PROMOTING COMPETITIVENESS IN SOUTH AFRICAN AGRICULTURE AND AGRIBUSINESS: THE ROLE OF INSTITUTIONS[1]

G.F. Ortmann[2]

This paper considers private and public institutions that will help promote the competitiveness of commercial farms and agribusiness firms, and enhance the productivity of communal farmers and the competitiveness of emerging farmers in South Africa. Commercial agriculture and agribusiness are creating institutions (such as food safety standards and strategic partnerships), adopting existing private and public institutions (e.g. TQM, ISO 9000 and HACCP) or restructuring to add value to products and services, reduce costs and gain access to export markets. Government should focus its relatively scarce resources on providing physical and legal infrastructure (such as secure property rights and contract enforcement) to reduce transaction costs, including risk, so that markets work efficiently. A major challenge for local agricultural economists is to provide information about institutions that will promote the productive use of land in communal areas, and the competitiveness of emerging farmers on redistributed commercial farmland.

BEVORDERING VAN MEDEDINGENDHEID IN DIE SUID-AFRIKAANSE LANDBOU EN AGRIBESIGHEID: DIE ROL VAN INSTELLINGS

Hierdie referaat oorweeg private en openbare instellings wat die mededingendheid van kommersiële plase en agribesigheidsfirmas sal help bevorder, en die produktiwiteit van gemeenskapsboere en die mededingendheid van opkomende boere in Suid-Afrika sal versterk. Die kommersiële landbou en agribesigheid skep instellings (soos voedselveiligheidstandaarde en strategiese vennootskappe), neem bestaande private en openbare instellngs aan (bv. TQM, ISO 9000 en HACCP) of herstruktureer om waarde tot produkte en dienste toe te voeg, koste te verminder en toegang tot uitvoermarkte te verkry. Die staat behoort sy relatief skaars hulpbronne toe te spits daarop om fisiese en wetlike infrastruktuur te verskaf (soos veilige eiendomsregte en kontrakafdwinging) om transaksiekoste, risiko ingesluit, te verminder sodat markte doeltreffend werk. 'n Hoofuitdaging vir plaaslike landbou-ekonome is om inligting te verskaf oor instellings wat produktiewe grondbenutting in gemeenskapsgebiede sal bevorder, en die mededingendheid van opkomende boere op herverspreide kommersiële landbougrond.

---

1 *Presidential address, 38th Annual Conference of the Agricultural Economics Association of South Africa, Sun City, September 2000.*

2 *Professor in Agricultural Economics and Head of the School of Agricultural Sciences & Agribusiness, University of Natal, Pietermaritzburg. Constructive comments on an earlier draft by Professor Lieb Nieuwoudt, Professor Mike Lyne, Mr Mark Darroch and Dr Stuart Ferrer are gratefully acknowledged.*

1. INTRODUCTION

Agricultural producers and agribusiness firms in South Africa are faced with increasing competition in domestic and international markets. Changes in the global economic and trade environment in recent years have been well documented (see, for example, Groenewald, 1996; Hammer & Champy, 1994; MacLaren, 1995; Peters & Hedley, 1995; Petit & Gnaegy, 1995; Porter, 1998; Swart, 1996 and Van der Merwe & Otto, 1997). The successful conclusion to the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1994 has promoted the liberalisation of international trade in agricultural and food products. Trade opportunities for South African managers have proliferated and international pressure is being exerted on the country to liberalise its trading system even further (Van der Merwe & Otto, 1997). Local agricultural markets have also been deregulated. This has been complemented by rapid advances in technology, particularly of information and communication technology, which has reduced costs and made relevant information more readily available. Customers have also become more demanding with regard to product and service quality, variety and food safety. Agricultural producers and agribusiness managers are, therefore, under increasing pressure to improve product and service quality, enhance productivity, and reduce production and transaction costs.

South Africa is now very much part of the global village and cannot escape the rapid developments taking place. By all accounts, South Africa's competitive position in the world economy is not highly ranked. South Africa is ranked 25th in the micro-economic factor section of the 2000 Global Competitiveness Report (Bennett, 2000), and seventh among African countries. According to Porter, as cited by Bennett (2000), South Africa's productive capacity is much greater than that reflected in its Gross Domestic Product (GDP) per capita; Porter believes this is due to the country's low productivity levels. Clearly, there is a need to investigate strategies and consider institutions that will promote South Africa's global competitiveness. This paper will focus on the agricultural and agribusiness sectors in South Africa, and consider the role that private and public institutions, including the Agricultural Economics Association of South Africa (AEASA) and its members, can play in promoting the competitiveness of commercial and emerging farmers, and agribusiness firms in deregulated markets. Agribusiness is also considered in this analysis because of its close link to primary agriculture. In fact, commercial farms may also be considered as agribusinesses (Harling, 1995). Land redistribution in South Africa poses a special challenge to institutions and agricultural economists, namely that the redistribution should be effected in a manner that will enable newly settled farmers to compete successfully in deregulated markets. This issue also forms an important part of the paper.

South Africa's developing areas, which account for about 13 percent of farmland, are occupied mainly under a communal land tenure system. Much research has been done by agricultural economists to develop models (institutions) that will promote productivity and economic growth of small-scale farmers in communal areas. But how will these farmers adapt to globalisation and the increased pressure to reduce costs and increase efficiency?

The paper will consider the role of institutions in promoting the competitiveness of agricultural and agribusiness firms, and small-scale farmers in local and international markets. The structure of the paper is as follows: Institutions and the importance of good governance are defined in the next section. This is followed by an analysis of the term "competitiveness" and strategies (institutional changes) that firms (farms) can adopt to promote competitiveness. The role of institutions in enhancing the productivity of small-scale farms and the financing of land redistribution is discussed in section 5. The paper concludes with recommendations on the role of institutions and agricultural economists in promoting the competitiveness of agriculture and agribusiness in South Africa.

2. INSTITUTIONS AND GOOD GOVERNANCE

Institutions arise in a world of uncertainty, costly information and transaction costs. Although organisations (such as government departments and farmers' co-operatives) are institutions, the basic concept of institutions is more fundamental than this. "Institutions are the "rules of the game" which prohibit, permit, or require certain actions" (Gerrard, 2000:2). They comprise arrangements among economic agents (i.e. laws, rules and customs) that attempt to decrease uncertainty and costs in exchange and ownership (Duncan, 1999; North, 1990; Runge, 1984). Institutions may be either formal or informal, the former comprising laws and regulations (e.g. property rights and contract law), and the latter consisting of conventions and codes of behaviour (e.g. community norms governing access to common property resources). Institutions are established to lower transaction costs in order to reap the benefits offered by trade and exchange. North (1990) defines transaction costs as the costs, including risk, involved in exchange or trade (e.g. marketing costs), costs of intangibles (e.g. searching for exchange partners), and contract monitoring and enforcement. Transaction costs vary by product, type of agent in the marketing chain, and farmers (households) with different asset bases (Delgado, 1997). "Good" institutions promote market exchange by securing property rights and predictable rules of law. "Good governance relates to government policies and institutions which promote competitive markets and efficiency, by defining the rules of the game which allow transaction costs to be reduced and so enlarge the

effective flow of goods and services" (Beghin & Fafchamps, 1995:288). Coase (1998) maintains that institutions govern the performance of a country.

Economic and political openness provide incentives for good governance. Economic openness refers to international or regional mobility of financial and human resources and the commitment to allow market disciplines to operate. Political openness pertains to "the contestability of political markets and of public-service provision, participation of pressure groups and transparency in the decision-making process" (Beghin & Fafchamps, 1995:288). Openness promotes predictability and the rule of law because in cases of bad governance the government can be penalised, for instance, by being voted out of power or by investors withdrawing their investments from the region or country. Predictability is an essential characteristic of good governance and is supported by the rule of law. In the absence of the rule of law, transaction costs and uncertainty increase (Beghin & Fafchamps, 1995). Hence, it is important that the rule of law is enforced and is perceived as such if institutions are to promote investment, growth and competitiveness.

The next section considers the meaning and nature of the term "economic competitiveness" against this background.

3. ECONOMIC COMPETITIVENESS DEFINED

In view of the rapidly changing global economic environment, accelerated by modern information and communication technologies, the economic competitiveness of countries (regions) and firms has been the subject of much research and debate in recent years (see, for example, Bredahl *et al*, 1994; Fafchamps *et al*, 1995; Peters & Hedley, 1995; Porter 1990 and1998; Spies, 1999; Van der Merwe & Otto, 1997). Fafchamps *et al* (1995:343) define competitiveness as "the ability of a firm or a country to produce a commodity at an average variable cost below its price". An economic unit not able to meet this test will not be able to sustain its market position and will eventually cease production. Porter (1998:7) argues that competitiveness of locations "arises from the productivity with which firms in a location can use inputs to produce valuable goods and services". Spies (1999:483) concurs by saying that "competitiveness implies superior performance in productivity growth - especially in multi-factor productivity, which is best reflected in the effective rate of technological innovation in an economy ...". This, in turn, depends primarily on the nature of the business environment that governments offer firms.

