

Session 6

Auctions, warehouse receipts and agricultural commodity exchanges

Cereals auctions

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In the context of the assistance to the cereal actors for the marketing of cereals, Afrique Verte has organised cereal exchanges since 1990.

What is a cereal exchange?

It is a place and a time dedicated to the interaction of supply and demand of cereals. It brings together direct and indirect participants, partners and other stakeholders of the cereal network.

What are the objectives of the cereal exchange?

The cereal exchange aims to:

- match supply and demand in cereals in order to satisfy the needs of the different people involved (buyers and sellers)
- promote the marketing of cereal production from regions with surplus to regions with cereal deficit and to consumption centres
- promote the relations of and cooperation between people, the support structures, and the funding institutions in rural areas
- increase the professionalism of the people involved in the cereal network in the field of marketing.

How does a cereal exchange work?

In general, the exchange follows the steps outlined below.

- *Before the exchange:* the potential participants send information sheets that consist of a description that is as detailed as possible of their needs during the exchange (purchase or sale of cereals). A synthesis of those needs is established by Afrique Verte.
- *During the exchange:* the activities of the exchange start with a presentation of the synthesis of the needs expressed by the participants. This presentation also enables participants to know who wants what and under what conditions, or who offers what and under what conditions. After this first step, time is allocated to allow buyers and sellers to engage in exchanges and negotiate directly with each other. This activity takes place outdoors through open negotiations. At the end, a plenary session is organised to communicate the outcome of the supply and demand interaction, such as orders placed, and contracts signed.
- *After the exchange:* this last step involves fulfilment of agreements reached through the execution of the contracts signed. Afrique Verte ensures the monitoring of the transactions decided between people during the exchange. Through its role of support and intermediation, it contributes to facilitating the execution of the contracts.

It is appropriate to add that, depending on the duration of the exchange, the programme can include presentations on various topics (related for instance to the rural world, the cereal network and the funding of cereal marketing) which aim to provide information to the participants and to support exchanges and consultations among the people in the network. In that way, the exchange is also a means of information and training for people involved in the cereal network.

What are types of cereal exchange have been put in place?

Until now Afrique Verte has set up three types of exchange.

- *The regional exchange*: an exchange located in a determined area (generally an area with surplus). It is however open to all the people who believe that they can find business opportunities.
- *The national exchange*: this is national, and generally takes place in the capital of the country. The participants come from all the different parts of the country. In general, during this exchange, presentations are made, in addition to discussions concerning the interaction between supply and demand.
- *The sub-regional exchange*: an exchange that brings together the people in the cereal networks of the three countries that Afrique Verte supports – Burkina Faso, Mali and Niger.

Who finances the cereal exchange?

The exchange is a priority activity of Afrique Verte which ensures technical and material organisation, in close collaboration with the farmers' organisations in those countries.

However, the funding of the exchange does not depend exclusively on Afrique Verte. Due to the relevance of the exchange, several participants contribute in one way or another to its organisation. Those involved include first of all the direct people (private operators and farmers organisations) who offer tangible contributions, and second, the development partners who can finance all or part of the exchange.

Livestock managed markets

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Beset by the withdrawal policy of the state in the 1990s, an associative grouping of farmers and breeders has been set up progressively. Its members were not ready to take over the roles and tasks abandoned by the State, but were determined to take their responsibilities in development matters. Since then, this grouping has evolved. It is during this phase of empowerment that the Union Départementale des Organisations Professionnelles d'Éleveurs de Ruminants' (Departmental Union of Professional Organisations of Livestock Farmers, UDOPER) appeared in 2001.

This livestock farmers' organisation is sponsored by livestock markets with multiple functions.

What is a traditional livestock market?

A traditional livestock market is a place where supply and demand meet to lead to the setting of a price for an ox or a small ruminant.

The sale of an animal on livestock markets operates through a middleman (*dilani*). This type of market has the following main characteristics:

- the buyer is never brought into contact with the seller, and *vice versa*
- the middleman takes advantage of the transaction to obtain a financial remuneration from the buyer as well as from the seller in a dishonest way
- in these transactions there is no price transparency.

Faced by these facts, leaders-*cum*-advocates have thought about modernising the traditional markets. This reflection has led to livestock self-managed markets.

What is a livestock self-managed market?

The fundamental characteristics of livestock self-managed markets are as follows:

- there is no middleman between seller and buyer, but a witness (*seedêjo* in the Peuhl language)
- the witness of the sale does not intervene in the bargaining between the two traders
- the *seedêjo* receives a tax by head of cattle at the end of the transactions to which he has borne witness
- these types of market have a legal status and various management documents, including:
 - transaction tickets

- a sales book
- a cash book
- a pay book
- a worksheet of the employees of the market
- a book of the cash payments to fund local development.

There is also a management committee, which brings together interested people, farmers and breeders, butchers, traders and loaders.

Since their establishment, the livestock self-managed markets have evolved and grown. From the nine markets at the outset (Bodérou, Dérafi, Ina, Sakabansi, Monko, Kérou, Nièkèné-bansou, Ouèssè), which were part of a network called Réseau Lumodji Marefudji Sago du Bénin, the number of markets has risen to 21.

There is no need to prove the socio-economic impact of livestock markets any more. On one hand, the livestock self-managed markets have enabled the construction of support services on the sites where they are located; on the other hand, they have invested in the development of their neighbourhoods. Other advantages of livestock self-managed markets include:

- improvement in transactions and revenues, transparency, time-saving and centralisation of information
- job creation and upgrading of the middleman's job
- improvement of animal health by selling veterinary products at preferential prices to farmers of UDOPER
- farmers taking part in decision-making concerning local development.

But these livestock self-managed markets do not evolve without problems. With the advent of decentralisation, some laws specify that 'the management of sales infrastructure is within the jurisdiction of municipal authorities'. This leads to altercations between the former managers of these markets and the municipal authorities.

But very early on, thanks to the support of SNV-Benin, this situation has been resolved reasonably, through the organisation of a workshop on the joint management of the livestock self-managed markets that took place in Gogounou on 16 and 17 August 2005.

Market opportunities

In the present context of the eradication of poverty on the one hand, and the constraints of decentralisation on the other hand, the setting up of livestock self-managed markets is justified.

However, in order to ensure the sustainability of production and of the livestock enterprises, other markets are essential, such as for veterinary inputs and cattle feed.

Management of livestock self-managed markets by delegation

Since the workshop on the joint management of the livestock self-managed markets that took place in Gogounou on 16 and 17 August 2005, we know that the laws on decentralisation have entrusted the local authorities with the construction, the equipment, the repairs, the maintenance and the management of the markets and slaughterhouses through Article 104. In the Borgou and Alibori departments, these infrastructures were managed by farmers' organisations, under the supervision of UDOPER.

These competences have to be transferred to the local authorities, in accordance with the legislation. However, following the failure of the first attempts at transfer, the local authorities have found it convenient to entrust UDOPER with the management through their authority.

Conclusions

Our work is not a panacea for the problems of farmers and other social classes. Your contributions and suggestions for improvements are most welcome. To sustain our exchange, we wish to define collectively a framework that will enable us to see and analyse the problems that we have in common.

Key considerations in the design of regulated warehouse receipt systems in Africa

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This paper provides guidance to people seeking to establish warehouse receipt systems (WRS) in Africa, based on the author's research and practical experience since the early 1990s. Rather than provide an encyclopaedic coverage of the topic, I have tried to identify the most important design considerations with a view to assisting those interested in promoting their introduction. The reader can obtain more detailed information by consulting references listed at the end of the paper.

The rationale – why bother?

First of all, rural Africa is collateral-starved. In many countries, banks have considerable excess liquidity, because they find it difficult to identify enough low-risk lending opportunities. Urban real estate is the main form of collateral, but from a banking perspective it is far from ideal, being slow to realise in the event of foreclosure. Rural land is usually ineligible on account of customary forms of tenancy. This puts a great premium on systems that allow banks to attach debts to stock-in-trade. Such systems are particularly advantageous if they allow banks to focus attention on a single risk factor, the price of the stock itself, which they can mitigate in various ways: by using market intelligence, by 'hair-cutting' (only lending a percentage of the stock value) and, in some cases, by hedging so as to lock in a forward or minimum price.

There are series of other reasons for establishing WRS in Africa. Smallholder agriculture is fragmented, lacks bargaining power and reliable sources of input supply, and, except when working in conjunction with strong outgrower schemes, is of little interest to the banks. Markets lack transparency, in terms of both quality and price, and it is often difficult for farmers to negotiate effectively with buyers. It is very difficult to set up enforceable contracts, for which reason grain must be bought and sold on a spot basis. African countries have much to gain by establishing systems that assist in the bulking and standardisation of agricultural products so that they can be traded more transparently and in line with market requirements; and provide smallholder farmers and small traders with a 'ladder' that they can use to gain the interest of banks and other service suppliers.

Regulated and unregulated approaches

With the liberalisation of agricultural marketing systems, collateral management agreements (CMAs) have become a common form of warehouse receipt system in Africa. They are typically used in the pre-export or post-import financing of commodity inventories, often as part of structured financing arrangements linking suppliers to end-users. Leading millers and traders have also used them as means of financing inventories of commodities, such as maize and sugar, which do not pass across borders. The provider of the collateral management service is normally the subsidiary of a Geneva- or Paris-based inspection company, and the agreement is tripartite in

nature, involving the borrower (typically an exporter, trader or miller), a bank, and the collateral manager.

Collateral managers have play an invaluable role in oiling the wheels of commerce in countries where there is a shortage of readily bankable customers; these countries cover most of the developing world, plus Eastern Europe and the former Soviet Union. However, their dominance over the storage business is also a symptom of these areas' relative underdevelopment and, more specifically, their lack of bankable home-grown warehousing systems. CMAs are accessible only to large customers who can afford the collateral managers' fixed charges; typically at least US\$2,000 per site per month, excluding physical handling, store rental and pest control. Moreover, collateral managers will usually only provide services on a one-to-one basis, working with individual traders, millers, cotton-ginners etc. who must have sufficient commodity to fill the warehouse under management. Unlike warehouse and silo operators in some developed countries, and the Republic of South Africa, they do not operate 'public warehouses' (public depositories open to multiple depositors). This creates a major scale threshold, which makes it difficult for farmers and small- and medium-scale enterprises to access collateral management services and low-cost or hard-currency financing.

Precedents in various countries, notably the USA, much of South America and the Philippines, show that it is possible to solve this problem by organising regulated warehousing systems that enable a larger group of providers to enter into the warehousing business, including trading companies that offer storage services as a sideline (Coulter and Shepherd, 1995; Lacroix and Varangis, 1996).

The organisation of regulated systems can strengthen the agricultural markets of Africa in a variety of other ways, notably by increasing market transparency; the regulatory regime can be instrumental in introducing standard grades, weights and measures at participating warehouses. It provides an opportunity for farmers to organise, bulk up produce, sell to remote buyers and gain a credit history. Indeed, production credit is potentially more attractive to both bank and borrower when the borrower is not obliged to sell his product after the harvest, but can deposit it with a collateral manager who holds it until prices are favourable. It makes it easier to establish commodity trading systems, and provides a tool by which public and food aid buyers can efficiently manage their stocks (Lacroix and Varangis, 1996; Martin and Bryde, 1998). The WRS can also become a focus for the organisation of stakeholders, and a healthy policy dialogue between these stakeholders and government (Coulter and Onumah, 2002; Coulter, 2005). In short, the organisation of an effective regulated WRS can contribute to breaking the log-jam of low productivity, which affects much of African agriculture.

This paper focuses mainly on regulated systems, although it also considers other alternatives that may be workable where it is not possible to establish nationwide (or region-wide) regulatory systems.

Key considerations

Experience to date calls attention to a few key considerations that need to be taken into account in designing a regulated system in Africa - trust, scale, the policy environment and the legal framework of the country concerned. The arrangement of trust is the most important factor, and explains why subsidiaries of multinational operators have come to dominate the collateral management business. While not immune from failure, these companies enjoy the backing of their first-world parents and have internationally underwritten professional liability insurance. The cover typically has various exclusions, and the collateral managers do not offer depositors a

‘full out-turn guarantee’, but the companies concerned clearly provide African banks with a significant level of comfort, such that they usually do not use home-grown collateral managers.

How can one engender trust in a WRS?

In most developing countries, it is preferable to have some sort of regulatory framework to license warehouses to receive deposits of agricultural products, and issue warehouse receipts against them. The objective is that buyers of grain, banks and other participants will treat all warehouse receipts the same, regardless of which warehouse issued them. The more effectively regulated the system, the more trust depositors and banks will have in those warehouses that are licensed to operate and issue warehouse receipts. This is particularly important for warehouses in outlying locations, which bankers rarely visit.

The criteria for licensing a warehouse operator will take account of its financial strength, physical facilities, competence of staff, ability to store according to quality standards, and administrative capabilities. The company may, moreover, have to put up a financial guarantee to protect depositors in the event of negligence and fraud. Apart from this, it will be subject to unannounced inspections to ensure that its obligations are covered by commodities in store.

If the regulator is to be effective, it will need above all to be distanced from political processes. There are two reasons for this. First, there is a mismatch of time horizons between political processes and the development of the WRS. The WRS needs time to grow gradually and organically, but politicians interested in WRS tend to be looking for speedy solutions to marketing problems, or perceived problems. For this reason, they may try to rush the organisational process at the expense of the banking confidence necessary to underwrite the system in the long term. Second, regulatory decisions need to be made ‘by the book’ and without fear or favour. If decisions are swayed by political pressure, banks will lose trust and tend to eschew local operators in favour of established CMA arrangements.

