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List of Acronyms

| | |
|-----------|--|
| ACDI/VOCA | Agricultural Cooperative Development International/ Volunteers overseas cooperative Assistance |
| ABEO | Agriculture, Business and Environment Office |
| ABS | American Breeders Service |
| ADRA | Adventist Development Relief Agency |
| AFC | Agricultural Finance Corporation |
| AFE | Action for enterprise |
| AGOA | African Growth Opportunity Act |
| AGROVETS | Agricultural and Veterinary Input Suppliers and Stockists |
| ASN | Ammonium Sulphate Nitrate |
| ASK | Agricultural Society of Kenya |
| BACOMA | Bungoma Agricultural commodity Marketing Association |
| BDS | Business Development Services |
| BDSP | Business Development Service Program |
| CAN | Calcium Ammonium Nitrate |
| CGA | Cereal Growers Association |
| COMESA | Common Market States of Africa |
| DALEO | District Agricultural and Livestock Extension Officer |
| DAP | Di- Ammonium Phosphate |
| DCA | Development Credit Authority |
| DTT | Delloite Touche Tomatsu |
| EAC | East African Commission |
| FaaB | Farming as a Business |
| FAO | Food and Agricultural Organization |
| FAR | Federal Acquisition Regulations |
| FBO | Farmer Business Outlet |
| FFS | Farmer Field Schools |
| FIPS | Farm Input Promotions Africa Ltd. |
| FtF | Farmer to Farmer |
| GOK | Government of Kenya |
| HIV/AIDS | Human Immunity Virus/ Acquired Immune- Deficiency Syndrome |
| HPMZ | High Potential Maize Zone |
| H/Qs | Head Quarters |
| ICIPE | International Centre for Insect Physiology and Entomology |
| IGAD | Inter-governmental Authority on Development |
| ILRI | International Livestock Research Institute |
| IPM | Integrated Pest Management |
| ITCZ | Inter-tropical Convergence Zone |
| KACE | Kenya Agricultural Commodity Exchange |
| KARI | Kenya Agricultural Research Institute |
| Kephis | Kenya Plant Health Inspectorate Services |
| KFA | Kenya Farmers Association |
| KIPRA | Kenya Institute for Public Policy Analysis |
| KMDP | Kenya Maize Development Program |
| KNFU | Kenya National Farmers Union |
| LMPZ | Lower Maize Potential Zone |
| LoL | Land O' Lakes |
| M&E | Monitoring and Evaluation |
| MCH | Maize Consolidation Hubs |
| MOARD | Ministry of Agriculture and Rural Development |
| MSME | Micro, Small and Medium-Scale Enterprises |
| NCPB | National Cereals and Produce Board |
| NGO | Non Governmental Organization |
| OECD | Organization of Economic Cooperation for Development |
| PMP | Program Monitoring Plan |
| RATES | Regional Agricultural and Trade Expansion Support |
| REDSO | Regional Economic Development Services Office |
| SBS | Sub-sector Business Services Approach |
| SGR | Strategic Grain Reserves |
| SMS | Short Messaging Services |
| SOW | Scope of Work |
| STAK | Seed Traders Association of Kenya |
| STTA | Short Term Technical Assistance |
| ToT | Training of trainers |
| UN/WFP | United Nations World Food Program |
| USAID | United States Agency for International Development |
| USAID/MD | USAID/ Micro enterprise Development Office |
| VAT | Value Added Tax |
| VCA | Value Chain Analysis |
| WWS | World Wide Sires |

EXECUTIVE SUMMARY

The Kenya Maize Development Programme (KMDP) is part of the USAID Strategic Objective 7 (SO7) which is aimed at increasing the level of rural Household incomes. The ACDIVOCA is the contractor for the KMDP, with the main partners being Cereal Growers Association (CGA), Farm Input Promotional Services (FIPS) Africa, and Kenya Agricultural Commodity Exchange (KACE).

The programme has been working in collaboration with key private sector players and the Government through the Ministry of Agriculture to improve maize production and bring efficiencies in maize marketing value chain. The costs of inputs, their unreliable quality, and sub-standard agronomic practices in many regions, contribute to the high costs of producing maize. The Kenya Maize Development Programme (KMDP) is addressing costs, quality and distribution through a range of services and institutions.

To bring a new level of vibrancy to the existing market, the programme has established groups of smallholder maize farmers for maize consolidation, handling and storage so that they can easily be linked to the market, access alternative sources of extension advice, business training, and quality seeds and fertilizers. Specific KMDP partners have been building on already strong relationships within the seed sub-sector to accelerate the introduction of improved planting materials. The proven mini-pack methodology of the Farm Input Promotional Service Africa (FIPS) for the promotion of improved seeds and fertilizers has been at the forefront the KMDP's rapid response to the need for expanded technology transfer to producers. Working in tandem with ACDI/VOCA Cereal Growers Association (CGA) FIPS, and KACE have been using their depth of experience in transferring business skills to smallholder farmers to build local capacity to make informed cost-benefit decisions about optional approaches to farming enterprises.

Conservation tillage is a proven agronomic system that while increasing productivity three- to four-fold leads to improved soil integrity, more efficient water use, reduced erosion and overall resource conservation. The programme has demonstrated this technology in demonstration plots; help farmers learn how to determine its relative profitability, and make the inputs available through input suppliers.

The programme has been working towards increasing market efficiencies by linking smallholder producers and their organizations to marketing service providers, such as the millers, and traders. Timely and reliable marketing information has been developed through the vast experience of the Kenya Agricultural Commodity Exchange (KACE), and a wide range of other market actors. It is envisaged that the number of middle-market links between producers and consumers will be reduced – shifting profits (wealth) to producers and consumers. The Cereal Growers' Association (CGA) will facilitate marketing of bulked up maize to millers and other large buyers such as the World Food Programme (WFP); and KACE will directly link producer organizations with small millers' associations and traders in maize-deficit regions.

This programme commenced early 2003 and has stimulated a lot of interest from the key stakeholders in the value chain who have come out strongly to support the programme in addressing the constraints that were identified to be inherent in the maize sector value chain.

The programme has also been addressing other cross cutting issues that affect the production of maize and these include issues related to HIV AIDS, Environment, and Gender. These are issues that affect the maize sector in one way or another.

This report covers the first year of the programme and will highlight primarily on what the programme has been doing on the issues highlighted above.

1.0 PROJECT BACKGROUND

1.1 **Maize Background in Kenya**

Maize is the foundation staple in the Kenyan diet, with a per capita consumption of 98 kilograms. The price of maize in Kenya is among the highest in eastern and southern Africa, and the lowest income quartile of the Kenyan population spends 28% of its income on maize¹. The inefficient maize production-marketing system has contributed to economic stagnation and worsening levels of poverty in Kenya. Increased productivity, more efficient markets, and rational government policies could dramatically alter the economic contribution of the maize sub-sector – from being a drag on the economy to becoming a key element in accelerated growth and poverty reduction.

The costs of inputs, their unreliable quality, and sub-standard agronomic practices in many regions, contribute to the high costs of producing maize. Import costs account for 40-50% of the price of DAP fertilizer, and by the time it reaches the small farmer, it has all too often been adulterated. The same complaint is voiced concerning the sale of sub-standard seed in counterfeit packaging. Farmers' investments, in what should be productivity and profit enhancing inputs, often result in a net loss. Frequently, the wrong inputs are applied at incorrect rates, and inappropriate blanket recommendations are disseminated by extension workers. In addition, inputs are not widely available in package sizes that are affordable to farmers. Furthermore, the approval process for new planting material is laborious, and new varieties are very slow to enter the marketplace². Distribution networks are inadequate, resulting in new materials such as high protein (QPM) and disease resistant varieties not being readily available.

Currently 25% of marketable maize comes from smallholder producers. During the harvest season, 70% of these farmers sell their maize to traders (assemblers) at the farm gate, and only 8% of the maize bought by larger millers is purchased directly from small farmers. Due to the dismal history of cooperatives, farmers are understandably reluctant to again become victims of the production-marketing system. However, working as individual households, unable to benefit from efficiencies in production and marketing systems, farmers can only hope to attain a level of sustainable poverty. Providing individual farmers with access to reliable inputs, and arming them with price information alone are not enough:

In the near-term, farmers must be assisted with actual linkages to markets in maize-deficit areas of the country. They require assistance in securing transportation services, contract negotiations, financing, and quality certifications. If they are to participate in maize production and marketing on a more equal footing with other market participants, the only choice is to learn from the past and to enter – eyes wide open – into association with other producers.

1.2 **Background of the Kenya Maize Development Program**

The Kenya Maize Development Program (KMDP) is part of the **USAID Strategic Objective 7 (SO7)** which is aimed at increasing the level of Rural Household incomes through facilitating increased efficiencies in the maize value chain. The ACDIVOCA is the contractor for the KMDP, with the main partners being Cereal Growers Association (CGA), Farm Input Promotional Services (FIPS) Africa, and Kenya Agricultural Commodity Exchange (KACE).

The **Cereal Growers Association (CGA)** brings the maize and wheat farmers together to form a strong stakeholders group that undertakes cereal farming as a business and lobbies for conducive policies that favors the sub sector. CGA will mobilize farmer groups and associations and link them with other players in the maize sub sector value chain.

The **Farm Inputs Promotions Africa (FIPS Africa)** will be working in the KMDP to improve the livelihood and food security of small and medium scale farmers in Kenya through promoting the use and easy access to appropriate inputs. FIPS Africa will promote adoption, use and access of improved seeds, fertilizer and other farm inputs.

The **Kenya Agricultural Commodity Exchange (KACE)** has a mission of establishing an agricultural commodity exchange forum locally and internationally based on an open free system. KACE's role in the project is to facilitate the availability of market intelligence and market linkages along the maize sub sector value chain.

¹ Facts and figures cited throughout this section are from Tegemeo Institute research.

² The protocols for approving new planting materials are being streamlined in the East African Community: if planting materials are approved in any one of the EAC countries, the approval process in the other countries will be shortened from three seasons to one season.

In addition ACIDI VOCA has been working with other associate partner organizations namely, Ministry of Agriculture, Kenya Agricultural Research Institute (KARI), Monsanto, Tegemeo Institute, Unga Ltd etc. to help facilitate the program activities and achieve business development through private sector service providers.

The USAID – funded contract provides for quick and effective technical assistance, training, financial and evaluative services required to design, implement, evaluate and coordinate the delivery of creative state-of-the-art business services in the maize value chain.

