



The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

TRANSFORMATION : THE CHALLENGE TO COMMERCIAL AGRICULTURE

J.A. Groenewald

Department of Agricultural Economics, Extension and Rural Development, University of Pretoria

1. INTRODUCTION

It is common knowledge that South African commercial agriculture is facing an environment that has changed, is rapidly changing and that is likely to continue to change for the foreseeable future. South Africa has gone through a fundamental political restructuring, and this process has not yet been completed. The international trade scene is undergoing what some regard as fundamental change, whilst others do cast some doubt on the magnitude of these changes. Within South Africa we experience a reduction in governmental intervention in agricultural marketing and simultaneously also reductions in government expenditure on support of commercial agriculture.

The questions become:

- In what direction should commercial agriculture move?
- What is its business, and what should it be?
- Which markets should be served, and how?
- What should be its local role, and how should this be filled?
- How should relations be between commercial agriculture and government? consumers? emerging farmers? society in general?
- What are the strengths, weaknesses and competitive capabilities of South African commercial agriculture, and how can it be improved?

To a large extent this boils down to applying management science to an analysis of commercial agriculture - to identify objectives and plans to fulfil these objectives, always bearing in mind that the five steps of setting objectives, weighing up alternatives, decision-making, execution and control should never be a linear process; it should be a circular one in which objectives change as new information becomes available (Heirs & Farrell, 1989). In this process, we have the paradoxical phenomenon that the more urgent problems become, the more rapid changes and crises follow on each other, the more important it becomes to handle these problems, but simultaneously, the more urgent it becomes to free sufficient time and energy to look at the future (Heirs & Farrell, 1989).

Given the continuing and accelerating globalisation of agricultural markets, the focus of South African commercial agriculture should - perhaps perforce - be widened to scopes not previously regarded important.

In its efforts to plan for a prosperous future, our commercial agriculture should also take proper note of

some business realities enunciated by Peter Drucker (1986):

- The one, and only real resource that determines success is critical knowledge; this implies that results are obtained only by leadership, not by mere competence.
- Results require a focus and concentration of our resources and efforts on opportunities.
- Leadership is short-lived; it has to change continuously to maintain its position.
- Resources are usually misallocated.

We will now turn our attention to some strengths, weaknesses, threats and opportunities for South African commercial agriculture and its institutions. (Something similar to a SWOT analysis, with the T preceding the O).

2. STRENGTHS OF SOUTH AFRICAN COMMERCIAL AGRICULTURE

South African commercial agriculture and its institutions have certain strengths which ought to be utilised to pursue opportunities and overcome threats and problems. Some of the major strengths can be summarised as follows:

- *Competence:* South African commercial farmers have over time accumulated a high degree of technical experience and technical knowledge, including both biological and more mechanical facets thereof. South African commercial farmers are certainly leaders in Africa in this respect.
- *Financial situation:* In South Africa, as in many countries of the world, the 1980's was the time of the big "shakeout", with large numbers of insolvencies and many farmers leaving the land. Much has been written on the reasons for this in South Africa (e.g. De Wet *et al.*, 1992; De Jager & Swanepoel, 1994; Janse van Rensburg & Groenewald, 1989; Van Zyl *et al.*, 1987a and 1987b). Those who remain in business are mainly those who have managed their finances better and who have economised on short-term inputs, plant and machinery and debt-arising purchases. South African commercial agriculture is now probably "leaner and fitter" than during the previous decade. It is by now probably less overmechanised than was shown to be true in the period 1976-1988 (Van Schalkwyk & Groenewald, 1992).
- *Product quality and leadership:* South African farmers have shown an ability to produce high quality products when given the incentive to do so, as is evidenced by the ability of fruit and wool

farmers to compete on international markets with products of high quality. In addition, local climatic factors favour the production of high quality maize. This could place South African commercial agriculture in a position of market leadership provided these products are marketed in the appropriate markets using appropriate channels of distribution.