In countries where public administration is characteristically weak and/or highly politicised, the only alternative may be to place the regulatory regime in the hands of a body representing stakeholders who have a vested interest in the success of the system. At its simplest, such a body can operate on a purely contractual basis with warehousing companies whose suitability to handle third-party stocks it can certify. However, it is likely to have greater reach if it works under national warehousing laws and with regulatory powers delegated by the State.

Stakeholder-controlled regulatory bodies do not guarantee success, as they can suffer schisms or become politicised in their own right. However, in some countries the approach appears to be yielding results. In the Republic of South Africa, the SAFEX division of the Johannesburg Stock Exchange oversees a large number of silo facilities that are registered as SAFEX delivery locations. Grains are delivered on SAFEX silo receipts that enjoy prestige *vis à vis* receipts issued by silo operators in their own name. Probably of greater relevance to the rest of Africa is the Zambian WRS, the only significant regulated WRS for grains in Africa north of the Limpopo. The regulatory function is handled by the Zambian Agricultural Commodities Association (ZACA) Ltd, a stakeholder-controlled organisation whose board includes representatives of farmers, traders, banks, insurers, government and development projects. In the second year of operation, five ZACA-certified warehouses received deposits of 66,000 tonnes of maize. One of the warehouse operators and four banks provided farmers with finance against the stocks they deposited in the warehouses.

Another case worthy of mention is the coffee WRS in Tanzania, which in 2004-05 resulted in the lending of US\$7.6 against stocks stored by cooperatively-owned coffee-curing companies,

licensed by the Tanzania Coffee Board. A key feature which gives them credibility *vis à vis* banks and depositors is their autonomous member-controlled character and independence of political processes.

In the case of Brazil, the world's fourth agricultural producer, politicisation was at the root of long-running failure of the warehousing sector. Some warehousing companies belonged to senators, and the public regulator was unable to establish rigorous regulatory discipline such that would disqualify underperforming operators (Coulter *et al.*, 1998). With the passage in 2000 of law 11,076, the country is seeking to address this problem and generally modernise the warehousing system. Compared with the previous law (decree 1,102 of 1903), the new legislative framework allows private entities a more important role in managing the system. For example, the Central Bank of Brasil has authorised the clearing house of the leading commodity exchange (Bolsa de Mercadorias e Futuros, of São Paulo) to institute a system of electronic registration and custody of warehouse receipts.

Size matters: the importance of scale

There are large economies of scale, both in running warehouses and in ensuring their integrity. A large part of the costs of managing warehouse sites are fixed, regardless of the capacity of the site, while the regulator's expenditure on activities such as reviewing financial statements, ensuring performance guarantees are in order, and travelling to warehouses, are also fixed. ZACA has a budget of around US\$120,000 per year, and while it initially enjoys donor subsidy, aims to cover these costs fully within a period of 5 years from initiating activities. It obtains its revenue through a US15 cent per tonne month charge on stocks held by certified warehouses.

The difference in running and regulating a site storing 1,000 tonnes and 10,000 tonnes of grain is in no way proportional to the difference in tonnages, so in order to make the operation self-financing, it is important to bring a group of large warehousing sites within the system during the early years. Once the regulatory operation has covered its fixed costs, it can then proceed to license smaller warehouses in relatively remote areas, as long as the revenue they provide covers the regulator's relevant variable costs. This of course involves some element of cross-subsidisation, with larger warehouse operators funding a large share of the regulator's overall costs, but this can be called a 'smart subsidy' because it is self-financing and doesn't create costly market distortions.

Owing to the relatively modest levels of overall agricultural production, and the prevalence of smallholder farmers as suppliers of commercial surpluses, scale is a particularly critical consideration in Africa. In most countries, total grain production is in the range of 1-4 million tonnes, and much of this is consumed in the villages where it is produced and never enters trade channels. These production levels are small in comparison with major world producers (e.g. the USA, average 345 million tonnes between 2001 and 2005; Argentina, 35 million tonnes), and are less than relatively small European countries (e.g. Hungary, 14 million tonnes; Bulgaria, 6 million tonnes).

Smallholder farmers find it harder, though by no means impossible, to accumulate large surpluses and meet the quality requirements of warehouses, than do commercial farmers. For this reason it is very difficult, if not impossible, to establish a regulated WRS, simply on the basis of deposits by smallholder farmers. In order to bring in large deposits of commodities and attain economies of scale, it is necessary to involve people such as commercial farmers, millers, traders (including international commodity dealers), and public buyers including official food security reserves and food aid agencies. Once the system is up and running, NGOs and development projects can focus on helping smallholder groups and sees such as hammer-milling operations to

take the greatest possible advantage of the system. Indeed, the system can only be fully successful if it creates a more even playing field whereby smallholder farmers can compete more effectively with commercial farmers.

The World Food Programme (WFP) is now the largest buyer of grain north of the Limpopo, and can potentially enter into a mutually rewarding relationship with promoters of warehouse receipt systems around Africa. In Ethiopia and Uganda alone, WFP and other food aid agencies are currently purchasing locally in excess of 300,000 tonnes of grain per annum. By helping local stakeholders establish WRS, the WFP can improve its access to well graded commodity, diversify its supply sources and reduce procurement costs. At the same time, WFP can provide the necessary liquidity to ensure that the WRS takes off and gathers economies of scale (Walker *et al.*, 2005).

The banks are the other vital contributor to the development of the regulated WRS. Local staff of African banks north of the Limpopo have very little experience of WRS, apart from the tripartite CMA arrangements referred to above. This applies to both locally owned and international banks, even those that use the silo receipt system in South Africa. More seriously, most African bankers have very limited familiarity with, and exposure to, agriculture, and often view the sector as loss-making.

Here the WRS offers a way of interesting banks in the agricultural sector, as it is potentially very attractive to them as a means of lending at low risk and expense. Once they are comfortable with the WRS, they can provide vital liquidity to make it work over the long term, and make it less dependent on concerns such as those of WFP, whose presence in countries waxes and wanes according to the size of refugee and internally displaced populations. Martin and Bryde (1998, p. 11), writing from Eastern European experience, put it this way:

‘Once the “demonstration effect” has taken place, the warehouse receipts have the potential to become a standard way to finance the agribusiness sector. They could attract to it resources from institutions that at the moment consider this as one of the most risky sectors, in which the companies are not well capitalised, and where it is almost impossible to obtain good collateral.’

WRS promoters should therefore seek to understand banks’ opportunities and needs, and be prepared to provide training and capacity-building inputs accordingly.

In the long term, it will probably be necessary for the regulatory authority to license all relevant warehouses of over a certain minimum capacity, regardless of whether they issue warehouse receipts, in order to ensure that all warehouse operators contribute to the regulatory costs. In this regard, it is worth noting that most American grain-producing states have found it necessary to establish mandatory licensing regimes. For example, the Indiana grain buyers and warehouse licensing agency maintains licensing and oversight of virtually all stored grain, with a view to ‘preventing loss to Indiana farmers from fraud and bankruptcy of grain buyers and warehousemen’. Indiana’s grain buyers and warehouse licensing and bonding law provides for mandatory licensing of all companies buying or storing more than 50,000 bushels. This is equivalent to about 1,270 tonnes, a minimal quantity for traders operating in the mid-west of the USA. The same agency registers companies storing less than 50,000 bushels as ‘grain banks’ (Anon, 2006).

In countries starting to set up regulated WRS, it may be wise to make licensing voluntary until such time as the regulatory function has proved its efficiency to stakeholders in the country concerned. To facilitate the transition to a mandatory regime, any new WRS legislation should provide the means for government to institute it without the need for fresh legislation.

A supportive policy and institutional environment

Governments often welcome the establishment of WRS, but in practice the policy environment does not always prove favourable. For example, governments sometimes:

- intervene suddenly in a way that alters market fundamentals, causing price to drop and people storing in licensed warehouses to lose money; the introduction of food aid grain on to the market can have a similar effect
- maintain a high overall level of government intervention in the market, such that seasonal price movements do not reflect carrying costs⁶⁶ – this has been an issue in former socialist countries of East Europe (e.g. Poland in the late 1990s) rather than in Africa, where governments have generally lacked the resources to engage in sustained large-scale intervention
- unexpectedly reduce import tariffs, with similar effect – this happened in Ghana in 1997, causing difficulties for two inventory credit schemes (Coulter and Onumah, 2002)
- decline to make under-utilised public storage facilities available for WRS, even when they are unutilised.

Given the history and politics of grain marketing, promoters should not expect the policy environment to be perfect for the establishment of WRS. However, it is best to organise such systems where the environment is relatively favourable, and build bridges with politicians and officials, consulting and familiarising them with their rationale and operation. Government may provide certain services, for example crop forecasts, food balance sheets and market information, which stakeholders can potentially use to mitigate the financial risks they incur. It is important to evaluate the information available and see how it can best be made available to stakeholders, e.g. over the Internet, through radio bulletins or mobile phones, and if the information is not suitable, seek it out through other sources.

Establishing a supportive legal framework

Some earlier papers have suggested that the most important element in establishing a WRS is a favourable legal environment (Lacroix and Varangis, 1996; Martin and Bryde, 1998). Banks and buyers require good title to the underlying goods represented by the warehouse receipts, and protection against seizure or litigation by other claimants to these goods. The latter requirement is encapsulated in the terms ‘negotiability’ and ‘perfected security interest’, which mean that a party who receives the receipt in good faith can take possession of the goods in preference to other claimants who may have a security interest in them. When WRS are ‘negotiable’ they are functionally equivalent to the goods themselves. Under such circumstances, business people can buy and sell, and lend against, warehouse receipts, without having to establish the absence of other charges against them. Such legal protection is of the greatest importance in developing a strong WRS, particularly when it involves grain stored by a large number of farmers or traders. Holders of warehouse receipts also need legal protection to provide cover for the possibility of events, such as the death or bankruptcy of the borrower or the warehouse operator.

⁶⁶ The absence of a predictable seasonal price pattern will greatly diminish demand for WRS. However, it should be remembered that some players are attracted to WRS as a procurement tool rather than a means of making speculative gains. Large buyers such as millers, coffee exporters, cotton spinners and food-aid agencies may simply use them to finance their operating stocks.

However, experience to date indicates that, at least in those countries that have a common-law legal framework, it is possible to start regulated WRS without a legal system which provides for negotiability. In South Africa, which has a Roman-Dutch legal system, the silo receipts system is treated as if negotiable, even though legally speaking, they are not negotiable instruments; certain test cases have upheld the position of receipt holders against other claimants. These and other experiences in Africa to date confirm the following statement from Coulter and Shepherd (1995, p. 26):

‘It is stressed that the ‘practical’ effects of a particular legal variable on the viability of inventory credit will usually not be evident from the examination of legal doctrine alone. Where the economics of the scheme are strong enough, and lenders are comfortable that the practical risks are small, they may be able to live with a certain amount of legal ambiguity. Where, however, the economics are unclear and the political and business culture is unaccustomed to what is being proposed, legal uncertainties may present another reason for sceptical participants, particularly banks, to turn away from an uncertain venture.’

Where it is not possible to make the warehouse receipts *de facto* tradable and pledgeable, there is a strong case for new legislation. Zambian bankers made this point very poignantly during the second highly successful year of the regulated WRS in that country, by stating they were ‘only scratching the surface’. They could achieve far more, particularly with smallholder grain, once the draft warehouse receipt law was passed and warehouse receipts became negotiable documents of title (Georgina Smith, Natural Resources International, UK, personal communication).

Alternatives to the regulated warehouse receipt model

The regulated model has two potential drawbacks: its requirements for scale; and honest and strict regulatory governance. It is worth asking whether there are alternative systems, apart from the above-mentioned CMAs, that can prosper in the absence of these prerequisites.

There have been some well organised smallholder-oriented inventory credit or warehouse projects, including those organised by TechnoServe in Ghana and the Ministry of Agriculture and FAO in Niger (Bass and Henderson, 2000; Kwadzo, 2000). However, with such projects it is difficult for the promoter to find an exit strategy in a way that makes the regulatory oversight function self-financing. One case where promoters appear to have overcome this problem is that of the Caisses d’Epargne et de Crédit Mutuels (CECAMs) in Madagascar. Village credit unions belonging to a large regional micro-finance institution (MFI) are financing members who store paddy in small local warehouses. The stock is jointly held by the credit union and the borrower under a ‘dual key’ arrangement. Since the inception of this initiative in 1992, the volume of paddy stored had risen to around 80,000 tonnes and the project is reported to be having a very positive impact on local food security (Fraslin, 2002, 2005).

The big advantage of the CECAM system is that a single institution fulfils both the regulatory and lending function; the lender is directly concerned in looking after its own assets and thereby absorbs the relevant overheads. However, two factors are likely to slow the replication of the CECAM experience. First, there are few rural MFIs of comparable strength in Africa. Second, MFIs tend to charge high interest rates and this may render them uncompetitive with banks; the CECAMs enjoyed access to a special government line of credit which has helped them lend at competitive rates.

The combination of lending and regulatory functions may also work with commercial banks. During the 1990s, the government-owned Banco do Brasil directly supervised a group of tied

warehouses which were acting as depositaries for grain financed by the bank (Coulter *et al.*, 1998). Here again, however, it is difficult to replicate the model, as bankers generally wish to confine themselves to banking and are reluctant to get involved with the warehousing business. Few are willing, like Banco do Brasil, to set up their own structure for supervising warehouses. Moreover, tied warehouses of this kind are generally closed to lending by outside parties, and this may restrict their ability to attract deposits.