1.3 Program Objectives

Strategic Objective 7 - Increased Rural Household Income

IR 7.1 Increased productivity of maize

- 7.1.1 Policy environment promotes investment in agriculture and efficient use of resources
- 7.1.2 Increased use of technology
- 7.1.3 Sustainable use of natural resources for Agriculture
- 7.1.4 Increased participation of private sector in delivery of services
 - 7.1.4.1. Capacity of private sector institutions to provide services strengthened

IR 7.2 Increased agricultural trade (domestic, regional and international markets)

- 7.2.1 Policy environment promotes trade and competition
- 7.2.2 Performance of marketing systems improved
- 7.2.3 Services for agricultural trade improved

IR 7.3 Increased access to Business Support Services for Micro and Small Enterprises

- 7.3.1 Policy environment promotes enterprise development
- 7.3.2 Financial markets developed and strengthened
- 7.3.3 Non financial services delivered cost effectively increased

IR 7.4 Increased effectiveness of Small Holder organizations to provide business services to their members

- 7.4.1. Policy and regulatory environment promote groups ability to organize and pursue business interests
 - 7.4.1.1 Role of GOK in encouraging groups/co-operatives/association formation and functioning strengthened
- 7.4.2 Ability of Smallholder Organization members to manage organization business activities strengthened

The BDS paradigm is another key component of the program in which we focus on the non – financial services in the maize value chain. This is a break away from the traditional way of donor funds going directly to the Government agency donor program or NGO who then provide the services directly to small enterprises; without involving the private – sector providers. The shift is now for the donor funds to facilitate commercial providers deliver services to the small enterprises. In this case, the NGO or government agency plays the role of the facilitator.

In September 2002 when the award was granted to ACIDI/VOCA, the program began with a sub sector mapping survey, to identify where the program will be implemented in Kenya. Western Kenya is the grain basket of the nation of Kenya and the team set out to visit Bungoma, Trans Nzoia and Uasin-Gishu districts in North Rift.

2.0 PROJECT DESIGN

The Kenya Maize Development Programme has been designed to take the Business Development Services approach to “market development.” This is an approach to enterprise development that combines sub sector analysis with the market development of business services. The ensuing “sub sector/business service” (SBS) approach identifies growth-potential sub sectors where improved access to business services can result in increased profitability and stability of small enterprises (SEs).

2.1 THE BDS MARKET BASELINE SURVEY

Before the liberalization of commodity markets, smallholder farmers had very few choices regarding the marketing of their commodities. Although agricultural marketing has been liberalized and single-choice marketing channels are a thing of the past, small farmers have yet to take the steps required to become active and informed participants in the value chain. They are still price takers, with little understanding of how to apply basic business principles to farming and to access more lucrative markets. At the farm level, farming is still seen and practiced as a subsistence activity rather than a commercial undertaking. Even a successful subsistence farmer can only hope to achieve a level of sustainable poverty.

Farmers are not investing in profit-maximizing production and processing technologies because it has rarely been demonstrated that those investments pay dividends; and there is a total lack of market information, further relegating small farmers to a subservient position in the production-marketing chain. Any business must first understand the markets before investing in production. Understanding markets was never a necessity for farmers – there were no alternative markets. The absence of marketing boards has left a void; farmers have no experience in market analysis, and market information went only as far as when and where the marketing boards would be buying, and at what price. In the liberalized environment, farmers now have the opportunity to make choices concerning how they approach their farming practices; the crops they plant, the level of investment, post-harvest options and market alternatives. To benefit from the opportunities they must learn to conduct their farming operations as businesses.

During colonial and post-colonial periods, the command economy did not encourage farmers to approach farming as a business or to develop the critical and analytical skills required to make informed decisions. In such an environment, smallholder farmers did not constitute a market demand for private sector agri-business service companies; and the supply of such services had always been solely in the domain of the public sector.

2.1.1 The Maize Sub Sector Marketing Value Chain

The BDS market survey also came up with a maize sub sector, value chain (See Diagram on next page). The maize value chain that was identified during the studies showed that maize moves through various channels before reaching the final consumer. From the farm level, where we have the small scale farmers and medium and large-scale farmers, maize goes to the village level where we find village collectors, assemblers and agents. Then it moves to rural market centre where there are larger assemblers and traders before moving to urban centre where it goes to millers in the urban centre or is channeled to the national markets through bigger traders and agents for national milling companies.

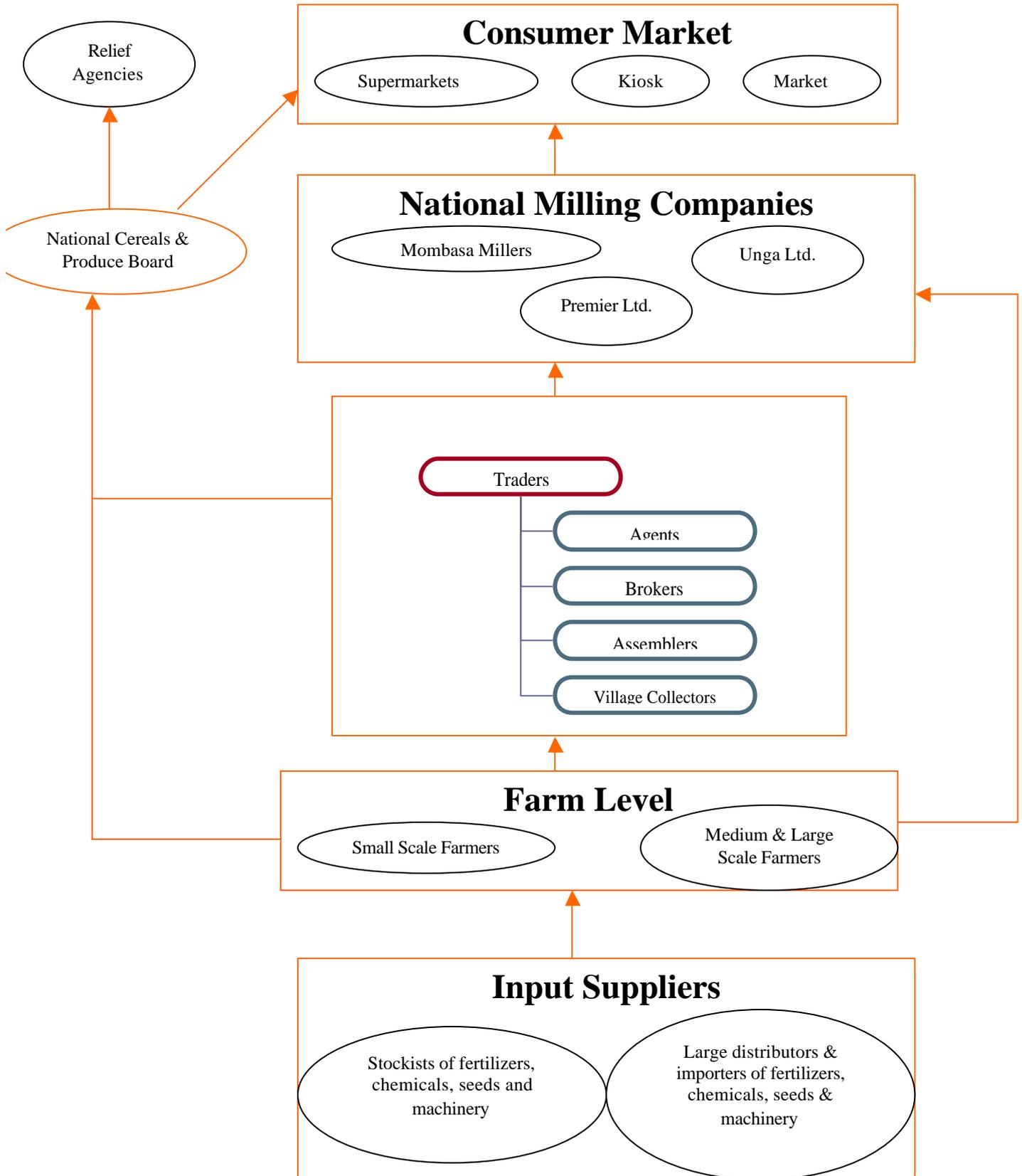
Throughout the value chain it was found out that brokers and traders play a key role and control the market. Some large scale farmers are able to by pass the long chain and access national markets. From the value chain small scale farmers were seen to be the most affected with the long value chain since they have no control over the pricing of their products. The margins made by each of the players in the value chain were quite minimal, ranging between at least Ksh. 20.00 and at most Ksh. 50.00.

The various identified players in the value chain included the millers, traders/brokers/agents, farmers, and the National Cereals and Produce Board. Five private consultants working with farmers were also identified during the survey. These consultants were providing extension services related to technology, marketing, training and technical services.

Chart 1: Maize Value Chain

Maize Value Chain

SUPERMARKETS



From the figure above, three distinct product channels are evident:

- Broker/Agent to Traders Channel
- Small and medium traders channel
- Integrated Large Scale farmers channel

Each one has specific characteristics about the way it operates, though there are some overlaps between them. A brief summary of each channel is as follows:

Broker/Agent to Trader Channel: the small growers in this channel either sell to brokers or directly to agents. The brokers also sell to millers though to a lesser extent. This channel is the strongest of the three channels, and has the most actors in it. The brokers only function during the high season and have and are constantly looking for volumes since the traders buy in bulk.

Small and medium traders' channel: they buy directly from the small and large scale farmers and sell directly to the national millers and the national cereals board. This channel deals in larger volumes than the broker channel. Increasing cost and quality constraints make it uneconomical for them to deal with individual small growers, so they must work with either larger individual farmers or with other brokers and traders who are able to consolidate the produce for the farmers.

Integrated large scale farmers channel: these farmers have integrated their operations both forwards and backwards. Large scale farmers have very strong market links and generally provide a fairly consistent amount of maize produce over the course of the year.

2.2 STEPS PROGRAM DESIGN

2.2.1 Step One: Analysis of Constraints in the Maize sector

The first step was to analyze constraints and opportunities in the SE's in the maize value chain so as to determine what the programme would help the SE's to achieve. Our overall strategy as laid out in USAID's Strategic objective 7 is to 'Increase rural household income'. The assessment led us to develop a more specific objective for KMDP which is "helping SE's in the maize value chain access better technologies and business information in order to help them improve business practices and link with better markets.

The following constraints and opportunities were identified regarding the three business services:

Constraints

- 1) Lack formal relationships between most millers and their suppliers and between the farmers and the traders
- 2) Limited use of contractual agreements between producers and buyers therefore lack of assured market outlets.
- 3) Imports of maize that occasionally distort the market.
- 4) Wide price fluctuations during the years and over the years.
- 5) Poor post harvest handling of maize resulting in high post harvest losses.
- 6) Small-scale farmers lack adequate, up-to-date information on new farming technologies, improved farm inputs and crop husbandry.
- 7) Input supply companies lack enough resources to reach out to farmers and are also reluctant to extend training and extension services to farmers because their sales promotion campaigns do not translate into immediate product sales.
- 8) There is lack of adequate and appropriate standard material for training players in the sub-sector.
- 9) Private Service providers especially consultants lack adequate information and knowledge on which to train their clients and they are often forced to invest heavily in the processes of acquiring knowledge.
- 10) Farmers are at times affected by droughts, lack of adequate labor and credit to purchase farm inputs and other services.
- 11) Prevalent fake and adulterated inputs as well as sub standard machinery parts.
- 12) Lack of information or awareness of new technologies and varieties of inputs, application and handling skills.
- 13) High cost of inputs.
- 14) The package size of the inputs is too large for the needs of both the small holder farmer and the stockist forcing the stockists to repackage. This leads to a change in the quality of the inputs.

2.2.2. Step Two: Selection of business development services

The second step was to select the business development services to address the identified constraints and opportunities. Eight business services were identified as follows.