Kennedy *et al* (1997) feel that despite the interest shown in the topic, the term "competitiveness" has not been clearly defined, nor has consensus been reached

on how it should be "properly" measured. While some definitions focus on the underlying sources of competitiveness (e.g. firms' ability to profitably create and deliver value through product differentiation and/or lower costs), others have placed greater emphasis on the indicators of competitiveness (e.g. the sustained ability to profitably gain and maintain market share). Clearly, much of the diversity of concepts and measures of competitiveness depends on the perspectives and objectives of the relevant research work (Kennedy *et al*, 1997).

National competitiveness is related to the economic concept of comparative advantage. The latter concept predicts that trade flows occur as a result of relative cost differentials between countries or regions. A country (region) will export goods it produces relatively efficiently and import goods that other countries (regions) can produce more efficiently; that is, countries or regions are competitive in goods and services in which they have a relative cost advantage (Kennedy *et al*, 1997), which depends on their natural resource endowments (raw materials or people). Some economists argue that the theory of comparative advantage does not apply to a world in which government policies distort markets (see, for example, Ahearn *et al,* 1990 and Sharples, 1990); "competitiveness" is, therefore, considered to be a more practical concept. This view implies that government policies affect competitiveness. Thus, a country may not have a comparative advantage in wheat production but it may be competitive on world markets because wheat is subsidised by the government. In this context, falling trade barriers, decreasing government support for agriculture and liberalisation of foreign exchange markets imply that the meanings of the terms "competitiveness" and "comparative advantage" move closer together. Fafchamps *et al* (1995) point to a distinction between competitiveness and the ability to produce; a producer or country may be able to sell or export by incurring a net social loss. Thus, competitive advantages based on natural endowments and unsubsidised markets have to become a key policy factor in South Africa's trade and agricultural markets, according to the Trade Policy Committee (cited by Van der Merwe & Otto, 1997).

Porter (1990) argues that firms, not nations, compete in international markets, and that the business environment offered to the firms by regions (nations) is critical in their success. Competitive firms will then also result in competitive regions or economic sectors (e.g. agricultural industries). In this context, this paper emphasises firms' competitiveness in trade. Economists have defined "firm competitiveness" in various ways (see, for example, Cook & Bredahl, 1991 and Van Duren *et al*, 1991). The strategic management school defines it as "the ability to profitably create and deliver value through cost leadership and/or product differentiation" (Kennedy *et al*, 1997:386), which implies that competitiveness is related to factors that influence a firm's cost and demand structure. Hence, a firm

can improve its competitiveness by enhancing customers' perceived benefits and/or by reducing costs. This view agrees with Porter (1998:4) who argues that "a firm achieves superior profitability in its industry by attaining either higher prices or lower costs than rivals".

Kennedy *et al* (1997) define customer value perception as perceived benefits/price. To be competitive, therefore, a firm should develop and maintain a favourable ratio for its product(s) relative to its rivals or product substitutes (by increasing the perceived benefits and/or decreasing the price). Customer benefits could be increased through product differentiation (adding value to products and services) which changes the bundle of customer benefits. Value-added competitiveness depends on an intimate knowledge of and response to the complex nature of customer demand. Product technology has allowed agriculture to respond to changing consumer needs in various ways (e.g. biotechnology has improved product attributes such as leanness of meat and protein content of grains), while information technology has allowed firms to more fully understand and track the diversity of human wants (Kennedy *et al*, 1997; Streeter *et al*, 1991). Furthermore, vertical co-ordination among firms in the food system (e.g. through contracted production or strategic alliances) can enhance the ability of firms to add value to their products and reduce risk and transaction costs (Den Ouden *et al*, 1996; Kennedy *et al*, 1997).

In markets of undifferentiated products (raw commodities), or in markets of differentiated products which have many close substitutes, firms must focus on price and costs. In these markets, "price remains the main vehicle for creating customer value and competitiveness is mainly price-driven" (Kennedy *et al*, 1997:389). The cost competitiveness of a firm depends on its variable and fixed costs, including transaction costs, and thus also on the factors which affect these costs. Transaction costs depend on infrastructure and the type of institutions the firm has to deal with (North, 1990). For example, weak intellectual property rights in a particular region (which discourage availability of cost-reducing technology in that region) or legal systems with ineffective enforcement mechanisms may place a firm at a competitive disadvantage by increasing costs. The impact of transaction costs on a firm's cost structure is often difficult to assess because they are implicit rather than payable costs - firms tend to organise in ways that minimise or avoid them. Nevertheless, transaction costs can have a significant effect on cost competitiveness (Fafchamps *et al*, 1995; Kennedy *et al*, 1997).

Adoption of cost-reducing technologies, such as modern information and communication systems (ICS), can improve a firm's cost competitiveness in the short-term. For example, use of modern ICS can enable a firm to gain quicker

access to relevant information than its competitors, while other modern technologies, including equipment and biotechnology, can also promote the competitiveness of early adopters. The size of operation may also be a source of cost economies; for example, the spreading of fixed costs (such as management, information and transaction costs) over greater volumes of output can result in lower average costs (economies of size). Differences in technical efficiencies among firms of similar size and using similar technologies are "typically the result of ineffective management and organisations" (Kennedy *et al*, 1997:390), and tend to be more pronounced in the absence of competitive pressures and market disciplines (Kalaitzandonakes, 1994). Firm competitiveness may also be influenced by factors such as location, government bureaucracies, other institutions in the relevant country (region) and market failures (Fafchamps *et al*, 1995; Kennedy *et al*, 1997). For example, the absence of land or labour markets, and credit constraints may restrict producers' ability to produce for the market and thus may hinder their competitiveness (Fafchamps *et al*, 1995). Just as management must continuously adjust to changing customer needs, it must also adjust to various internal and external factors that influence the firm's costs (Kennedy *et al*, 1997).

Following the discussion on what makes a firm competitive in trade (namely, adding value to products and/or reducing costs), the next section deals in more detail with the strategies commercial firms can employ to enhance their competitiveness in domestic and international markets and the role of institutions in promoting competitiveness. Later, the role of institutions in enhancing competitiveness of producers in developing agriculture will be analysed.

4. PROMOTING COMPETITIVENESS OF COMMERCIAL FIRMS (FARMS)

This section covers some strategies that commercial firms may consider adopting to promote their competitiveness. These include Total Quality Management, restructuring the business, adoption of quality assurance standards and food safety regulations, and strategic partnerships. Their relevance to commercial farms will also be discussed.

4.1 Total quality management

Faced with increasing competition in regional and international markets, more demanding customers and stricter government regulations, an increasing number of firms are adopting a Total Quality Management (TQM) approach to adjust to the changing business environment and to improve product and service quality for customers (Schiefer, 1997). This represents a shift of emphasis from the

traditional production-oriented focus on efficiency and cost effectiveness to customer-oriented evaluations of goods and services (Schiefer, 1997). Berk and Berk (1993), who describe the historical developments in TQM, maintain that TQM is centred on the principles of customer focus, continuous improvement in all areas (processes) of an organisation, defect prevention rather than detection, and a recognition that responsibility for quality is shared by everyone in an organisation.

Implementation of TQM requires organisational commitment at all levels in a firm. Although external consultants (experts) may be involved, competent leadership and the involvement and empowerment of employees to develop and implement process improvements are vital to the success of TQM (Schiefer, 1997). According to Cartin, as cited by Schiefer (1997), the objective of TQM is to achieve "high quality processes" that satisfy customer requirements, use resources efficiently, minimise product variability, use key point quality measures to assess performance, and add value to an organisation's objectives.

A TQM approach may be as applicable on a commercial farm as for an agribusiness firm. Agricultural producers need to study every aspect of their production processes and apply the principles of TQM. This may well lead to a greater acceptance of their products by consumers and a reduction in production costs. Examples from agriculture where institutions are used to create incentives to improve the quality of products include: (1) the new recovery value system of payment to sugar farmers which aims at enhancing the quality of sugar-cane delivered to sugar mills; (2) payment to dairy farmers for quality milk based on butterfat content and low bacterial count, and (3) grading of products such as meat, vegetables and fruit. These incentives encourage managers to focus on improving production processes on farms. This will involve, for instance, the education and training of farm workers as the responsibility for quality is shared by everyone on the farm.

4.2 Restructuring (re-engineering) the business

Although the philosophy of TQM is being applied by an increasing number of firms, some business analysts have argued that the returns to organisations on their investments in TQM have been below expectations (Hammer & Champy, 1994 and Hansen, 1994). Business process re-engineering (restructuring) has been proposed as a radical approach to improving a firm's competitiveness. Hammer and Champy (1994:32) define it as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and

speed". By focusing on the requirements of customers, re-engineering ensures that processes are designed according to market requirements.

Re-engineering or restructuring is about radical change whereas TQM involves incremental adjustment. However, the two approaches are complementary. Hammer and Champy (1994) argue that, in practice, firms need to combine both process improvement and process re-engineering in an ongoing quality programme. Re-engineering initiatives may be appropriate for some processes and continuous improvement initiatives for others. Importantly, the risks involved in process re-engineering (improvement) are high (moderate), but so are the potential returns.