- *Geographic protection against competition:* South Africa, being distant from Northern hemisphere, has a natural protection against competitors from the Northern hemisphere. South Africa also has a seasonal advantage over Northern hemisphere producers for the production of fresh products for Northern hemisphere markets.
- *Labour availability and costs:* The high degree of unemployment, while having so many undesirable economic and social consequences, places commercial agriculture in a position of having an oversupply of unskilled or semi-skilled labour. While the productivity of much of this labour is low, wages have generally been below marginal productivity (Van Schalkwyk & Groenewald, 1992). This state of affairs is likely to continue; it puts South African commercial producers in a favourable competitive situation in the production of products (including beneficiation) which require much unskilled labour.
- *Organisational strength:* South African commercial farmers are served by a well-established and well-organised network of farmer organisations and co-operatives. These also show some weaknesses - as will be shown later - but can serve as a springboard for actions benefiting commercial agriculture.
- *Service institutions:* South African commercial agriculture has historically been served with a research and extension network financed by the State. This infrastructure still exists to a large extent. There have however been reservations regarding the relevance of some research and extension activities.
- *Productivity:* South African agriculture has undergone accelerated productivity growth. Measured total factor productivity growth was zero for the period 1947-65; in the period 1965-81 it was measured at 2,15% per annum, and it amounted to 2,88% between 1981 and 1991 (Van Zyl *et al.*, 1993). This growth, which appears to have exceeded productivity growth in most other sectors of the economy, puts commercial agriculture in a strong position to utilise new economic opportunities when these arise.

3. WEAKNESSES INHERENT IN SOUTH AFRICAN COMMERCIAL AGRICULTURE

South African commercial agriculture is also plagued by some inherent weaknesses which have either to be rectified, or overcome, or both if the sector is to prosper. Some of the major ones can be listed as follows:

- *Financial knowledge, information, management and position:* Notwithstanding the leaner and fatter

profile of commercial agriculture, a large number of farmers appear still to be in debt, particularly to government institutions such as the Land Bank and the Agricultural Credit Board, and to some co-operatives. Analyses have shown that such farmers, even if they receive financial injections such as those after the 1991/92 drought, will not survive in the absence of substantial improvement in productivity and financial management (Van der Watt, 1995).

The neglect to include financial management in traditional South African agricultural extension has resulted into a weakness in knowledge concerning financial management. In addition, large numbers of commercial farmers still have not started the first step to good financial management - proper record keeping. The well-directed use of records has been proven to be a major difference between successful and unsuccessful farmers (De Wet *et al.*, 1992).

- *Marketing acumen:* The Marketing Act was first passed in 1937, almost 60 years ago. Under this Act, the marketing of most agricultural products was severely controlled. One channel marketing on local and/or export markets became completely monopolised. In some other agricultural industries restrictive registration of traders and/or processors had similar effects. Producers of a large number of products, and their co-operatives were legally forbidden to engage in marketing. Suppression of, and the complete decay of marketing skills were inevitable results.

The continued existence of a system which according to comments by almost all uncommitted commentators had led to gross inefficiencies, has now become unsustainable. This leaves producers and co-operatives involved with many products at a disadvantage *vis-à-vis* competitors whose marketing skills are in a better state.

- *Labour relations and management:* Another field in which the development of knowledge has been rather tardy, involves labour relations and management. This was quite understandable in the light of the powerful agricultural lobby up to the late 1980's and the oversupply of labour. However, if commercial agriculture is to survive and continue to serve the nation, this bottleneck needs urgent attention.
- *The ageing commercial farming population:* In common with many countries of the world, the commercial farming population of South Africa has been gradually ageing. This reduces the willingness of farmers to adjust to changing circumstances and to institute the types of innovation necessary for today's and tomorrow's world.
- *Marketing distortions:* Besides its effects on marketing acumen, the control system under the Marketing Act has brought in its wake gross market distortions. Grain prices present possibly the most serious case in point. High prices of particularly yellow maize and other feed grains have disadvantaged the livestock sectors seriously (Willemse & Van Zyl, 1995). In this process artificially high local prices with local buyers

effectively subsidising exports (Groenewald, 1989) have seriously eroded the livestock sectors' competitive situation *vis-à-vis* foreign competitors. One would normally expect a country with surpluses of feed grains to be a strong competitor on international pigmeat and poultry markets. High feed costs have however been a major factor causing South African poultry and pig producers to face financial problems and a poor ability to compete with foreign competitors, even on domestic markets.