1. Access to affordable appropriate quality inputs
2. Access to training to reduce cost of production of maize
3. Access to information on quality standards and specifications
4. Access to timely and reliable market information
5. Access to management and business training
6. Access to post harvest handling, bulking and storage

7. Access to financial institutions
8. Access to reliable market out

2.2.3. Step Three: Market assessment for the Business Development service

The 8 were then ranked using an attractiveness matrix with ‘potential to increase rural household income’ and ‘potential number of SE’s reached on the y and x axis. (The numbers in the matrix represent the business services listed above).

ATTRACTIVENESS MATRIX

Table 1: Potential to Increase Rural Incomes

| | | |
|--------|-------------|-------------|
| High | 6 | 1 2 8 |
| Medium | 4 5 7 | 3 |
| Low | Medium | High |

Potential Market Demand

Out of the above analysis, three business services (shaded area) were selected as the most potential for KMDP to focus on.

1. Access to affordable, appropriate quality inputs
2. Access to training to reduce cost of production of maize
3. Access to Reliable Market outlets.

These services were looked at further in detail in order to identify actual services that would be focused on.

Step Four: Designing a sustainable delivery strategy

A fourth step was the assessment of the market for the identified business services. This assessment helped to identify the demand for the services, supply of the services and the transactions that get services to SE’s. It also helped identify possible suppliers of identified services. Validation workshops in the target areas came led to identification of possible interventions as seen in the table below:

| Market Constraints | Possible interventions | Existing Providers | Who else could provide |
|--|---|--|--|
| <ol style="list-style-type: none"> 1. Many small scale maize growers do not use hybrid seeds and sufficient quantities of fertilizers. 2. Inability to access these inputs at affordable prices results in low productivity per unit area making the enterprise unprofitable 3. Recommend smaller packaging for fertilizers and for seed. 4. Use the smaller packages for demonstrations | <ul style="list-style-type: none"> • Training on identification of proper inputs, handling, rates, types of inputs and safe use. • Facilitate linkages between the stockists and distributors to develop a working relationship • Demonstration plots • Maize Hand Book and other information on where farmers can purchase improved inputs | <p>The Government</p> <p>Small-scale stockists of fertilizers and chemicals</p> <p>Distributors</p> <p>Manufacturers NGO’s</p> | <p>Seed Companies,</p> <p>Fertilizer companies</p> <p>Chemical Companies;</p> <p>Private Sector Trainers</p> |

Table 2B. Access to Training to Reduce the Cost of Production

| | | | |
|--|---|---|--|
| <p>1. Many small-scale maize growers lack appropriate information on inputs and crop husbandry skills which results in low productivity per unit area.</p> <p>2. Small scale farmers are price takers with little understanding of how to apply basic business principles to farming and to access more lucrative markets.</p> <p>3. Farmers are not investing in profit maximizing production and marketing options</p> | <ul style="list-style-type: none"> • To mobilize farmers into groups • To facilitate training of farmers in new and improved technologies • To facilitate training of farmers in farming as a business • To facilitate capacity building of farmer groups | <p>The Government through the MOARD</p> <p>Local and International NGOs</p> <p>Input suppliers</p> <p>Private Consultants</p> <p>Farmer trainers(Hans Siedel Foundation/AV)</p> | <p>Private Consultants</p> <p>Input distributors and suppliers</p> <p>Stockists</p> <p>Millers</p> |
|--|---|---|--|

Table 2C. Access to Reliable Market Outlets

| | | | |
|---|---|--|----------------------------|
| <p>1. Gaps and inconsistencies in the information flow in the value chain.</p> <p>2. Lack of critical mass and economy of scale to benefit from the opportunities in the market</p> <p>3. Mistrust between producers and traders and between traders and millers.</p> <p>4. Lack of reliable market outlets, in particular for the small farmers.</p> | <ul style="list-style-type: none"> • To facilitate the dissemination of marketing information and intelligence to farmers and traders groups and to millers. • Facilitate the mobilization and formation of farmer groups and associations. • Facilitate capacity building of producer groups to create sufficient critical mass to address post harvest issues, improved and standardized qualities and marketing strategies capacity | <p>NCPB</p> <p>Millers</p> <p>Traders/brokers</p> <p>Transporters</p> <p>Private companies</p> | <p>Private Consultants</p> |
|---|---|--|----------------------------|

2.2.4. Step Four: Designing a sustainable delivery system.

This has been the most challenging process in this market development approach. The goal is to facilitate a vibrant, commercial market. However, maize industry in Kenya can be described as a weak market for BDS. Such a market is characterized by a weak supply, weak demand and few transactions. An effective market is where there is exchange between demand and supply at a market price. The BDS market assessment revealed that there was one miller cum trader (Simba mtoto in Kitale) who had a commercial relationship with the small traders and farmers. The miller advances cash to the traders (small assemblers) to buy produce from farmers in different shopping centers. There was no major company in the target area that was reaching out in the value chain with embedded services or fee for service. . Most of the other suppliers to maize SE's sold inputs or bought produce with no lasting business relationships or market linkage. It is interesting to note that in Dairy and horticultural sector, the Market development approach is widely applied. Many reasons can be floated as the cause of the above scenario;

- Maize is a staple food and a food security crop in Kenya and thus a lot of government interference. This discourages private sector firms from serious market commitment.
- There were a number of service providers in the value chain (especially the farmers) providing services that were subsidized either by the government or by NGO's. The big question then is what kind of subsidies are acceptable and for how long for the poor farmers. Must there be inflexible rules creating distinction between facilitator and provider even when there are no other market players in a particular intervention?
- Most of the private sector companies interviewed did not perceive in the poor small-scale as a major potential market. How does one interest the private sector? The KMDP Business Fair was a step in answering this question.
- What are the models of small and larger firm linkages and relationships? How does one ensure it becomes a win/win relationship? What actual benefits accrue to the farmer and other SE's because of such linkages?

- In a liberalized maize market, what policies need to be in place that safeguards the private sector investment in the SE's
- So far, BDS has been limited to training. What strategies does one use to interest service providers in other components?

2.2.5 Step Five: Selection of an intervention strategy to develop a market for the Business development Service

Supply Side of the Market

Dysfunctional public extension services do not transfer modern farming techniques to farmers, and they have little understanding of the market forces and how to guide farmers concerning the marketing of their commodities. Neither farmers nor extension agents acknowledge or understand that farming should be approached as a business. Extension agents (if they were present) are unable to apply business principles to farming.

Extension services are hampered by the lack of updated technology, low salaries and inadequate transport and operating funds. Extension personnel that are able to reach farmers are ill prepared to frame their messages in the context of the liberalized environment. The focus is on production, with scant understanding of business farming principals – increased efficiencies, value addition, risk management, record keeping and alternative market access.

Public sector service provision efforts, regardless of intent, will remain dysfunctional and ineffective in transferring the technologies and furnishing the training required by the farmers and the markets. In spite of this, farmers must learn to grow for the markets and they must learn to make informed decisions (crops, alternative farming methods, investment choices, financing, etc.) through the application of simple analytical tools.

Many indigenous and international organizations are successfully transferring production skills to farmers. Outputs are increased and the food-security objectives of the project are met, however, the sustainability of their efforts is too often dependant upon the sustainability of their funding sources. Moreover – the tight focus on food-security and achieving production numbers, often overshadow the importance of income security. Income security and accelerated capital accumulation are pre-conditions of food security, and contribute to the growth of the larger economy.

Demand Side of the Market

Baseline surveys indicated that Small Scale Farmers are price takers with little understanding of how to apply basic business principles to farming and to access more lucrative markets. Farmers are not investing in profit maximizing production and marketing options.

The KMDP is therefore undertaking targeted activities to strengthen farmers demand for services they identify and to increase their access to these services, be they provided by extension services or private sector (stockist, private consultants, other farmers, farmer organizations).

From the surveys, it was therefore proposed that the following players in the maize value chain could provide services to farmers:

- Input Supply Companies (costs covered by operating revenues)
- Consulting firms or individuals
- Farmer Trainers
- Millers
- Stockists

The figure below can be used to summarize the findings of the BDS survey carried out in the target districts. The figure also shows a summary of how market analysis can be marched to interventions.

Chart 2: KMDP Market Interventions

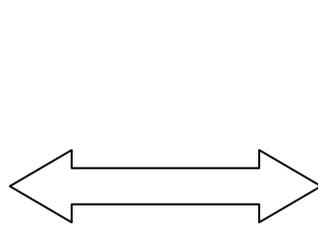
BDS Providers

Constrained by
Limited information-
About market
opportunities,

Skills deficiencies-
Technical or Business

Operational Deficiencies-
Resources, systems,
structures

Inappropriate products



BDS Consumers

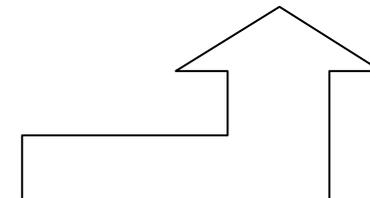
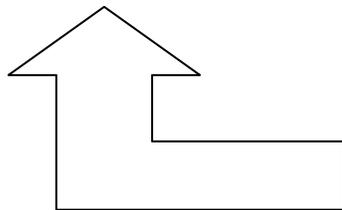
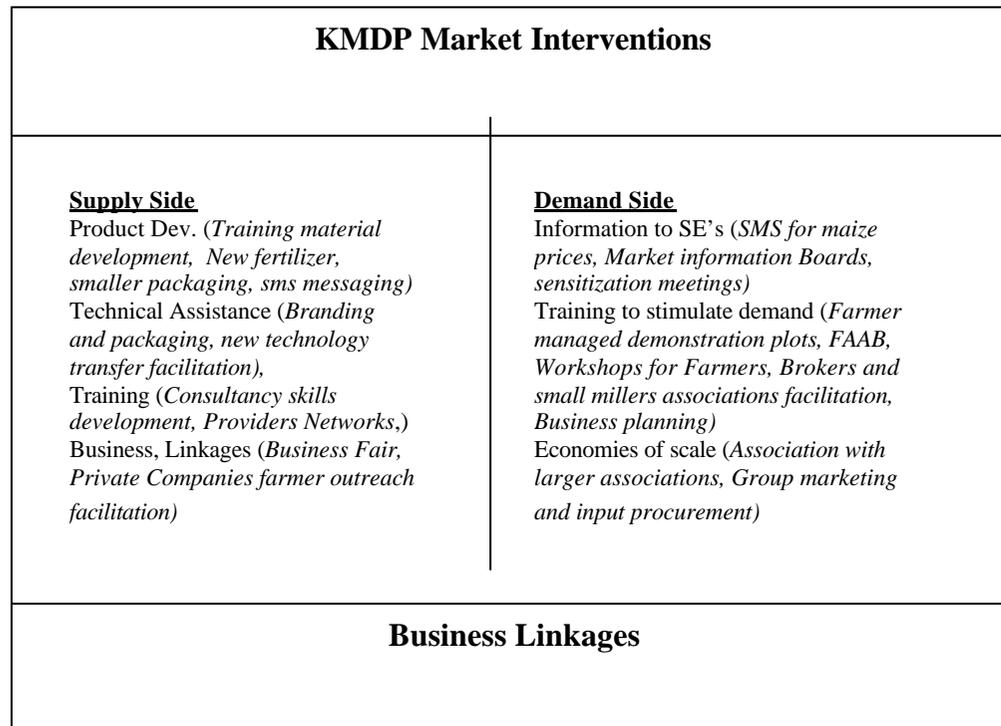
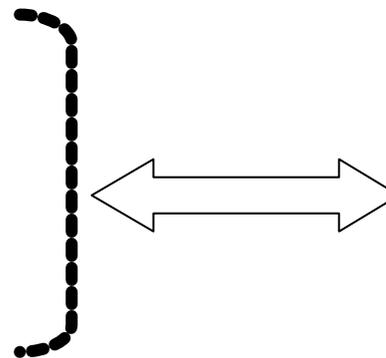
Constrained by:

Limited information or
awareness- about new maize
production technologies

Valuation problems in Maize
farming affecting willingness to
pay

Limited Resources – to assess or
purchase services

Environment – Market distortions
by monopolies



Business linkage with private sector service providers has been encouraged for a variety of reasons including promotion, collaborative projects, and mutually benefiting advertising.

