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AGRICULTURAL RESTRUCTURING IN SOUTHERN AFRICA : THE CONTRIBUTION OF THE DEVELOPING AGRICULTURAL SECTOR¹

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"There is as much justice in the equal treatment of unequal cases as there is in the unequal treatment of equal cases." (Aristotle)

1. INTRODUCTION

At the previous conference of the Agricultural Economic Association of Southern Africa (AEASA) in Stellenbosch, the late Prof. Simon Williams of Colorado State University, USA, challenged agricultural economists to use their professional skills and become involved in the process of change currently being experienced in Southern Africa or else face the risk of being labeled irrelevant and unconcerned. His request, as well as responses from various of our Honorary Members, prompted AEASA to structure this year's conference around the theme where "Risk and Uncertainty" at both macro and policy levels and micro farm level aspects are addressed.

The need for restructuring of Southern African agriculture to promote a more efficient system is at present being argued across a broad front. Marketing and distribution systems, production systems and the agricultural support system, which includes funding, research and extension, are currently under review. At the recent summit meeting between the heads of the Economic Community of Southern Africa (ECOSA) states, the South African State President emphasized a common marketing strategy and agricultural policy between the various member states, and all this amidst the socio-economic and socio-political restructuring which is at present so topical in this subcontinent. We are indeed living in a fast-changing world, with risk and uncertainty part of our daily living! It is therefore an appropriate time to think and plan for a "new" agricultural structure in Southern Africa.

In this spirit, this presidential address take up the challenge and attempts to contribute to the present debate on agricultural restructuring by giving attention to the role and contribution of developing farming in an efficient agricultural sector. The reason for this is twofold: a) my familiarity with the situation in developing agriculture; and b) commercial agriculture, more specifically white farming, recently structured their approach towards the future with the South African Agricultural Union strategy plan as basic guideline. Developing agriculture and Southern African agriculture accommodating both developed and developing sectors, however, still seems to be far away from a coherent approach and structured strategy in this regard. An attempt is thus made to support a process of strategic planning in Southern Africa's developing agricultural sector.

Agriculture in the developing areas of Southern Africa² is often viewed as inefficient and unproductive when compared to modern farming in the White areas. It has also been suggested that agriculture in these developing areas should rather be viewed as non-economic or even "ethnic" in nature, practiced by the aged, ie. "old-age-home farming", and women and children. From this viewpoint it is then argued that investment should be directed away from this type of agriculture in favour of continued support for modern farming, especially in the developed White areas and/or to other economic activities which would render a greater contribution to economic and social development.

Economic analysis of developing agriculture, however, shows that the level of activity in this farming sector is generally a rational response to market forces and opportunities. Recent studies on rural credit indicate that "informal" investment, especially from non-agricultural sources, in smallholder farming is substantial, while productivity increases can be observed across a broad front in developing agriculture (Nieuwoudt, 1989; Coetzee, 1988; Van Rooyen, Fenyes & Van Zyl, 1987; Richards, 1989).

In this paper the case for a key role for farming in the developing areas within a "new" agricultural economic dispensation for Southern Africa will be argued. The argument will emphasize developing agriculture's potential to create income and employment in the broader economy through the efficient allocation and utilisation of resources and market opportunities.

2. THE STRUCTURAL DIVERSITY OF SOUTHERN AFRICAN AGRICULTURE

An analysis of Southern African agriculture shows that structural imbalances exist between agriculture and the rest of the economy, between the commercial and developing sectors and within commercial and developing agriculture (Fenyes, Van Zyl & Vink, 1987). Some features of this structural diversity are now briefly examined.

The picture presented by agriculture in Southern Africa is of a highly diverse situation with South African commercial farming dominating the scene (Natrass, 1981; Van Rooyen, Fenyes & Van Zyl, 1987). (See Tables 1 and 2). Surplus-producing, commercially oriented and capital intensive White farming exists alongside small scale, subsistence oriented Black farming in the independent and national states.

The performance levels, cost structures and levels of activity of these "two agricultures" differ considerably. For example "White" commercial farming produced an output of R1 298 per person (119/ha cultivated) in comparison to R65 per person (R34/ha cultivated) for "Black" smallholder agriculture. Although each sector employs roughly the same number of people, the commercial White sector area cultivated covers about six times the land under developing farming (Cobbett, 1987) and the output per commercial worker is more than twenty times the output of a smallholder.