The market distortions, together with increased concentration engendered by or at least permitted under the Marketing Act, have also inexorably led to increased food marketing margins and higher consumer prices.

- *Weather patterns:* The instability of Southern African weather patterns is a well-known phenomenon, leading to instability and risk, particularly where the market distortions alluded to above have stimulated the adoption of biologically ill-adapted farming systems.
- *Obsolescence:* The difficult period of the 1980's has brought in its wake more economising behaviour on the part of farmers and co-operatives alike. However, some of the plant and equipment is now likely to be worn out and/or obsolete.
- *High cost production:* Some traditionally protected agricultural industries, e.g. wheat in the Western Cape, are plagued by high cost structures relative to their production. Although possibilities exist to restructure agriculture in such cases (cf. Nowers & Van Zyl, 1991; Van der Westhuizen & Kleynhans, 1987), this will need reorientation among farmers, including the acquisition of new knowledge. It will also require capital outlays and will certainly take time.
- *Farmers' organisations:* The South African Agricultural Union (SAAU) has for long acted as an umbrella organisation for farmers' organisations and has enjoyed an official monopoly as the only mouthpiece for agriculture recognised by a long succession of Ministers of Agriculture, many of whom had previously held positions on the SAAU executive. The existence of a few groups not affiliated with the SAAU raises a question concerning its representativeness of commercial farmers. In addition, the SAAU has since the 1970's largely been funded by a part of levies on controlled products, and could theoretically continue to function with little farmer support. As a result, it is really difficult to gauge its real true representativeness and its own vitality.

The SAAU had for long wielded considerable political power, and had under those conditions rather often adopted a confrontational stance; it had sometimes also appeared to be rather uninterested in the clients of commercial agriculture - the consumers.

In addition, some affiliates of the SAAU have had leaders who have at the same time represented particularly one political party in parliamentary bodies. This has possibly seriously affected its efficacy in representing commercial farmers in the

post 1994 era. One may also raise the question as to whether the SAAU has a strategic direction.

- *Domestic image:* Some of the factors mentioned above - those which have contributed to higher food prices, confrontational stances, political involvement, labour relations, etc. appear to have contributed to a weakening of commercial agriculture's domestic image. This will certainly complicate some future actions.
- *Co-operative problems:* The co-operative movement, though strong, is plagued by some problems of its own. The attachment of some members of co-operatives appears to be weakening (Fekete, 1990; Fekete *et al.*, 1992). The reasons stem from a tendency on the part of some co-operatives to monopolise and at the same time, efficient competition from private concerns for the custom of members. Then also, the large co-operative concerns have become unpersonal and removed from the world of the ordinary farmer. It has become "the" co-operative, rather than "our" co-operative. The perception can also arise in large co-operatives that they favour the large producers relatively to smaller members.

As co-operatives become larger- and South Africa has some large ones - members' interests diverge, and disunity may result. Thus, expansion of some activities become opposed by some members (Roger, 1995; Jamison, 1960). Co-operatives also have problems in attracting equity capital (Roger, 1995) while the production orientation of their directors restricts the ability of the board of directors to supervise and assist management in large, expanded co-operatives (Roger, 1995).

Some South African co-operatives appear to have invested too heavily and have built to much capacity in plants, causing them to be in overleveraged positions when the recession of the 1980's started - a problem shared by co-operatives in the USA (Roger, 1995; Caves & Petersen, 1986).