- Farmer managed Fertilizer demonstration plots by companies through Farm Input Promotions(FIPS) – Africa
- Market information dissemination through Marketing Information Boards and by Mobile phones provider, Safaricom, with Kenya Agricultural Commodity Exchange (KACE).
- Private sector membership in Cereal Growers Association (CGA). This will enhance private sector involvement in policy and advocacy. It will also improve the market linkages between the private sector and the member farmer groups.
- Annual Business Fairs: the first one was organized in September this year with an aim of linking the producer groups with the private sector. During the fair, a system of awards was introduced that recognizes the Best Groups, Best leadership teams and Best Demonstration Plots.

Effective markets development requires that there be an effective demand and supply. Whether service transactions are likely to take place depends on one side, on the service attractiveness (overt benefit, reasons to believe, dramatic difference) and on the other side, the capacity to absorb the service (identification of problem, ability to transfer know-how, service fee). When plotted on a diagram, four quadrants can be defined that show the main focus of KMDP for required interventions in the development of service markets.

Table 3:

| | | | |
|----------------------------|-------------|--|--|
| Absorption Capacity | High | Supply Development | No demand or supply interventions needed |
| | Low | Demand Stimulation Supply Development | Demand Stimulation |
| | | Low | High |
| | | Service Attractiveness | |

In some of the target areas, absorption capacity and service attractiveness is low, demanding that it to be stimulated and the quality and quantity of service provision be improved at the same time. In some cases highly attractive services meet only low absorption capacity, making it necessary to stimulate demand by reducing the service fees. On the other hand, if service attractiveness is low, it is indicated to develop more appropriate services that are beneficial to SE's. There is no need to intervene if service attractiveness and absorption capacity are both high unless there are other transaction constraints (i.e. communication, media). The KMDP market assessment results show an unclear matrix in the markets accessed. This could be as a result of the several constraints mentioned earlier. It has been necessary to stimulate demand, reduce service fees(where clients only meet part of the cost like transport, and to also get involved in the development of more attractive services that benefit the target SE's.

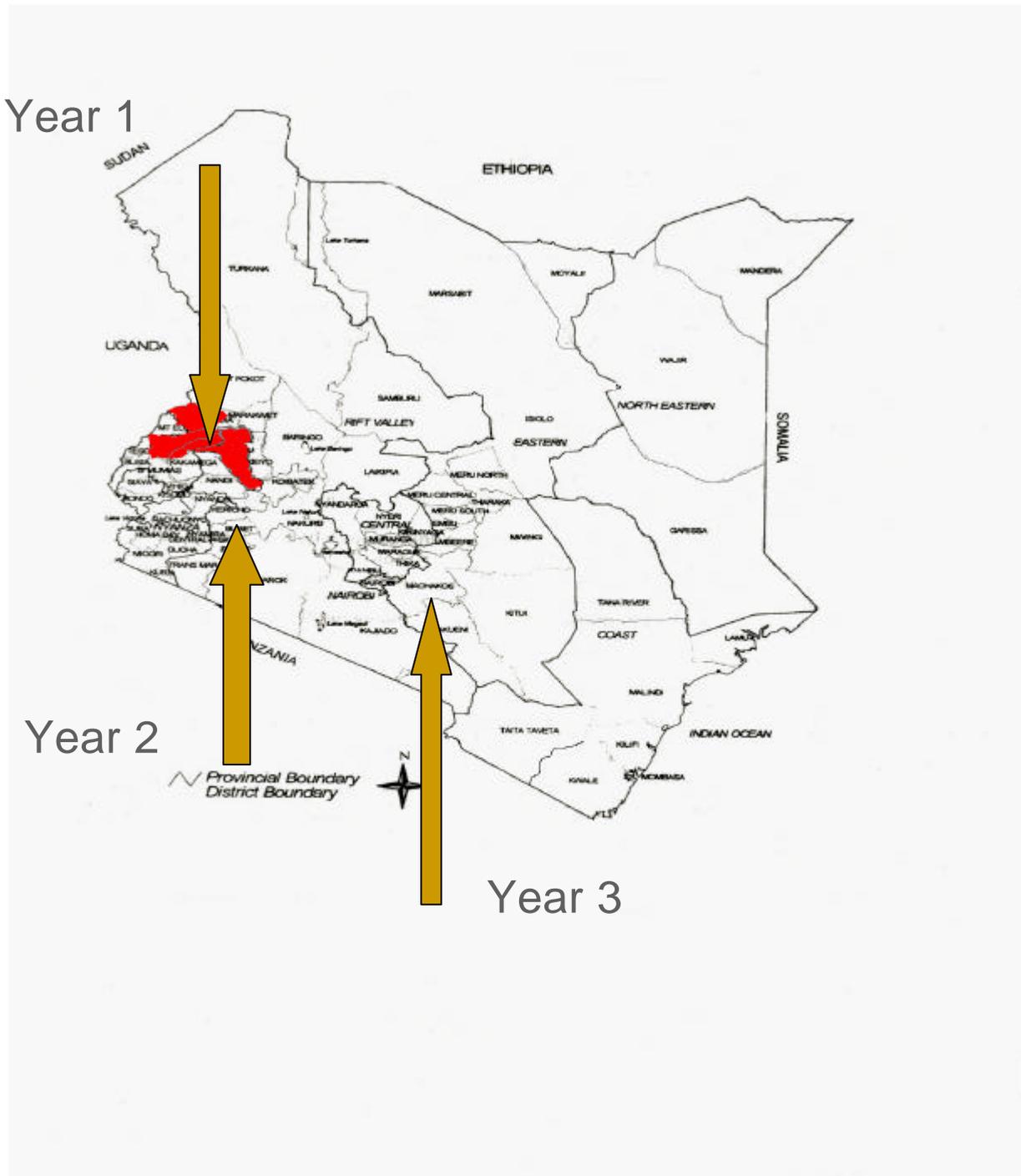
The assessment led to the development of a more specific objective for KMDP which is **“helping SE’s in the maize value chain access better technologies and business information in order to help them improve business practices and link with better markets.** The goal was to develop a high impact SE strategy.

2.2.6. Step six: Develop a performance assessment system

The performance monitoring plan was pre – established by USAID at the onset of the programme. The goals and indicators have been agreed on in participatory forums facilitated by USAID Kenya involving all USAID Kenya funded programmes.

3.0 OVERVIEW OF TARGET AREA FOR YEAR ONE

Map 1. Target Districts where KMDP will be operating



3.1 BACKGROUND INFORMATION ON TARGET DISTRICT

3.1.1 Bungoma

Bungoma is one of the largest districts in Western Province with a total land area of 2,063 Km² and the arable area is 1,838Km² with a cultivated area of 1,175Km². The district has farm holdings of about 103,150.

The district has a population of approximately 900,000 people (1999 census) and is one of the districts in the Maize Producing areas with an average yearly yield of about 1.9M 90 kg bags (according to the District Agricultural office production statistics).

The district has 10 divisions.

Most of the maize in the district is grown in the LH and UM agro eco-zones that cover the divisions of Ndivisi, Webuye, Kimilili, and Tongareni.

The LM agro eco-zones maize is grown for subsistence, with the preference being sugar cane as a cash crop. The average farm holding size in the district is 2ha.

3.1.2 Trans Nzoia

Trans Nzoia is one of the eighteen districts in the Rift Valley province. It is bordered by the republic of Uganda to the West, Bungoma and Lugari Districts to the South west, West Pokot District to the North, Marakwet District to the East and Uasin Gishu to the South east.

It has three important topographic features, namely Mt. Elgon (4313m) to the northwest, Cherengani Hills (3371m) and the Nzoia River. The Nzoia River drains the district and flows into Lake Victoria with its major tributaries being Ewaso, Rongai, Koitabos and Nogomet Rivers, The other river is Suam which flows into Lake Turkana.

Generally, the district is flat with gentle undulation rising steadily to Mt. Elgon and the Cherengani Hills. The hilly parts of the districts are normally impassable during the rainy season. The district on average has a height of 1800m above sea level and the lowest point has an altitude of 1400m above sea level on the northern part of the district. Most of the District is therefore within the LH agro eco-zones.

Trans Nzoia produces between 2.5 m to 3 m bags which represents 10% of the total maize production. As such it has been dubbed the “bread basket” of the country since maize is Kenya’s staple food. There has been a significant increase in area under maize for the last five years. This is due to settlement of squatters in the former ADC farms. As such a substantial amount of these lands have been put under maize.

3.1.3 Uasin Gishu

Uasin-Gishu district is located in the Rift Valley Province. It lies between 34 – 50 35 37 East and 0 – 0 55 North. The district has a total area of 3218 km². It is divided into six administrative divisions; namely Ainabkoi, Kapsaret, Kesses, Moiben, Turbo and Soy and further into 51 locations and 96 sub locations. These are also the agricultural extension divisions. About 90% of the land area of Uasin-Gishu district is arable and within the LH agro eco-zone. About 2,000 km of the district is high potential and approximately 1,000 km is medium potential. Swamps, rocks and hills cover the remaining 218 km.

While maize production in Uasin Gishu district is heavily dependent on yield and area allocated to the crop, the area under maize over the last decade fluctuated from year to year due to weather and market incentives/disincentives.

The average maize yield is about 2 tons per hectare. However, potential exists for increasing yields to over 6 tons per hectare through increased use of improved seeds, fertilizers and good crop husbandry.

3.1.4 Lugari District

Lugari district was carved out of the larger Kakamega District in 1998. It is one of the eight districts in western province. It borders Kakamega and Nandi districts to the south, Bungoma to the west, Uasin Gishu to the East and Trans-Nzoia to the north.

Administratively, the district is divided into three divisions namely Likuyanini, Lugari and Mtete. These are further divided into 10 locations and 28 sub- locations. Likuyani division is the largest while Matete is the smallest. The political set-up in Lugari district is such that Matete Division falls under Malava constituency in Kakamega District whereas administratively it falls under Lugari District. Likuyani and Lugari Divisions constitute Lugari Constituency.

Lugari District lies between altitudes 1,300m and 1800m above sea level and therefore is classified as LH agro eco-zone. It is hilly and rocky towards the east, which gradually falls into a plain as it progresses to the south. One of the main rivers in the district is River Nzoia. It originates from the Mt. Elgon and Cherengani Hills in Trans-Nzoia district. This is the river that forms the northern part of the boundary with Bungoma District. Another river, the Kipkaren River, enters the district shortly after the Kipkaren river bridge at Kipkaren market. It flows down south to join river Nzoia shortly after Lugari railway station.

