world market situation, often play a decisive part in determining domestic prices. However, the formula also shows that non-price factors are very important in determining optimal positions. The following factors may be singled out: area of land, production yield, locality of production, and combinations of branches of farming. Technology is particularly important here and although the interdependence between prices and the above factors cannot be denied, it is nevertheless important to analyse non-price factors on their own merits. In this regard it could even be argued that long-term growth in the agricultural sector is dependent on a stable investment policy in both "hard" and "soft" capital directed at comparative advantages rather than on price policy and price administration (Lele & Mellor, 1988).

Fortunately we in Southern Africa are moving in this direction; prices are increasingly being

determined on markets. A policy of this kind could, for instance, produce yield effects and/or cost-saving effects that could counteract relatively low prices. Nevertheless, it is still maintained that both price and non-price factors should be taken into account if growth potential in the agricultural sector is to be understood.

Secondly, it may be asked why there should be growth in the agricultural sector, or to put it differently, under what circumstances would growth in the agricultural sector be beneficial to economic growth and prosperity. It could be argued from an economic perspective that agricultural production makes a considerable contribution to economic development and the growth of prosperity, especially through income and labour linkage effects and multipliers (Van Rooyen, 1988; Van Zyl & Vink, 1988). On the basis of a recent input-output analysis, it is clear that the agricultural sector plays a major part in the creation of job opportunities, not only within this sector itself but also, and especially, in the non-agricultural sectors. (Central Statistical Services, 1979, 1978, 1982, 1986). Here it is interesting to note that an investment of a million rand in the agricultural sector results in about 125 job opportunities, as against about 60 job opportunities in the industrial or mining sectors.

To the question in which directions agricultural economic growth is likely to take place there is unfortunately no obvious reply. These directions could be researched in terms of the capital/labour ratio where both price factors and non-price factors play a part. It is also important that incentives by the public sector, especially in the form of non-price factors, should be directed at the optimum development of those industries that make the maximum contribution to linkage effects and multipliers. For these purposes it would therefore be important to develop input-output tables and multipliers on both a sectoral and a commodity basis.

A last question concerns the reasons why emphasis should be placed on support for small farmers in developing agriculture. From the point of view of an income and labour creation strategy for economic development, the value of the development of small farmers on a broad front is self-evident. An approach of this kind would stimulate buying power and job opportunities over a broad front in rural areas and, provided this approach were linked to a strategy for inward industrialisation, it would be reasonable to expect that multipliers and linkage effects would be established over a broad front (Van Rooyen, 1988). The question is therefore not whether small-scale farming in less developed areas should be supported, but rather to what extent the channelling of capital in this direction is possible.

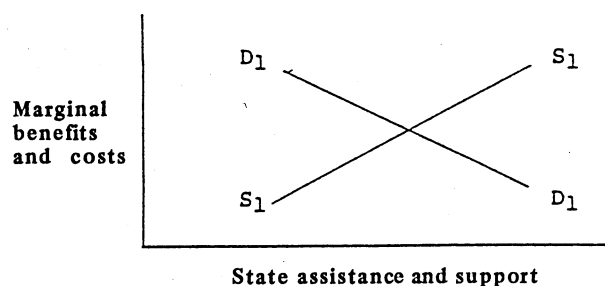
The idea here is that small farmers should be enabled to compete on an equal footing in the agricultural input and commodity market (Van Rooyen, Vink & Christodoulou, 1988). The economic desirability of an approach of this kind can be exhaustively argued, with a strong indication that the channelling of capital investment in favour of programmes to support small farmers is of

cardinal importance for long-term economic growth, development and the stabilisation of rural areas. However, a matter of this nature would be influenced not only by factors relating to economic efficiency but by political factors as well. This brings us to the third theme, namely the political economics of agricultural policy. The political economics of agricultural policy in Southern Africa is concerned not only with the apparent conflict between large-scale commercial and small-scale less developed farming.

In general it is argued that it is important for agricultural economists to understand why governments and politicians adopt certain positions regarding the agricultural sector and agricultural commodities.

If they had an understanding of these matters agricultural economists would be in a better position to communicate with these bodies and assist them in taking decisions on agriculture. A further important function of agricultural economists is to point out the benefits and costs of various policy decisions timeously and in so doing enlarge the choice matrix of decision-makers.