Many leading international firms have successfully restructured their businesses over recent years, some with spectacular results in terms of improved competitiveness. The trend has been for large firms to sell off non-core activities and to focus on their core competencies for improved product and service quality, and lower production costs. At the same time, the more "focused" firms have acquired other firms producing similar products and services, or have merged with them to take advantage of size economies. In South Africa, market deregulation has led several former co-operatives to establish private companies to unlock shareholder's value, streamline management structures, improve access to new technology and raise more capital. Several commercial farms have also restructured by forming companies in which farm workers have bought shares (equity-sharing schemes). This is expected to provide greater incentives for workers to improve productivity and has facilitated land redistribution.

To ensure continuous delivery of quality goods and services, business restructuring and TQM can be integrated into a "quality assurance system" which allows for the documentation, enforcement and control of quality standards. The ISO 9000 guidelines provide such a system (Johnson, 1993 and Schiefer, 1997). Some food safety standards are also compatible with the ISO standards. The role of ISO certification and food safety standards are discussed in the next two sections.

4.3 ISO certification

The adoption of generic quality standards developed by the Geneva-based International Organisation for Standardisation is becoming an accepted business practice world-wide and has been strongly endorsed by the European Union (Henson & Northen, 1997; Schiefer, 1997 and Zaibet & Bredahl, 1997). In 1987 the International Organisation for Standardisation published a series of quality assurance standards which were collectively known as ISO 9000. The ISO 9000,

which represents voluntary principles of good practice, is a series of five standards, ISO 9000 to 9004, "that detail internationally accepted procedures and guidelines to maintain quality in product design, production, installation and servicing" (Zaibet & Bredahl, 1997:375). ISO 9000 outlines quality management and quality assurance concepts which can be considered as guidelines for implementing ISO 9001 to ISO 9003. ISO 9001-3 list the certification requirements for quality systems of different comprehensiveness, decreasing from ISO 9001 to 9003. ISO 9004 deals with a series of guidelines on recommended quality actions which exceed the requirements of ISO 9001-3 (Schiefer, 1997). More details on ISO 9000 are provided by the International Organisation for Standardisation (www.iso.ch).

Turner and Ortmann (1999) surveyed a sample of 92 South African agribusiness firms and found that 36 percent of respondents had adopted ISO 9000. At the end of 1997, over 226000 certificates had been awarded in 129 countries world-wide; of these, South Africa held 1915 certificates (less than one percent) . Europe, the United Kingdom, Far East Countries and North America held 39, 25, 14 and 11 percent of these certifications respectively (Turner & Ortmann, 1999). The objective of the ISO 9000 series is to promote world-wide standards which will improve quality, operating productivity and efficiency, and reduce costs (Schuler *et al*, 1996). The increasing acceptance of the ISO 9000 quality standards and the growing recognition among managers of the importance of applying effective environmental management systems has led to the development of the ISO 14000 series of standards on environmental management (Jackson, 1997). This paper, however, will focus only on the benefits and costs of applying the ISO 9000 standards.

ISO certification, which is based on quality audits by registration bodies on a regular basis to remain valid, meets the requirements of widely-differing legal systems and provides some guarantee of access into export markets (Zaibet & Bredahl, 1997). Although these standards are voluntary principles of good practice, the British government, for example, has made certification a requirement for many government contracts, pushing food suppliers to adopt ISO standards as part of their quality system. In the Netherlands, ISO 9000 is perceived as a way of enhancing the competitiveness of Dutch companies in export markets and encouraging the development of high quality and niche-market food products (Henson & Northen, 1997).

Zaibet and Bredahl (1997) argue that certification by food firms in the UK has increased efficiency in that (1) production costs have decreased while product safety has increased (e.g. due to improved management, training and increased staff motivation), and (2) transaction costs associated with negotiating,

monitoring and enforcing contracts have fallen (see also Bredahl & Holleran, 1997). An increasing number of firms are adopting ISO certification due to the concern of losing their competitive position. Firms interviewed by Zaibet and Bredahl (1997) did not consider the cost of achieving ISO certification (varying between 0,07 to 1,5 percent of turnover) as a constraint (the main costs included staff training and acquisition of calibration equipment). In their study, Turner and Ortmann (1999) calculated the average costs of ISO 9000 certification for "small" firms (turnover < R100 million per year) as 0,301 percent of turnover (range: 0,027 - 1,024 percent; median: 0,157 percent) and for "large" firms (turnover > R650 million per year) as 0,045 percent of turnover (range: 0,011 - 0,140 percent; median: 0,019 percent). They suggest that the cost of certification may be prohibitive for very small firms which show the highest cost per Rand of turnover. Nevertheless, Zaibet and Bredahl (1997:383) maintain that "ISO certification is a necessary condition for suppliers to keep their market share or even to increase it as retailers are only interested in dealing with certified suppliers". This has important implications for agricultural producers, for instance, who wish to supply food processing firms, wholesalers or retailers with quality farm products. Turner and Ortmann (1999) found further that 58 percent of the respondent ISO 9000 certified firms had adopted the principles of TQM, 18 percent had considered and rejected TQM, an equal percentage was currently considering implementing TQM, while six percent had never come across the concept.

ISO 9000 and TQM are not equivalent, but ISO 9000 forms part of the quality management process. The ISO 9000 and TQM approaches have both similarities and differences. Management responsibility, corrective/preventive action and training are common objectives in both cases. However, ISO 9000 does not totally encompass the TQM principles of continuous quality improvement, customer focus and the training and empowerment of workers (Fowler & Lord, 1995; Yung, 1997). Unlike ISO 9000, TQM does not place sufficient emphasis on documentation (Yung, 1997). According to Schiefer (1997), to meet continuous quality improvement, a TQM programme has to be integrated into an organisational structure which allows for its documentation, enforcement and control. The ISO 9000 quality assurance standards can provide this necessary structure (Schiefer, 1997 and Schuler *et al*, 1996). Sadgrove (1995:107) added that "without ISO 9000, a TQM company often lacks a systematic approach to quality". Whilst TQM focuses on corporate culture, ISO 9000 looks at corporate systems (Sadgrove, 1995). The marketing advantages of ISO 9000 certification and its documentation procedures could enhance a TQM system. According to Yung (1997), the ISO technical committee are trying to revise the ISO 9000 series (Vision 2000) by incorporating some of the principles of TQM (i.e. customer focus, quality improvement, management commitment).

4.4 Food safety standards

Related to quality aspects of food production are concerns about food safety, a topic generating considerable debate. Major institutional forms of food safety regulation include public regulation (direct government intervention, e.g. in the form of food safety standards) and private regulation. The latter may take two forms: (1) market regulation, where food safety requirements are imposed on food companies by other, more dominant firms with which they trade, and (2) self-regulation, where food standards adopted voluntarily are set and enforced by an industry-level organisation, e.g. a trade association (Henson & Northen, 1997).

Public regulation is currently the predominant form of food safety regulation. One standard that is widely used by food companies in an attempt to ensure consumers' food safety requirements is the HACCP (Hazard Analysis Critical Control Point) system which was developed to prevent chemical, microbiological and physical hazards (Caswell & Hooker, 1996). Bredahl and Holleran (1997) report that greater food safety legislation is forcing food companies to adopt risk management tools, such as the HACCP principles. An effective HACCP system will identify key (critical) points along the processing chain where potential hazards are likely to occur, implement preventive measures to contain hazards and establish monitoring procedures (Caswell & Hooker, 1996 and Unnevehr & Jensen, 1996). Faced with sanitary and phytosanitary regulations (non-tariff barriers), food companies applying HACCP principles will be at a competitive advantage (Caswell & Hooker, 1996). By its nature, HACCP is compatible with ISO 9000 (Early & Shepherd, 1997). Although complying with ISO 9000 standards is not sufficient to ensure the safety of the final product, the quality management culture developed with ISO 9000 standards promises to generate corporate practices directed at preventing failures (Henson & Northen, 1997). The labelling of food products also provides additional information to the market.

4.5 Strategic partnerships (alliances)

In business a partnership can be defined as "a set of interdependent firms that work closely together to manage the flow of produce and services along the supply chain, in order to realise superior customer value at minimal costs (Wierenga, as cited by Ziggers, 1997:370). Strategic partnerships (alliances), which are formed between organisations that excel in specific areas, succeed only if they are mutually beneficial to all partners, trust is developed among them and contracts are honoured (Standard Bank, 2000). Whipple and Frankel (1999) argue that strategic alliances enable partnering firms to combine their individual

strengths while compensating for their internal resource scarcities without making the investment required for actual ownership.

In South African agriculture, strategic partnerships between farmers and other organisations (vertical co-ordination) are seen as crucial for farmers' financial survival and growth (Van Zyl, 2000). Although firms could vertically integrate their activities for reasons such as reducing transaction costs, including aspects of risk associated with transactions, many of the advantages of vertical integration can be gained, without incurring its associated costs (such as dissipation of resources, reduced flexibility and rigidity of organisational structures), through vertical co-ordination (Den Ouden *et al*, 1996; Ziggers, 1997). It allows firms to focus on core business (i.e. specialise) and to outsource other activities.