In spite of substantial increases in production levels, mainly through project investment in developing agriculture, indications are still that the productivity gap between subsistence and commercial agriculture has been widening consistently while at the same time the Black population has increased at a rate of 3,1% per annum. Consequently Black rural areas have become increasingly dependent on food imports from the commercial White sector and large-scale, corporate type of farming projects in the developing areas.

An interesting question which arises now which has important future implications for the restructuring of Southern Africa's agricultural and rural structure relates to whether this observed

phenomenon of differing levels of farming productivity among White and Black farming can be explained by an inherent dualism in Southern Africa.

Table 1: The position of the agricultural sector in various Southern African States, 1980 - 1982

Countries	Total GDP (R m)	Agriculture's Contribution to GDP (%)	Economically active population in agriculture (%)
SOUTH AFRICA	75 670,0	7,0	30
<i>National States:</i>			
KwaZulu	425,7	27,5	10
QwaQwa	29,6	5,7	3
Lebowa	221,7	29,4	20
Gazankulu	62,3	25,0	21
KaNgwane	46,1	17,0	24
KwaNdebele	*	*	8
<i>TBVC States:</i>			
Transkei	712,7	23,2	76
Bophuthatswana	624,9	3,9	47
Venda	60,8	18,9	85
Ciskei	131,9	8,3	8

* Not available

Source: Van Rooyen, Fenyes & Van Zyl, 1987.

An assessment of the prevailing situation in Southern Africa's "two agricultures" highlights the different environment or milieu in which each operates. The commercialized White farming sector generally operates under farm business principles, encouraging commercial production, while comprehensively supported by specialized private sector service institutions and organizations such as the Land Bank, Agricultural Marketing Boards, the Co-operative Movement, research institutions and a strong political lobby in "organized agriculture". Government support through subsidies to and protection of this sector is also of long standing, although indications are that some of these measures are on the way out.

Agriculture in developing areas, however, operates largely outside this comprehensive institutional support structure, with restricted access and opportunities for Black farmers to compete on agricultural markets. Decisions on labour allocation, production programmes, livestock farming/holding, choice of technology, etc, in developing agriculture are further largely governed by household economics and social security considerations. Due to the many institutional restrictions experienced by farmers in the developing areas, it is not surprising that farming is given a low priority. This generally results in low levels of agricultural production and productivity as well

as underutilization of land resources despite the relatively high agricultural potential of some of these areas.

The existence of successful, albeit relatively few, established commercial Black (including Indian and Coloured) farmers must be appreciated as these farmers operate commercially despite numerous restrictions facing them in relation to access to resource markets and support systems (Motsuonyane, 1987; Stacey, 1988).

Apart from common problems such as the price-cost squeeze as indicated by input costs rising faster than "farm gate" commodity prices and adverse natural conditions, the vastly different modes of production give rise to different sets of problems to farmers in Southern Africa. Commercial farmers, and particularly White farmers, in the summer crop producing areas of SA, recently struck by crippling droughts, at present find themselves in financial straits due to over-capitalisation, high debt burdens, surplus production, the "cost-price squeeze" and too intensive or incorrect cropping systems (Groenewald, 1985). The Black small farmer faces problems related to insecure and fragmented land rights, non-viable and small farm units, overstocking and the deterioration of land, as well as lack of support infrastructure, water supplies, transportation networks, financial support and research services. In addition, they have restricted opportunities to compete in agricultural markets.

Markets are often restricted by economic factors related to high transportation costs and legal arrangements, eg. quota entitlements, while representation and participation in agricultural policy decisions by these farmers are limited. Access is further limited by legal restrictions along racial lines to entry in the wider Southern African land market (Fenyes, Van Rooyen & Vink, 1986). Against this background a simple comparison between White and Black agriculture and their respective characteristics is neither sufficient nor meaningful in explaining the diversity in agricultural production between the two. From this assessment it is also apparent that it is incorrect to conclude that Black smallholders will not or cannot make an important contribution to economic development and growth in Southern Africa. It can, however, be stated that differences are not related to the issue of economic rationality. Economic forces operate in both agricultures, influencing resource allocation and utilization.