In order to arrive at a better understanding of the political decision-making process, it is important to take the political market as the point of departure. This market is represented as follows (Anderson & Tyers, 1988; Downs, 1957):



- D_1, D_1 = Demand for State assistance, as reflected in the declining marginal benefits of added votes
= composite demand curve of voters and pressure groups
- S_1, S_1 = Supply of State assistance, as reflected in the rising marginal costs of the "lost" votes of groups that do not benefit
= Supply curve of Government of policy

FIG. 1. The political market for agricultural support

As was done previously, this framework will be tested on the basis of a few questions. The first question is related to the observation that agricultural growth is frequently affected more by factors outside the agricultural sector than by internal factors. It is clear from the political market model that pressure groups within the agricultural sector normally only have the bargaining power to influence agricultural policy on a diminishing marginal utility basis. However, forces outside the agricultural sector may have a dramatic influence on the demand for an agricultural support policy and so

result in a shift in the demand curve. An example here is reduced support to the agricultural sector as a result of the general movement in the direction of free market relations in the economy, the privatisation of tasks undertaken by the State and strict fiscal and monetary policy. In such circumstances the composite demand for agricultural support may move to the left. The State is also expected to come under pressure to reduce its offering of a policy package in support of the agricultural sector considerably, in view of the high political cost involved. The supply curve would therefore also move to the left, with a consequent reduction in State assistance to agriculture.

A good example of the opposite condition is the Japanese situation (Hayami, 1988) (Conference discussion: Session chairman's summary, 1988). Despite the fact that the agricultural sector is relatively small, producer prices for rice and meat are supported to approximately ten times the level of world prices. This practice cannot be explained by the force of agricultural pressure groups, but becomes explicable if one takes cognizance of Japanese cultural values and the national feeling that there is virtue in supporting those who till the soil - in other words agricultural fundamentalism. Japan, a wealthy country, can well afford this! Similar arguments prevail in West Germany and the USA, but have met with less success. Similar sentiments exist in Southern Africa and all of us present here are probably agricultural fundamentalists to a greater or lesser degree. It would appear, however, that in future sentiment will not carry as much weight in the political arena as it did in the past. There will therefore have to be far stronger economic motivation for State aid to agriculture.

This model provides us with a possible answer to a question posed previously regarding the apparent conflict between large-scale commercial farming and small-scale farming in the less developed areas of Southern Africa. The present policy of regional development places a high premium on balanced economic development and the utilisation of under-utilised resources within a regional framework. An approach of this kind would imply, *inter alia*, that the demand for policy support was shifting in favour of the mobilisation of resources in less developed areas, through factors such as government investment in "hard" and "soft" capital.

If support for small farmers in these areas were to receive high priority (in other words if the supply curve in the developing areas were to move to the left) the white farming sector could possibly be prejudiced, *inter alia* as a result of "soft" production loans to rising black farmers, capital projects in the developing states, etc. Suppose these groups had a big vote, which could possibly be lost. Then unless the latter groups were accommodated by means of suitable support programmes, lower levels of State support to black small farmers in less developed areas would be enforced by the political market, with a consequent reduction in economic growth and productivity. There is another option, namely a sacrifice of votes in white farming areas in favour of long-term economic growth. The inherent voting

power of the white agricultural sector and the solidarity among this group of voters would, however, determine the "cost" of the latter option. From the political point of view this option would be acceptable if the cost in terms of votes were slight.

However, economic realities require that a different view be taken of this matter. Large-scale commercial white farms can indeed also make a positive contribution to economic growth, in certain circumstances, especially through multiplier effects, and it is therefore important to give these groups of farmers policy support as well.

Within the framework of the political economy of agricultural policy there need not necessarily be any question of a conflict between developed and less developed farming sectors. A long-term economic development strategy would direct policy support within the political market chiefly towards those commodity groups that generate net economic benefits at the regional and national levels through income and job opportunity linkage effects and multipliers. In this regard it must be argued that conflict is more likely to arise in the political market between commodity groups and development regions than between black and white farmers. Where policy support is directed at the same commodity groups within a region, the possibility of co-operation between these two agricultural groups indeed affords a special opportunity to influence the political market. The fact that there may be more than one political market within the regional context does not essentially affect this argument.