Porter (1998:340) argues that the best alliances are highly selective - they focus on particular activities and on obtaining a particular competitive benefit. He warns against broad alliances that cover many activities and markets because they tend to constrain an organisation's own development. "A firm cannot rely on a partner for assets crucial to its competitive advantage".

4.6 Relevance to commercial farms

An increasing number of agribusiness firms are adopting quality systems that conform to the requirements of the ISO 9000 standards (Schiefer, 1997 and Zaibet & Bredahl, 1997). Many farm businesses, however, have lagged behind agribusiness firms in applying quality programmes. An important reason may be that previous market controls in South Africa and other developed countries have kept farmers detached from consumers' needs and expectations. This is rapidly changing as agribusiness firms are increasingly dependent on markets demanding higher quality products and services. These firms, therefore, depend increasingly on raw material suppliers (agricultural producers) who need to fulfil certain minimum quality standards.

Research conducted by Schiefer and Helbig in 1995 among 350 agribusiness firms in Germany (cited by Schiefer, 1997) indicates that there is a need to integrate quality assurance systems at different levels in the production chain. Processing companies in meat and cereals considered the introduction of quality management systems (ISO 9000) on farms as important. For close links along the product chain to remain effective, and for participating firms to reduce transaction costs, the number of participating groups (suppliers) may have to be reduced. Individual farmers could compete for the business or they could, as a group, develop and maintain acceptable quality systems that would allow processing companies to consider a large group of farmers as, technically, a

single supplier (Schiefer, 1997). An overview of how to develop partnerships (vertical co-ordination) is provided by Ziggers (1997).

Farmers are faced with unique difficulties and challenges in applying quality programmes. This may be attributed to the nature of agricultural production. For example, changing weather conditions (droughts, floods, hail or extreme temperatures), pests and diseases may influence the yield and quality of products. Consumers are increasingly concerned about the treatment of animals on farms, the environmental impacts of using commercial fertilisers and chemicals, use of genetically-modified (GM) crops, and the working and living conditions of workers on farms. Diseases, such as BSE in beef cattle, and poor perceptions of GM products can have an adverse effect on the demand for such products owing to consumers' perceptions of unsafe food. Production flexibility may also be limited by specific structures on farms (asset specificity).

Nevertheless, farmers, being the first link in the food supply chain, have to be increasingly aware of changing consumer perceptions and demands regarding such aspects as food safety, quality, variety and farm production methods. The EU, for example, is aiming towards reducing the application of vaccines and medicinal products in animal production (Noordhuizen *et al*, 1997). Given these developments, farmers will in future have to focus more on disease prevention rather than cure (disease risk management). Noordhuizen *et al* (1997) maintain that the HACCP system can be successfully applied at the farm level and describe the sequential steps involved in applying the HACCP concept to animal health management. Adopting the HACCP system would help to control the production process, maintain or improve the health status of animals, and safeguard farms from the introduction of disease agents.

In addition to farmers selling their products to food processing companies with their quality requirements, an increasing trend in deregulated agricultural markets involves farmers selling their products (such as grains, vegetables and dairy products) directly to final consumers who have rising quality expectations. In South Africa, for example, deregulation of the milk industry led many dairy farmers to sell milk directly to the public, some with great success. Others have failed because they could not achieve or maintain the required product quality and service. Producers also face more competition from other farmers who operate in the same markets. This implies that farmers who foresee profitable opportunities in selling directly to consumers and who wish to improve their competitiveness, may have to adopt quality management programmes and/or may have to restructure their farm businesses in order to improve product quality and service, and reduce costs. The adoption of a voluntary quality assurance programme, such as ISO 9000, or applying food safety standards

embodied in the HACCP could be considered, for example. This may generate greater confidence among quality-conscious consumers in the value of the farm product(s). Clearly, the benefits and costs of adopting these standards will have to be considered.

With regard to improving quality management on farms, producers have to continuously evaluate their farm processes, i.e. the way they do things on the farm. For example, typical *operational processes* on a grain farm include land preparation, planting, fertilising, crop protection, harvesting and marketing (e.g. adding value, packaging, transport, after-sales service). Typical *management processes* include monitoring performance (crop growth, product quality, labour productivity), managing information (seeking and utilising relevant information), managing assets (land, machinery, cash flow), managing human resources (education, training, empowerment, conflict resolution), and planning and resource allocation. Process definition and degree of detail may change according to the objectives of the manager. Producers have to study each process in detail and consider the potential for improving a particular process or altering it completely so as to achieve their objectives (such as lower costs, improved timeliness and higher-quality products).

The management processes listed above may apply to any farm or organisation. Managers have to constantly seek ways to improve the monitoring of performance measures (e.g. yield, quality and productivity). Record-keeping and information management may be facilitated by using user-friendly computer software packages. Computer facilities enable records to be quickly analysed and external sources of information (via the Internet, for instance) to be considered as well. Clearly, other information sources (such as magazines, extension agents and private consultants) also play an important role in forming decisions. The challenge for managers is to find the optimum mix of various information sources for their organisations. Efficient planning and resource allocation, as well as effective asset and human resource management, also depend largely on the availability of the right type of information at the right time. For example, the introduction of new labour and water laws in South Africa has added a new dimension to farm labour and water management. Farmers need to be well informed about the implications of these laws for their businesses. Generally, the new labour laws have increased transaction and wage costs in employing labour, and many farmers, seeking to reduce these costs, have substituted machinery and contractors for labour (Newman & Ortmann, 1996). Therefore, the process of human resource management is being substantially revised in South Africa.

Many commercial farmers in South Africa are also restructuring their businesses in response to the increasingly competitive environment. Some examples include:

(1) equity-sharing schemes in the Western Cape where commercial farmers have established companies and workers have purchased shares in these companies. This is expected to act as an incentive for workers to increase productivity, and also helps to redistribute farmland if the workers are effectively involved in decision-making; and (2) many farmers are converting their beef farms to wildlife production systems geared towards accommodating the needs of hunters and tourists.

These are some examples of how farmers can, and do, adapt to the more competitive environment. Institutions such as TQM, ISO 9000, food safety measures (e.g. HACCP), strategic partnerships and restructuring of businesses can play a vital role in promoting firms' competitiveness and increase market share (e.g. equity-sharing increases labour productivity and product prices for empowerment labels). Implementation can however be complex, particularly in large organisations, due to the need for administrative support systems, appropriate staff incentives, etc.

5. PROMOTING COMPETITIVENESS OF SMALL-SCALE FARMS

The role of institutions in the development of small-scale farms in Africa has been well documented (e.g. Atwood, 1990; Ault & Rutman, 1979; Baber & Nieuwoudt, 1992; Barrows & Roth, 1990; Coldham, 1979; Feder & Noronha, 1987; Fenwick & Lyne, 1999; Kille & Lyne, 1993; Kirsten *et al*, 1998; Lyne 1991, 1996; Lyne & Nieuwoudt, 1990; Lyne *et al*, 1996; Migot-Adholla *et al*, 1991; Moor & Nieuwoudt, 1995; Place & Hazell, 1993; Thomson, 1996 and Van Zyl *et al*, 1996). The efficient use of land and improving the livelihood of small-scale farmers has been the focus of this research. Institutions such as land markets create incentives to invest by allowing the decision-maker to face the opportunity cost of his actions.

Land reform is an emotive issue in Africa, as has been evidenced by recent commercial farm invasions in Zimbabwe. The redistribution of farmland in South Africa is high on the government's agenda, and it is generally accepted that it is necessary for political stability and hence economic growth. Much research has been conducted in South Africa over the last decade on the role that institutions can play in redistributing land and improving the viability of small-scale farms.

The next section provides an overview of attempts by researchers to develop institutions designed to promote productivity and economic growth in communal land areas in South Africa. This will be followed by an analysis of institutions required to help promote the settlement of commercial farmers on redistributed commercial farmland.

5.1 Promoting productivity on communal land

A common feature of African indigenous agriculture is that an individual is entitled to an allotted parcel of land as long as it is being used (Feder & Noronha, 1987). In the communal areas of KwaZulu-Natal, a tribal authority assigns land-use rights to the household head in accordance with traditional laws and customs. Typically, the household has exclusive use rights to cultivated land during the summer cropping months (after which this land becomes communal grazing) and communal rights to grazing land (Thomson & Lyne, 1995). Arable land not under cultivation becomes communal grazing. The operation of a sale market for agricultural land in the communal areas is not allowed under customary law.

Limited property rights do not guarantee that individuals can fully internalise benefit streams or transact land to their advantage. Place *et al* (1994) argue that tenure security comprises three components, namely breadth, duration and assurance of property rights. Breadth of rights includes the rights of an individual to use, transfer and exclude others from the land. Duration is the length of time for which a given set of rights is legally valid, and assurance implies that rights are held with varying degrees of certainty in the present and future. Tenure is not secure if any of these conditions are lacking. Under customary law the breadth of rights is often limited and some of these rights may be difficult to enforce. Furthermore, individuals seldom enjoy fully exclusive rights to arable land, which is limited to the summer growing season. Tenure security in communal areas is therefore constrained by inadequate breadth or duration of property rights to arable land (Thomson, 1996).