3.2 SPECIFIC FACTORS AFFECTING THE GROWTH OF MAIZE IN THE DISTRICTS

1. **Producer price of previous crop**—when the above mentioned price is attractive, farmers are motivated to produce more the following year and vice versa
2. **Cost of inputs**— this is always increasing while the price of produce does not increase at the same pace. Cost of production therefore limits production
3. **Credit availability**—lack of credit limits production especially in the absence of a good capital base caused by low prices of produce. This has continued to be a persistent problem.
4. **Weather**—this is becoming more unpredictable with time and the farmer cannot therefore time operations successfully. The costs of production therefore escalate due to additional operations e.g. replanting or pest control.
5. **Time of payment**—when payments are prompt, farmers are often ready for the next planting season. In cases of delay, however, they get disconnected with the resultant negative impact on production, especially in the absence of credit.
6. **Quality of inputs**—the quality of seeds, fertilizers and chemicals has been questionable in the recent past. Unscrupulous businessmen have released fake or low quality inputs into the market causing losses to the farmers.
7. **Cost of machinery hire**—with the ever increasing cost of fuel coupled with the old and dilapidated machines, the cost of hiring machinery cannot become cheaper. Consequently the cost of production keeps rising in the form of land preparation and transportation costs.

4.0 PROJECT IMPLEMENTATION

The project implementation followed the three business services: access to affordable, appropriate quality inputs; access to training and extension services and access to reliable market outlets. These business services focus on the four intermediate results (IRs) of the Strategic Objective (SO7):

IR 7.1 To increase productivity and production of maize in the target areas.

IR 7.2 Increased Agricultural Markets and Trade

IR 7.3 Increased Access to Business Support Services

IR 7.4 Increased Effectiveness of Small Holder Organizations

4.1 SMALLHOLDER ORGANIZATIONS

IR 7.4 Increased effectiveness of smallholder organization to provide services to their members.

4.1.1. Introduction:

Currently 25% of marketable maize comes from smallholder producers. During the harvest season, 70% of these farmers sell their maize to traders (assemblers) at the farm gate, and only 8% of the maize bought by larger millers is purchased directly from small farmers. Due to the dismal history of cooperatives, farmers are understandably reluctant to again become victims of the production-marketing system. However, working as individual households, unable to benefit from efficiencies in production and marketing systems, farmers can only hope to attain a level of sustainable poverty. Providing individuals with access to reliable inputs, and arming them with price information alone is not enough: in the near-term, farmers must be assisted with actual linkages to markets in maize-deficit areas of the country. They require assistance in securing transportation services, contract negotiations, financing, and quality certifications. If they are to participate in maize production and marketing on a more equal footing with other market participants, the only choice is to learn from the past and to enter – eyes wide open – into association with other producers.

The Kenya Maize Development Programme has been working directly with producer organizations (Farmer Field Schools, associations, and other formal and informal groups) and through private sector service providers (including training consultants, contracting specialists, auditors, etc.) to build the capacities required for farmers to engage with other market participants from a position of strength. This is in response to IR 7.4 on increased effectiveness of small holder organizations of the SO7.

The Program has also been working with various producer organizations to develop ways of reducing transaction costs and creating economies of scale. The Government has been a key collaborator through the ministry of Agriculture and Ministry of Co-operative development and marketing and will be continuously consulted regarding the programme's activities. Ministry personnel have been invited to participate in training sessions to make them fully aware of field activities, while at the same time affording them the opportunity to heighten their skills as service providers³.

Key services that producer organizations can provide include improved access to financial services, product consolidation, value-added processing and business and organizational skills transfer.

The programme is aiming at developing the capacity of these groups so that they can focus their efforts, besides what they are doing, on maize production and marketing and improve on efficiencies along the whole value chain.

4.1.2 OBJECTIVES

1. To develop performance based objectives, methods, procedures and guidelines to support farmer groups and farmer organizational development initiatives among small holder maize farmers

³ Ministry personnel have already been sponsored by GTZ to participate in *Farming-as-a-Business* workshops and Training of Trainer sessions. One participant has demonstrated exceptional technical and training skills, and will be employed by the Consortium as a contract trainer.

2. Promote small holder farmer group formation and organize trainings on organizational development, management and financial controls.
3. Provide continuing technical assistance to small holder maize farmers on group formation, sustainable farmer organization development and operations.
4. Oversee business planning and maize marketing among small holder farmers and ensure compliance with agreements.
5. Manage and monitor the implementation of all farmer organizational training and ensure achievement of project objectives and targets through regular travel, reporting and evaluation.
6. Promote forums for lobbying and advocacy for producer groups as well as formulation of policies that promote the maize sector.

Through sub sector survey, groups were selected from the five districts that are in the High Potential Maize Zones. Several groups were interviewed and nine groups were selected putting into consideration the size of the land of the members (between 1 to 20 acres), the major activities being undertaken by the farmers on the farm e.g. maize farming, coffee or tea; and how active the organization has been.

Trans Nzoia District

Kiungani Coffee Growers Association
Kolongolo Farmers Co-operative Society
Kapsara Tea Growers Association

Uasin-Gishu District

Sosiani Farmers Co-operative Society
Progressive Farmers Co-operative Society

Lugari District

Mumunyonzo Coffee Growers Association

Bungoma District

Farmer Field School – Mabanga
Matarajio Self Help Group
Kabisi Farmers Co-operative Society

Initially the programme started with the afore mentioned nine groups and later incorporated a tenth group

Kakamega District

Kabras Joint Self Help Group

4.1.3 ORGANIZATIONAL CAPACITY ASSESSMENT

KMDP conducted a baseline survey in June 2003 for the small holder organizations using the Organizational Capacity Assessment Tool through participatory monitoring and evaluation. The results presented were produced by using an assessment tool that provides detail on the groups' strengths and weaknesses so that both the group and KMDP could plan corrective courses of action.

The survey assessed the capacity areas of governance, operations and management, human resources development, financial management, business services delivery, external relations and sustainability as per the Strategic Objective 7.

Organizational assessment is defined as a tool which can help internal and external evaluators determine how an organization is placed in respect to template of best practice. Such an assessment will allow the organization to identify where it is under performing and where help is needed.

Stages of Organizational Development:

Nascent: the organization is in the earliest stages of development. All the components measured by OCAT are in rudimentary form or non existent.

Emerging: The organization is developing some capacity. Structures for governance, management practices, human resources, financial resources, and service delivery are in place and functioning.

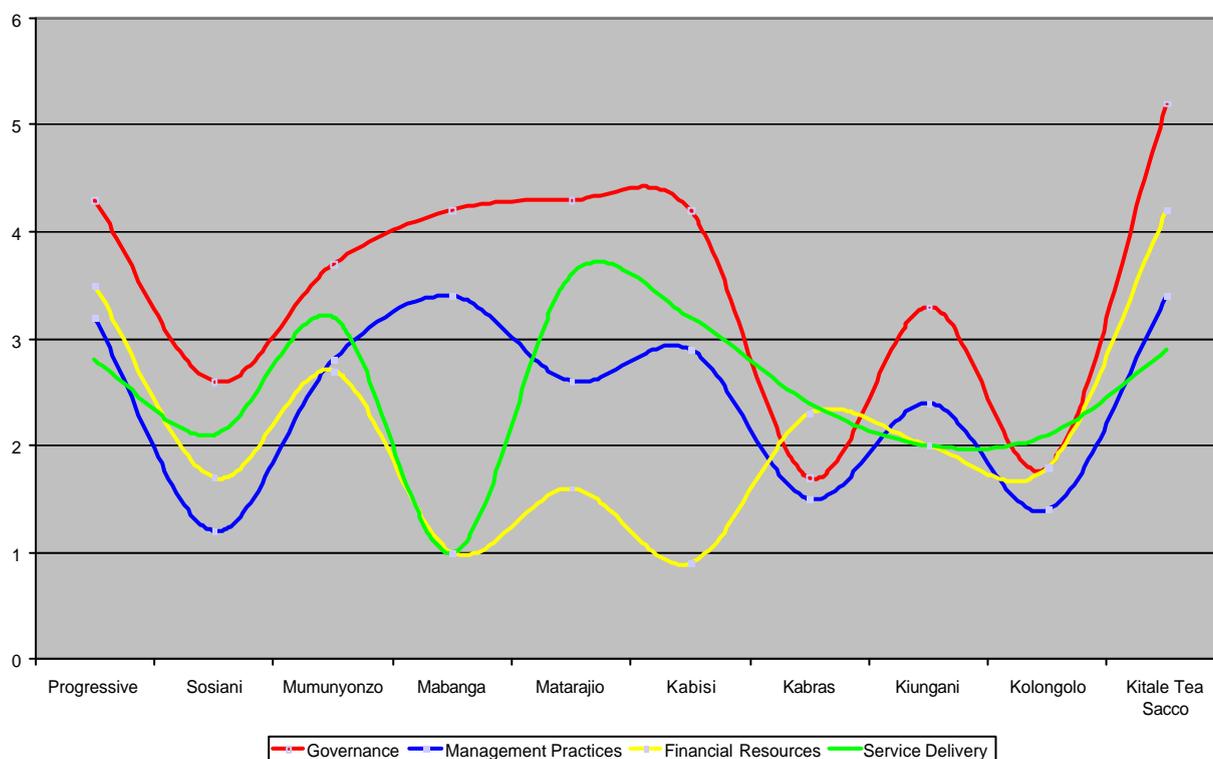
Expanding: the organization has a track record of achievements, its work is recognized by its members, the government, the private business sector, and other organizations active in the same sector.

Mature: the organization is fully functioning and sustainable, with a diversified resource base and partnership with national and international networks.

Rating scale to stages of development:

| Rating | | | Stage |
|--------|----|-----|-----------|
| 1.0 | to | 1.4 | Nascent |
| 1.5 | to | 2.9 | Emerging |
| 3.0 | to | 4.4 | Expanding |
| 4.5 | to | 6.0 | Mature |

Graph 1: The results of the OCAT assessment for the groups are illustrated on the graph below



The ten (10) organizations showed different strengths and weaknesses under the various aspects which were being considered. Matarajio Self Help Group, for instance, was strong in Governance but weak in financial resources. The analysis showed that all the organizations were at nascent stage. All the components measured by the OCAT were unstable, indicating the groups were at the rudimentary stage of development. (See organization profiles for detailed outlines of the different components measured by the OCAT).

4.1.4 Association Business planning workshop-Soy Club Eldoret

Three workshops whose objective was to enable individual KMDP business groups to develop an effective action plan for the next three years were carried out. The workshops other purpose was to enable the leaders in the respective groups to develop realistic guidelines in managing the affairs of their groups as business enterprises along the lines of a model introduced by KMDP in the business guideline manuals early in the groups’ formation.

The workshops specific objectives took the group leaders through three parts with ten (10) steps of the business guide line as listed below.