Promoting the WRS: making things happen

Entirely home-grown national WRS have emerged in countries with strong commercial farming, such as the Republic of South Africa and Zimbabwe prior to 2001. Elsewhere in Africa, donor-funded projects have been predominant in promoting WRS. This is unsurprising, because smallholder farmers are too dispersed to take the initiative in establishing national systems. Moreover, in the absence of public or donor support, other stakeholders, such as banks and traders, generally restrict themselves to CMAs, which are less institutionally challenging.

It should therefore be recognised that WRS are to a significant extent a ‘public good’, and that the skills of the promoting entities are crucial to their uptake. At the same time, support services that are highly dependent on donor support run the risk of becoming artificial and not developing local roots. Based on the experience of recent years, we can offer some guidelines for success.

First and foremost, the entity will need to work closely with, and stimulate initiative by, the private stakeholders who stand to gain through creation of the new system. The more successful examples described here have all depended on strong private initiative. These players will, in turn, need at least tacit support of their governments, and preferably explicit backing in the policy and legal spheres.

Funding arrangements will need to be very flexible, so that support is provided where the response of local stakeholders is strong and coherent, and pull back where it is not. This can be challenging, because funding commitment sometimes creates a momentum of its own, regardless of developments on the ground. Sometimes several donors will be seeking to assist the development of local agricultural markets, and they should do all possible to harmonise agendas and work together in support of local stakeholders. This is particularly important with regulated systems, which are likely to require a single set of rules for the country concerned.

Promoters will need to focus on the key requirements discussed in this paper - establishing trust in the system, economies of scale, a supportive policy environment and a strong legal basis. Lastly, they should work hard to define a clear exit strategy and a pathway to full local sustainability.

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Kenya Agricultural Commodity Exchange – linking smallholder farmers in Kenya to better markets through market information

Adrian Mukhebi (KACE, Kenya)

The Kenya Agricultural Commodity Exchange Limited (KACE) has developed and piloted a simple, low-cost MIS to provide relevant and timely market information targeted at smallholder farmers. The MIS uses modern ICTs to collect, process, update and disseminate market information, so that farmers can negotiate for a better price in the market place. The KACE MIS is designed to disseminate market information and link the farmer to people in the market chains, including other farmers, traders, commodity dealers, processors, exporters and importers. The components of the KACE MIS include (i) rural market-based market information points (MIPs); (ii) mobile phone short messaging service (SMS); (iii) interactive voice response (IVR) service; (iv) Internet; and (v) radio. To provide for long-term sustainability of the MIS, plans are under way to involve beneficiaries as franchisees for the operation of MIPs as commercial entities. In addition, revenue-sharing agreements have been established between KACE and service providers who charge for information such as SMS.

KACE services

KACE (www.kacekenya.com) is a private-sector firm launched in Nairobi, Kenya in 1997, to provide two services targeted at smallholder farmers: to link farmers to markets through matching commodity offers to sell and bids to buy; and to provide relevant and timely market information. Market information includes commodity prices in different markets in Kenya, regional and international markets, commodity offers and bids (in quantity, quality, packaging, timing), transport services and costs.

Lack of relevant and timely market information greatly disadvantages smallholder farmers in the market place, and reduces their access to better markets and better prices. As a result, farmers are often exploited by middlemen in local markets who offer relatively low prices, sometimes below production costs. In addition, farmers either remain ignorant of better market opportunities, or face high transaction costs in trying to access new markets. For any one crop, the marketing chain often consists of multiple middlemen, each taking a margin. The combination of low prices, lack of access to better markets or high transaction costs result in low farm incomes, keeping the farmer in a vicious cycle of poverty.

Market information is also needed to help farmers decide and choose what commodities to produce, what technologies to apply for production, when to produce, for whom to produce, and when and at what price to sell. Without market information, farmers cannot be efficient in their production or marketing activities.

To provide the two services of market links and market information provision, KACE has developed and piloted a simple low-cost MIS. The MIS involves using ICTs to collect, process, update and disseminate relevant and timely market information to enhance the bargaining power of farmers. The components of the KACE MIS are as follows.

Rural market-based market information points

MIPs are information kiosks located in rural markets, serving as sources of market information. There are currently 15 MIPs, located mainly in western Kenya. An MIP consists of a simple office, with two staff (a manager and an assistant). Those in areas with electrical power and fixed landline telephone service are equipped with a computer, Internet connection and a fax machine. All are supplied with mobile phones. There are boards used to display market information, or used as trading floors for matching offers and bids. KACE Headquarters in Nairobi compiles market information and sends it to MIPs, where it is printed and placed on the boards for users to visit and view freely, with the help of KACE staff.

Mobile phone short messaging service

KACE supports a service to upload market information into the Safaricom Ltd mobile phone service provider network, to which about 3 million Kenyans subscribe. Mobile phone users are then able to download market information through their mobile phone handsets as SMS messages in simple menu-driven steps. KACE has branded this service as SMS Sokoni. Negotiations are under way to develop a similar SMS with the second mobile phone service provider – Celtel Kenya Ltd, which has about 2.5 million subscribers.

Interactive voice response service

KACE has developed this service with the interactive media services. KACE sends updated commodity price information to the interactive media service daily. The service records the information in voice mail, and users access the information by dialling a designated hotline (0900 552055) and listening to the information by following a simple menu. Users have a choice of language, English or Swahili, as well as a choice of commodity or market for which they seek information. KACE has branded this service the Kilimo hotline.

Internet

Farmers and farmers' groups with e-mail addresses, and other clients with Internet connectivity, are included in an electronic KACE database called the Regional Commodity Trade and Information System. The database includes the e-mail addresses of clients and a module of updated market information. The information is sent and received as e-mail messages. Some farmers and commodity buyers receive market information in this way. In addition, KACE has a website (www.kacekenya.com) which it is developing as a virtual library of agricultural information, as well as an electronic commodity trading platform for matching offers and bids.

Radio

Limited KACE market price information is broadcast on national radio, reaching an estimated 5 million listeners a week, many of whom are farmers in rural communities. Liberalisation of the communications sector is still under way in Kenya. The few operating FM stations in rural areas

demand prohibitive charges (about US\$4,000 per 15-minute slot) to broadcast market information. Thus this medium has yet to be developed and exploited for market information dissemination in Kenya.

The market information system

Collecting and processing market information

Market price information (mainly wholesale buying prices) is collected on the following 25 main traded commodities:

- cereals: dry maize, green maize, rice
- pulses: beans, groundnuts, soya beans, pigeonpeas, green grams
- vegetables: cabbages, onions, carrots, tomatoes
- tubers: potatoes
- fruits: bananas, mangos, passion fruits, oranges, avocados
- livestock: milk, beef cattle, meat: goats, sheep, chicken, eggs, fish.

KACE MIP staff visit commodity markets in their areas early in the morning (0500–0700 h) each market day. Using standard KACE data collection sheets, they interview three to six wholesalers to obtain wholesale buying prices for each listed commodity traded in the market. They compute mean prices for the market for that trading day, and send by e-mail, SMS or telephone the information to the KACE Headquarters information technology department to arrive by 0800 h each trading day. They also send the offers and bids collected through client visits to the MIPs since the last reporting submission. The IT department staff then summarise the prices, offers and bids from all the MIPs, and send the information back to each MIP by e-mail or fax. The MIP managers download the information, print it out and place the hard copies on information boards at the MIP for the users to access freely, replacing old information with new each time.

Disseminating market information through MIPs

Users visit the MIPs to receive market information. They read the information placed on the MIP wall or on boards. Users who can not read get assistance from the MIP staff. The information in Table 1 shows a record of direct users (those who visited all KACE MIPs) of the KACE MIS for the period November 2004 to end of October 2005. On average, 810 users visited MIPs every month, an increase of 63% from the previous year (Table 2). Of the total number of users (9,722), 37% were female and 63% male. The number of female users increased by 105% over last year's figure, whereas the increase in the number of male users was 46%. The number of indirect users, those who share or receive market information from direct users, is reckoned to be much higher: every direct user shares information with at least two or three other users.

Table 1: Visitors to MIPs/MICs and Head Office, November 2004-October 2005

Month	Total		Female		Male	
	No.	Cumulative	No.	Cumulative	No.	Cumulative
Nov 04	932	932	296	296	636	636
Dec 04	556	1488	173	469	383	1019
Jan 05	617	2105	230	699	387	1406
Feb 05	717	2822	321	1020	396	1802
Mar 05	640	3462	234	1254	406	2208
Apr 05	1107	4569	425	1679	682	2890
May 05	1169	5738	410	2089	759	3649
Jun 05	847	6585	304	2393	543	4192
Jul 05	807	7392	314	2707	493	4685
Aug 05	886	8278	317	3024	569	5254
Sep 05	783	9061	270	3294	513	5767
Oct 05	661	9722	254	3548	407	6174
Total	9722		3548		6174	
Month average	810		296		515	

In a monitoring and evaluation survey, conducted by KACE in February 2005, of 222 farmers in western Kenya, 84% of farmers were using KACE as source of market information, 47% daily, 35% weekly and 13% monthly. 92% of farmers reported they were happy with KACE information. Also, 52% of traders were using KACE as source of market information.

Table 2: Summary of KACE MIS users, 2003/4 and 2004/5

Users	2003/04	2004/05	% Change, 05/04
Total	5,972	9,722	+63
Female	1,733	3,548	+105
Male	4,239	6,174	+46
Monthly average	498	810	+63

Maize, the Kenyan staple, is one of the most highly traded commodities for which the price is collected and disseminated.

Tables 3 and 4 show dry maize wholesale prices for three markets: Bungoma (rural market), Eldoret (regional market) and Nairobi (national/terminal market) for the 12-month period November 2004 to October 2005. For the three markets, the maize price remained steady between Ksh 14.11 per kg (US\$193 per MT) and Ksh 16.67 per kg (US\$228 per MT) from November 2004 until May 2005. It rose to a maximum of nearly Ksh 18 per kg (US\$247 per MT) in Bungoma and Nairobi in June 2005. It has since declined with the onset of the harvest season to a low of Ksh 8.44 per kg (US\$116 per MT) in Bungoma in October 2005, a 53% drop from the highest price in June.

Table 3: Dry maize wholesale prices (in Ksh per kg) in selected markets in Kenya, Nov 04 to Oct 05			
Month	Nairobi	Eldoret	Bungoma
Nov 04	16.66	16.10	14.11
Dec 04	16.67	15.77	14.58
Jan 05	16.67	15.50	15.50
Feb 05	16.34	14.86	15.83
Mar 05	15.23	14.26	16.44
Apr 05	15.19	14.11	16.42
May 05	16.28	14.48	17.19
Jun 05	17.76	15.42	17.94
Jul 05	15.88	14.98	17.13
Aug 05	14.63	14.00	11.59
Sep 05	13.18	12.58	9.19
Oct 05	12.22	11.19	8.44
Mean	15.56	14.44	14.53
Note: 1 US dollar = Ksh 75/=			

This notable drop in price at harvest time is due to a combination of factors: partly because farmers need cash and must sell; also because farmers do not have sufficient storage to store the crop until the price improves post-harvest; and furthermore, because farmers are not able to access better markets elsewhere, either because they lack market information or are not organised enough to bulk the necessary volumes and quality required. This issue of wide price fluctuations is one of the problems that a warehouse receipt system could address, by enabling farmers to access some cash for their commodity while it is stored to await better post-harvest prices.

Table 4: Summary of mean dry maize wholesale prices in selected markets, 2003/04 and 2004/05

Market	Ksh per kg		% change 2005/04
	2003/04	2004/05	
Nairobi	15.86	15.56	-2.00
Eldoret	14.71	14.44	-2.00
Bungoma	14.42	14.53	+0.8
Mean, Ksh/kg	15.00	14.84	-1.10
Mean, US\$/MT	200	198	-1.00

Disseminating market information through SMS and IVR

Wholesale buying prices, as well as commodity offers and bids collected and summarised as described above, are uploaded into the Safaricom mobile phone network by the KACE IT department, and disseminated as SMS to Safaricom mobile phone subscribers on a daily basis. This same information for some commodities is also available on the IVR service provider, where it is recorded on voice mail and updated through the Kilimo hotline number.

A subscriber pays Ksh 7 (US\$0.10) per SMS of downloaded market information and Ksh 20 (US\$0.27) per IVR call. KACE has revenue-sharing agreements with the service providers. For SMS, KACE receives a share of 10% of the user fee paid to Safaricom, while the KACE share is 20% per IVR call.

Usage of SMS and IVR is shown in Table 5. KACE is conducting a user survey in December 2005 to determine SMS and IVR services, and what changes if any can be implemented to enhance usage.

Table 5: Summary of SMS messages, IVR calls and website hits, 2003/04 and 2004/05

Tool	No. 2003/04	No. 2004/05	% change, 2005/04
SMS	29,891	14,327	-52
IVR	3,015	234	-92
Website	102,301	127,772	+25
Total users	135,207	142,332	+5
Monthly average users	11,267	11,861	+5

Disseminating market information through the Internet

Wholesale buying prices, as well as commodity offers and bids, are daily entered and updated into the Regional Commodity Trade and Information System database and sent to recipients via e-mail by KACE IT staff. The same information is also posted and updated daily at the KACE website for access by subscriber clients visiting the site. The number of website hits at a monthly average of 10,649 was 25% higher than in the previous year.

Disseminating market information through the radio

Wholesale buying prices are sent to the Kenya Broadcasting Corporation (KBC) daily by the IT staff for radio broadcasts Monday–Friday after a news broadcast, at about 16.45 h, and repeated after the 09.00 h news broadcast the following day. As the KBC selects what is read out, only a few commodities are covered in any one broadcast. Exorbitant charges (at least US\$4,000 for a 15-minute slot) are required by KBC to broadcast information covering more commodities than the 1-minute slot they offer for free.