Various studies, for example, substantiate the economic rationality of smallholder Black farmers in Southern Africa (see Van Rooyen, Vink & Christodoulou (1987) for comprehensive references). Evidence can also be cited from elsewhere in Southern Africa. An interesting study in Zimbabwe indicated that high levels of productivity are generally related to areas of favourable environmental conditions and support

Table 2: Gross value of agricultural production in SA, the self-governing states, and the TBVC States, 1979/80

Country	Field crop production R'000 (%)		Horticultural production R'000 (%)		Livestock production R'000 (%)	
	R'000	(%)	R'000	(%)	R'000	(%)
SA (Commercial)	2 648 963	(49)	849 383	(16)	886 397	(35)
Transkei	52 000	(44)	7 800	(7)	58 200	(49)
Bophuthatswana	9 131	(34)	4 429	(16)	13 721	(50)
Venda	1 805	(26)	1 665	(24)	3 543	(50)
Ciskei	830	(11)	2 085	(28)	4 430	(61)
KwaZulu	37 052	(34)	31 472	(28)	40 665	(38)
QwaQwa	116	(10)	722	(62)	325	(28)
Lebowa	12 275	(41)	4 472	(15)	13 540	(46)
Gazankulu	3 442	(32)	2 212	(21)	5 132	(47)
KaNgwane	1 862	(40)	1 040	(22)	1 800	(38)
KwaNdebele	124	(7)	1 020	(56)	649	(37)
TOTAL	2 767 600	(48)	906 300	(16)	2 028 400	(36)

* Percentage contribution within a country.

Source: Van Rooyen, Fenyes and Van Zyl, 1987.

systems, irrespective of the farming mode, eg. large-scale commercial farming vs. smallholder farming on communal land (Weiner, Moyo, Munslow & O'Keefe, 1985). Increasing evidence that the smallholder farmer can successfully grow a wide range of crops is also cited. For example, in the 1981-82 crop year, the Umsfarudzi smallholders recorded average cotton yields of 1 738 kg/ha, as compared to 1 500 kg/ha, and 4 067 kg/ha maize as compared to 4 164 kg/ha for local large-scale commercial farms. Recent analysis from some farmer support programmes (FSPs)¹, notably in KaNgwane, KwaZulu, Transkei and Lebowa, funded by the Development Bank of Southern Africa increasingly confirm the above observations (DBSA, 1989; Richards, 1989). A large variety of farming activities are supported by these FSPs which range from dryland maize production, irrigation farming and garden farming, to cotton production, livestock farming and sugar farming, to name but a few activities. In these and other related programmes, smallholders responded in an economic, rational and efficient manner to access opportunities given through farmer support services.

It can be argued, and substantial evidence points to the validity of this proposal, that the "two agricultures" phenomenon in Southern Africa should be viewed as the consequence of historical events and policies restricting fair access to resources and markets, and in particular of legislation biased against Black smallholders (see for example Beinart, Delius & Trapido, 1986; Bundy, 1979; Van Rooyen *et al.*, 1987; Vink & Van Zyl, 1989).

Evidence of a racial explanation being an important factor in successful farming so often "confidentially" expressed is thus clearly devoid from all scientific and practical evidence!

3. AGRICULTURAL RESTRUCTURING AND AGRICULTURE'S KEY ROLE IN DEVELOPMENT

Agricultural restructuring in Southern Africa therefore seems important especially if it is viewed firstly against the present institutional dispensation where agricultural arrangements and especially farming are structured along racial/ethnic lines, restricting fair access to compete; and secondly where the "liberalization" of the agricultural market is considered to be vital for increased efficiency among others by enabling all farmers in Southern Africa to compete in agricultural markets on an equitable basis.

One implication of restructuring is clear. A shift is necessary in agricultural policy and investment towards accommodating smallholder farmers and emerging entrepreneurial groups in the developing areas. The answer for developing agriculture also does not lie in large-scale plantation/estate/corporative farming to supply food and fiber to Southern Africa, but lies in a broad-based "access" approach stimulating the entrepreneurial activities that will trigger economic production activities and create wealth.

It is generally agreed that the creation of income and employment opportunities in Southern Africa must receive high priority in development strategies (Department of Manpower, 1987). The full role of agriculture in such a development strategy, however, is often little understood.

It can be argued that agriculture performs three functions essential for economic development (Mellor, 1979). Firstly, because food makes up the bulk of marginal expenditures among the lower income people, farming provides the physical goods to support:

- (a) increased employment;
- (b) higher wage earnings; and
- (c) improved living standards for rural dwellers and farmers.