The co-operatives' expansion into credit has generally not been successful. Credit is a rather specialised economic function; to succeed in it, a concern must assume the nature of a financial institution with its own controls, checks and balances. The overleveraged position of many co-operatives in the 1980's can at least partially be ascribed to their venture into the world of finance.

4. EXTERNAL THREATS TO COMMERCIAL AGRICULTURE

It is necessary to consider, in addition to its strengths and weaknesses, also threats to commercial agriculture. A list of some threats follows.

- *Extension and research services:* These services had previously been funded by the government, and are now being reduced. There is a felt need, on the one hand, to reduce government expenditure in general. In addition, one can expect South African governments for the foreseeable future to concentrate most of its agricultural research and extension funding to address the problems of the

previously disadvantaged small farmer sector.

In addition, the appropriateness and relevance of some past research and extension methods have been questioned from time to time. The impression was sometimes gained that some problems subjected to research had relatively little influence on agricultural productivity.

- *The "large is better" and "small is beautiful" myths:* Two myths, often fanned by vested interests or political agendas, have in the past dogged South African agriculture and is likely to do so in the future. The economies of size argument has been used to justify restrictive registration, one channel exports of fruits and grains, concentration in sugar milling, the erection of mammoth urban abattoirs, etc. It has also been an excuse for policies that favoured large farmers. At present a new dogma that smaller farms outperform large ones, small millers outperform large ones, etc. is driven by some with dogmatic fervour. Both these dogmas, while attractive to some for ideological reasons, are without scientific foundation. Studies in agriculture, agriculturally related industries and non agriculturally related industries overwhelming show that with rare exceptions, neither of these slogans can be verified empirically. It is management that determines the optimum size of a production or marketing enterprise. There is however a danger that these dogmas will again in future be used to enforce ideological patterns in agricultural production, processing and marketing.
- *Foreign trade threats:* The conclusion of the Uruguay Round of the GATT and the founding of the World Trade Organisation (WTO) are certain to have far reaching effects on South African commercial agriculture. These events embody a major shift from non-transparent qualitative restrictions to transparent tariffs, which have to be gradually reduced. However, some policies such as income support not related to output, are exempt from the agreement. This at once puts South Africa, together with the poorer countries at a disadvantage *vis-à-vis* wealthy countries in particularly Western Europe and North America. South Africa is not financially able to finance support to the extent of Western Europe and North America. It is also noteworthy that while South African agriculture received more support (1988-93) than Australian and New Zealand agriculture, this support was much below that received by agriculture in Canada, the USA, Japan, the EU, Finland, Norway and Switzerland (Helm & Van Zyl, 1995). It has furthermore been pointed out by Ingco (1995, quoted by World Bank, 1995) that the period selected as base for tariffication was the period with the highest tariffs in recent history. She discovered "dirty tariffication", the binding of tariffs at higher rates than those of the base period in the EU (six out of seven product categories) and somewhat milder dirty tariffication by the USA. Paarlberg (1995) concludes that the tariff ceiling intended by the GATT threatens to act as a floor.

Such behaviour obviously endangers South Africa's efforts to improve agricultural exports. In addition, the EU has proven to be extremely unsympathetic concerning South African agricultural products; its

proposed deal with South Africa would still have tariffs applicable to 39% of South Africa's farm products, including lemons, oranges, apples, fruit juice, canned fruit and wine - although South Africa currently provides only 1,7% of all the EU farm imports (Anon, 1996).

South Africa does not appear to have the necessary manpower to monitor imports for dumping. There is a distinct danger of such imports entering South Africa unnoticed, thereby harming South African producers. Large imports of subsidised dairy products from the EU is a case in point (Coetzee, 1996).