In theory, land titling, as an institutional innovation, is expected to increase tenure security, promote investment and allow the emergence of a land market (Barrows & Roth, 1990). However, attempts in Africa to replace customary tenure with title deeds have not been very successful (Atwood, 1990; Coldham, 1979; Migot-Adholla *et al*, 1991; Platteau, 1995 and Place & Hazell, 1993). Empirical evidence from several African studies shows that titling can increase uncertainty and conflict over land rights, and that use of formal credit, investment and productivity in agriculture did not increase when title deeds replaced customary tenure (Atwood, 1990; Migot-Adholla *et al*, 1991; Place & Hazell, 1993). Title deeds only give collateral value to land when they assist market transfers (Fenwick & Lyne, 1999). Evidence from Kenya suggests that titling did not activate the land market (Platteau, 1995), and Migot-Adholla *et al* (1991) argue that the credit and investment objectives of registration have been nullified.

Promoting land rental markets may be a strategy to improve efficiency and

equity in small-scale agriculture. Efficiency involves the neo-classical conditions of secure tenure and low transaction costs (Nieuwoudt, 1990). Transaction costs must be low relative to rental income. High transaction costs could shift the potential lessee's offer to a level where it no longer exceeds the reservation price of the lessor (Atwood, 1990). Conversely, insecure property rights could raise the lessor's reservation price above the lessee's offer price, as a risk premium is incorporated into the reservation price. Many households perceive renting to be risky as they believe they could lose their land permanently (Lyne *et al*, 1996). Risk increases transaction costs and, as a consequence, the land rental market is constrained. If the land market is efficient (competitive), then land will transfer to its most efficient use, i.e. rents are maximised. The presence of an active rental market is therefore a good indicator of tenure security and allocative efficiency, both of which promote agricultural productivity.

A land rental market has equity advantages. Provided that transactions are voluntary, removing constraints to renting will create positive opportunities for many rural households (Lyne *et al*, 1996). Landholders who are unwilling or unable to use all their land could gain additional income by renting out their unused land, while households dependant on agriculture but short of land would be able to expand their farming activities. Lyne *et al* (1996) point out that, although a land sale market would enable consolidation of farmland, poorer households may be forced into distress sales and urban poverty. The consequences of this would be severe for households where social security is weak and expected off-farm income low (land offers social security against illness, unemployment and old age). A rental market avoids the problem of a landless class as transfers are temporary and do not interfere with households' residential rights.

To promote a land rental market in the communal areas of South Africa, transaction costs or perceived risks will have to be eliminated or reduced (Thomson, 1996). For example, pro forma rental contracts between households could be endorsed by the local tribal authority and held by an independent arbitrator. The contracts must also be enforceable, and by setting legal precedents that uphold contracts, tenure security is reinforced. These legal precedents, as well as dispute procedures, should be advertised. Maintaining a register that advertises names of willing lessors and lessees may further reduce private transaction costs (Thomson, 1996). Since government bears transaction costs in the formal land market (deeds registry, title deeds, etc.), it could also bear the costs of maintaining a register in the communal areas. Tribal authorities may be encouraged to support rental transactions if they were allowed to tax part of the rental income. The tax could be used to fund local infrastructure which would provide an opportunity for the tribal authority to consolidate their support in the

community (Thomson & Lyne, 1991).

If farmers perceive that their tenure on the land they operate is secure, they have an incentive to invest in land improvements and maintain existing land improvements, which increase land productivity (Blarel, as cited by Thomson, 1996). When land ownership is insecure, land is not considered as reliable collateral by lenders because it is difficult to foreclose and dispose of the land (Feder and Onchan, 1987). Results from several countries confirm that access to credit, particularly institutional credit, improves with tenure security, even if land cannot be sold (Feder & Onchan, 1987; Migot-Adholla *et al*, 1991; Kuhn *et al*, 1997 and Fenwick & Lyne, 1999). With better access to credit, farmers can alleviate liquidity constraints and make investments in land improvements and technology which lead to higher land productivity.

It can be expected that the level of investment in land would usually be lower on rented land than on owner-operated land due to moral hazard and transaction costs (Kille & Lyne, 1993). However, there may still be strong incentives to invest in land when rental contracts are enforceable because the rental stream, and thus the value of land, increases with its expected productivity arising from conserving and improving the land. This incentive shifts from the lessor to the lessee as the term of the rental contract lengthens (Kille & Lyne, 1993). Importantly, an active rental market allows households to alter the scale of farming and take advantage of economies of size by spreading fixed costs, such as lumpy management, transaction and information costs, over greater volumes of output. Empirical evidence from the communal areas of KwaZulu-Natal suggest that both adoption of farm technology and production of surpluses are positively related with farm size and the renting of land (Nieuwoudt & Vink, 1989 and Thomson & Lyne, 1991). Thomson's (1996) research supports the view that a more active rental market for arable land would promote allocative efficiency by transferring land to those households best able to use it. In other words, use rights would transfer to farmers with greater skills, capital or family labour, leading to better resource allocation and greater productivity (Baber & Nieuwoudt, 1992).

An important question often asked is, are small-scale, emerging farmers able to compete with large-scale commercial farmers? Real product prices tend to decrease over time because technology change increases supply relatively more than what real increases in income and/or population increase demand. This puts pressure on farms to expand their operations so that they can spread their fixed costs over greater volumes of output, thereby reducing unit costs. Evidence in agriculture clearly shows that where land markets exist farm sizes tend to increase over time. Although it may be argued that small-scale farmers are faced

with low fixed costs relative to total costs and the pressure on them to expand is not that great, they nevertheless are faced with fixed management, transaction and information costs. A rational producer would like to spread these costs over a greater volume of output by renting in more land, thereby reducing unit costs and promoting competitiveness.

Clearly, solutions must be found to the land question in South Africa. The challenge is how land can be equitably distributed so that the emerging farmers use the land productively and are able to compete on a sustainable basis. The next section considers financing options for the successful settling of emerging commercial farmers on redistributed land.

5.2 Promoting emerging commercial farmers

Although land redistribution is essential for political stability and hence economic growth in South Africa, "it is important to ensure that the efficient use of commercial farmland and other agricultural resources is not compromised in the long-term" (Lyne *et al,* 2000). According to Lyne *et al* (2000), land reformists in South Africa had accepted the principle of market-based land redistribution prior to the first democratic election in 1994. The important question was how the future government could help previously disadvantaged people gain access to the land market, e.g. by offering cash grants or subsidising loans buyers would use to finance land and equity in commercial farms (Lyne *et al*, 2000 and Nieuwoudt & Vink, 1995). Hence, the challenge for government was how to finance land redistribution on a willing buyer - willing seller basis so that a large number of historically disadvantaged people would benefit but, at the same time, maintaining a strong commercial orientation on the new properties (Lyne *et al,* 2000).

Various institutions have evolved over the last few years to help finance land redistribution in South Africa. Since 1995 government has used settlement and land acquisition grants in terms of which historically disadvantaged South Africans who are landless and poor may qualify for a cash grant (originally R15000 per household) to purchase and develop farmland. Because these grants are relatively small and current legislation restricts the subdivision of farmland (Subdivision of Agricultural Land Act, 70 of 1970) , beneficiary households have to pool their grants to purchase land from a willing seller. Based on research evidence, Lyne *et al* (2000) argue that these groups, represented by trusts or communal property associations, "were often too large to negotiate sound constitutions to manage communal resources or to assign exclusive rights to individual beneficiaries. Free-rider problems threaten to convert these farms into open access resources leading to environmental degradation and continued

poverty".

Research conducted by Graham (2000) in KwaZulu-Natal clearly shows that private purchases of farmland (i.e. transactions financed without government grants) redistributed much more land wealth than government assisted transactions (via cash grants) in 1997 and 1998. Lyne *et al* (2000) also present data showing that insecure land tenure under government-assisted projects has negatively affected beneficiaries' ability and incentive to finance seasonal inputs and land improvements. Perhaps due to this poor performance, government policy has now shifted in favour of creditworthy land reform projects such as making cash grants available to farm workers to finance equity in established commercial farms. These equity-sharing schemes, initiated by commercial farmers in the Western Cape, are company operations in which financial equity is shared between the previous land owner and his farm workers. They have promoted land redistribution and wealth while improving agricultural performance, and the companies have successfully attracted additional finance from commercial banks and venture capitalists (Eckert *et al,* 1996 and Lyne *et al,* 2000).