Secondly, increased agricultural production places additional income in the hands of the cultivators, who tend to spend a substantial proportion of it on non-agricultural commodities and consumer goods. Thirdly, increased agricultural produc-

tion generates both employment and income linkages throughout the economy which could in turn be exploited by means of labour creation strategies in industry and business.

The relationship between agricultural growth, economic growth and employment is thus clear: If an increase in employment of lower income people does not accompany increased agricultural output, there will be inadequate demand for food and real agricultural prices will decline sufficiently to discourage continued growth in agricultural production and the associated inter-sectoral linkages and multipliers. Furthermore it is important to relate employment creation to entrepreneurial development as this approach has been shown to contribute significantly to the generation of employment and income.

From the above analysis it is now important to clarify further the potential role and contribution of developing agriculture.

4. THE CONTRIBUTION OF DEVELOPING AGRICULTURE

Developing agriculture will have a key role if three questions can be answered affirmatively (Mellor, 1986):

- i) Can agricultural production be increased by means of advances in resource productivity?
- ii) Can effective demand for agricultural commodities expand apace with accelerated agricultural growth?
- iii) Can a dynamic agriculture provide an effective demand pull for growth in other sectors?

Within the present unbalanced growth pattern of the Southern African economy a fourth question should be added:

- iv) Can agricultural development and agricultural growth contribute to more balanced, efficient and sustainable economic development?

These questions, as they apply in the Southern African context, are now examined.

4.1 Productivity increases

It is estimated that the developing areas have a significant measure of Southern Africa's agricultural potential while large areas are still unutilized or underutilized. It is also observed that although 4% of the land resources and some 16% of the arable land are found in Black states, only 6% of the gross value of agricultural production reaches commercial markets (Brand, 1986). On a basis of yields achieved elsewhere in Southern Africa, it has further been estimated that developing farming realises only one third of its potential production (Bembridge, 1986).

With regard to productivity increases, recent observations of positive smallholder response to comprehensive farmer support programmes indicate a real opportunity to exploit the untapped natural resource base and economic forces in Southern Africa's developing areas. The above assessment underlines the potential for increasing agricultural production in the developing areas by means of advances in resource productivity.

4.2 Effective demand expansion for food and agricultural commodities

Demand and supply features in the Southern African market need to be assessed carefully to determine future trends. Increasing demand for food is essentially a function of population increase, income growth and income elasticity of demand (Mellor, 1966).

With an expected population growth of + 2,7% per annum and in view of the relatively stable income elasticity of demand for food (around 0,6) in Southern Africa since 1950 (Van Zyl &

Vink, 1988), and provided that sufficient jobs can be created to enable a real income growth, consistent increase in demand for food can be expected⁴.

Regional differences in population and income growth prospects should be noted (DBSA Annual Report, 1988) while the positive impact of income- and employment- creating strategies and higher income elasticities of demand for food in developing areas will further boost the demand for agricultural products. Studies in rural areas show that income elasticities are for example 0,4 for staple food and 0,8 for non-staple food (Nieuwoudt, 1989).

Provided that employment and therefore income earning opportunities, especially for the poorer groups, can be expanded, indications are that agricultural producers will be faced with a steady increase in demand for food and fibre.

4.3 Agricultural linkages and multipliers

An assessment of the inter-sectoral linkages and multipliers in the agricultural sector indicate that agriculture plays an important role in the Southern African economy with the various economic sectors influenced differently by changes in agricultural production: "The fertilizer and pesticide industries are shown to be most sensitive, followed by the agricultural machinery industry". "Another important feature is that the total impact of a change in agricultural production on the economy is more than twice that of the direct impact" (Van Zyl & Vink, 1988).

It is, for example, also interesting to note that, although agriculture's direct share of employment creation recently decreased rapidly (Fenyves & Van Rooyen, 1985), the agricultural sector's ability to create employment opportunities inside and outside the farming sector was established as the second largest, after the construction sector, of all the economic sectors: 124,4 jobs per R1m investment in agriculture vs. 60,4 jobs in mining and 60,8 in manufacturing (RSA input:output tables, Mullins & Scheepers, 1980).

Substantial linkages and multipliers can further be expected as a result of support and productive investment in developing areas directed towards small farmers and rural businesses. Studies in rural KwaZulu in this regard for example, show a highly positive income elasticity of demand for the following:

household expenditures	= 0,93;
clothing	= 1,27;
household durables	= 1,24;
savings	= 2,61;
education	= 0,93; and
transport	= 0,86.