- *Inefficiency of South African trade and industry:* The recent World Competitiveness Report has shown South African trade and industry to be uncompetitive because of low productivity. The sectors that deliver essential services (inputs, processing, marketing, etc.) to commercial agriculture in this way provide a threat to commercial agriculture.
- *Political and economic bargaining power:* Consumer groups and labour are steadily improving their bargaining power *vis-à-vis* commercial agriculture. At the same time, there is bound to be some interest conflicts between the SAAU, NAFU, some unaffiliated farmer groups, emerging farmers and some political groupings. These factors increase the vulnerability of commercial agriculture.
- *Lack of experience in export trade:* Many potential exporters lack experience in export trade. In an American study, managerial apathy was found to be a major impediment to increased food exports, and that export promotion programs were often misdirected (Byford & Henneberry, 1996). The same is likely to be true in South Africa.
- *Increased competition from other countries in the Southern hemisphere* occurs as some of these countries experience economic development. Such increased competition from some countries in South America has already made inroads on for example, international fruit markets.
- *Environmental matters:* Agriculture is both a victim of, and contributor to environmental pollution. In South Africa, agriculture has thus far, because of problems with measuring non-point pollution, hardly ever been penalised for its contribution. It has however been shown that commercial agriculture is also a polluter at times (Aihoon, 1994) and are expected to become a bigger issue in future - as it is in present day Europe.
- *Alienation of land:* It is general knowledge that land reform is part and parcel of present land policy in South Africa. The procedure is bound to be mainly market driven, and this reduces the possible threat. However, some expropriations may be expected in cases where restitution is at stake. There are also calls from more vocal radical groups for deviations from the market process. Land alienation will be a threat only to the extent that these groups succeed in their goals.

- *Crime:* South Africa has to cope with probably unprecedented crime levels, which have included theft of livestock, robberies and murders of farmers. Neither has white collar crime left commercial agriculture unscathed.
- *The labour union movement:* Agriculture was for long exempt from much labour legislation, including the Basic Service Conditions Act and the Labour Relations Act. These exemptions have however been terminated over the last two years, and the labour union movement has also entered the agricultural scene. Many farmers no doubt regarded this as a serious threat, and which may cause labour costs to rise. Farm labourers will now, in contrast to the past, potentially be in a position to present a unified front.

5. OPPORTUNITIES

Several opportunities beckon; if it is to approach fulfilment, South African commercial agriculture will have to focus its sources on these opportunities. The following appear to be promising opportunities:

- *International trade:* International trade prospects appear to be better than ever before. Notwithstanding the already mentioned problem of dirty tariffication, the new WTO regime should result in broadening markets for South African agriculture. The general expectations are that world prices of a wide range of products will increase as production stimulating agricultural support is reduced in the EU and USA and as subsidised exports assume smaller proportions.
- The rapid economic growth of some countries, particularly in Asia, presents new opportunities. The Pacific Rim region has been identified as the highest growth region for international food markets, including meat, and most non-tariff barriers are being removed or have been removed (Byrne *et al.*, 1995). China and India with their huge populations have also undergone rapid economic growth over the last few years. All these developments present opportunities for commercial agriculture.
- *Local market opportunities:* The deregulation of agricultural marketing in South Africa also presents new opportunities for those entrepreneurs who are willing and able to pursue these opportunities. Niche markets for special products present one type of example, as does smaller scale local product beneficiation (e.g. small mills, cheese making etc.) There is the opportunity to serve local consumers or to develop and market unusual products.
 - *Foreign exchange movements:* It is well known that the South African Rand has over an extended period depreciated relative to the main currency units of the world. This depreciation appears destined to continue, albeit perhaps at a slower rate, for some time to come. This can potentially improve export earnings and provide a breathing space for those who want to establish their foreign market organisations. It does, however, also increase prices of imported inputs.
 - *Goodwill:* The amount and degree of mutual goodwill prevailing in South African society is perhaps surprising in the light of the history of past decades. This goodwill presents some real opportunities to commercial agriculture in terms of labour relations, relationships among producers across colour lines and the potential for co-operation between the institutions of commercial agriculture and those of emerging farmers.
 - *Co-operation in Southern Africa:* The potential co-operation through SADCC appears to be improving. In the light thereof that regional trade blocs have shown themselves to be good vehicles in the move to global trade liberalisation (Bergsten, 1996), this presents to South Africa not only the prospects of larger regional markets, but entrance together with neighbours, therefore with increased bargaining power, into world markets.
 - *Globalisation of the farm inputs market:* This presents to South African commercial agriculture the prospects of better priced, higher quality inputs than before. This globalisation is taking on large proportions (Boehlje *et al.*, 1995) and one of its dimensions is research and development. This development may act to at least partially offset the effects of low competitiveness in the South African agri-supply industries.
 - *A more accommodating approach on the part of the corporate world* presents the potentials for communities of interests, joint ventures and hence a chance for producers or producers' institutions, e.g. co-operatives, to achieve vertical interests by retaining their essential character while benefiting from the benefits of the corporate form of business.
 - *New technology:* New technology in production (e.g. biotechnology), marketing and business organisation appears to combine to create new opportunities. New markets are evolving to include specification buying, i.e. specific products may be produced to satisfy specific tastes and preference - so-called "designer foods" (Sanders, 1996). The opportunities thus created for innovative farmers and processors - including small ones - are rather exciting.