To facilitate the financing of farmland by the private sector and ease cash flow problems for loan beneficiaries over the first few years of loan repayment, Nieuwoudt and Vink (1995) suggested an interest rate subsidy on mortgage loans that diminishes at the rate of inflation over time. Cash flow problems are experienced initially because the average annual return on farmland is only around five percent of its market value whereas interest on loan repayments during periods of high inflation is much higher. Nieuwoudt and Vink (1995) demonstrated that with an annual inflation rate of 12 percent and the loan beneficiary paying an affordable five percent on the full purchase price of the land, the interest rate subsidy will phase out after 11 years. Lyne *et al* (2000) point out that this approach has been used by the private sector and Ithala Bank, which has facilitated private farmland transactions since 1996 (e.g. in the sugar industry). Although Ithala's approach has been criticised as elitist, it has attracted support from various sugar estate owners and has financed 90 medium-scale farms with a combined market value of almost R80 million in 1997 and 1998. Early indications are that the majority of these farmers are meeting their loan obligations and maintaining high yields (Lyne *et al,* 2000).

At the end of May 1999, the Land Reform Credit Facility (LRCF) was launched by the Department of Land Affairs (DLA) "with the aim of drawing private sector finance and human capital into commercially viable land reform projects. ... The Facility offers loans with deferred or graduated repayment schedules to reputable banks and venture capital investors who finance, on similar terms, equity-share

projects and land purchased by aspiring farmers" (Lyne *et al,* 2000). The DLA had ruled out any subsidies or loan guarantees so that the idea of using public and donor-sponsored funds to pay for a finite, diminishing interest subsidy could not be implemented by the LRCF. At present the LRCF is administered by one full-time manager whose main task is to approve loan applications submitted by accredited financial institutions according to land reform criteria established by the DLA.

Just eight months after its inception, the LRCF had already approved four loans totalling R14,6 million, the loan terms ranging from seven to 20 years and the deferment periods from two to six years. Three of the loans were approved to finance two equity-sharing schemes while the fourth loan will finance eight mortgage loans made to individual farmers, each acquiring about 100 hectares of established sugarcane land (Lyne *et al,* 2000). Lyne *et al* (2000) attribute the positive response by financial intermediaries to the LRCF loan product to two possible factors, namely (1) the improved risk profile of the end clients by alleviating cash flow problems that often render potentially profitable land reform projects infeasible, and (2) the wholesale interest rate charged by the LRCF (currently fixed at between one and three percentage points below the three-month Bankers' Acceptance rate) implicitly subsidises the cost of capital to financial intermediaries.

A Commercial Farmer Programme has been proposed by the Ministry for Agriculture and Land Affairs (2000) to assist in establishing commercial black farmers. Under this Programme, previously disadvantaged people have access to grants ranging from R20000 to R100000 to acquire agricultural land. Grants in excess of R20000 depend on the level of the beneficiary's own contribution in cash and debt finance. To date, there has been no evidence that this Programme has been implemented.

The above discussion highlights the developments in the financing of land redistribution in South Africa. It would appear that private financial intermediaries are taking on a more active role in this regard, which is to be welcomed. It is imperative that land redistribution, whether in terms of equity-sharing schemes or to individuals, should encourage the efficient use of commercial farmland and other agricultural resources so that these farmers can also compete successfully in local and international markets. To accomplish this, successful financing models must be complemented with effective extension, education, information and infrastructural (physical, such as roads, and legal) support for emerging farmers, and a secondary land market must be encouraged so that better farmers can expand, even at the expense of disadvantaged farmers who do not perform. By subsidising transaction and information costs, small-

scale farmers are better able to compete with larger farmers as size economies become less pronounced (Lyne & Ortmann, 1996). This applies also to farmers who may eventually be settled on government trust land.

Strong economic growth may ease the economic and political pressure on agricultural land in South Africa by attracting more people into industry. However, to encourage a more labour-intensive industrial sector, the government may have to further ease the very restrictive labour laws, which have increased wage and transaction costs and have encouraged firms to switch to more capital-intensive production. The urban-rural link and the availability of urban land becomes critical and needs further investigation. It may be cheaper for government to create well-serviced land sites in urban areas on which migrators can settle than the attempt to redistribute agricultural land where the parcels of land may be too small to be economically viable. For a rural area (farm) to be competitive, it must be able to provide returns to resources comparable with, or better than, those of other areas (farms) (Sarris, 1995). Rural land reforms are essential to re-establish the entire property rights structure. If ownership is seen to be unfair, uncertainty and conflict will worsen. Government should focus its scarce resources on providing physical and legal infrastructure (including secure property rights and contract enforcement) to reduce transaction costs so that markets work and firms and farmers can enter those markets.

6. CONCLUSIONS

Increasing competition in local and international markets has focused managers' attention on strategies (institutions) aimed at improving their firms' competitiveness. Commercial agriculture and agribusiness are endogenously establishing institutions (such as food safety standards and strategic partnerships) or adopting existing private and public institutions (e.g. TQM, ISO 9000 and HACCP) to add value to products and services, reduce costs and gain access to export markets. Government has a critical role to play in creating a business climate that is conducive to investment and in which business can prosper. This is achieved, for instance, by securing property rights, enforcing the rule of law through an effective judicial system, reducing crime, promoting education and training, and improving physical infrastructure. Good governance promotes "good" institutions which facilitate the efficient functioning of markets by reducing transaction costs, including risk and uncertainty, and by providing relevant information to consumers and firms.

Restructuring of firms and reengineering business processes is a response to the rapidly changing competitive environment. Restructuring may be complemented with quality programmes, such as TQM, and quality assurance standards, such as

ISO 9000. Outsourcing non-core activities enables firms to focus their efforts on what they do best. Strategic partnerships with other organisations may promote firm (farm) competitiveness if such alliances are mutually beneficial. Such alliances should be very selective, focusing on particular activities, and involve non-core activities.

Agricultural market deregulation in South Africa has led several former co-operatives to establish private companies to unlock shareholder's value, streamline management structures, improve access to new technology and raise more capital. Some commercial farmers have restructured their businesses by establishing equity-sharing schemes in which workers acquire shares in the farm business. This is expected to serve as an incentive for workers to improve farm productivity and competitiveness, and can be considered as a land reform initiative if the workers are also involved in decision-making.

In South Africa, a major challenge for institutions in general, and agricultural economists in particular, is to help promote the productive use of land in communal areas and the settlement and competitiveness of emerging farmers on redistributed commercial farmland. Since attempts in Africa to replace customary tenure with title deeds have not been very successful, promoting land rental markets may be a strategy to improve efficiency and equity in small-scale agriculture. Efficiency depends on secure tenure and low transaction costs relative to rental income. If the land rental market is efficient (competitive), then land will transfer to its most efficient use (rents are maximised) and agricultural performance is promoted. An efficient land rental market can also promote equity in that landholders who are unwilling or unable to use all their land could gain extra income by renting out their unused land while households who wish to farm would be able to expand their farming operations.

Redistributing commercial farmland to previously disadvantaged people in South Africa is essential for political stability and hence economic growth. However, the efficient use of commercial farmland and other agricultural resources should not be compromised in the long-term. The principle of market-based land redistribution has been established, and a major challenge for government and other institutions is how to finance land redistribution on a willing buyer - willing seller basis. Various institutions have evolved over the last few years to help finance land purchases. To date, the government land acquisition grant, for example, has generally not been successful in establishing commercial farmers. Government policy has now shifted in favour of creditworthy land reform projects such as making larger cash grants available to emerging farmers and farm workers to finance land or equity (shares) in established commercial farming operations.

Although several financing strategies have been proposed by economists, such as an interest rate subsidy on mortgage loans that diminishes at the rate of inflation over time, the Land Reform Credit Facility (LRCF) has been relatively successful in extending loans to commercially-viable land reform projects, such as equity-sharing schemes and land purchase by aspiring farmers. The LRCF offers loans with deferred or graduated repayment schedules to reputable banks and venture capital investors who finance, on similar terms, these land reform projects. This facility helps alleviate cash flow problems of borrowers, particularly in the initial years of operation. The fact that commercial banks and other private financial intermediaries are taking a more active role in financing land reform projects is to be welcomed and should be further encouraged. They have the expertise to manage the financing process efficiently. However, successful financing models must be complemented with effective extension, education, information and infrastructural support for emerging farmers. By subsidising transaction and information costs, small-scale farmers are better able to compete with larger farmers as size economies become less pronounced.

Clearly, institutions that facilitate the functioning of markets have been more successful in promoting competitiveness than those that rely on central direction (e.g. LRCF versus government land reform projects, and deregulated markets versus control boards). The success of institutions may be explained in terms of how market efficiency is improved; for example, in terms of the following criteria: creation of well-defined, enforceable and transferable property rights (in land reform); creation of a system by which interested parties can negotiate a solution (land reform, LRCF); reducing missing information in the market (HACCP, ISO 9000); and lowering transaction costs (vertical co-ordination). Government can provide institutional support that will promote efficiency, such as an effective judicial system, upholding property rights and the rule of law, and liberalising the market. Given the incentive structures provided by the market, the private sector will continue to develop and adopt voluntary institutions that will promote competitiveness.