Market linkage service: the commodity exchange

In addition to the provision of market information, market linkage is the second service offered by KACE. In KACE's view, the value of market information lies in facilitating trade links. This is accomplished through direct as well as indirect trade linkages.

Direct trade links: offers and bids

Farmers as well as traders come to place bids (to buy) or offers (to sell) at the MIPs. Specially designed forms are provided for that purpose by the manager. The offers and bids are placed on a bulletin board and also circulated by SMS or e-mail to all other MIPs, MICs and other recipients. A placement fee for an offer or bid at a MIP is Ksh 100 (US\$1.37) paid to KACE (but bids on existing offers are not charged). Two possibilities exist:

- the transaction takes place at the MIP trading floor by matching the bid and offer, and no other charges are paid
- the transaction takes place outside the MIP by MIP staff acting as a broker between seller and buyer. Then a negotiable charge of between 0.5% (for a large volume) and 5% of the value of the transaction is made as income for KACE. This is the direct trade.

Tables 6 and 7 show the volume of direct trade that went through the KACE MIPs for the 12-month period November 2004–October 2005. The total volume was US\$75,366, up 29% from the previous year. Much of the trade was by smallholder farmers selling small quantities of maize worth as little as US\$10 a transaction; and most of the trade occurred between the months of May and October, the maize-harvesting season (maize is the main commodity traded).

Table 6: Value of trade through the KACE MIS, November 2004 to September 2005

Month	US\$	Cumulative US\$
Nov 04	220	220
Dec 04	72	292
Jan 05	1,139	1,431
Feb 05	2,994	4,425
Mar 05	311	4,736
Apr 05	6,349	11,085
May 05	31,885	42,970
Jun 05	10,698	53,669
Jul 05	7,938	61,607
Aug 05	2,671	64,279
Sep 05	9,671	73,949
Oct 05	1,417	75,366
Total	75,366	
Month average	6,281	
Note: 1 US\$ = Ksh 75		

Table 7: Summary of value of trade through the KACE MIS, 2003/04 and 2004/05

	2003/04 US\$	2004/05 US\$	% change, 05/04
Total	58,650	75,366	+29
Month average	4,888	6,281	+29

Indirect trade links

Indirect trade links are those where farmers or traders use KACE market information to trade without passing through KACE. Transactions are concluded outside the MIPs directly between buyers and sellers, often without the knowledge of the MIPs. KACE gets no commission on such transactions. These are the indirect trade links, which are significantly more than the direct trade links. For instance, five MIPs in Bungoma kept track of some offers and bids and what happened to them from October 2004 to November 2005 (for 10 months). The total value of the tracked indirect trade was Ksh 26,113,055 (US\$357,713).

The total trade value reported is certainly grossly underestimated, as sales concluded outside the premises of KACE are rarely reported. In addition, it can be assumed that the provision of market information is reducing spatial arbitrage and bringing about increased market integration, although this has not been documented. KACE is thus correcting an important information externality, but it does not get paid for this important public service.

Measures taken to ensure sustainability of the services

Involvement by beneficiaries and local entrepreneurs

Farmers are being trained and shown how to access and use market information. Once they benefit from it, through better market access and better prices, as pilot results have demonstrated, they will acquire the capacity to seek and access the information without further training from KACE. They will visit and access the information at the MIPs. They will also use mobile phones, which an increasing number of farmers are acquiring, especially on a group basis to share the costs of mobile phone handsets, to access SMS and IVR services.

For further sustainability of the MIS provision, KACE plans to franchise MIPs to local entrepreneurs to operate them on a commercial basis. This will create private-sector operators, who will further develop a wide range of related agricultural marketing and extension services, and ensure long-term financial sustainability. It will also free KACE from intensive management of these centres, and hasten the scaling up of their services.

Financial sustainability through service revenue-sharing

KACE has entered into revenue-sharing agreements with the SMS and IVR service providers. For every SMS message, or IVR call, the user pays for airtime to the mobile phone service provider, or pays for the call to the IVR service provider, who in turn pays KACE an agreed percentage share. KACE will share the revenue so generated with the MIPs to contribute to their financial sustainability. It is planned that when the KACE MIS are fully developed and widely promoted and used by clientele, they will generate sufficient revenue to sustain themselves.

Main challenges

Market information service

- Lack of standard units of measurement: various local units are used in market places for trading. They often do not have uniform volumes or weights, posing a challenge in quoting a price per weight or volume. KACE staff have been trained to convert and report prices per unit weight, e.g. kg; or unit volume, e.g. litre, which is bound to introduce some errors in the data.
- Lack of grades and standards: commodities traded in the market place do not have specified grades and standards against which to provide price quotations. Everything is therefore sold as fair average quality.
- Maintaining the cooperation of respondents to provide price data: some farmers or traders in a given market object to being asked to provide price information over a period of time. KACE staff then have to identify new respondents, or find some incentives for continued

cooperation, such as the supply of market information from other markets, or offering to check the moisture content of grains using moisture meters.

Trade linkage service

- Small quantities of highly varied quality commodities may be offered: this makes it difficult to attract large-volume buyers prepared to pay a premium price for better quality. This increases transaction costs. It can be addressed through collective marketing of commodities by farmers, which KACE and other development farmers are promoting.
- The lack of standard units of measure and grades and standards makes market links difficult. For instance, there is no premium price for superior quality, and sellers have no incentive to improve on quality, which is often required for trade links to better (price) markets. Again, KACE and other partners are promoting collective marketing, where a group of farmers bulks the commodity and improves its quality, including packaging in standard units, before offering for sale.
- Lack of a warehouse receipt system to enable farmers to access some cash or credit from stocks while they await selling at better post-harvest prices.
- Unpredictable government policy: in Kenya the government, through the National Cereals and Produce Board, continues to intervene in grain markets, and this distorts prices and discourages increased private sector participation in commodity markets.

Way forward

There are two major developments that KACE plans to undertake in order to scale up its services: franchising of MIPs to make them financially sustainable; and the development of a physical (and electronic) trading floor in Nairobi, in conjunction with the Kenya Grain Council, which is currently under establishment for the promotion of structured grain trade not only in Kenya but also in the East Africa and COMESA regional markets.

Franchising MIPs

As indicated, plans are under way to franchise MIPs so that they can operate commercially and become financially self-sustaining, but without abandoning their public goods MIS. In this concept, KACE would move further upstream and concentrate on operations in national and regional markets. Franchised MIPs would develop a wide range of services for which demand has been demonstrated, e.g. transport brokerage, warehousing, storage brokerage, weighing services, grading and quality control services, selling mobile phones and airtime, offering Internet services, selling farmer inputs, trading commodities for their own account, etc. The idea is that the franchises become independent, commercially viable local businesses. They would be encouraged to identify and engage in profitable trade opportunities in their areas of operation. KACE would provide training, technical assistance, networking service and quality control, as well as market links to upstream markets (at national and regional market levels).

KACE itself would thus concentrate its activities at a higher aggregation market level, coordinate the market price information service, disseminate the market price and bid-offer information via ICT, work with the cellphone companies, provide market linkage and transparency at the national level, and run its own physical and electronic trading floor in Nairobi.

Agricultural Commodity Exchange for Africa (ACE)

Ian Goggin (ACE, Malawi)

The idea for the formation of the Zimbabwe Agricultural Commodity Exchange (ZIMACE) was first mooted in the early 1990s, when the Government of Zimbabwe embarked on its Economic Structural Adjustment Programme. With the introduction of this programme, the liberalisation of agricultural marketing commenced, and it soon became apparent that an organisation was needed through which the free marketing of agricultural commodities could occur. Out of this, the concept of ZIMACE evolved.

ZIMACE was started by interested parties in the private sector, namely the commercial farmers' union and Edwards and Company, a local firm of stockbrokers, who became shareholders and the financial backers. Subsequently, a board of directors was appointed and tasked with establishing a commodity exchange. Initially, while the administration was being set up, ZIMACE employed brokers who traded for ZIMACE, but from 1 March 1994 blocks of shares were sold, entitling the purchaser to appoint a broker to trade on their behalf. ZIMACE stopped utilising brokers and ceased being actively involved in any trading, and from that date, provided a forum for deals to take place.

Although the Commercial Farmers' Union and Edwards and Company were initially the major shareholders in ZIMACE, this position changed over time. The Commercial Farmers' Union reduced its seat holding from eight to three, while Edwards and Company were no longer seat holders, having held seven seats originally. The balance of the current membership of 28 seats is made up of other organisations, including the Grain Marketing Board, millers, traders, banks, other buyers and broking firms. This membership has changed dramatically since the early days of ZIMACE.

During the process of establishing ZIMACE, the aims and objectives were clearly stated as the need to 'create an orderly internal market which encourages production, allows free movement of goods and rewards good quality'. It was therefore determined that a commodity exchange of the highest integrity should be introduced, available to all the people of Zimbabwe and acceptable international traders, based on an open, free market system for the benefit of producers and consumers. The exchange facilitated the trade of any agricultural commodity provided or desired by consenting parties (willing buyer-willing seller).

ZIMACE, the first ACE to start operating in southern Africa, commenced trading on 1 March 1994. The Zambian ACE followed in June of that year, with the agricultural division of the South African Futures Exchange (SAFEX) opening in January 1995.

There is no doubt that the importance of ZIMACE continued to grow significantly in the local and regional agricultural markets, with considerably more notice being taken of this market internationally. This growth was not without its problems, some of which were predictable, while others were totally unforeseen.

The continued lack of relevant market information, both within Zimbabwe and in the SADC region as a whole, had a major negative impact on the free market. Figures quoted as to crop size, quality and volume in store, and anticipated imports and exports, were inaccurate at best, and at times extremely distorting in the market itself. Also, the lack of support of some of the

larger and more firmly established market-based and -oriented institutions tended to undermine the operations of ZIMACE. Add to this the fact that some ZIMACE members were active in conducting trade off the exchange floor, and the enormity of the challenges faced by ZIMACE at that time begins to emerge. These problems are exacerbated by the fact that central government saw fit to impose price controls on basic foodstuffs, while at the same time doing little or nothing to halt increases in the cost of inputs either to the producer or the end-user.

A decision was taken by the ZIMACE board, after consultation with the members, to enforce an existing provision in the rules making trade across the exchange floor compulsory for members. This was circulated as a resolution of the ZIMACE board, and was further enforced through an amendment, which was incorporated into the rules and regulations of the exchange. Obviously, this did not suit all the members, which resulted in a few of them electing to be 'non-broking members' rather than broking members. Such an election, while not diminishing any of their basic rights or responsibilities as members, required that they utilise the services of a broking member whenever they wished to conduct business across the exchange floor.

ZIMACE continued to provide both a spot and forward market facility, but was unlikely to venture into the futures market. The relatively small volumes of production, together with a lack of speculators and the reluctance of financial institutions to involve themselves in the market, are seen as hindrances to the establishment of a futures market. The most sensible suggestion in this regard would be that the present futures market in South Africa be expanded to include the region as a whole. Indications were that this was already happening, with trade being conducted on SAFEX by some of the ZIMACE brokers, and the Zambian exchange using the SAFEX futures price and incorporating the transport differential into the price quoted in Zambia. As trade barriers are removed, the ability to trade on any of the exchanges within the region will become more practical and realistic, with the will to do so already there, particularly within the private sector.

There are currently eight different contracts trading on ZIMACE, specific to maize, soya beans, groundnuts, sorghum, wheat, cotton and hogs. A general contract applies to all lesser traded commodities. All contracts include details pertaining to the quantity, quality, changeover of ownership and risk, price, payment terms, inspection, transport, delivery (or collection), packaging and *force majeure*. Every deal conducted across the ZIMACE floor is put to contract, which had to be signed by both parties immediately following the trading session. The contracts themselves are legally binding, giving additional security to the parties involved in the deal.

All paperwork relative to deals conducted on ZIMACE was to be completed and lodged with the exchange by midday of the day on which the trade is actually conducted.

The rules and regulations of the exchange governed the manner in which deals were transacted on ZIMACE. Through this mechanism, the integrity of the member companies, and the conduct of their brokers was monitored. The exchange also ensured the maintenance of standards of quality, not only of the commodities themselves, but also of trading practices through these rules and regulations.

In the event of a dispute arising, where the disputing parties are unable to resolve the issue among themselves, the ZIMACE 'rules of arbitration' governed and an arbitration panel reviewed the controversy. The benefit of this arbitration facility is enormous in saving both the time and costs of having to take legal action through a court of law. Initially, there were a large number of arbitrations heard, many being used as test cases by larger organisations. Once rulings were handed down in all these cases and principles established, the swing tended to be towards resolving the dispute between the parties concerned where possible, without resorting to

arbitration. As a result, considerably fewer arbitration hearings were conducted once the 'ground rules' had been established.

ZIMACE succeeded, over the years, in building up a great deal of expertise, with the brokers establishing an increasing number of contacts throughout the world.

The Grain Marketing Board, as already indicated, was made up of members of ZIMACE, and had two major functions to perform. The first was their own commercial operation, while the second was the requirement to purchase the strategic grain reserve on behalf of government. The difficulty with this system was that of separating these two functions. Regrettably, the general understanding was that the Grain Marketing Board set the price of maize in Zimbabwe, whereas this was in fact effectively set by the government in respect of the strategic grain reserve purchases. If the two functions of the Grain Marketing Board had been clearly separated, with the so called 'floor price' attached to the strategic grain reserve and not to the Grain Marketing Board and the purchase of non-strategic grain reserve stock, the situation would have been considerably more transparent, although the need to abolish this system remained a priority. Debate at a number of regional seminars and workshops centred around the need for a regional futures market and a separate spot and forward market. SAFEX would be the obvious answer to part of this need, but it was argued by many participants that Zimbabwe, through ZIMACE, would be ideal for the regional spot and forward market exchange. The geographical location of the country, together with the relative sophistication of the communication and transport networks and the extremely good storage facilities, were all seen as advantages in this regard.