(Nieuwoudt, 1989).

Indications are therefore that growth in other sectors can be generated through agricultural growth in the developing sector. The multiplier effect of increased agricultural incomes and employment in low-income groups is expected to generate a substantial demand for food and non-agricultural commodities.

4.4 Balanced economic growth

From the above assessment it can be argued that investment in developing agriculture, especially to benefit smallholders across a broad front, will upgrade farming productivity and generate multiplier effects creating demand and corresponding entrepreneurial actions, employment and income in poor developing areas. Economic upliftment and growth could be expected to occur in these areas. This will, under certain conditions, result in a more balanced economy in Southern Africa and will within ecological parameters and if human capital factors are attended to, provide a sound basis for sustainable growth.

5. THE APPARENT CONFLICT BETWEEN COMMERCIAL (WHITE) FARMING AND SMALLHOLDER (BLACK) FARMING

The argument of looming conflict between White and Black farming generally finds voice through the viewpoints that a) support to emerging Black farmers will require "affirmative" action and subsidization to such a degree that "socialism" will be promoted; and/or that b) investment and technical assistance should rather be directed towards present commercial farming as this will economize the application of scarce financial and technical resources.

A socialistic system will indeed be promoted if emphasis is placed on an equal share by all farmers in production and resources. The argumentation in this paper, however, favours a system where emphasis is placed on "equal" opportunity and in this respect, evidence already cited indicates that smallholder Black farmers respond rationally and efficiently to economic opportunities. Affirmative action would therefore only be justified if support programmes were of an interim nature and would effectively assist smallholders to gain access equal to that of the farmers elsewhere in Southern Africa, to opportunities to compete in agricultural markets. As such affirmative support to smallholders represents a strategy to promote higher efficiency through improved competition, the initial costs of these programmes should be far outweighed by future benefits to the Southern African agricultural economy.

The argument that support of and investment in existing commercial farming should be favoured is built on false economics. In the present policy environment where attempts are being made to "free markets" and to promote market-related decision making, movements towards comparative advantage positions in the agricultural economy can be expected. Historically, certain farmers and farming areas in Southern Africa were constrained in terms of support services and institutions to compete optimally in agricultural markets and exploit comparative advantage positions. Resources were therefore utilized in a sub-optimal and inefficient manner. However, it must also be realized that certain farming activities and areas have been heavily supported by public sector interventions such as subsidies and administrative prices. The movement away from these policies towards efforts to provide equitable access for all farmers to compete in agricultural markets will inevitably lead to a changed agricultural structure and the relocation of certain agricultural production activities to represent a more economically rational spatial situation. The viewpoint to maintain and further expand the existing production structure should thus first be analysed against sound economic cost-benefit arguments, where "sunk cost" arguments should be weighed against long-term economic growth and sustainability criteria.

An alternative viewpoint (to that of conflict) is advocated in this paper, ie. that the developed commercial sector can co-operate with the developing emerging sector to mutual benefit, especially within a regional context (Van Rooyen, 1988). It can be expected that government support within the Regional Development Policy as well as considerations in the economic market will favour those production activities which will optimize value added through direct production, linkages and multipliers in a regional context. Conflict will thus rather occur between commodity groups and regions and not between producers/ farmers *per se*. With support directed at groups within a region, both types of farmers, commercial and smallholders, could gain from co-operation at production, marketing and institutional levels. Co-operation in this respect is for example already occurring where Venda and Levubu farmers share knowledge, input provision and processing facilities for subtropical crop farming. Another very successful effort is observed in the sugar industry where smallholders are fully accommodated within the larger commercial sector, with mutual benefits flowing from this synergy (Ardington, 1989). Market potential analysis in Region D serving Transkei, Ciskei and the Border Area and similar exercises in Region G (Venda, Gazankulu, Lebowa and the White farming areas of

Northern Transvaal) and in Northern Natal (Pongola, KwaZulu and Swaziland) are other examples of co-operation between White and Black farmers.