Agricultural economists in South Africa have made valuable contributions in terms of promoting productivity and competitiveness in commercial and developing agriculture. However, globalisation and increasing competition pose considerable challenges for agricultural economists to keep abreast of the changes and upgrade their skills continuously so that they can provide clients with a superior service and be successful managers of firms. AEASA is playing an important role in capacity-building through its annual conference, various workshops offered at national and regional level aimed at upgrading skills, and communicating via *Agrekon*, the AEASA Newsletter and the AEASA Website.

Further potential roles of AEASA are discussed in detail by Oosthuizen (1999). A major challenge for agricultural economists in South Africa is to develop business and finance models for commercial and emerging farmers, and for agribusiness firms, promote strategic thinking and entrepreneurship, and provide objective information. Agricultural economists also need to focus even more on finding sustainable solutions to the land question in South Africa. They can be catalysts to government, commercial farmers, emerging farmers, NGO's, the private sector and other institutions in this regard.

REFERENCES

AHEARN, M., CULVER, D. & SCHONEY, R. (1990). Usefulness and limitations of COP estimates for evaluating international competitiveness: A comparison of Canadian and U.S. wheat. *American Journal of Agricultural Economics*, 72(5):1283-1291.

ATWOOD, D.A. (1990). Land registration in Africa: The impact on agricultural production. *World Development*, 18(5):659-671.

AULT, D.E. & RUTMAN, G.L. (1979). The development of individual rights to property in tribal Africa. *Journal of Law and Economics*, 22(1):163-182.

BABER, R.A.A. & NIEUWOUDT, W.L. (1992). Economic incentives in the subsistence areas of South Africa and the need for reform. *Development Southern Africa*, 9(2):153-168.

BARROWS, R.L. & ROTH, M. (1990). Land tenure and investment in African agriculture: Theory and evidence. *The Journal of Modern African Studies*, 28(2):265-297.

BEGHIN, J.C. & FAFCHAMPS, M. (1995). Constitutions, institutions and the political economy of farm policies: what empirical content? In Peters, G.H. & Hedley, D.D. (eds.), *Agricultural Competitiveness: Market Forces and Policy Choice*. Proceedings of the 22nd International Conference of Agricultural Economists, Harare, Zimbabwe. Dartmouth Publishing Company, UK:287-295.

BENNET, J. (2000). SA's unfulfilled potential. *Sunday Times Business Times*, July 9, 2000:6.

BERK, J. & BERK, S. (1993). *Total Quality Management: Implementing Continuous Improvement*. Sterling Publishing Company, New York, USA.

BREDAHL, M.E., ABBOT, P.C. & REED, M.R. (eds.) (1994). *Competitiveness in International Food Markets*. Westview Press, Boulder, USA.

BREDAHL, M.E. & HOLLERAN, E. (1997). Food safety, transaction costs and institutional innovation. In: Schiefer, G. and Helbig, R. (eds.), *Quality Management and Process Improvement for Competitive Advantage In Agriculture and Food*. Proceedings of the 49th Seminar of the European Association of Agricultural Economists, University of Bonn (ILB), Germany:51-67.

CASWELL, J.A. & HOOKER, N.H. (1996). HACCP as an international trade standard. *American Journal of Agricultural Economics*, 78(3):775-779.

COASE, R. (1998). The new institutional economics. *The American Economic Review*, 88(2):72-74.

COLDHAM, S.F.R. (1979). Land tenure reform in Kenya: The limits of the law. *Journal of Modern African Studies*, 17(4):615-627.

COOK, M.L. & BREDAHL, M.E. (1991). Agribusiness competitiveness in the 1990s: Discussion. *American Journal of Agricultural Economics*, 73(5):1472-1473.

DELGADO, C. (1997). The role of smallholder income generation from agriculture in sub-Saharan Africa. In Haddad, L., *Achieving Food Security in Southern Africa: New Challenges, New Opportunities*. IFPRI, Washington DC, USA.

DEN OUDEN, M., DIJKHUIZEN, A.A., HUIRNE, R.B.M. & ZUURBIER, P.J.P. (1996). Vertical Cupertino in agricultural production - marketing chains, with special reference to product differentiation in pork. *Agribusiness: An International Journal*, 12(3):277-290.

DUNCAN, A.(1999). Throwing light on cats in the dark: Agricultural economists. *Agrekon*, 38(4):437-476.

EARLY, R. & SHEPHERD, D. (1997). A holistic approach to quality with safety in the food chain. In: Schiefer, G. and Helbig, R. (eds.), *Quality Management and Process Improvement for Competitive Advantage In Agriculture and Food*. Proceedings of the 49th Seminar of the European Association of Agricultural Economists, University of Bonn (ILB), Germany:391-400.

ECKERT, J.B., HAMMAN, J.N. & LOMBARD, J.P. (1996). Perceiving the future: Empowering farm workers through equity sharing. *Development Southern Africa*, 13(5):693-712.

FAFCHAMPS, M., DE JANVRY, A. & SADOULET. E. (1995). Transaction costs, market failures, competitiveness and the state. In Peters, G.H. & Hedley, D.D. (eds.), *Agricultural Competitiveness: Market Forces and Policy Choice*. Proceedings of the 22nd International Conference of Agricultural Economists, Harare, Zimbabwe. Dartmouth Publishing Company, UK:343-354.

FEDER, G. & NORONHA, R. (1987). Land rights system and agricultural development in sub-Saharan Africa. *World Bank Research Observer*, 2(2):143-169.

FEDER, G. & ONCHAN, T. (1987). Land ownership security and farm investment in Thailand. *American Journal of Agricultural Economics*, 69(2):311-320.

FENWICK, L.J. & LYNE, M.C. (1999). The relative importance of liquidity and other constraints inhibiting the growth of small-scale farming in KwaZulu-Natal. *Development Southern Africa*, 16(1):141-155.

FOWLER, C. & LORD, B. (1995). ISO and TQM. *Chartered Accountants Journal of New Zealand*, 74(10):33-38.

GERRARD, C.D. (2000). Ten institutionalist perspectives on agriculture and rural development: A conceptual framework for policy makers, managers, and analysts. Paper presented at the XXIV International Conference of Agricultural Economists, Berlin, August 2000.

GRAHAM, A.W. (2000). Land redistribution in KwaZulu-Natal: An analysis of farmland transactions recorded in 1997 and 1998. Unpublished MSc Agric thesis, Agricultural Economics, School of Agricultural Sciences & Agribusiness, University of Natal, Pietermaritzburg.

GROENEWALD, J.A. (1996). Transformation: The challenge to commercial agriculture. *Agrekon*, 35(4):180-187.

HAMMER, M. & CHAMPY, J. (1994). *Reengineering the Corporation: A Manifesto for Business Revolution*. HarperCollins Publishers, New York, USA.

HANSEN, G.A. (1994). *Automating Business Process Reengineering: Breaking the TQM Barrier*. Prentice-Hall, New Jersey, USA.

HARLING, K.F. (1995). Differing perspectives on agribusiness management. *Agribusiness: An International Journal*, 11(6):501-511.

HENSON, S. & NORTHEN, J. (1997). Public and private regulation of food safety: The case of the UK fresh meat sector. In: Schiefer, G. and Helbig, R. (eds.), *Quality Management and Process Improvement for Competitive Advantage In Agriculture and Food*. Proceedings of the 49th Seminar of the European Association of Agricultural Economists, University of Bonn (ILB), Germany:85-101.

INTERNATIONAL ORGANISATION FOR STANDARDISATION. Online information: http://www.iso.ch.

JACKSON, S.L. (1997). *The ISO 14001 Implementation Guide: Creating an Integrated Management System*. John Wiley & Sons, New York, USA.

JOHNSON, P.L. (1993). *ISO 9000: Meeting the New International Standards*. McGraw-Hill, New York, USA.

KALAITZANDONAKES, N.G. (1994). Price protection and productivity growth. *American Journal of Agricultural Economics*, 76(4):722-732.

KENNEDY, P.L., HARRISON, R.W., KALAITZANDONAKES, N.G., PETERSON, H.C. & RINDFUSS, R.P. (1997). Perspectives on evaluating competitiveness in agribusiness industries. *Agribusiness: An International Journal*, 13(4):385-392.

KILLE, G.S. & LYNE, M.C. (1993). Investment on freehold and trust farms: Theory with some evidence from KwaZulu. *Agrekon*, 32(3):101-109.

KIRSTEN, J., VAN ZYL, J. & VINK, N. (1998). *The Agricultural Democratisation of South Africa*. Francolin Publishers (Pty) Ltd, Cape Town.

KUHN, M.E., DARROCH, M.A.G & ORTMANN, G.F. (1997). Efficacy of collateral types used by financial intermediaries in KwaZulu-Natal. *Agrekon*, 36(4):637-647.

LYNE, M.C. (1991). Land reform in the tribal areas of South Africa. *Agrekon*, 30(4):295-297.

LYNE, M.C. (1996). Transforming developing agriculture: Establishing a basis for growth. *Agrekon*, 35(4):188-192.

LYNE, M.C. & NIEUWOUDT, W.L. (1990). The real tragedy of the commons: Livestock production in KwaZulu. *South African Journal of Economics*, 58(1):88-96.