To enable political processes to produce better economic decisions in the field of interstate co-operation between white and black agriculture in Southern Africa, I would suggest that the following matters receive pertinent attention: *Firstly*, it is of cardinal importance that a joint agricultural policy and market strategy for both developed and developing agriculture in Southern Africa be designed, consisting of a set of principles and strategies for agricultural development and growth. *Secondly*, attention should be given at the commodity, regional and national levels to the stimulation of regional benefits in terms of multipliers, linkage effects and comparative advantages. A *third* important requirement for successful co-operation would be the spelling out of the benefits and costs of various policy options in order to propose economically sound strategies between and within regions and negotiate funds. Comparative advantages should again be pursued with broad guidelines for compensation where production localities alter and existing producers are directly prejudiced (Van Rooyen, 1988). *Fourthly*, farmers and agricultural groups should make every effort to achieve co-operation across state boundaries through organisation and the designing of plans, strategies and projects.

THE POSITION OF LAND AS A PRODUCTION FACTOR

I shall now touch on a few themes relating to land as a production factor. A frame of reference for the

analysis of land values and land prices would have to take cognizance of the fact that macro-economic factors such as inflation and interest rates frequently have a far greater impact on land values than agricultural production performance (Tweeten, 1986).

The impact of these mechanisms is magnified by the practice of "linking" subsidies to the agricultural sector to land as an inelastic resource and therefore raising land prices. Similarly advantageous taxation arrangements in the agricultural sector are reflected in higher land values. The danger with commercially marketable land is therefore overinvestment of capital without any accompanying increase in productivity and economic growth (Nieuwoudt, 1986).

The themes of land tenure and land reform should be regarded as extremely important for the future. The bond between man and the soil is one of the most fundamental of all ties. Land cannot be viewed merely in the context of an economic production factor. Both political and economic analyses figure prominently when a land reform policy is being formulated.

In this regard I should like to share a few thoughts on an economic frame of reference. Within the context of agricultural economics, efficiency is especially stimulated by equitable access for all agricultural producers to factor and commodity markets. The agricultural system should therefore place emphasis on such accessibility and equity. In this regard access to the land market is therefore also important (Van Rooyen, 1988; Vink, 1988). In my view there are three situations within which accessibility should be investigated.

Firstly, the situation within tribal lands, where communal land tenure systems of various kinds function within developing areas; secondly the situation of agricultural lands that are being transferred to the national states under the Land Consolidation Programme and thirdly, the situation where land is currently accessible to white farmers only.

Several models should be considered for the respective situations. For instance, the development of an effective land market under tribal ownership systems would not necessarily require an immediate switch to a private ownership system. Exchangeable production rights, share cropping and leasing of land would make increased access to and the more efficient utilisation of land possible and eventually lead to a land market.

With regard to consolidation, there is a unique opportunity to make farms directly available to black farmers on a commercial basis. To the best of my knowledge, and I base my opinions, *inter alia*, on contact with the agricultural committee of NAFCO, (National African Federated Chamber of Commerce) black businessmen and financial institutions, there are a number of wealthy black entrepreneurs who would be prepared to purchase earmarked agricultural land directly from the present owners at their own risk and engage in full-time farming.

The present system of project planning where farming units are replanned for the establishment of

black farmers has some merit but also involves considerable transaction costs, including the purchase of agricultural land by the South African Government and the provision of additional infrastructure to accommodate smaller farming units. The selection and training of farmers is another frequent source of difficulty.

The accessibility of white land to black farmers is a very thorny political question. It could be argued that such accessibility could make a positive contribution to agricultural growth and productivity, provided that the necessary attention were given to the provision of "hard" and especially "soft" capital to support black farmers. Increased accessibility would not necessarily include right of ownership. Again, options such as share-cropping and partnerships could be considered, and the utilisation of farm workers in managerial capacities and possibly also as shareholders in the farm could also be investigated. There could be very sound economic arguments for increased accessibility for black farmers in the vicinity of black urban areas that would provide a growing market for milk, vegetables and fruit (Fényes, Van Rooyen & Vink, 1986).