6. STRATEGY FOR THE FUTURE

Future strategy should build an strength facilitation and rectification of weaknesses, elimination or accommodation of threats, and most of all pursuance of opportunity. Specific areas will now briefly be dealt with.

- *Public image and approach:* A basic change has to made to the old confrontational style traditionally adopted by leaders of commercial agriculture. The days in which such an approach could be expected to succeed to yield results desired by leaders. are clearly something of the past. In addition, commercial agriculture needs political neutrality in their leaders. There may be wisdom and truth in the remark by the 18th century British statesman, Edmund Burke: "It is a general popular error to imagine the loudest complainers for the public to

be the most anxious for its welfare".

It should be the guiding principle of commercial agriculture to argue all matters calmly on their merits, to improve its image and retain the improved image in negotiations with government, labour, consumer groups, industrialists and everyone else. The same applies to public utterances and media releases.

- *Knowledge, information, research and extension:* Commercial farmers will have to improve their managerial knowledge and skills. Informal and formal training is needed for this. Some can be done by universities, technikons and colleges. Other training of a less formal nature can be arranged by organised farmers' groups, usually in co-operation with an educational institution.

The demise of control boards will have an unfortunate side-effect in the form of less market information. Commercial agriculture can hardly afford this, and efforts will have to come from within the ranks of commercial agriculture to stimulate and support agencies that will do the work. This may present challenging opportunities to private initiative, probably collaborating with public institutions.

A similar situation is developing with agricultural research and extension. Internationally, this has been handled by institutional changes, cost-recovery initiatives, commercialisation and privatisation (Dinar, 1996). It is time for South African commercial agriculture to study these developments and develop its own unique models. The existence of research and extension departments at many co-operatives will help to facilitate the process. Payment or cost recovery procedures are still needed.

Another possibility is the formation of New Zealand style farm management associations.

- *Marketing and trade:* In the light of rapidity of events, there is need for co-operation between commercial agriculture and the State for the monitoring of unwarranted dumping practices in contravention of WTO rules. A bureau should be set up to aid the State in this monitoring process, within an agreement on co-operation.

It is in the interest of commercial agriculture to do its own search and analysis of markets. As South Africa is a rather small fish on the international trade scene, South Africa may have a better opportunity than most to develop niche markets, particularly if the new opportunities in the Pacific Rim, China, India and the Arab World are kept in mind.

This will largely need product beneficiation - a form of added value that will not only benefit agriculture, but also provide work opportunities. Co-operatives may find it profitable to enter into joint ventures with corporations for this purpose, thereby linking production with final product development. Co-operatives may have advantages in locating and selecting qualified producers, but

adverse selection may occur if the co-operative feels an obligation to contract every willing member (Roger, 1995).