ZIMACE remained the only true exchange functioning in the spot and forward markets in the region until September 2001 when, following legislation introduced in July of that year giving the Grain Marketing Board the sole right to trade in maize and wheat, trade became untenable. ZIMACE has *not* been disbanded, and the members are hopeful that they will be in a position to re-open the exchange at some stage in the future.

The Zambian exchange has to a large extent failed in its efforts in this regard and is still operating as a 'one-man band', with no trading sessions taking place. ZIMACE made great strides in the market and continued to do so, despite the many barriers imposed on it. Its credibility remained high, not only internally, where the views of the exchange were increasingly sought by both the government and private sectors, but also regionally and internationally.

This credibility is reflected in an increase in membership, from 6 in 1995 to 28 in 1998, before settling at 23. The volume and value of trade conducted continues to grow, as reflected in Table 1, which indicates the total value of trade conducted each trading year, based on the period of April one year through to March the following year, since the inception of ZIMACE.

While ZIMACE went through some uncertain periods, this in itself was not totally unexpected. Advice received from consultants prior to its formation indicated that the exchange could expect a great many ups and downs, particularly during the first 5 years of its operation. This undoubtedly proved to be true, but what emerged from this was a much stronger organisation, whose credibility rose tremendously. There is no doubt that, given the opportunity, ZIMACE will again rise to the occasion and expand, as there remains a huge need for an organisation of this sort in Zimbabwe.

Table 1: Total value of trade conducted each trading year since the inception of ZIMACE	
Trading year	US\$ million
1994/95	1.11
1995/96	24.38
1996/97	32.38
1997/98	31.33
1998/99	141.92
1999/2000	253.15
2000/01	677.53
March-June 2001	94.42
Based on the period April of one year to March the following year.	

ACE: its formation and potential role in a liberalised market place

Malawi, like many other countries in Africa, has an economy that is based on, and relies primarily on, agricultural production. In the past, Malawi established a name for the quality of the commodities produced – tea, coffee, groundnuts, rice and chillies, to mention but a few. However, the introduction of marketing boards, their inability to pay a premium for quality product, and a general lack of reliable market information led to a reduction in both the volumes produced and qualities achieved, as there was little or no incentive for farmers to produce or grade what was produced.

A feasibility study conducted in 2004 revealed that the introduction of an ACE in Malawi would improve the marketing of agricultural produce and products in the country, with resultant economic benefits.

Economic and market challenges

The country faces many economic and market challenges. First and foremost, there is a total lack of reliable and accurate market information. While steps have been taken to address this, much still needs to be done, and ACE will supply a great deal of the necessary market information needed in this respect. By declaring sale prices in various parts of Malawi, as well as those other countries with members, and by registering bid and offer prices for commodities, market trends will be established. Add to this the function of the broker, whose duty it is to advise his client, whether buying or selling, as to the best marketing opportunities and when and where these are likely to occur, market participants will be much more empowered than they are at present. The transparency of the market will also provide an opportunity for those unable to conduct their business over the exchange floor to negotiate from a position of strength, having been informed of what the market is doing and what future trends are likely to be.

Many of the benefits will be covered later, but perhaps one of the most significant is the ‘order’ the exchange can bring to the market. Through the establishment of quality standards for each commodity traded, it will be much easier to do business, as the market will be able to identify the grade being offered for sale, attach the known characteristics to that parcel and bid against the offer price on this basis.

Many small-scale farmers have no option but to sell their produce, whether they want to or not, because they have nowhere to store it. The ACE warehouse/silo certificate system will provide an opportunity for them to do so, and will also bring the prospect of generating much-needed liquidity into the agricultural sector. This will also allow for those farmers who do not have access to registered storage to sell their commodities at a fair market price, as there is likely to be less of any specific commodity available in the market at harvest. These documents will afford an opportunity to producers, as well as traders and end-users, to store their goods in an ACE registered storage facility and to be issued a warehouse/silo receipt. This document can then be used to secure a loan using the commodity in store as the collateral.

How the idea of ACE arose

In recent years, the Government of Malawi has relaxed controls on almost all agricultural commodities. Following this, the liberalisation of agricultural marketing commenced, and it soon became apparent that an organisation was needed, through which the free marketing of these agricultural commodities could occur. Out of this need, the concept of ACE was first mooted.

What has necessitated the introduction of an ACE in Malawi?

- poor market information
- lack of available markets
- lack of competition
- no quality standards
- poor communication
- lack of transparency.

What are the potential benefits?

- reliable market information, both pre- and post-harvest
- much-improved market access
- much more competition
- introduction of quality standards
- much-improved communication
- full transparency
- enforceable contracts
- arbitration facility

- more efficient and cost-effective markets.

How can it assist the farming community as a whole, and the small-scale farming sector in particular?

- market information not previously available
- market access - local, regional and international
- more market participants
- higher prices for good quality
- transparent deals and prices made public
- written contracts that are enforceable
- improved communication
- more efficient and cost-effective markets
- warehouse/silo certificates.

What can it do for other sectors within the agricultural industry?

- ability for all sectors to participate
- opportunity for parastatals to participate
- opportunity for transport to be traded
- opportunity for storage to be traded
- opportunity for the seed industry to participate.

What are the potential benefits to the country?

- much improved agricultural markets
- renewed faith in agriculture
- higher production
- fewer imports
- focus on Malawi and the exchange
- more efficient and cost-effective markets.

A brief history of the formation of ACE

ACE was first mooted by the National Smallholder Farmers' Association of Malawi (NASFAM), who identified a need to bring more order to the market place. Although not everyone shared this view at first, recent developments in the local market have resulted in a distinct change in attitude. The development of agricultural industries, not previously in place, has played a considerable part in this change of attitude, and has resulted in a much broader

interest in this new marketing initiative. Ultimately, a board of directors will be appointed and tasked with running the exchange on behalf of its members, made up of companies from the region, initially from Malawi, Zimbabwe and South Africa.

ACE will provide a forum at which deals can take place.

Aims and objectives of ACE

The primary requirement of a successful ACE in a producing country is:

‘an orderly internal market, which encourages production, allows free movement of the goods and rewards quality.’

To this end, it is essential that we establish a commodity exchange of the highest integrity, available to *all* the people of Malawi, and acceptable international traders, based on an open, free market system for the benefit of producers and consumers. The exchange will facilitate the trade of any agricultural commodity provided or desired by any consenting parties. It will also provide price discovery and dissemination - prices are based on the economics of supply and demand and then supplied to the public via the media.

How would an individual or company trade through ACE?

Members of the exchange would appoint brokers to conduct business for them, and it is they who will conduct trade on behalf of their clients, whether they are individuals or companies. The members would get a return through the brokers, who will charge an agreed broking fee to their clients. This will not be set by the exchange, but will be negotiated between the client and the broker, and is usually in the region of 1 or 2% of the value of the contract.

How is ACE financed?

ACE will be set up as a non-profit-making company and will therefore not charge a fee for trade conducted across the exchange floor. It is presently funded by USAID through NASFAM, but will, in time, raise levies against the shareholding companies to meet its annual operating costs. This will also have the effect of encouraging them to utilise the exchange, as they will have a vested interest in it. Additionally, it is intended that members be charged a fee to join the exchange.

What are the plans for ACE?

In addition to the interest shown by local companies, expressions of interest have been received from six companies in Zimbabwe, all of whom were members of the exchange there, as well as one from South Africa. This will give the exchange much more of a regional flavour, with potential to draw additional members from Zambia, Mozambique, Tanzania and Kenya. The plans are to meet the needs of producers and buyers in the region by providing an open, free trading market in those countries that have already expressed an interest, and by further expansion into both the regional and international markets.

Benefits of trading through a commodity exchange

There are many benefits to be gained from trading through an exchange such as ACE, some of which are detailed below.

- Reducing risks to calculated ventures.
- All the deals are transparent, which is certainly not the case in other markets. Prices are published through the news media, assuring both producers and consumers that they are getting the best price available at the time.
- The rules and regulations of ACE govern the manner in which deals are transacted within the exchange. Through this mechanism, the integrity of member companies, and the conduct of their brokers, is monitored.
- In the event of a dispute arising, and where the disputing parties are unable to resolve the issue among themselves, the ACE rules of arbitration govern, and an arbitration board will review the controversy. The benefit of this arbitration facility is enormous in saving both time and the costs involved in having to take legal action through the courts.
- The exchange ensures the maintenance of standards of quality, not only of the commodities themselves, but also of trading practices through its rules and regulations.
- There will be a great deal of expertise on the exchange, and the members located outside Malawi will make access into both regional and international markets considerably easier.
- An exchange such as ACE also provides a very cost-effective marketing system, with the transaction costs involved being as transparent to both buyer and seller as any other details, such as price of the commodity, for example.
- The ACE contracts, which must be signed by both parties and which are legally binding and are required to be lodged at ACE in respect of each deal conducted, give much-needed security to the parties involved in the transaction. These contracts cover the following assurances:
 - quantity
 - quality
 - passing of ownership and risk
 - price
 - payment terms
 - inspection
 - transport
 - delivery and weights
 - packaging and packaging definitions
 - *force majeure*
 - analysis
 - demurrage

- interest
- arbitration.

The current situation in Malawi and other countries in Africa

Some initiatives have been taken already to try to improve market information, and a project under the banner of IDEAA, funded by the Rockefeller Foundation, with the full support of the Ministry of Agriculture, is now functional. While this is a welcome intervention into a market that, until recently, has had no worthwhile market information or intelligence, it nevertheless falls well short of the functions of an ACE. This programme also works in the micro-economic environment, whereas ACE will look at the bigger picture, with millers and other food processors, large traders, broking houses and financial institutions as potential members of the exchange.

I have no doubt that it has benefited the small-scale producer, particularly those with very little to sell, as it has brought buyers and sellers together. However, it has not yet succeeded in getting to the wider audience, and sales are therefore generally conducted within specific areas. What is needed is to expand this concept further, and to attract more buyers and sellers to the market.

There are also indications that the IDEAA initiative has succeeded in improving communication within the farming community, but much still needs to be done in this regard. An exchange provides real-time information, as it is happening, so that all market participants benefit. The most exposed group, and therefore the one that can potentially gain the most, is the small-scale farming sector. By getting the most up-to-date price and market information, even if they are unable to trade across the exchange floor for any reason, farmers can still negotiate a better price with buyers, based on the knowledge they have.

Rationale

The agricultural industry has indicated that it is anxious to get some order into the market. Farmers are experiencing difficulty in identifying and accessing markets; buyers are concerned at the number of contracts that are broken; and all sectors are concerned with quality issues. The cost of doing business in Malawi remains high, with checks having to be made on each bag delivered, processors having to run the commodities through the manufacturing process a number of times due to the large variation in pip sizes, and the quality desired is often mixed with poorer grades. A commodity exchange is able to address all these concerns by ensuring the maintenance of standards. In its simplest form, a commodity exchange provides a venue at which buyers and sellers are brought together to conduct business, normally through a group of registered brokers. A properly run exchange should accommodate people active in the production, trade, processing and consumption of commodities, and reduce their costs of doing business:

- market forces should determine prices
- there should be many participants in the market – both buying and selling
- there should be strong farmer support, preferably including commercial farmers
- substantial volumes should be traded, allowing a minimum of three brokers to sustain their operations.

It is also important to have a clear understanding of the role of a broker, and how this differs from that of a trader. In simple terms, a broker is an individual who conducts deals across the exchange floor on behalf of a buyer or seller, acting solely on his client's behalf, and who relies solely on commissions for his/her income. A trader, on the other hand, is someone who takes a position in the market and is directly involved in the purchase and sale of the commodity concerned, with a view to making a margin between the buying and selling prices. The margin made is not known by the seller at any time.

Integrity and transparency are the cornerstones of the system. Trading sessions are open for public viewing, all deals are published, and closing prices are broadcast on a daily basis. The integrity of member companies is monitored for proscribed practice, such as doing deals outside the view of all parties on the trading floor, market manipulation and 'front-running'. If the system is correctly managed, both producers and consumers (buyers/end-users) can be assured that they are getting the most advantageous possible price. Indeed the success of ZIMACE – an increase in trading volume from US\$1.1 million in 1994 to US\$677 million in 2001 – is founded on the generalised perception of integrity among the membership and the public in general.

Agricultural commodity exchanges have greatly improved trading practices in many countries, and have brought more formality to trading methods, enhancing market transparency while in some cases improving the quality of commodities traded. Many of the parties expressing interest from outside Malawi have done so on the basis that the exchange will ease the existing problems with trade. Indeed, one large trader indicated that he would be keen to purchase the entire Malawian groundnut crop, provided he could do so through an institution such as ACE.

Everything noted above will contribute to assisting small-scale farmers. However, perhaps one point that has not been emphasised sufficiently is contained in the contracts, and this is the price payable, together with the date of that payment, which will enable farmers to plan based on given facts. In time, I believe the market will develop to the point where forward contracts, and delivery at a future date at a guaranteed price with pre-arranged finance as part of the package, will become more common, which will again benefit the farming sector.

Insofar as other sectors in the agricultural industry are concerned, there will be opportunities to buy and sell fertiliser and other inputs, transport, storage and other items related to farming, such as seeds and irrigation equipment. This will result in more competitive prices, with the resultant benefits to the agricultural market. In turn, this will have a knock-on effect of giving much more accurate information as to what might be available in any given commodity or service, irrespective of who owns it, based on much more reliable data.