LYNE, M.C. & ORTMANN, G.F. (1996). Estimating the potential for creating

additional livelihoods on commercial farmland in KwaZulu-Natal. In Lipton, M., Ellis F. & Lipton, M. (eds.), *Land, Labour and Livelihoods in Rural South Africa: Volume 2: KwaZulu-Natal and Northern Province*. Indicator Press, University of Natal, Durban.

LYNE, M.C., THOMSON, D.N. & ORTMANN, G.F. (1996). Institutional change to promote land rental markets in the developing regions of Southern Africa. *Agrekon*, 35(1):12-19.

LYNE, M., ZILLE, P. & GRAHAM, D. (2000). Financing the market-based redistribution of land to disadvantaged farmers and farm workers in South Africa: Recent performance of the Land Reform Credit Facility. Unpublished paper, Agricultural Economics, School of Agricultural Sciences & Agribusiness, University of Natal, Pietermaritzburg.

MACLAREN, D. (1995). The Uruguay Round Agreement on agriculture: A new world order for agricultural trade? *Review of Marketing and Agricultural Economics*, 63(1):51-63.

MIGOT-ADHOLLA, S., HAZELL, P., BLAREL, B. & PLACE, F. (1991). Indigenous land rights systems in sub-Saharan Africa: A constraint on productivity? *The World Bank Economic Review*, 5:155-175.

MINISTRY FOR AGRICULTURE AND LAND AFFAIRS. (2000). Integrated Programme of Land Redistribution and Agricultural Development in South Africa. Final draft document (version 1), Pretoria.

MOOR, G.M. & NIEUWOUDT, W.L. (1995). The interaction between land tenure security and agricultural productivity in Zimbabwe. *Agrekon*, 34(4):288-292.

NEWMAN, R.A. & ORTMANN, G.F. (1996). Machinery and labour contracting among commercial farmers in KwaZulu-Natal. *South African Journal of Economic and Management Sciences*, 20 (Summer 1996):85-97.

NIEUWOUDT, W.L. (1990). Efficiency of land use. *Agrekon*, 29(4):210-215.
NIEUWOUDT, W.L. & VINK, N. (1989). The effects of increased earnings from traditional agriculture in Southern Africa. *South African Journal of Economics*, 57(3):257-269.

NIEUWOUDT, W.L. & VINK, N. (1995). Financing of land purchase by small-scale farmers. *Development Southern Africa*, 12(4):509-517.

NOORDHUIZEN, J.P.T.M., FRANKENA, K. & WELPELO, H.J. (1997). Applying HACCP principles to animal health care at farm level. In: Schiefer, G. and Helbig, R. (eds.), *Quality Management and Process Improvement for Competitive Advantage In Agriculture and Food*. Proceedings of the 49th Seminar of the European Association of Agricultural Economists, University of Bonn (ILB), Germany:105-114.

NORTH, D. (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, New York, USA.

OOSTHUIZEN, L.K. (1999). Agricultural economics, farm management and agribusiness: combining strengths and stretching the frontiers in Africa. *Agrekon*, 38(4):401-436.

PETERS, G.H. & HEDLEY, D.D. (eds.). (1995). *Agricultural Competitiveness: Market Forces and Policy Choice*. Proceedings of the 22nd International Conference of Agricultural Economists, Harare, Zimbabwe. Dartmouth Publishing Company, UK.

PETIT, M. & GNAEGY, S. (1995). Agricultural competitiveness and global trade: looking at the future of agriculture through a crystal ball. In Peters, G.H. & Hedley, D.D. (eds.), *Agricultural Competitiveness: Market Forces and Policy Choice*. Proceedings of the 22nd International Conference of Agricultural Economists, Harare, Zimbabwe. Dartmouth Publishing Company, UK:45-60.

PLACE, F. & HAZELL, P. (1993). Productivity effects of indigenous land tenure systems in sub-Saharan Africa. *American Journal of American Agricultural Economics*, 75(1):10-19.

PLACE, F., ROTH, M. & HAZELL, P. (1994). Land tenure security and agricultural performances in Africa: Overview of research methodology. In Bruce, J.W. & Migot-Adholla, S.E. (eds.), *Searching for Land Tenure Security in Africa*. Kendall/Hunt, Iowa, USA.

PLATTEAU, J-P. (1995). *The Evolutionary Theory of Land Rights as Applied to Sub-Saharan Africa: A Critical Assessment*. University of Notre-Dame Press, USA.

PORTER, M. (1990). *The Competitive Advantage of Nations*. The Free Press, New York, USA.

PORTER, M. (1998). *On Competition*. A Harvard Business Review Book, Harvard University, USA.

RUNGE, C.F. (1984). Strategic interdependence in models of property rights. *American Journal of Agricultural Economics*, 66(5):807-813.

SADGROVE, K. (1995). *Making TQM Work*. Kogan Page Ltd, London, UK.

SARRIS, A. H. (1995). Is there a need for governmental interference to improve the competitiveness of rural areas? In Peters, G.H. & Hedley, D.D. (eds.), *Agricultural Competitiveness: Market Forces and Policy Choice*. Proceedings of the 22nd International Conference of Agricultural Economists, Harare, Zimbabwe. Dartmouth Publishing Company, UK:327-342.

SCHIEFER, G. (1997). Total Quality Management and quality assurance in agriculture and food. In: Schiefer, G. and Helbig, R. (eds.), *Quality Management and Process Improvement for Competitive Advantage In Agriculture and Food*. Proceedings of the 49th Seminar of the European Association of Agricultural Economists, University of Bonn (ILB), Germany:139-156.

SCHULER, C., DUNLAP, J. & SCHULER, K. (1996). *ISO 9000: Manufacturing, Software, and Service*. Delmar Publishers, New York, USA.

SHARPLES, J.A. (1990). Cost of production and productivity in analysing trade and competitiveness. *American Journal of Agricultural Economics*, 72(5):1278-1282.

SPIES, P.H. (1999). The impact of global trends on the competitiveness of South African agriculture. *Agrekon*, 38(4):477-486.

STANDARD BANK (2000). Alliances vital to farm viability. *AgriReview*, May 2000:1-2.

STREETER, D.H., SONKA, S.T. & HUDSON, M.A. (1991). Information technology, co-ordination, and competitiveness in the food and agribusiness sector. *American Journal of Agricultural Economics*, 73(5):1465-1471.

SWART, P.J.A. (1996). South African agriculture in the world economy. *Agrekon*, 35(4):200-203.

THOMSON, D.N. (1996). A study of land rental markets and institutions in communal areas of rural KwaZulu-Natal. Unpublished PhD thesis, Department of Agricultural Economics, University of Natal, Pietermaritzburg.

THOMSON, D.N. & LYNE, M.C. (1991). A land rental market in KwaZulu:

Implications for farming efficiency. *Agrekon*, 30(4):287-290.

THOMSON, D.N. & LYNE, M.C. (1995). Is tenure secure in communal areas? Some empirical evidence from KwaZulu-Natal. *Agrekon*, 34(4):178-181.

TURNER, C.R. & ORTMANN, G.F. (1999). Quality management amongst South African agribusiness firms: The role of ISO 9000 Quality Assurance Standards. *South African Journal of Economic and Management Sciences*, NS 2(3):451-475.

UNNEVEHR, L.J. & JENSEN, H.H. (1996). HACCP as a regulatory innovation to improve food safety in the meat industry. *American Journal of Agricultural Economics*, 78(3):764-769.

VAN DER MERWE, A. & OTTO, R.J. (1997). International marketing developments and the effects on South African agriculture. *Agrekon*, 36(4):434-452.

VAN DUREN, E., MARTIN, L. & WESTGREN, R. (1991). Assessing the competitiveness of Canada's agrifood industry. *Canadian Journal of Agricultural Economics*, 39(4):727-738.

VAN ZYL, J. (2000). Strategic partnerships sprout up. *Finance Week*, 17 March 2000:27.

VAN ZYL, J., KIRSTEN, J. & BINSWANGER, H.P. (1996). *Agricultural Land Reform in South Africa: Policies, Markets and Mechanisms*. Oxford University Press, Cape Town.

WHIPPLE, J.M. & FRANKEL, R. (1999). Strategic alliances: Creating long term success. Staff Paper 99-16, Department of Agricultural Economics, Michigan State University, East Lansing, Michigan, USA, 37 pp.

YUNG, W.K.C. (1997). The values of TQM in the revised ISO 9000 quality system. *International Journal of Operations and Production Management*, 17(2):221-230.
ZAIBET, L. & BREDAHL, M. (1997). Gains from ISO certification in the UK meat sector. *Agribusiness: An International Journal*, 13(4):375-384.

ZIGGERS, G.W. (1997). Integrated quality assurance in the pork supply chain: The challenge of vertical Cupertino. In: Schiefer, G. and Helbig, R. (eds.), *Quality Management and Process Improvement for Competitive Advantage In Agriculture and Food*. Proceedings of the 49th Seminar of the European Association of Agricultural Economists, University of Bonn (ILB), Germany:365-378.