This problem may however be solved by changes in co-operative structure. There is certainly room today for different co-operatives in an area handling the affairs of members with different needs, even if these co-operatives handle the same generic product.

Niche markets should also be used more in South Africa. Agricultural marketing appears to have been rather hesitant in the identification, targeting and servicing of different market segments.

- *Labour relations:* There is an urgent need for commercial agriculture to update its labour management and also its general relationship with labour. In this respect, the Transvaal Agriculture Union has lately organised a pension scheme (Transvaalse Landbou-Unie, 1996). This should not be the ultimate - it is only a step in the right direction. Special training is needed for this purpose.
- *Relationships with small scale agriculture:* Wisdom will dictate commercial agriculture to strengthen links with the small scale sector. There are areas of common interest, and it is in any case the ideal that the present small scale sector will develop into a modern, commercial sector. Good relations and aid, mainly in the form of sound advice can do inestimably much to foster a pleasant rural environment.
- *Crime:* While commercial agriculture can certainly not solve problems of rural crime on its own, it can certainly contribute to such solutions. Some promising initiatives have already been started in the form of co-operation with the South African Police Services. The point is that commercial agriculture must exhibit some initiative and make its contributions if the problems of crime are to be overcome.

7. CONCLUSION

Commercial agriculture is passing through a process of change in a changing environment. This environment appears to many to be beset with dangers and threats. Commercial agriculture also has its own inherent weaknesses. However, there is hope: Commercial agriculture has some strengths and there are new opportunities, new horizons. Pro-active attitudes, thoughts and deeds can move our commercial agricultural sector into a new era of prosperity, provided common sense prevails.

This is the challenge to commercial agriculture.

REFERENCES

- AIHOON, J.K. (1994). Pollution insurance for the agricultural sector: A study in the Loskop Valley. MSc (Agric)-thesis, University of Pretoria.
- ANON (1996). South Africa and the EU. The Economist, July 13:45-46.