The potential benefits to the country and the region as a whole are many and varied. One, which perhaps might be overlooked, is the focus that will be placed on Malawi and the region as a result of a successful regional commodity exchange being operated from here. There is already a great deal of awareness, as evidenced by the interest shown from both Zimbabwe and South Africa, and the potential to expand further. It will also provide increased opportunities for the country itself to become more involved in the agricultural markets, by utilising the expertise available through the exchange. Additionally, there will be some income generation into the economy as a result of the joining and annual fees payable by all members.

This is a very exciting project that will benefit all agricultural and agribusiness sectors in Malawi by making the trade in agricultural products more professional, opening up new markets, bringing market information and transparency to price formation and, through the warehouse receipt feature, improving access to capital.

The establishment of an agricultural commodity exchange in South Africa

Rod Gravelet-Blondin (SAFEX, South Africa)

The agricultural derivatives market in South Africa was first established as the Agricultural Markets Division of the South African Futures Exchange (SAFEX) as a result of the deregulation of the agricultural marketing sector in South Africa. The fact that the government moved out of the price-determination function and allowed agricultural prices to be based on the economic factors of demand and supply meant the introduction of price risk into the agricultural marketing equation. The agricultural derivatives market was established to provide all participants in the market with an efficient price risk-management facility and an effective price-discovery mechanism. The market was established on private-sector initiative by way of the compilation of a business plan (prospectus) and the subsequent selling of trading rights to the private sector to raise the required start-up capital. The role of the government in this was solely the provision of the enabling environment to allow the establishment of the market, and the fact that the market was left to operate without any interference. The regulation of the market was introduced and is operated by the Financial Services Board that administers the relevant acts under which exchange licences are granted and exchange rules are regulated.

In August 2001, SAFEX was acquired by the then Johannesburg Stock Exchange (JSE), and the agricultural derivatives market in South Africa is now operated as the agricultural products division of the JSE. The membership structure of the market changed in July 2005, when the JSE demutualised and ownership of the exchange was effectively separated from the trading rights of the exchange. This is in line with many exchanges worldwide.

It is important to note the exchange in South Africa was established as a derivative market trading futures and options contracts, and not spot or physical commodities.

Success factors

Clear objective – price volatility

The market was established with a clear objective: to provide all participants in the market with an efficient price risk-management facility and an effective price-discovery mechanism. It is important to know the reason for the establishment of a market, and that objective must be linked to a need in the market. A market must add value to the process and should be economically viable or sustainable.

Consistent policy – agriculture

In order for a derivatives market to work in agriculture, there should be ‘consistency in inconsistency’ – in other words, government policy regarding price determination and trade policy should be consistent. The objective or reason for the establishment of the market must continue to exist so that value can continue to be added to the agricultural marketing process.

Credible environment – financial, legal

There must be a high level of integrity and trust in the financial and legal framework in which the market is to be established. Participants entering contracts according to rules need to know that the contracts will be honoured, and that if not, that there is competent legal recourse to ensure adherence. Similarly, financial transactions must be secure. A major contribution towards the successful establishment of the market in South Africa was the support and role of the financial sector, particularly as regards the derivatives market, because the clearing structure was provided by the large retail banks.

Compatible infrastructure – storage, transport

In any agricultural commodity market, product needs to be stored and moved (unless it is a highly localised spot market). Storage and transport infrastructure that can be trusted as secure, safe and efficient should be in place. This has a great impact on the extent to which a market can operate, and the high quality of infrastructure in South Africa contributed to the success of the market.

Clear and consistent standards

Although vital to the operation of a derivatives market, the compilation and consistent application of clear standards is also important to the operation of any agricultural market. The buyer needs to know what he or she is buying, particularly if they do not have sight of the product.

Concrete regulations rules

All participants in a market need to understand and abide by the rules of the market, which need to be clear and consistently applied. Obviously, rules governing a derivative market will be more detailed and comprehensive than those of a spot market, but the important issue is that rules exist and are applied consistently. It is important that some dispute-resolution mechanism exists, as well as some form of agreed legal contract, to complement and enforce the rules where necessary.

Consultative development – participants/members

In order to add value to the marketing process, the market must meet a need. In order to establish if the need is real or perceived, it is necessary that a consultative process take place with participants in the market. This does not guarantee success, but it does go a long way to adding to it. Participation in the market structure is vital to success and market participation is enhanced, if the development of the market results from consultation.

Creating the opportunity

The establishment of the derivatives market in South Africa enabled members, initially, and brokers, subsequently, to act as agents on the market. This created opportunity to do business, and one cannot underestimate the profit motive in the establishment and success of an exchange. The opportunity that is created must be supported by the factors mentioned above.

Creative marketing/training

The more complicated the market structure, the more extensive and detailed the marketing and training programme, but it is vital that participants are fully aware of the benefits of the market and the potential pitfalls. Marketing and training are never complete, but must be ongoing. Much of the success in South Africa can be attributed to person-to-person marketing and training across the country. It is important to include the politicians, the administrators (government) and the media in marketing and education.

Committed staff

This could be classed as a 'soft' issue, but dedicated, hard-working staff, who believe in what they are doing, can make or break the establishment of a market. Incentives can be looked at and can be helpful as motivation, but belief in a project cannot be bought.

The future

Any business organisation that does not remain effective, efficient and focused will not survive, unless it is supported for non-economic purposes. An agricultural market needs to be effective. A market that does not add value to the marketing process will also find it difficult to continue. There will be costs in using a market structure, but the value of using the market structures must outweigh the costs thereof.

A particular challenge facing the derivatives market in South Africa is to make a market that is primarily devised for large commercial farmers relevant and applicable to the smaller subsistence farmers in the country. Obviously, the fact that the derivatives market establishes an efficient price signal is of enormous benefit to all farmers, as it clearly signals the true economic value of the product, but directly accessing the market to benefit from the price risk-management facilities is difficult for smaller farmers.

If the government policy in South Africa changes to re-introduce centralised price determination, the *raison d'être* for the derivatives market will disappear. It is important that policy-makers are aware of the mechanism of a market and are not intimidated by price fluctuations.

Prospects for a regional agricultural derivatives market

One of the questions that we were asked in coming to the CTA meeting was the issue of why SAFEX is not expanding into other countries. I have outlined in this section some ideas for the development of a Southern African regional trading platform. This is an opportunity that is still at the conceptual stage, and the reasons for not taking this forward are due to questions concerning finding the right partners, the right timing and the right financing; these issues, along with the opportunities, are outlined below.

The Southern African region, whether defined as the five countries of the Southern African customs union or the larger 15-country Southern African Development Community (SADC), is an agricultural resource-based regional economy. This has prompted the view that economic development in the region should be agricultural resource-based in order to be sustainable. However, the nature of agriculture is such that it is subject to volatile pricing patterns and provides, according to many analysts, an unstable and unsuitable basis on which to develop the

economy. It is now widely accepted that the preferred route to stabilise the impact of volatile commodity prices on an economy is to facilitate access to a derivatives market. Not only can participants in the agricultural economy benefit from the advantages of the price risk-management facilities offered by a futures market, but the economy itself can benefit from the price-discovery function that is generated by an efficient market.

In early 1995, SAFEX established an independent membership-based division, the agricultural markets division, to trade derivative instruments on agricultural commodities. The initial contracts introduced, based on chilled beef and potatoes, were not successful; however the subsequent contracts on white and yellow maize, wheat and sunflower seeds have been highly successful. Following the takeover of SAFEX by the JSE Securities Exchange in August 2001, agricultural derivative instruments are presently traded on the agricultural products division of the JSE Securities Exchange.

Fundamentals for a successful derivatives market

It is widely accepted that, for a viable commodity derivatives exchange to be established, the following conditions should exist.

- Supply and demand for the commodity concerned has to be large; there need to be many potential participants; and the commodity must be a fairly important component of these people's operations. Some literature states that there has to be a well functioning spot market and that before futures contracts can be introduced, forward contracts have to be actively traded. This actually does not correspond to the ways that commodity exchanges have developed historically (even in recent history, e.g. electricity) – they often helped spot and forward markets to develop, rather than being introduced only after these markets already functioned well.
- The commodity traded must be well standardised, with grades widely accepted by commercial parties, and independent entities able to evaluate grades. Exchange trade is easier if a commodity is storable.
- Pricing must be left to market forces. This means that there should be little likelihood of manipulation by:
 - private interests (note, in particular, the need to avoid control of a small number of people over transport and storage facilities)
 - government entities – either deliberate, for the commercial interest of government trading entities or the private interest of government officials, or because of a sudden change in government policy. The latter implies that there has to be a commitment from the government to a rule-based rather than arbitrary policy on the pricing and trade of the commodities to be traded on an exchange.
- The exchange should be supported by major commercial interests. This does not just mean that many companies should use the market for hedging (or if they wish, speculation), but also that:
 - they are willing to use the exchange price as reference for their physical trading

- even if they do not trade on the exchange, they should not feel left out – e.g. farmers should feel the exchange is good for them. This requires an educational effort by the exchange, and good public relations.
- Well functioning and accessible services and infrastructure facilities are necessary, for example good access roads, availability of transport companies, weight bridges, quality control services, an efficient administration, warehousing, telecommunications, etc. (if the warehouses or transport companies are controlled by only a few companies and not available for public use, they are of little use from the exchange's point of view).
- Judicious government support is required – including a willingness to adopt suitable new regulation/legislation and appropriate oversight over trade on the exchange.
- Free market prices must be volatile enough to create large price risks.
- There should be enough potential interest from the speculative community.
- Well functioning and fully trusted clearing operations are needed, whereby trades are guaranteed and margin money/deposits are held with integrity.

Existence of fundamentals in the region

The *modus operandi* will be to look very briefly at each of the above listed conditions (fundamentals) to determine whether and to what extent they exist in the region as a unit. The viability, or not, of a regional agricultural derivatives exchange will be based thereon. Due to the nature of livestock and livestock products, the investigation will concentrate on field crops.

- During average production years, South Africa produces approximately 50% of the maize in the region, 50% of the sunflower seed, 50% of the wheat and 40% of the soya beans. Thus, purely on a volume basis, a regional derivatives exchange could not only serve a large percentage of field crop production in the region, but the increased volume of underlying product could increase the liquidity of the contracts already successfully traded on the Agricultural Products Division of the JSE Securities Exchange. The only other products that are produced in any volume are barley, with almost 80% of the regional production produced in Ethiopia; and sorghum, with Ethiopia accounting for 50% of regional production. It can be safely assumed that there are many potential participants and that the commodities represent an important component of the participants' operations.
- It is advisable that, for a regional derivatives market to function to its full potential, the commodity traded should not only be subject to good standardisation, but that such standardisation also be consistent across the region. The standardisation of potential products across the region that could be traded on a regional derivatives market at present is such that it would be very difficult to fully utilise the potential of a market under present conditions. It would be possible to hedge (on condition that there was a consistent correlation between domestic and exchange prices), but if the grading was not standardised, delivery in fulfilment of a futures contract would be limited to long position holders taking delivery from a single point.
- The agricultural pricing policies of the various potential participant countries in a regional derivatives exchange at present is diverse, and not without the possibility of manipulation by either private or government entities. It is essential for a regional derivatives exchange that

government policies as regards agricultural marketing be consistent, and not subject to sudden change.

- It is believed that a regional derivatives exchange would be supported by the major commercial interests throughout the region, and that the exchange price would indeed serve as the reference for physical trading. A more difficult area would possibly be structuring the exchange to serve the various levels of participants throughout the region.
- Infrastructure facilities would not only need to be well functioning and services accessible, but there would need to be an acceptable level of consistency across participating countries. At present, it seems that this is not the case, and the benefit and operation of a regional derivatives exchange would be severely curtailed as a result.
- It is difficult to gauge the level of support of the various possible participant governments for a regional derivatives exchange and the corresponding willingness to adopt/enact appropriate new legislation, However, it is assumed that if support were forthcoming, the appropriate legislation would follow. Present regional activities regarding such appropriate legislation seem to indicate, however, that support for such a regional derivatives exchange is not high on the agenda.
- Without interventionist and stabilisation policies, it can be assumed that the free market prices of the possible products that would be traded on a regional exchange would indeed be volatile and create price risk, with the resultant need to manage such price risk.
- It is difficult to assess whether speculative interest would exist, but generally it can be assumed that speculative interest will be attached to a well run market that has the necessary integrity. A difficulty would be the understanding of the role of speculation in the price formation of agricultural products, especially those closely connected to staple food products.
- As with the difficulties with the present lack of compatible agricultural policies within the region, there is also a lack of compatible financial policies. A regional derivatives market would require an understanding of the necessary money market flows associated with the clearing operation of a derivatives market, as well as the smooth and uninterrupted flow of such funds.

Conclusions

The above analysis consists of a brief and somewhat cursory introductory review of the possibilities of the establishment of a regional agricultural derivatives market. Although the product base and free market price fluctuations would certainly support the case for the establishment of such a market, it appears that, at present, there are major issues militating against such a development.

These major issues are incompatibility in:

- grading standards
- agricultural policy as regards marketing of agricultural products
- infrastructure
- financial policy.

A concerted effort, concentrating particularly on policy issues, agricultural and financial, by participating countries, would be required to move the process forward. Obviously, a major education/training effort would also be required.

A step forward could possibly involve the greater regional utilisation of the Agricultural Products Division of the JSE by the surrounding countries. Although this would not provide the full benefits of a derivatives market because it would preclude delivery, it would assist in developing the understanding of the operations of a derivatives market and would provide a long hedging opportunity. The first step in this direction would be the development of a clear understanding of, and the smooth logistical flow for, financial obligations relating to the market.