Marginal areas that are suffering a financial crisis as a result of drought could also be considered for such an arrangement.

I would like to conclude these few observations on the land factor by making the point that we have to accept that land has an economic but also a strong political dimension.

In terms of political and constitutional considerations, it is reasonable to expect certain reforms. The agricultural economist is in position to make a contribution to the spelling out of economic alternatives and realities and, with the necessary understanding of the political market, to have a considerable influence, so that land affairs are dealt with not merely on the basis of political considerations, but also in terms of economic benefits and costs (Fényes, Van Rooyen & Vink, 1986).

FARMING SYSTEMS AND FARM DECISION-MAKING

Economically speaking, the contribution and the role of the agricultural sector lie in its ability to utilise resources in unique production processes in order to raise general economic prosperity. The control and management of the production process (farming) is probably the most cardinal function of the agricultural industry. The individual producer takes decisions and accepts risks in terms of his own value judgements and needs, as embodied in unique target functions and not necessarily in the national interest. Furthermore, these functions are not necessarily in line with national economic interests either. Signals to producers, conveyed through prices and especially through non-price factors, are therefore important if farming production processes are to take place in a manner which is beneficial to the national economy as a whole.

It is therefore important that policy-makers should take cognizance of the decision-making

mechanisms and target functions of individual agricultural producers that regulate the allocation of resources within farming systems. Financing institutions, which have an interest in the solvency of producer clients, should also take cognizance of these target functions.

These are two matters I would like to mention here. Indications have been received from family farms in the commercial farming sector and small farms in developing areas that farming is functioning as a subsystem of the household rather than as an activity in its own right (Low, 1984). The economics of the household play a special role in resource allocation and risk acceptance in the farming industry. Therefore, for farming families, the maximisation of profit may be only one (improbable) target function.

There are indications that farmers of this kind are far more likely to aim at goals such as survival and income stabilisation. Income possibilities outside the agricultural sector but accessible to the household, often play a decisive part in farming decision-making, so that portfolio preferences of farming households also require to be taken into account in the formulation of policy directions and programmes. This view therefore requires that the target functions, alternatives and limitations within which a household takes decisions should be carefully studied. The change in emphasis from business economic theory to household economic theory may be of fundamental importance in gaining a better understanding of the farm management of family farms and small farming systems (Arayama, 1988).

The concept "*bona-fide farmer*" is also indicative of an inadequate frame of reference which may be detrimental to economic efficiency. Within the household economy, a rural family may decide on grounds that make good economic sense to make only partial use of agricultural resources and to give attention to non-agricultural activities instead. The farming operations therefore assume a part-time character. However, should farmers be compelled to become full-time producers in order to qualify for credit, membership of agricultural support organisations, State assistance etc. with the object of boosting productivity, the result might be to promote an inefficient economic process. I would like to suggest that a farmer be defined as any person who uses resources for purposes of agricultural production (Stilwell, Van Rooyen & Gouws, 1988). The concept of the "*bona-fide farmer*" is not really relevant.

ECOLOGY AND RESOURCE CONSERVATION

The last theme about which I would like to express a few thoughts is related to ecological balance, the economics of natural resource utilisation and resource conservation. Unfortunately this is a field in which economic analysis has so far made only minor contributions. Here the emphasis should be placed on the argument that the utilisers of resources should strive for the conservation of these resources, provided that this resulted in economic benefits. Problems may therefore be expected in cases where

the economic benefits of conservation do not exceed the economic costs, i.e. the opportunity costs of conservation practices, and in cases where the period that elapses before net benefits are produced is too long in terms of the individual's time preference and planning horizon. The part played by legal provisions and State subsidies should therefore be formulated within an economic perspective in order to address both incentives and control measures properly.

Furthermore, I would like to advance the argument that this matter cannot be dealt with without a sound knowledge of institutional economics. Political market analysis is equally important, and in this field regional and state considerations are a fundamental part of the Southern African situation. To quote an example: Region X utilises communal natural resources in a manner which results in pollution that has an adverse long-term effect on region Y. At the same time, however, region Y derives minimal benefits from the project in region X. The question is to find a framework within which the problem created by this externality can be dealt with fairly. As a second example, take the problem of overgrazing and resource utilisation on common property that frequently arises within tribal grazing areas.