- BERGSTEN, C.F. (1996). Globalizing free trade. *Foreign Affairs*, Vol 75(3):105-121.
- BOEHLJE, M., AKRIDGE, J. & DOWNEY, D. (1995). Restructuring agricultural business for the 21st century. *Agribusiness*, Vol 11:493-500.
- BYFORD, L. & HENNEBERRY, D. (1996). Export decisions of food processing firms in Kansas, Missouri and Oklahoma. *Agribusiness*, Vol 12:247-251.
- BYRNE, P.J., CAPPS, O. Jr., TSAI, R. & WILLIAMS, G.W. (1995). Policy implications of trade liberalisation : The case of meat products in Taiwan and South Korea. *Agribusiness*, Vol 11:297f.
- CAVES, R.E. & PETERSON, B.C. (1986). Co-operatives' shares in farm industries : Organisational and policy factors. *Agribusiness*, Vol 2:1-9.
- COETZEE, K. (1996). Kommentaar : Implikasies van tarifiering vir die Vrystaatse landbou. *Agrekon*, Vol 35:157-158.
- DE JAGER, F. & SWANEPOEL, V. (1994). Factors associated with farm financial failure in the Northern Springbok Flats. *Agrekon*, Vol 33(4):242-247.
- DE WET, P.V.D.M., GROENEWALD, J.A. & BOSHOFF, A.B. (1992). Managerial behaviour and financial success or failure in farming - an exploratory study. *South African Journal of Agricultural Extension*, Vol 21:1-7.
- DINAR, A. (1996). Extension commercialisation : How much to charge for extension services. *American Journal of Agricultural Economics*, Vol 78:1-12.
- DRUCKER, P.F. (1986). *Managing for results*. Harper & Row, New York.
- FEKETE, F. (1990). Particularities in the co-operation of farmer enterprises in the Western European countries. *Aula*, Vol 4:95-108.
- FEKETE, F., FÉNYES, T.I. & GROENEWALD, J.A. (1992). Some forces affecting performance and organisation of agricultural co-operatives. *South African Journal of Economic and Management Sciences*, Vol 8:16-23.
- GROENEWALD, J.A. (1989). Review of the report of the Committee of Enquiry into alternative marketing arrangements for maize. *Development Southern Africa*, Vol 6:467-488.
- HEIRS, B. & FARRELL, P. (1989). *Denken als hoofdzak. Een nieuwe methode voor het management*. Veen Uitgevers, Utrecht en Antwerpen.
- HELM, W. & VAN ZYL, J. (1995). Does South African agriculture receive too much support? - A comparison. *Agrekon*, Vol 34(2):43-49.
- INGCO, M. (1995). Agricultural liberalisation in the Uruguay Round : One step forward, one step back? Conference on the Uruguay Round and Developing Countries. World Bank, Washington.
- JAMISON, J.A. (1960). Co-ordination of vertical expansion in agricultural co-operatives. *Journal of Farm Economics*, Vol 42:555-571.
- JANSE VAN RENSBURG, B.D.T. & GROENEWALD, J.A. (1987). The distribution of financial ratios among farmers during a period of agricultural setbacks : Grain farmers in Western Transvaal, 1987/82. *Agrekon*, Vol 26(1):13-19.
- NOWERS, R.J. & VAN ZYL, J. (1991). 'n Ekonomiese evaluerende van herstruktureringsoommoontlikhede in die Swartland. *Agrekon*, Vol 30:53-60.
- PAARLBERG, R.L. (1995). Does the GATT agreement promote export subsidies? *Choices*, Fourth quarter 1995.
- ROYER, J.S. (1995). Potential for co-operative involvement in vertical co-ordination and value-added activities. *Agribusiness*, Vol 5:47-481.
- SANDERS, L.D. (1996). Factors affecting the status and future of agriculture in Oklahoma. *Oklahoma Current Farm Economics*, Vol 69:1-16.
- THOMPSON, A.A., Jr. & STRICKLAND, A.J. III. (1990). *Strategic management : Concepts and cases*. Fifth Edition. BPI & Irwin, Homewood IL and Boston Ma.
- TRANSVAALSE LANDBOU-UNIE (1996). TLU besluit op voorsorgfonds. TLU Oorsig, Mei 1996:1-2.
- VAN DER WATT, J.C. (1995). Die langtermyn impak van die 1992-Staats hulpskema vir die boerderysektor. M. Com.-thesis, University of Pretoria.
- VAN DER WESTHUIZEN, B. & KLEYNHANS, T.E. (1988). The influence of more efficient utilisation of the combine on the product mix and profitability of a simulated central Swartland farm. *Agrekon*, Vol 27(1):1-8.
- VAN SCHALKWYK, H.D. & GROENEWALD, J.A. (1992). Regional analyses of South African agricultural resource use and productivity. *Agrekon*, Vol 31:116-127.
- VAN ZYL, J., VAN DER VYVER, A. & GROENEWALD, J.A. (1987a). The influence of drought and general economic effects on agriculture : A macro analysis. *Agrekon*, Vol 26(1):8-12.
- VAN ZYL, J., VAN DER VYVER, A. & MOSTERT, C.W. (1987b). The effect of debt burden, interest rates and inflation on the survival of farm enterprises : A case study in the Western Transvaal and the North Western Transvaal bushveld. *Agrekon*, Vol 26(1):1-7.
- VAN ZYL, J., VAN SCHALKWYK, H.D. & THIRTLE, C. (1993). Entrepreneurship and the bottom line : How much of agriculture's profits is due to changes in price, and how much to productivity? *Agrekon*, Vol 32:223-229.
- WILLEMSE, J. & VAN ZYL, J. (1995). Economic implications of a deregulated yellow maize marketing

system on the livestock industry. *Agrekon*, Vol 34 (3):75-89.

WORLD BANK (1995). Global economic prospects and the developing countries. The World Bank, Washington.