Main questions and recommendations

Main questions and recommendations

At the end of the e-discussion and at the beginning of the conference, a summary of comments was presented. As part of this initial presentation at the conference, a number of questions were posed to attendees, as shown below. These questions were highlighted so that attendees could consider these issues during the conference in the context of the information that was being presented.

- **Sequencing:** Is sequencing important?
- **Conditions:** Are there any preconditions necessary for these strategies to work in support of smallholder farmer?
- **Context:** In what ways do the marketing tools and strategies presented in this conference need to be adapted to work effectively in different ACP countries?
- **Ownership/leadership:** Who should introduce these strategies? How should they be funded?
- **Linkages:** Should they be introduced as single entities or clustered to make efficiency gains?
- **Priorities:** Where should CTA invest in regard to ACP marketing support?

The questions were related to the various types of marketing institutions, strategies and tools that are being used to assist in improving market co-ordination and performance in ACP countries, see list below.

Strategies, tools and institutions

- Marketing policy support (strategy)
- Market development analysis (tool)
- Farmers' organisation (strategy)
- Market information service (institution)
- Market intelligence (tool)
- Grades and standards (strategy)
- Establishing a legal framework for trade (strategy)
- Establishing a and integrating financial instruments (tools)
- Support to private sector associations (strategy)
- Warehouse receipt system (institution)
- Commodity exchange (institution)
- Advocacy and capacity-building, networking (strategy)

The conference was structured according to this list, such that attendees could evaluate the role, effectiveness and usefulness of each of these factors for specific types of market actors, but especially for smallholder farmers, who make up the bulk of the agricultural sector. The

conference attendees were also asked to consider these factors in regard to the other people in the marketing of agricultural produce, including large-scale farmers, informal traders, formal traders from the private sector, and people from the public sector including government, donors and NGOs. Based on this perspective, the groups were asked the following questions.

Questions and recommendations from marketing information services

- Who should own, manage and control MIS?
- How can partnerships be developed to sustain them?
- What should be the priorities for CTA?

Due to the nature of the meeting and wide range of views presented, we felt it was best not to present all the comments made, but to synthesise comments into some key points.

Management

The group suggested that the management of an MIS should not be solely the domain of the government, as evidence has shown that this can be detrimental to emerging or pilot services.

Ownership and partnerships

The group felt that for MIS to develop in a sustainable and effective manner and also meet the needs of a range of people from the agricultural sector, ownership should not be the exclusive domain of any one entity. An MIS should involve, if possible, a degree of collaboration and competition between people from government, private sector, development groups and public-sector agencies. To make better decisions on partnerships, the group suggested that, for any situation, the roles and responsibilities of the various people, and the needs, should be analysed, using one of the analytical or sampling frameworks below. This would probably need to be done on a case-by-case basis.

Table 1: Analytical framework to evaluate roles and responsibilities for the development of a market institution

	Government	Consultants/NGOs	Farmers	Traders
Who pays?				
Who plans and makes decisions?				
Who implements?				
Who uses?				
Who owns the outputs?				

Table 2: Analytical framework to evaluate roles and responsibilities

Table 2: Analytical framework to evaluate roles and responsibilities			
Who implements?	Who pays?		
	What is done?		
	What information?		
	Which clients?		
	Which outputs?		
	Quality control?		

CTA priorities

To support the development of sustainable MIS, it was felt that CTA could play a vital role in clarifying some basic issues and then investing, with participants, in long-term projects to facilitate model options.

Basic research in the area of MIS should include the following.

- **Study:** An evaluation to determine the value, utility and benefits of MIS in ACP countries. This study would select three or four countries from Africa and the Caribbean, to determine how MIS support the needs of specific types of client. This type of analysis should identify what is working well, what is not working well, and the reasons for this. At present, it is unclear to many donors whether market information is a genuine public good, or should be partially or entirely covered by the users and/or market-chain operatives. This study should also investigate the question of ownership, how it is being implemented at present and which types of management system provide the best services. What are the possibilities for greater autonomy in implementation of an MIS?
- **Study:** One issue that was repeatedly raised was that of the future role of the mobile phone system for interactive and low-cost MIS. This issue was raised in relation to the *e-choupal* system in India and the rapid deployment of mobile phone infrastructure in most ACP countries, relative to the slower outreach of Internet access.
- **Support:** Based on the results from an evaluation of MIS, CTA would be well placed to share best practices in how to design and implement MIS.
- **Support:** Capacity building in the provision and analysis of market data to provide greater use of the information for specific target groups.
- **Support:** Based on the findings from the impact assessment of MIS, CTA should develop an advocacy and policy dialogue process with key stakeholders in selected countries with recommendations on the importance and value of MIS and how they may be integrated.

Questions and recommendations from marketing institutions

- Is sequencing important in introducing the elements of tools, strategies and institutions?
- Are there any preconditions necessary for implementing the market-strengthening tools, strategies and institutions discussed at this meeting?
- Which are the most appropriate groupings for supporting and sustaining these tools, strategies and institutions?
- What are strategies that can be used to increase the prospects of sustainability of these new developments?
- What should be CTA's priorities in these areas?

Sequencing

In one of the groups, 11 out of 12 people felt that the sequencing of investments in market institutions was a useful approach, and that making investments in the order presented at the conference would be more effective. The group suggested that investments made in an *ad hoc* or unplanned manner were likely to lead to either failure or poor performance of the said strategy. Several examples of this were cited from the group. However, although sequencing was a desirable outcome, the group also indicated some caveats, in that each country should be considered in regard to the location and its contextual situation. It may be that some agricultural sectors are prime candidates for support, such as online futures sales, whereas other parts of the economy would only benefit from more basic types of marketing support. The other concern was in relation to the practicalities of attempting to introduce and integrate ideas in a measured and sequenced fashion, due to the desires of multiple participants and agencies involved in decision-making and investment. Hence, if a government or donor specifically wanted a new institution to be supported, this would happen regardless of sequencing logic. The lack of any informed analysis or profiling of countries in terms of the marketing status may also preclude a logical development pathway.

Preconditions and profiling

The group felt that, for the first set of strategies, tools and institutions mentioned in the list, there were few preconditions that would be a major impediment to the success of interventions at these levels. The first three could be set up independently and not have adverse effects on each other:

- marketing policy support (strategy)
- market development analysis (tool)
- farmers' organisation (strategy).

For the next three areas of marketing intervention, it was felt that their effectiveness and/or performance would be significantly improved if interventions 1-3 were in place. However, even if they were not, it would not necessarily make their usefulness redundant:

- market information service (institution)
- market intelligence (tool)
- grades and standards (strategy).

As an example, marketing information would be effective in the absence of a marketing policy or a series of widely known marketing studies, and even in a situation where farmers were not well organised. However, there would be considerable benefits in the utility of market information, if farmers were well organised and acting on the advice of clear marketing studies and strategies.

Effective development of several of the complex marketing institutions, such as warehouse receipt systems and commodity exchanges, that stipulate some form of profiling method, would be a useful starting point from which advice could be offered by ACP countries on their strategies for developing marketing support to offer advice on appropriate marketing intervention linked to:

- best practice
- case studies
- partners
- timing
- context
- location
- experience.

Partnerships

The question of who should be involved in developing marketing institutions was addressed by the group through Table 3.

Table 3: Who should be involved in developing marketing institutions?							
	Govern- ment	Donor	Regional	Private sector	NGOs	Univer- sities	Consultant s
Policy	* * *	* * *	*	*	*	*	*
Analysis	*			*		*	*
Farmers' organisations					* * *		

Sustainability

The issue of sustainability was also addressed by the group, who emphasised the following key points:

- need to have in place appropriate institutional arrangements
- need to avoid all sorts of opportunistic strategies
- government may be required in some cases for public goods
- private sector must pay for everything
- training and universities should play a major role.

CTA priorities

Because of its networks of partners in ACP countries, the group felt that CTA should be in the right position to provide information on best practices through the dissemination of case studies from the six ACP regions. Facilitating dialogue and alliances among ACP partners on strengthening market institutions was another priority area highlighted by the group discussions.

Table 4: Synthesis of workshop's key messages

Strength of message	Nature/focus of message	Strategy implications	Implications for CTA
<p>Very strong - consensus - clearly expressed (must)</p>	<p>Availability of timely, accurate and relevant market information is a critical success factor.</p>	<p>Build on anecdotal evidence to obtain more objective verifiable evidence of proof of relevance and impact of information.</p>	<p>CTA requested to support evaluation of existing MIS.</p>
	<p>Addressing the (information) needs of smallholder farmers is paramount (direct efforts).</p>	<p>Channel support to MIS through farmers and farmers' associations.</p>	<p>CTA may modify its support strategy for MIS development.</p>
	<p>Important to recognise and understand regional and, to a lesser extent, national differences in the state of development of MIS and other market instruments.</p>	<p>Knowledge/information sharing needed.</p>	<p>CTA to promote networking at ACP level (web-based as well as through publications and other means).</p>
<p>Strong (should)</p>	<p>Development of MIS and other market instruments should be sequential.</p>	<p>Training, knowledge sharing and consultations may be needed.</p>	<p>CTA can contribute as appropriate (possibly including advocacy).</p>
	<p>MIS should be combined with other services (advice, advocacy, financial, legal, insurance, etc.)</p>	<p>Better understanding of the enabling environment and preconditions.</p>	<p>Information dissemination by CTA.</p>
	<p>Public-private sector collaboration recommended.</p>	<p>Concern for sustainability can influence type of collaboration.</p>	<p>Information dissemination by CTA.</p>
<p>Dilute (may/may not)</p>	<p>Ownership of MIS and other instruments may/may not be so important.</p>	<p>Further consultation need on priorities and overall approach to development.</p>	<p>CTA could work on consensus-building between stakeholders.</p>
	<p>Market information may/may not rank very high in relation to other farmer needs.</p>	<p>Further consultation need on priorities and overall approach to development.</p>	<p>CTA could work on consensus-building between stakeholders and priority setting.</p>
	<p>Further R&D may/may not be required to guide the development of strategies and best practices for establishing and maintaining MIS and other market instruments.</p>	<p>Further consultation needed on priorities and overall approach to development.</p>	<p>CTA could work on consensus-building between stakeholders and priority setting.</p>

Opportunities for CTA-led R&D interventions

Based on the presentations of the meeting and recommendations from the discussion groups, the following section provides some critical areas of research and development, in which CTA could play a leading role in assisting the marketing development of ACP countries over the next 5-year period.

Due to the increasing economic pressure caused by events such as globalisation and market reform, ACP countries need to find innovative means and methods to improve their market performance. CTA could assist in this area by playing a strategic role in niche pieces of research and developmental investment to combine specialised information with new ICT technologies to improve the competitiveness and innovation within the agricultural sector of ACP countries. Having identified niche opportunities, CTA should develop these new areas of intervention beyond the pilot level to have a significant and sustained impact on improving marketing institutions in ACP countries.

Areas of intervention identified at this meeting include the following.

Research and development options

Market information

Undertake an impact study of different types of MIS currently being used in selected ACP countries to evaluate the value, utility and quality of these services in terms of client needs, accuracy, timeliness and accessibility. This study should determine the institutions best placed to own and implement such services and how they can be supported financially. The study should also clearly outline costs and benefits that accrue from the services. The study should compare services being administered in ACP countries having small (10-15 million), medium (20-40 million) and large (60 million +) populations, those with strong and weak ICT capacity and having different levels of market engagement at the local, national, regional and international levels.

Outcomes of this research

- better understanding of the status of MIS in ACP countries - this type of review has not been undertaken since 1996
- recommendations of best practices in costs and types of services that have the most effective ways of reaching target users, particularly smallholder farmers
- policy recommendations on public goods or private-sector financial arrangements to support long-term support in these sectors.

Marketing capacity tool

As the marketing support services within ACP countries are highly diverse, it is currently difficult to identify which types of marketing support services would best suit any one country. To address this diversity, CTA should develop a rapid online marketing profiling instrument, using instruments such as 'survey monkey', so that ACP economic research groups, policy-

makers and practitioners can use these tools to evaluate their country's position in terms of the status of its marketing interventions, institutions and investments. The assessment tool would be used to check market capacity. This information can then be used as the basis of developing plans for investment and or re-engineering options to improve the marketing efficiency and performance of key sectors, within the local context.

Outcomes of this research

- Development of an online analytical tool, that would profile the marketing status and capability of a country based on the investments and effectiveness of existing services and institutions. This profiling tool would provide a low-cost mechanism for CTA to work with ACP counterparts in evaluating national and regional market needs and opportunities.
- Areas of investigation would include aspects such as MIS capacity and competence, farmers' organisations, media coverage (radio, TV, newspapers), ICT access (Internet, mobile phone), traders' organisations, financial linkage to key agricultural sectors, storage capacity, (warehouse, cold chain), research linkage to PS, collateral trading status (WHR, exchange), legal status.

Marketing evaluation and strategy development

Based on the results of the marketing capacity analysis, CTA would be in a position to work with ACP partners and their service providers in developing support packages and or strategies for marketing development. CTA could also use this tool to evaluate whether new interventions being advocated by CTA, such as mobile trading and mobile MIS, would be an appropriate investment in a particular country.

Outcomes of this research

- Application of market capacity instrument to identify key factors related to the marketing status and capability of a country, based on the investments and effectiveness of existing services and institutions. At present, CTA is only able to commission individual support measures for ACP countries on a demand basis.
- This profiling tool would provide a low-cost mechanism for CTA to work with ACP counterparts in evaluating services across the ACP region, which would provide a prescribed scheme on which to base new interventions, and also decisions as to where to make the most effective investments relative to poverty/populations/marketing capacity indicators.