- To enable the business group leaders state afresh the formation and the purpose of their business group.
- To describe their business group by-laws, rules and regulations.
- To describe the structure of the business group set-up
- To describe how the business group should make decisions affecting and pertaining to their business interests.
- To identify experiential business skills, knowledge, and training experience available in the group set-up.
- To critically analyze, evaluate and identify the business and group strengths and challenges (weaknesses), opportunity and threats through SCOT (SWOT) analysis tool.
- To enable the group and it’s leaders identify and describe the external assistance required by the business
- To state and write the business group goals and objectives.
- To state the past achievements and chart future plans
- To have the honor to draw “a plan of action” for the next three years. And to coin a “motto” in the Farming as a Business (FaaB)

Table 4: Participants by district; gender and sex ratio

| District | Number of group | Number of participants | Male | Female | Female-male ratio |
|-------------|-----------------|------------------------|------|--------|-------------------|
| Uasin-Gishu | 6 | 30 | 18 | 12 | 2:3 |
| Trans-Nzoia | 3 | 13 | 8 | 5 | 5:8 |
| Lugari | 2 | 10 | 5 | 5 | 1:1 |
| Bungoma | 3 | 16 | 10 | 6 | 3:5 |
| Totals | 14 | 69 | 41 | 28 | 2:3 |

Workshop Outputs

When associations are cohesive farmer members are able achieve a lot together. ACIDI/VOCA’s interest is in strengthening the associations through continuous training in group dynamics, exchange forums, interactions and open days.

- **Financial and other business training:** Handling of group finances is fundamental and sensitive for the long-term business groups’ survival. Training in simple records and bookkeeping is therefore a necessity.
- **Conducting meetings:** To get the most out of their meetings’ forums, groups meetings need to be conducted with professionalism and to achieve this training on conducting effective meetings including: setting agendas, writing and recording minutes and orderly filing will be facilitated.
- **Savings’ mobilizations:** For long-term sustainability at individual and group level, members need to develop a savings culture. This could take the form of but not limited to- open and operate savings accounts in commercial banks, merry go rounds and SACCO.
- **Community’s resource and mobilizations:** Each community is endowed with untapped and under-utilized resources. Community mobilization will ensure interventions invested in the groups will survive beyond the projects’ period. The community will require to be empowered through capacity building so as to be able to lobby the government for infrastructure development and maintenance such in the case of roads, electricity, health centers and also for support services in pricing of goods and services and availability of retroviral drugs.
- **Role of information, technology and communication:** Information? Selling, buying and pricing through the Internet. Sharing of price levels through farmer group’s cell phones’ network. Awareness of micro and macro policy and regulatory frameworks affecting agriculture farming.
- **Collective buying of inputs and selling of produce:** The other objective is to get the groups working together in procurement and marketing though consolidation of the goods and services.

4.1.5 Association Profiles

Trans Nzoia District

1. Kiungani Coffee Growers Association: Motto “Growing together for self-reliance”

The cooperative was started in 1996 to market coffee through the Coffee Board of Kenya. The cooperative has a membership of 100 coffee farmers. They grow maize for subsistence as well as commercial purposes. The maize is not marketed through the cooperative as it is sold by the individual farmers through brokers and traders.

The cooperative has an account balance of Kshs. 60,000.00, being earnings from the coffee. The society has no access to credit. They do not also give loans to members, as the society is still nascent.

Maize is the major crop on the farm taking about 80% of the total cultivated area. The average acreage in the area is about 8 acres with an average yield of about 10 bags per acre. With good agronomical practices the farmers could achieve 18 bags per acre.

The board of directors have received basic training in planning, bookkeeping, organic farming, agro forestry, and rainwater harvesting and gender issues.

- ✓ Kiungani Coffee Growers Society is a registered cooperative society with the Government of Kenya through the Ministry of Cooperative Development.
- ✓ There society needs to develop a vision and mission statement that will enable the society to redirect its focus. It should also come up with strategies that will enable it accomplish these set goals.
- ✓ There is a need to train the staff, the members and the committee so that they can be able to contribute to their full potential and improve on the management practices.
- ✓ Networking was found out to be a weakness in that no relationship had been built with the different sources for their mutual support.
- ✓ The society needs to address the issue of gender equity by involving more women and the youth in the affairs of the society.
- ✓ The society’s activities were not financially sustainable.

Kolongolo Farmers Co-operative Society: motto” Turning weakness into strength”

This co-operative was started in the 1990’s as a land buying venture and that has developed into 1500 farm holdings in the 13 villages covering the region. They have evolved into small groups to deal with different agricultural ventures including sorghum, sunflower, Soya, bean, poultry and sheep.

The area is on the Mt Elgon rain shadow and occasionally affected by drought. During the previous year there was a drought leading to poor harvest and food shortages. The area has been prone to continued attacks by cattle rustlers from the neighbouring Pokots and Karamajong. The community is further afflicted by the HIV/AIDS scourge and currently the area ranks highest with HIV/AIDS cases in Trans-nzoia.

They sell their maize through brokers and normally do not get good prices for their produce.

- ✓ Kolongolo is registered as cooperative society with the Ministry of Cooperative Development. The society has a constitution and by laws that were prepared by the Cooperative ministry.
- ✓ The society needs to be empowered in the areas of human resource management, service delivery, and management practices. The organization has no clear vision or mission.
- ✓ Management systems will need to be put in place to ensure the organization uses for effective resource management and utilization to achieve its vision and goals. Leadership abilities will need to be strengthened; networking enhanced and service delivery honored in order to restore the confidence of the members.

Kitale Tea Growers Association Motto:

The cooperative was started in 1993 to produce and market tea in Cherangani division. It now covers the whole district of Trans Nzoia, and parts of Marakwet, West Pokot and Mt. Elgon. After liberalization the SACCO started serving all farmers regardless of whether they were tea growers or not.

The cooperative has a membership of 425 of which 25% are women. Although maize is a major crop in the area, taking about 75% of cropland the farmers do not use their cooperative to market the maize or acquire inputs.

1. Financial:

The Sacco has an account with the Cooperative Bank of Kenya with a monthly balance, which does not go below Kshs. 1M. This money is from the sale of tea proceeds, deposits on loan repayment and savings account for clients. About 274 clients have savings accounts with the Sacco; these include individual accounts and group accounts (women groups and self help groups). The Sacco provides loans to both members and non – members.

2. Manpower and Technical

A Board of Directors, elected by the members and working on voluntary basis, manages the Sacco with the support of a few employees who manage the cooperative on a day to day basis.

The members of the board have undergone several trainings organized by the KTDA in rural development. Training in Computer skills and Record Keeping has been offered to the staff.

3. Community Development:

The society works closely with other organized groups and associations in the community to uplift the standard of life of the members. These groups are encouraged to open savings account with the Sacco and given financial advice on how best to invest their funds.

- ✓ Kitale Tea Sacco has a fairly well established management structure, with the committee playing the role of giving directions and determining policies for the society.
- ✓ During the assessment the members were able to articulate the vision and mission of the society but there is need to make it clear and document with the involvement of all the members of the society.
- ✓ There was a felt need for the society to develop their members further and continue providing them with opportunities to contribute to their full potential.
- ✓ The society needs to utilize a process and structure that involves participation of all members in implementing policies and practices that ensure the organization uses its resources effectively to achieve its vision and goals.
- ✓ There was a general weakness in gender representation, especially in membership and in the decision making.
- ✓ The society appeared to be financially stable with a deposit base of over Kshs. 4million.

UASIN GISHU DISTRICT

Sosiani Farmers Co-operative Society Motto

Sosiani Farmers Cooperative Society was founded in 1968 as a produce marketing society. It started with 93 members and currently has 330 members. The society has not been active for a long time due to problems which emanated from the liberalization of the agricultural sector in the country. It is owed over Kshs. 4M by Kenya Cooperative Creameries which also went under. Efforts to revive the society bore fruit recently when the farmers realized the benefits of being in an organized group.

- ✓ The organization is registered as a cooperative society with the Ministry of Cooperative Development. It is governed by a committee which from the assessment appear to be weak in policy and direction focus.
- ✓ The society has a constitution and by laws but they unfortunately not followed to the letter. From the assessment, there is need for a clear vision, mission, strategy, and a set of shared values for the organization to grow.
- ✓ Human resource development was weak and the members and employees need to be trained to fully exploit their potential skills.

- ✓ Policies and practices to achieve the vision and goals, choose appropriate strategies and report, measure and evaluate results were not in place, making the effective utilization of resources to lack.
- ✓ Leadership was generally lacking in all aspects.
- ✓ Management of resources was generally poor with no proper inventory and lack of stewardship of the assets of the society.
- ✓ There was no involvement of women in the activities of the society.
- ✓ Sustainability was at the weakest level. The society has no ability to harness resources available internally.

Progressive Farmers Co-operative Society Motto

This is a dairy co-operative with 212 members. Milk is collected from members, processed into mala (sour milk) and sold to Spin knit. The society has a good market outlet in Baringo District. Prior to market liberalization the society used to bulk the members maize harvest and market out through the NCPB. This was augmented through sale of gunny bags as an embedded service. The society has stores with a capacity of 12,000 bags by 90 kg that are currently being leased by individual members.

At the time the society was trading it was offering credit facilities to members to acquire inputs but quite a number of them defaulted when the market was liberalized.

The society collectively own 7 acres of land, a lorry, pickup, tractor and milk cooler. The society provides transport services to members and the demand is more that they can cope with due to the limited vehicles. Other services provided by the society are A.I, dipping of cattle and house rental

To be a member one must:-

1. Live in this area
2. Be of sound mind
3. Be owners of own property
4. Pay a membership fee of Kshs. 5,000 (can be paid in installments)
5. Pay an entrance fee of Kshs. 500

- ✓ The organization is registered as a cooperative society under the Ministry of Cooperative Development.
- ✓ During the assessment, it was established that human resource development needs to be given more attention.
- ✓ Management needed to implement policies that ensure the society uses its resources effectively to achieve its vision and missions; to choose appropriate strategies and activities; and to report, measure, and evaluate results.
- ✓ Competent leadership that is, able to empower, serve, communicate, and is motivated by compassion for the farmer.
- ✓ Gender participation as a value was not evident within the organization.
- ✓ Financial sustainability was demonstrated through fundraising.

LUGARI DISTRICT

Mumunyonzo Coffee Growers Association

The society started in 1981 with 30 members that as grown to more than 700 members covering the four districts of Bungoma, Lugari, Trans-nzoia and Uasin gishu. To be a member one must buy shares worth Kshs. 1,000 and Kshs. 50 registration fee. The maximum number of shares one can own is 1000. The members grow maize and coffee.

In the past the society was contracted to grow seem maize and was also bulking and trading in members' commercial maize.

They reported that this is the only surviving co-op in Lugari district. They know they need to cooperate to get a good market.

The cooperative has a store with a capacity of 5,800 bags. It provides transport to members for coffee, carry out pulping and drying. The society provides other services that includes sale of coffee seedlings from Ruiru and limited loans to members for school fees.

For one to qualify for a loan from the co-op you must have been a member for 3 years. The society gets financing from the Co-operative Bank of Kenya.

- ✓ Mumunyonzo is registered as a cooperative society through the Ministry of Co-operative Development.
- ✓ The society is governed by a committee appointed by the members and the committee has the key responsibilities of setting the society's direction and determining the policies of the society.
- ✓ Some creativity and growth in thinking should be instilled in the staff members.
- ✓ The management system seemed to be in place but there was the need to utilize a process and a structure that will involve participation of all the members in the formulation of policies so that they own the activities being implemented by the organization.
- ✓ The society has not built relationships with other sources as a way of networking.
- ✓ For growth and sustainability of the society, it is imperative for a more responsibly use and management of all of the human, natural and financial resources of the organization.
- ✓ There were also gender biases in representation especially for staff and in the committee.