The conventional manner of dealing with the above problems has frequently been called the "tragedy of the commons", where groups and individuals are the "prisoners" of their own selfish actions. Here the situation can only be rectified by an external force, e.g. through legislation that restricts pollution and livestock numbers. In practice, however, this approach has frequently failed, *inter alia* because monitoring is too expensive and impracticable. The argument advanced by institutional economics is, that not only do individuals act in their own interests, but they also promote the interests of the group in order to escape from the "prisoners' dilemma". Within this approach the "super fairness" criterion refers to the situation where there is no jealousy between individual participants (Vink, 1986). The rules of the game within communities are frequently formulated in such a way that the "no jealousy" objective is pursued. Unequal access to services and productive resources is an obstacle to the attainment of the "no jealousy" position. Within this framework it should be argued instead that aid programmes should place the emphasis on equitable treatment and equal access to decision-making and resources. Such programmes would make it easier to ensure that the "game" should be "played" in such communities in such a way that communal resources are used for the benefit of all participants and not only for the benefit of the small group of privileged people. This approach is therefore aimed chiefly at strengthening the institutions and rules that function within communities at the "grass roots" level rather than at enforcing regulations from above. It is found in practice that this approach has a major impact on increasing the efficiency of resource utilisation within rural communities where communal resource

utilisation applies. (Under a system of private ownership other game rules would apply, although even here community is important.)

With regard to the grazing problem, it is therefore proposed that all owners of livestock be given access to farming support and marketing services, but that at the same time they should be held responsible for developing acceptable "rules" (Van Rooyen, Vink, Nel & Bornmann, 1988). With this approach the pollution problem would only require official action if a local solution in the form of "rules" or joint action could not readily be arrived at (Livingston & Van Witzke, 1988). In my opinion this local option holds great promise within the framework of the regional development policy and in the context of our political dilemma.

CONCLUDING REMARKS

I would like to conclude by asking this question: "Can agricultural economists be sure that their inputs and contributions will have enough economic and financial value to ensure the survival of the profession?" I believe that a strong argument can be advanced in both the public and the private sectors in favour of agricultural economic expertise. There are a few conditions, however. *Firstly*, the agricultural economist should seek to make his primary contribution within the field of economics. What do I mean by this? Zorba the Greek made the point: "Writers and grocers are the same - they weigh everything". He could have added economists to the list! An agricultural economist's primary task lies in identifying the benefits and costs of alternative solutions as accurately as possible, quantifying them and weighing them up against each other on the basis of realistic decision-making criteria. This applies in both the public and the private sectors.

Secondly, agricultural economists should try to understand the political market, in order to be able to be of service to this market at the strategic level, to the benefit of the economy. In this regard I would like to make a strong appeal to the profession of agricultural economics not to lose sight of realities. Our entire region is facing major demands and fundamental adjustments in both the economic and the political fields. The agricultural economist can play an important part in exposing woolly speculation to economic realities. We can no longer confine ourselves to production economics and farm management. Naturally these aspects of agricultural economics are important and are one of its principal strengths. However, the outside world also requires objective inputs from agricultural economists. Unless we provide these we will be ignored and eventually we will be less relevant than we think (and know) we can be.

Thirdly, any agricultural economist who is worth his salt should realise that his inputs are being wasted where the marginal benefits are smaller than the marginal cost as measured in effort and time. This argument will, however, mean different things to different economists, depending on their personal target functions. The profession as a whole needs to

produce greater benefits than costs in order to survive and all agricultural economists have a responsibility to make a contribution here. For this reason we should remain relevant and address topical issues and we have an important part to play in community life. AEASA also merits a contribution from us.

Lastly, I believe that if agricultural economists apply a healthy measure of self-criticism they could, in the words of Professor Groenewald on a previous occasion, become the true pioneers of the "new" agriculture of the last part of the 20th century. A healthy measure of self-criticism does not, however, prevent us from occasionally congratulating ourselves on what we have already achieved. I am convinced that a healthy balance between criticism and praise, humour and play, dedication and tolerance, self-interest and the interests of the community is the best formula for ensuring that agricultural economics is revered and appreciated as a valuable profession. Let us strive for this balance at this, our 26th conference.

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