Marketing support portal

To provide an interactive information portal for a community of practice to support methods, tools and application to strengthen marketing analysis, institutional development and linkage of smallholder producers to markets. The information on the marketing portal should be directly linked with specific iterative 'learning alliance' approaches to build a cadre of marketing trade and marketing specialists that can build the capacity of private- and public-sector market institutions.

Outcomes of this R&D intervention

- CTA would act as a lead organisation in obtaining the latest conceptual thinking in applied trade and marketing approaches, methods, tools and applications within a high-profile

information and learning resource. CTA would, however, build this process using a consortium approach so as to bring together inputs from other leading research, development and private-sector agencies. In this way, the portal would lead to the establishment of a community of practice that would support an interactive information portal to provide guidance in marketing and agro-enterprise – agribusiness development.

- The information platform will build on existing materials, supplemented with news studies from partner organisations. Based on this marketing portal, CTA will encourage partners in its extensive network to evaluate where there are strengths and where there are weakness in their marketing systems and, through a consultative process, provide advice on strategies and sequenced areas of intervention to improve market efficiencies that support the needs of smallholder farmers. This portal would be used to support the marketing evaluation and strategy development tools.

Integrating trade and marketing support

Since 2001, CTA has provided, through its Agritrade web portal, policy support information to ACP trade negotiators and decision-makers on the key agricultural trade issues (WTO, EPAs, CAP reform, market access, etc.). CTA should explore options to link this trade-based information with associated activities that support market-based interventions, such as MIS and marketing exchange institutions. This integration of information would offer the opportunity for greater dialogue and knowledge-sharing between people involved in policy development and decision-making with actors involved in developing ACP business opportunities within specific sectors.

Outcomes of this R&D intervention

- Rather than building isolated areas of information that support specific trade- or market-based actors, greater linkage of trade- and market-based research and policy-type information systems will provide a new type of knowledge-management system that would further assist in bringing together both thinking and activities of people involved in diverse yet related areas of market and trade support and development.

Linking farmers to formal market institutions

To evaluate the opportunities and catalyse the process of enabling smallholder farmers to manage their risk through engaging in more formalised markets. There is little doubt regarding the many advantages of working towards more formalised markets in ACP country markets, in terms of increasing food safety, better management of risk, more transparent transactions, opportunities to add value to produce and generally strengthening good business practices. However, all these actions also involve added cost and greater business responsibility. Many observers consider that these projects will fail due to poor design, overly ambitious time frames and lack of regard of the conditions required for these systems to work. There are serious questions about the equity of benefits from interventions and how smallholder farmers, the vast majority of stakeholders in the agricultural sector of ACP countries, will benefit. More information is required to ensure that infrastructure, information and quality control equipment is available in local areas so that well organised farmer associations outside the capital city areas can also benefit from the process.

Outcomes of this research

- This research will place emphasis on evaluating the equity of benefits that accrue in the transition from informal to more formalised markets, with particular emphasis on the implications for smallholders and the supply chains in which they are involved.
- The study will evaluate gains by smallholders as opposed to larger traders and farmers who are most likely to benefit from a process of market reform. The study will focus on specific countries, and pay attention to migration flows and alternative diversification options with shifts in market forces.

Specific farmers' organisation studies

At the organisational level, there were repeated references for smallholder farmers to be more organised, if they are to be able to take advantage of new marketing opportunities. While this may be considered a simple measure, organising farmers in the post-structural period has often been poorly designed and implemented, and in many ACP countries farmers are now less organised for market supply than they were 30 years ago. Studies could be undertaken to evaluate where farmers are well organised and where they are less efficient, and the key factors and methods that influence best practice in the establishment of primary and secondary order farmers' organisations.

Outcomes of this research and development

- Best practice guides in farmer group development and linkage of these groups to secondary associations.
- Specific types of approach should be developed that suit farmers with high and low market access and those targeting high- and low-value markets.

Specific ICT studies

Mobile phone analysis, to evaluate where and how this technology could be developed in specific countries to improve marketing opportunities for poorer smallholder farmers as well as increasing marketing efficiency within and between ACP countries.

Outcomes of this research

- Recommendations and new innovations for use of ICT mobile technology linkages to support areas of market information, trading and financial links. The integration of financial and non-financial services through mobile technology offers exciting new opportunities to support the many millions of atomised farmers in ACP countries.
- New interventions in this area will provide CTA and its partners from the public and private sectors with an opportunity to design, test and privatise new services to improve marketing performance for smallholder farmers.

Programme

Programme

Expert Consultation on Market Information Systems and
Agricultural Commodity Exchanges:
Strengthening Market Signals and Institutions
28–30 November 2005
Dorint Novotel Amsterdam, The Netherlands

Day 1
Monday 28 November

- | | |
|--------------------|--|
| 7:30–9:00 | Registration of participants |
| 9:00–10:00 | Session 1 Opening and setting the scene |
| 9:00–9:20 | Welcome and introductions
<i>Dr Hansjörg Neun, CTA Director</i> |
| 9:20–9:40 | Testimony of CTA's early support for MIS development
<i>Dr Ibrahim Khadar, CTA</i> |
| 9:40–10:00 | Expectations and objectives of the meeting
<i>Vincent Fautrel, CTA</i> |
| 10:00–10:30 | Coffee break |
| 10:30–11:40 | Session 2 Setting the scene
<i>Chair: Dr Niek Koning, Wageningen University</i> |
| 10:30–11:10 | The new trade environment and the plight of smallholder farmers
<i>Mr Peter Robbins, Director, CMIS, UK</i> |
| 11:10–11:40 | Food marketing systems, market institutions and co-ordination roles
<i>Dr Aad van Tilburg, Wageningen University, The Netherlands</i> |
| 11:40–12:00 | Review of the electronic discussion
<i>Dr Shaun Ferris, CIAT, Uganda</i> |
| 12:00–13:00 | Discussions |
| 13:00–14:30 | Lunch |
| 14:30–16:10 | Session 3 Marketing needs from the government, trade and farmer perspectives
<i>Chair: Baba Dioum, CMA/AOC, Senegal</i> |
| 14:30–14:50 | Policy planning and outcomes in market institutions
<i>Willie Odwongo and Martin Fowler, Ministry of Agriculture, Uganda</i> |

14:50–15:10 Traders' perspective on public sector marketing institutions: benefits and needs
Sophie Walker, Kenagri, Kenya

Farmer organizations' perspectives on market information and new innovations in auctions, warehouses and exchanges:

15:10–15:30 *Ousseini Ouedraogo, ROPPA, West Africa*

15:30–15:50 *Heishan Peiris, NASCOMEX / NASFAM, Malawi*

15:50–16:10 *Brook Johnson, CLUSA, Senegal*

16:10–16:30 Coffee break

16:30–17:30 Discussion

Day 2 Tuesday 29 November

8:00–09:50 Session 4 Innovations in market information services

Chair: Dr Arlington Chesney, IICA, Costa Rica

8:00–8:10 Introduction
Shaun Ferris, CIAT, Uganda

Case studies

8:10–8:30 National MIS: Experience in the Pacific
Taimalietane Matatumua, Ministry of Agriculture & Fisheries, Samoa

8:30–09:00 Regional MIS: Experience in West Africa
Gaston Dossouhoui, RESIMAO, Bénin and Marc Bernard, ZADI, Germany

09:00–9:30 MISTOWA: using ICTs to offer MIS that can promote the trade of agricultural products in West Africa
Patrice Annequin, IFDC/MISTOWA, Ghana & Mark Davies, TRADENET/Busylab, Ghana

09:30–09:50 Increasing the incomes and life quality of farmers in Senegal through a multimedia mobile phone MIS
Daniel Annerose, Manobi, Senegal

09:50–10:20 Discussion

10:20–10:40 Coffee break

10:40–11:40 Session 5 Market Intelligence Services

Chair: Professor Michael Weber, Michigan State University, USA

10:40–11:00 Caribbean Agribusiness Marketing Intelligence and Development Network
Mr Vassell Stewart/Dr Ardon Iton, CAMID/CARDI, Trinidad & Tobago

11:00–11:20 Regional Agricultural Trade Intelligence Network – RATIN
Stephen Njuria, RATIN, Kenya

- 11:20–11:40 InfoComm
Olivier Matringe, UNCTAD, Geneva
- 11:40–12:00 Discussion
- 12:00–13:00 Discussion in three working groups
- 13:00–14:30 Lunch
- 14:30–15:30 Plenary feedback
- 15:30–16:30 Session 6 Market instruments to strengthen the demand signal**
Chair: Dr. Adrian Mukhebi, KACE, Kenya
- 15:30–15:50 Financial framework
Jennifer Heney, FAO, Italy
- 15:50–16:10 Bankers' perspectives
S. M. Sheokand, NABAD, India
- 16:10–16:30 Legal framework
J. Cockeran, JSE, South Africa
- 16:30–16:50 Coffee Break
- 16:50–17:30 Discussion

Day 3

Wednesday 30 November

- 7:30–8:45 Visit to the flower auction in Aalsmeer (departure from Novotel at 6:45)
- 09:00–11:00 Session 7 Auctions, warehouse receipts and agricultural commodity exchanges**
Chair: Peter Robbins, CMIS, UK
- 09:00–09:10 Introduction
Peter Robbins
- Case studies**
- 09:10–09:40 Cereals Auctions
Philippe Ki, Afrique Verte, Burkina Faso
- Livestock managed markets
Djegga Demmon, UDOPER, Bénin
- 09:40–10:00 Warehouse receipts
Jonathan Coulter, NRI, UK
- 10:00–11:00 Commodity exchanges:
KACE: *Dr Adrian Mukhebi, Kenya*
ACE: *Ian Goggin, Malawi*
SAFEX: *Rod Gravelet-Blondin, South Africa*

11:00–11:15	Coffee break
11:15–12:15	Discussion in three working groups
12:15–13:00	Plenary feedback
13:00–14:30	Lunch
14:30–16:00	Session 8 Synthesis of the meeting – recommendations from the workshop
14:30–15:30	Working groups to look at specific questions Report back to plenary (3 x 10 minutes)
15:30–16:00	Main questions and recommendations
16:00–16:30	Coffee
16:30–16:45	Closing speech <i>Dr Hansjörg Neun, CTA Director</i>

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Acronyms and abbreviations

ACP	African, Caribbean and Pacific
ACE	agricultural commodity exchange
AICI	Agricultural Insurance Company of India Ltd
AMD	Agricultural Markets Division (of SAFEX)
APD	Agricultural Products Division (of the JSE), South Africa
CECAM	Caisses d'Épargne et de Crédit Mutuels, Madagascar
CABA	Caribbean Agribusiness Association
CAMID	Caribbean Agribusiness Marketing Intelligence and Development
CARDI	Caribbean Agricultural Research and Development Institute
CBS	Central Bank of Samoa
CMA	collateral management agreement
CEDEAO	Communauté Economique des Etats de l'Afrique de l'Ouest
CLUSA	Cooperative League of the United States of America
CRDI	<i>see</i> IDRC
EAC	East African Community
ECOWAS	Economic Community of West African States
ELISA	enzyme-linked immunosorbent assay
FMCA	Financial Markets Control Act, South Africa
FAO	Food and Agriculture Organization of the UN
HPLC	high-performance liquid chromatography
ITC	India Tobacco Company
ICT	information and communication technologies
IDRC	International Development Research Centre, Canada (Centre de Recherches pour le Développement International)
IVR	interactive voice response
IFDC	International Center for Soil Fertility and Agricultural Development
ICRISAT	International Crops Research Institute for the Semi-Arid Tropics
IFPRI	International Food Policy Research Institute
JSE	Johannesburg Stock Exchange
KACE	Kenya Agricultural Commodity Exchange Ltd
KBC	Kenya Broadcasting Corporation
MIP	market information point
MIS	market information system
MISTOWA	Market Information Systems and Traders' Organizations of West Africa (USAID project)
MAPS	Marketing and Agro-Processing Strategy, Uganda
MFI	micro-finance institution
MCX	Multi-Commodity Exchange, India
NASCOMEX	NASFAM Commodity Exchange (Malawi)
NABARD	National Bank for Agriculture and Rural Development, India
NCDEX	National Commodity and Derivative Exchange, India
NMCE	National Multi-Commodity Exchange, India
NASFAM	National Smallholder Farmers' Association of Malawi
NGO	non-government organisation
ONASA	Office National d'Appui à la Sécurité Alimentaire, Benin
OECD	Organisation for Economic Co-operation and Development
PMA	Plan for the Modernisation of Agriculture, Uganda

PPCD	Policy Planning and Communication Division of the Ministry of Agriculture, Samoa
RATIN	Regional Agricultural Trade Intelligence Network
RIMS	Regional Integrated Marketing Development Strategy (of CAMID)
RESIMAO	Réseau des Systèmes d'Information des Marchés en Afrique de l'Ouest (West African Market Information Systems Network)
RBI	Reserve Bank of India
SMS	short message service
SADC	Southern African Development Community
SDRDC	Southern Diaspora Research and Development Centre
CATIE	Tropical Agricultural Research and Higher Education Center, Costa Rica
UDOPER	Union Départementale des Organisations Professionnelles d'Éleveurs de Ruminants (Departmental Union of Professional Organisations of Livestock Farmers)
WRS	warehouse receipt system
WAP	wireless application protocol
WARP	West African Regional Programme (of USAID)
WTO	World Trade Organization
ZACA	Zambian Agricultural Commodities Association
ZADI	Zentralstelle für Agrardokumentation und –information (Central office for Agrarian Documentation and Information)
ZIMACE	Zimbabwe Agricultural Commodity Exchange