BUNGOMA DISTRICT

Farmer Field School Umbrella Network – Mabanga

The above umbrella network has a total number of 103 Farmer Field Schools with a total of 3,000 members spread within 11 locations in Bungoma district. Active members of FFS are 70 with a total of 1,500 members. Each field school has an average membership of 21 to 50. The network has 35 registered Farmer-led facilitators from among the members.

- ✓ Farmer Field School Umbrella network is registered as a self help group through the Ministry of Social Services and as a constitution although not well developed and by laws.
- ✓ The groups' vision is not very clear and as no strategy to express the approach that will be used to accomplish their goals.
- ✓ From the assessment, it was evident that the group needs human resource development so that the members, leaders, and other employees can be able to conduct their activities in a more focused way.
- ✓ The management is weak; and as a result there is poor utilization of available resources.
- ✓ There was gender equity with quite a number of women and youth being involved in the affairs of the organization.

Matarajio Self Help Group

The above group has 21 active members whose main goal is to boost maize production and marketing to achieve food security and enhanced incomes to improve their standards of living.

Through the group, **500** households can be reached in the area which was a Ministry of Agriculture focal area in year 2002. The current maize output per acre is 8 bags (90 kg)

- ✓ From the findings, the group is registered as a self help group through the Ministry of Social Services and is fully recognized by the MOA representatives on the ground.
- ✓ Specifically, the group needs to develop its human resources especially with the committee members since they do not have any employed staff.
- ✓ Training in leadership was a required need for the group so as to make the leaders more competent to carry out the responsibilities bestowed upon them by the members.
- ✓ For sustainability of the group there is the need for it to be financially sustainable.

Kabisi Farmers Co-operative Society

The co-op society has 709 members of which 120 are active and deliver coffee to the cooperative for marketing purposes. Out of the 120, only 50 attend meetings regularly. The co-op covers 9 villages in the area. Average acreage is 8- 10 acres per family. Maize crop occupies 80% of the land. Maize production is 5 bags per acre (average).

- ✓ Kabisi Farmers Cooperative Society is governed by a committee whose main responsibility is to set direction and determine policies for the organization.
- ✓ It was clear from the assessment that the society did not have a clear vision, mission and strategy.
- ✓ Management systems need to be put in place by having a well formulated policy that will ensure the resources are effectively managed so as to achieve the overall goal of the organization.
- ✓ The assessment also revealed gender inequalities. This was evident both in committee representation, staff and member representation.
- ✓ A weakness was seen in the general sustainability of the society with no financial base and a lack of activities that will ensure sustainability of the society.

Kabras Joint Self Help Group

Kabras Joint Self Help Group was registered in late 2002 through the Ministry of Culture and Social services. It is an association that has brought together several groups in Kabras division of Kakamega district. The groups are mostly maize traders who buy maize from the High potential areas and sell in small quantities to consumers in the district. Kakamega district is perceived as a maize deficit district since most of the land has been converted into sugar growing. Besides buying and selling maize, the group is also engaged in other activities which include dairy, poultry, and bee keeping.

- ✓ The group is registered as a self help group through the Ministry of Social Services and has a committee selected to represent the various groups affiliated to it and the locations where these groups are from.
- ✓ Management policies have not been put in place, therefore the effective use of resources is not guaranteed.
- ✓ Gender has been very well catered for in the group but there was the need to involve them more in decision making, education and representation in the committee.

Table 5: GROUPS' OWN SWOT ANALYSIS

| Group/ Members Year formed | Strength | Weakness | Opportunity | Threat/problems | Others |
|--|---|---|--|--|---|
| Sosiani 6 veterans & 9 others formed in 1968 | -Have a store -All cereals can be grown | Farming is not yet seen as FaaB -small numbers | Highland Potential | -High production costs -Droughts -HIV/AIDS | Break away group From Ndalat Complex of Nandi District |
| Progressive 6 veterans & others 04.2003 | -large scale farm experience | Poor management and decisions -little or no group interest | -dormant group | -infrastructure -communication | High expectations from government |
| Kasperet 13 veterans members & 20 others .07.1996 | -Great network Potential and good awareness -a consortium of groups | -lack of unity of purpose -no training in FaaB. | Capacity and Mobilization and great highland potential | Cheap imports and market glut -high interest rates -lack of post harvest storage | Have a loans' Portfolio of Kshs. 5.7 m and 0.6 m savings |
| Kaptumo MCS. 44 veterans & 16 others formed in 1990 | Potential of business expansion | -Slow to change -no training in FaaB. | business expansion | -poor infrastructure | -poor business decisions |
| Mumunyonzo CGA-10 veterans 24.06.2003 | -willing to learn & explore | -lack of trust due to previous poor management -lack of vision | -new group has new hopes | -poor infrastructure & communication | High expectations from government & other industry stakeholders |
| Kiminini 11 veterans & 70 others, .07.2003 | -willing to learn & explore | -not aware of weaknesses yet | -new group has new hopes -training/guidance | -not fully aware that they are the centre of interest | The group is not clear of their role in their own development |
| Kapsara 10 veterans & 150 others 03.07.2003 | -willing to learn & explore | -not all members attend meetings -lack of trust and vision | -new group has new hopes in FaaB concepts | -poor infrastructure & communication -weather uncertain challenges | -high level of illiteracy and ignorance |
| Kolongolo Nafaka Ngoma 10 veterans & 32 others 31.03.2003 | -receptive and willing to learn & explore new ideas | -an amount of lack of trust is still a challenge | -visionary leadership | -level of illiteracy to read and write is a threat to group advance | level of illiteracy and ignorance |

| <i>Group/ Members</i> Year formed | Strength | Weakness | Opportunity | Threat/problems | Others |
|--|--|--|--|--|---|
| Kiboroo-Gitwamba 5 veterans & 19 others 20.6.2003 | | -lack adequate training skills in FaaB. -lack of unity of purpose | | -lack of ready market & wastage of produce due to pests | |
| Kabisi 4 veterans & 100 others 31. 07. 2003 | -guidance and counseling besides by-laws -expertise in the group -own contribution for financing | -ignorance on farm inputs timing and quantities | -good leadership & plenty of skills | -lack of market information and infrastructure | -experience, skills among members -level of illiteracy |
| Matarajio 10 veterans & 50 others 09.2001 | Adheres to it's by-laws -savings in merry go-round | -lack of unity & cooperation from a few members | An increasing number of farmers | -poverty within the majority of households -infrastructure | -level of illiteracy -funds raising |
| Bungoma Umbrella Network 10 veterans and 3890 others 09. 2000 | -membership numbers -guidance and counseling besides by-laws -great levels of awareness | -some members are corrupt & others lack commitment | -good leadership, plenty of skills & well developed organizational structure -more ideas and skills present | -HIV/AIDS robbing community of the human capital in resources -infrastructure & lack market information | -FAO, IFAD connection -HIV/AIDS being addressed by professionals -networks -good awareness |
| Kimitu SHG 14 veterans & 165 others 06. 2003 | -lots of experience and skills in the membership | -slow to adopt new ideas, skills and technology -lack of trust -gender & cultural issues | -good leadership & management | -high level of illiteracy -selfish interests and nepotism -liberalization and free market gluts | -professionals are in the management and leadership |
| Kiungani FSHG 12 veterans & 200 others 02 .2003 | -lots of experience and skills in the membership | -Poor attendance of group meetings -tribalism | -helping indigenous coffee farmers | -lack of market information and infrastructure -liberalization and free-markets gluts | -professionals are in the management and leadership |

KMDP will therefore be able to design programmes basing on the work plans the groups were able to develop. These programmes range from training and market facilitations and linkages with the private sector.

4.1.6. "FARMING AS A BUSINESS" WORKSHOPS

The first "Farming as a business" workshop was held on 20-27 April, 2003 at CMRT in Egerton University. The workshop was organized by ACDIVOCA-Kenya and was attended by 25 farmer trainers, private sector service providers, Ministry of Agriculture Officers as well as a representative from USAID

Farming-as-a-Business guides most farmers to the unavoidable conclusions that collective actions contribute to increased efficiencies and profits, and that saving for future investments is more beneficial than borrowing at high interest rates. For many groups, this course has been a prerequisite for more advanced training in the establishment and management of registered producer organizations. The materials were designed to furnish clients with the analytical and problem-solving tools required to make decisions about how to conduct business operations.

14 farmer facilitators were trained as trainers of which 35% were women during the first training that was at Egerton University. These farmer trainers went back to their groups and organized farmers for training in Farming as a Business. So far 170 farmers have been trained. These 'FaaB' classes have become very popular especially with the KMDP groups since they were organized in a way so as to suit the schedule of the rural farmer. It was spread over a period of two months with the meetings being held twice a week. Farmers were being required to pay a small fee to cover stationery and other training incidentals; this has gone a long way to prove the point that if farmers are given the right products or services, they are willing to pay.

4.2 PRODUCTIVITY

INTERMEDIATE RESULT 7.1

Increased Productivity of Target Agricultural Sub-sectors

4.2.1 INTRODUCTION

KMDP has designed its project to increase the productivity of the Maize Sector. To this end, it developed at the start of the project in December 2002, in consultation with stakeholders in the target areas, a Business Service with the aim of increasing “**farmers’ access to affordable and appropriate quality inputs**”. Within this IR, KMDP is also addressing other sub-IR as follows:

IR 7.1.1 Policy Environment Promotes Investments in Agriculture and Efficient use of Resources

IR 7.1.2 Increased use of Technology

IR 7.1.3 Sustainable Uses of Natural Resources for Agriculture

IR 7.1.4 Increased Participation of the private sector in Delivery of Services Strengthened

KMDP focus is primarily on IR 7.1.2 to 7.1.4 while the IR 7.1.1 will be addressed by Tegemeo Institute of Egerton University. The newly-established Kenya Maize Stakeholders Consortium will however address relevant issues which affect the maize industry which includes policy (IR 7.1.1).

4.2.2 DELIVERABLES FOR YEAR 2003

Through a series of Performance Monitoring Plan Workshops, KMDP developed a number of indicators to evaluate its performance. Key indicators developed were as follows:

1. Percentage change in maize production per unit (acre)

KMDP’s target was to increase maize production per unit (acre) by 10% by the end of the first year.

2. Percentage change in cost of production of maize per unit of output (90 kg bag)

KMDP’s target was to reduce the cost of production 5% by the end of the first year.

3. Number of farmers using improved technology (at least 3 new technologies)

KMDP’s target was to empower 4,000 farmers to use improved technology by the end of the first year.

4. Number of farmers using NRM practices for sustainable agricultural production.

KMDP’s target was to empower 4,000 farmers to use NRM practices by the end of the first year.