6. STRATEGIES FOR AGRICULTURAL RESTRUCTURING, GROWTH AND CO-OPERATION

In the preceding sections arguments were given for a substantial role for and investment in developing agriculture in future economic development strategy for Southern Africa. It is also clear that with the restructuring of the Southern African agricultural sector the position of smallholder farming must be considered and attention must be given to the stimulation of entrepreneurial and employment opportunities and income growth in developing agriculture while co-operation between Black and White farmers will have to be promoted. Some of the most important strategies in this respect are now discussed.

6.1 Access and entitlements

It is important to ensure that farmers in Southern Africa have equitable access to opportunities to compete in the market. This will require that agricultural policies and investments emphasize the integration of "emerging" smallholder farmers and entrepreneurs into the commercial economy as this will promote the optimal utilisation of agricultural resources and will generate important income and employment linkages in the economy. This is comprehensively argued by Van Rooyen, Vink & Christodoulou (1987) where the case for opening access to input and commodity technology and knowledge markets for emerging farmers in the developing areas by means of policy reform, comprehensive support programmes and affirmative action was presented.

They pointed out that, although this may imply a degree of short- to medium- term redistribution of agricultural resources towards smallholder farmers in developing areas, it would eventually result in increased efficiency of resource use and lead to progressive, broad-based and sustainable agricultural and regional economic growth in the long run.

In addition to the supply of support services, access to participation will depend on a person's command over or entitlement to commodities (Sen, 1986). Within the Southern African context the entitlements of smallholder farmers and Black commercial farmers are at present severely restricted by various factors such as the lack of *de facto* production rights, limited exchange opportunities to trade in the wider South African economy, limited opportunities to transfer assets and labour to higher returns opportunities, technical restrictions, legal restrictions, etc. The success of farmer support programmes and the entry of Black, Indian and Coloured farmers into commercial agriculture would depend to a major degree on arrangements to ensure access and to improve entitlements. An "entitlement approach" to agricultural restructuring is required. Legislation and arrangements to solve the acquirement problem facing emerging Black farmers need priority on the agenda for restructuring.

6.2 Adjusting the present distribution of agricultural resource endowments

An "access and entitlement" approach to agricultural restructuring will inevitably direct attention towards the present availability and distribution of agricultural land resources in Southern Africa. Regardless of the political sensitivity of this issue, it must be appreciated that individual restrictions to access and entitlement of land would jeopardize the long-term, economically optimal utilisation of land resources while effectively undermining private enterprise initiatives in agriculture.

Land issues in all states in Southern Africa will receive increasing attention in future and should be placed on the agenda for action (De Klerk, 1986; Motsuonyane, 1987; Van Rooyen, 1986). It is necessary that this issue be assessed within a sound economic framework, with attention being given to efficiency and equity criteria, and should not be assessed solely in terms of its political considerations (Van Rooyen, 1988). An evolu-

tionary approach is proposed to handle this politically sensitive issue with, as first steps, emphasis on direct access to farm land under the land consolidation programme to Black farmers, increasing the productive value of land and stimulating an informal land market in tribal/communal areas and utilizing farming opportunities around urban complexes, especially for market gardening (Fenyes, Van Rooyen & Vink, 1986 and 1989).

6.3 Comparative advantage and cost-benefit considerations

The principle of market-related economic activities requires that sound economics dictate the location and establishment of agricultural activities. With present efforts to stimulate the economic potential of the less developed areas of Southern Africa and the opening of access to all farmers to compete in the market, the application of the principle of comparative cost advantages may imply certain shifts in production localities to ensure the economically optimal utilisation of scarce agricultural resources and markets.

Historical events and infrastructural development patterns which prevented developing areas (especially certain developing (Black) farming areas) to compete cost-effectively in the market, would have to be discounted in terms of economic and social cost-benefit considerations. This would favour a possible shift in the locality of existing production areas. It is further expected that movements towards a "freer" market position, cost of labour supply and transport cost factors will be major items in establishing comparative advantage shifts (Van Zyl, 1989; Ardington, 1989, DBSA, 1987). Rigidities and inflexibilities due to declining supply elasticities in commercial agriculture, selected market opportunities in the Southern African and international markets and adjustment programmes will, however, need the urgent attention of policy makers and agricultural planners to enable movement towards optimal economic positions (Groenewald, 1987). It can be argued that economic cost-benefit analysis should increasingly be employed to enable and direct public sector decision makers to attend to and promote but not restrict changing production patterns and localities.

6.4 Appropriate research and technology

The appropriateness and supply of technology in Southern Africa needs to be thoroughly assessed in terms of future requirements. Both biological and chemical technology (seeds, pesticides, etc) and mechanical technology are of importance here. Commercial agriculture is at present characterised by over-investment, with the emphasis on expensive imported technology and on large-scale machinery (Groenewald, 1987). Restructuring in this regard should be towards less expensive, local mechanisation equipment. Smallholder farming, however, lacks the financial resource base and institutional support to register needs for appropriate scale-neutral or small-scale technology in the market. Improved seed, fertilizer, pesticides and mechanisation equipment required for smallholder farming are viewed as some of the most prominent inputs required to modernise developing agriculture, improve productivity and promote equity-based development (Mellor, 1985; Vink & Van Zyl, 1989).

A system to stimulate a movement in research and development towards appropriate technical inputs adapted to local conditions and to the diversity of agriculture in South Africa is an important requirement, among other things to enable suppliers to provide inputs in the correct form and at the required time. In this regard, the farm systems research approach (Development Bank of Southern Africa, 1988; Van Rooyen, 1984; Rose & Tapson, 1984; Stilwell, Van Rooyen & Gouws, 1988) seems appropriate to direct attention to the biological, chemical and mechanization needs of smallholders in developing agriculture. The present restructuring of agricultural research from an "own affairs" to a general affairs institution and the promotion of an Agricultural Research Council provide important opportunities to establish small farm systems research projects and to pertinently attend to the needs of smallholders operating in the rural context (Van Rooyen &

Stilwell, 1989). A network linking existing research institutions and stations, such as Cedara, Döhne, Roodeplaat and Universities with Faculties of Agriculture to an FSR programme aiming at smallholder development, where appropriate technical innovation is attended to within a multi-disciplinary approach, must be actively promoted.

The FSR approach could equally be applied to the commercial farming sector as it focuses on the farmer operating within the farming environment. The present proposal for the structuring of the Agricultural Research Council without accommodating the disciplines of agricultural economics, rural sociology, etc, is however unacceptable.

6.5 Restructuring of agricultural support organisations

Generally government action (or any public sector organisation) must be directed towards facilitating the private sector to operate in an effective and efficient manner in agriculture. Public sector organisations involved in agricultural development, however, often participated in farming processes in competition with the private sector, *inter alia* emerging smallholder farmers. Public sector institutions such as agricultural development corporations and companies, as well as government departments, should thus withdraw from profitable (some times not so profitable!) agricultural production ventures (eg. estate projects) and redirect their attention towards the very important "mission" to support and facilitate the activities of local communities, emerging businessmen, contractors and individual and groups of emerging farmers. Of great importance in this respect, will be the involvement of the private sector in the supply of certain farmer support services, where cost recovery and profit making can be directly sourced from farmers.

Input supply, training, extension, mechanisation services and marketing services are areas to in which increased private sector participation and funding can be facilitated. Attempts to institute greater public sector centralization and control in the organization of production services in developing agriculture should be viewed as counter-productive to a sound long-term development strategy aimed at creating capacity and greater sustainabilities at local and individual levels. Local "grassroots" organizations should be promoted where possible. Co-operative movements should for example rather be promoted through collective action activities at a grassroots level, than in "top down" approaches enforced by government (DBSA, 1989).

As in the case of the recent restructuring of the South African Land Bank to operate on a multilateral basis, the facilities and control of similar organizations, serving the broader Southern African agriculture (eg. Marketing Boards and research institutes, etc.), should be opened up to ensure fair access to different participating groups. The proposed Agricultural Research Council should also be structured to serve the needs of smallholders.

6.6 Agriculture in rural development

Agricultural development strategies should increasingly be viewed within their broader economic context. Such an approach will focus attention on agriculture's leading role in development, namely stimulating forward and backward linkages and multipliers in the local, regional and national economy. The optimization of rural linkages will *inter alia* be achieved by stimulating and supporting local initiatives and small emerging entrepreneurs to cater for required agricultural services, such as marketing, mechanization contractor services, transportation, etc.

Establishing the required infrastructure (roads, dams, fencing, etc.) should also essentially be labour-intensive, with considerable opportunities for small entrepreneurs to become involved.

This proposed approach stands in contrast to those proposing high-tech, large-scale type of farming or which view agriculture as a subsistence or "old-age-home" pastime in rural areas, while emphasizing health, educational transport and other basic needs with insufficient attention to production programmes.

6.7 A "declaration" on agricultural restructuring and co-operation

In order to ensure the introduction of measures to promote the above mentioned strategies, a view of the Southern African agri-milieu is required which would allow for across border consultation and co-operation at policy, production and marketing levels.

The viewing of agriculture in a regional rather than an ethnic or state/political context, must be considered as a basic point of departure. This does not, however, necessarily imply the need for a formal "common agricultural policy" (CAP), although an agreement by the various Southern African states through a "Declaration of Intent" on basic principles and guidelines for future agricultural development and restructuring would be an important step in the right direction.

Such an approach would for example also accommodate the various activities of the multilateral technical committee on agricultural environmental affairs (AGEN), present efforts towards formulating across-border marketing arrangements and strategies for agricultural commodities, the recent opening up of the South African Land Bank to fund commercial Black farmers, etc., and the actions proposed under the previous point.

The declaration should further be extended to establish the framework to "normalise" agricultural production on a market-related basis, preventing the costly duplication of organisational and institutional structures, such as co-operative movements and marketing institutions, and should promote equitable access to production opportunities and resource endowments. Land issues should be pertinently addressed in terms of the movement towards equitable access. The arrangements to facilitate private sector involvement in the provision of capital and farmer support services should also be attended to. The application of "affirmative" action to enable Black "emergent" farmers to optimise their access to opportunities should be addressed. Environmental and conservational issues should also be addressed in these statements and guidelines. The issues discussed under sections 6.1 to 6.7 could be on the agenda of such a declaration.

A strategic planning exercise, structured along the lines as conducted by the South African Agricultural Union for commercial agriculture, should also be initiated to set operational guidelines and action plans for the "new" South African agricultural structure. Strategic plans for restructuring and co-operation for the various regions and commodity groups will logically follow this effort.

7. CONCLUSIONS

Restructuring of agriculture in Southern Africa is on the cards from both an efficiency and fairness viewpoint. The "exclusive" character of South African agriculture (Black and White, commercial and developing) and a restricted view of the Southern African agricultural context, perpetuating the apparent dualism and isolating the developed from the developing sector, should be avoided in view of the interrelatedness of agricultural activities and the importance of creating a competitive milieu for agricultural producers. A regional context, rather than a state/political context should be given to agricultural matters emphasizing co-operation and local "collective action". A "declaration of intent" on principles and guidelines of agricultural development policy and practice in Southern Africa is urgently required.

Growth and redistribution are two vital ingredients for future development in Southern Africa. Southern Africa's developing agricultural sector has a key role to play in this process.

However, this contribution depends largely on the ability to restructure farming activities in developing areas on an economically sound basis, focusing on entrepreneurial development, employment and income generating strategies. The conditions for such strategies to be successful emphasize the recognition of production increasing opportunities within developing agriculture especially through the promotion of smallholder farmers to participate in agricultural production. In this respect, the mobilization of the private sector to service the requirements of smallholders and to fund and provide farmer support activities, should be highlighted. The advantages of developing agriculture vis-à-vis other economic sectors in respect of inter-sectoral employment and income linkages and multipliers should also be recognised and exploited in developing strategies and programmes.

The promotion of equitable access and entitlements to enable Black farmers to compete in agricultural markets should receive priority from an economic and political viewpoint to ensure long-term efficiency in the South African agricultural economy. In general, a shift in agricultural investment towards farmer support programmes in the developing rural areas is viewed as very necessary for sustained economic growth.

The alternative to this proposed approach will lead to increasing inefficiencies and duplication of investments. Strains along racial and state barriers will also increase. Agricultural restructuring can indeed lead the way to peace and harmony on the Southern African sub-continent.

8. NOTES

1. The comments of Nick Vink and Mark Lyster, Development Bank of Southern Africa are acknowledged. Michèle Stoudman and Toetie Bourn are thanked for their editorial inputs.
2. Southern Africa to include South Africa and the self-governing states, and Transkei, Bophuthatswana, Venda and Ciskei
3. Programmes structured towards enabling access by farmers to agricultural inputs, credit, markets and marketing services, extension, training and research services, managerial support services and mechanisation services. Farmers are defined as all resource users producing agricultural products.
4. Applying the given percentages and estimating a 1% per annum increase in real income, the demand for food can be expected to grow by at least 3,3% per annum.

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