4.2.3. BASELINE SURVEY DATA

A baseline survey was conducted amongst members of co-operating farmer groups in target areas to obtain data against which performance could be assessed. The KMDP focus is on small scale farmers who own between 0.1 to 20 acres of land in Lugari, Trans Nzoia, Uasin Gishu, and Bungoma districts. In all the districts the programme is involved with nine farmer groups. This section will discuss the production levels of the different focal areas in which the groups are located. This is because the data collection focused on the groups and associations, and may not be representative of the whole district or the region per se. It is envisaged that the results will reflect the situation of the small scale farmer in the districts of focus.

4.2.4 Production Cost

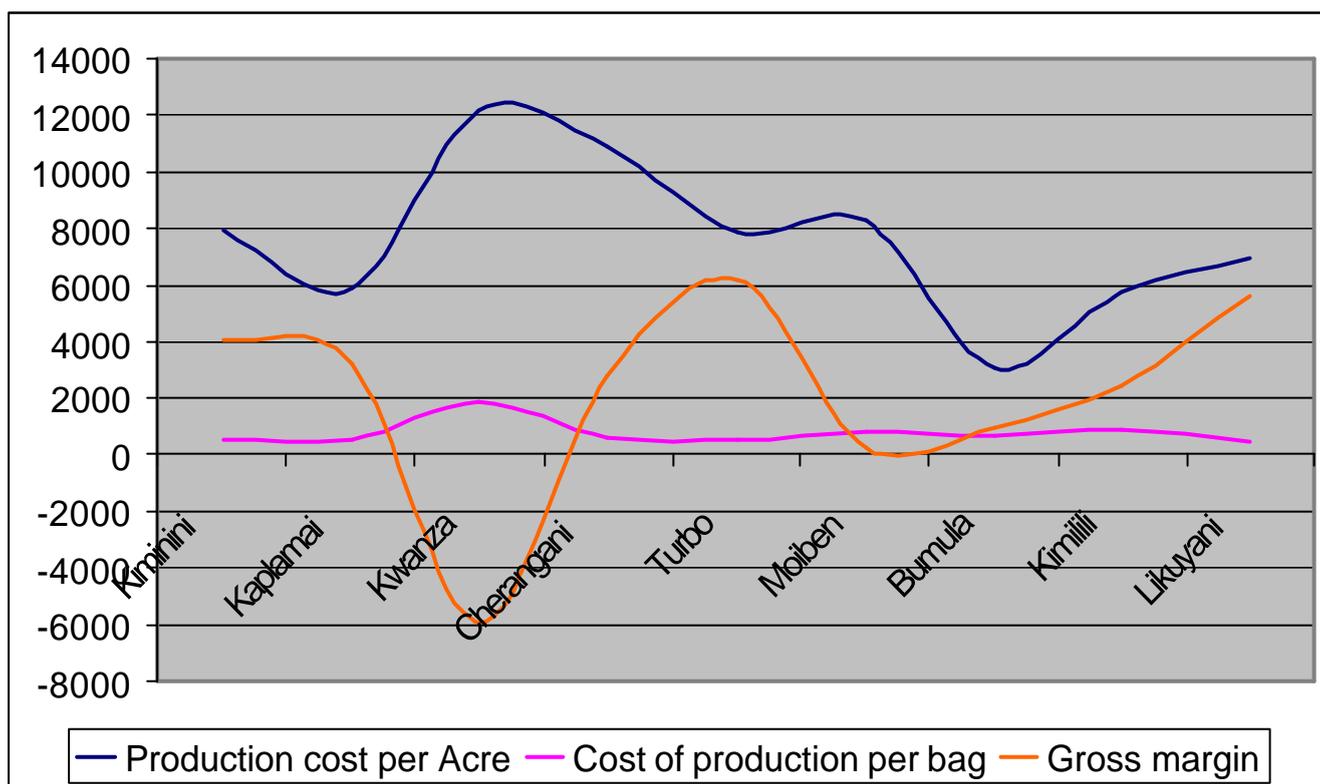
From the study, the production cost per acre is shown for the areas of focus in the graph below. From the table from Kwanza (where Kolongolo FCS is situated) and Cherangani (Kitale Tea Sacco) have the highest cost of production per acre. This can be attributed to the fact that during the year 2002, there was a general crop failure in the two divisions that was occasioned by drought and suspect quality inputs. In Bumula (FFS network), Kimilili (Matarajio) and Likuyani (Kabisi) had a lower cost of production. This result can be

attributed to the fact that the farmers did not use improved technology and where it was used; the agronomic practices were not always practiced to the optimum and on time.

The cost of production per bag has taken the same trend as the cost of production per acre as shown in the Graph 2.

The gross margins in Kwanza show negative figures due to the high cost of production and the lower yield the farmers got during that season as a result of the drought and the general crop failure. Cherangani Division had a higher yield but the gross margin is lower. This may be due to the higher cost of production. Generally, the cost of production among the nine areas and groups is high.

Graph 2: Production cost per acre, per bag and Gross Margin by Area of focus (Division)



4.2.5 Improved Technology

The levels of technology use among the nine groups refer primarily to the use of Hybrid seeds and inorganic fertilizers. From the baseline survey, no farmers were practicing conservation tillage and therefore no data was collected on the same.

Table 2 shows the percentage of farmers using improved seed. From the table, it can be deduced that most farmers use improved seed, the only difference being the seed variety. The percentage of farmers using H614 in all the divisions is 77.8%. In Kiminini, Kwanza and Cherangani divisions of Trans Nzoia district, all the respondents were using H614 variety. Kaplamai Division of Bungoma District was the only division which had respondents who said they used indigenous seed varieties. All the respondents who responded to using improved seed were using Kenya seed maize varieties. None responded to using improved seed varieties from other seed companies e.g. Western Seed Company, Monsanto, Pannar and Pioneer.

Table 6: Percentage of seed Varieties used in the year 2002, by division

| | H614 | H625 | H627 | H628 | H511 | Indigenous/local type |
|------------|------|------|------|------|------|-----------------------|
| Kiminini | 100 | | | | | |
| Kaplamai | 60 | | 20 | | | 20 |
| Kwanza | 100 | | | | | |
| Cherangani | 100 | | | | | |
| Turbo | 83.3 | | 16.7 | | | |
| Moiben | 100 | | | | | |
| Bumula | | 100 | | | | |
| Kimilili | 33.3 | | | 33.3 | 33.3 | |
| Likuyani | 100 | | | | | |
| Average % | 77.8 | 3.7 | 7.4 | 3.7 | 3.7 | 3.7 |

4.2.6 Baseline Survey of Farm Input Stockists

A baseline survey of stockists in the target districts was carried out in August 2003 to determine their knowledge, and range of products supplied. Results are currently being evaluated. The evaluation will form the basis for training needs and linkages with the main distributors and credit providers.

4.2.7 Interventions and Outputs/Results

Activities were conducted within the sub-IR as follows:

IR 7.1.2 Increased use of Technology

1. Protocol development

In order to ensure farmers were exposed to improved production technologies, five demonstration protocols were developed (for protocols, see pages 32 to 37).

Farmers were trained in the establishment of the demonstration plots, and cultural practices such as spacing to achieve the optimum plant population, time of planting, depth of planting, the placement of fertilizer in relation to the seed, and timely weeding.

Protocol 1: Best Fertilizer type

The objective is to demonstrate to farmers the use of new improved fertilizer types. The baseline survey showed that most farmers were using mainly DAP planting fertilizer. Prolonged use of DAP results in soil acidification, and the depletion of other nutrients (such as K and S) which may limit yields. The protocol compares the use of DAP with new multi-nutrient fertilizer types (e.g. Kelgreen and Mavuno)

Protocol 2: Limiting nutrient demonstration

The objective of this protocol is to demonstrate to farmers the mini limiting nutrients which limit crop yield. Results are fed back to the private sector to assist in the design of now improved multi-nutrient fertilizers.

Protocol 3 Maize Variety fertilizer demonstration

The objective of this protocol is to expose farmers to different maize seed varieties from different companies (Kenya Seed Co, Western Seed Co., Pannar, Pioneer, and Monsanto). The baseline survey showed that most farmers use H 614 from Kenya Seed Company, which was included as a control.

Protocol 4 Lime Demonstration

Acidic soils are unfavourable for plant growth. The objective of this protocol was to demonstrate the value of liming.

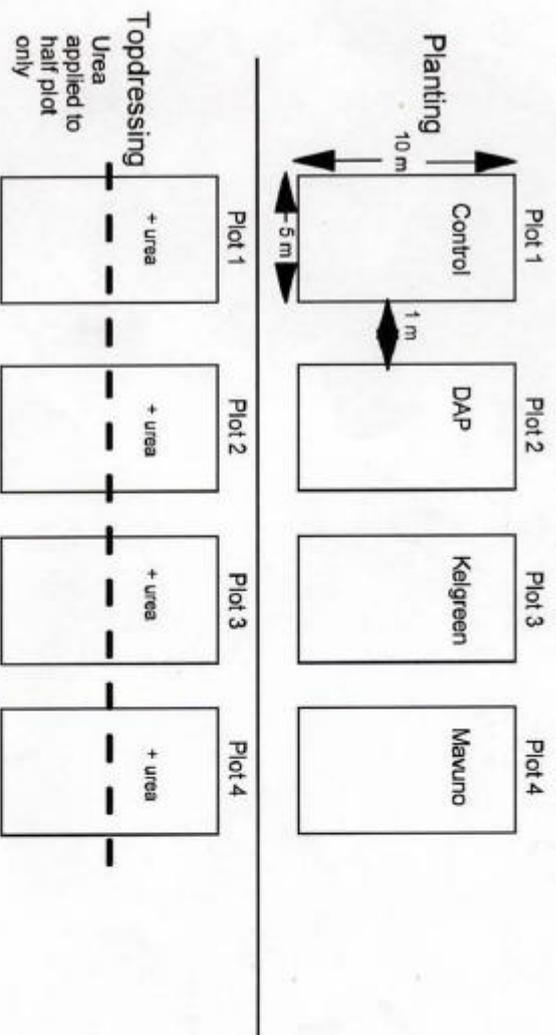
Protocol 5 Cultivation technique demonstration

The objective of this protocol is to introduce the concept of minimum tillage to not only reduce the costs of land preparation, but increase yields whilst improving the environment (reduced soil erosion/soil degradation).

KMMP Protocol 1: Best Fertilizer type

Rationale

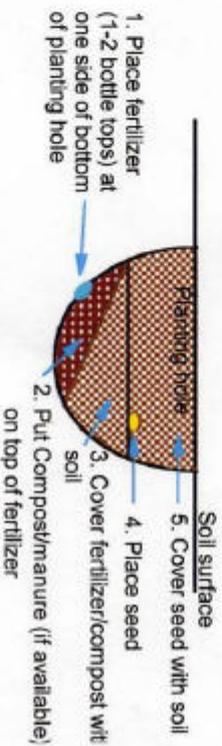
FIPS Africa is currently promoting improved balanced fertilizer formulas. Trials are required to test new improved fertilizers against DAP. A 4 plot trial is proposed below.



Use Farmers own seed
 Planting fertilizer: Place below and to the side of the seed (see diagram)
 Spacing: 75 cm between rows; 25 cm within row; 1 seed per planting hole.

Guide for application of planting fertilizer

- Avoid contact between fertilizer/compost manure and seed
- Fertilizer is best placed below and to one side of the seed
- When available, always apply compost together with fertilizer
- Follow steps 1-5 below:

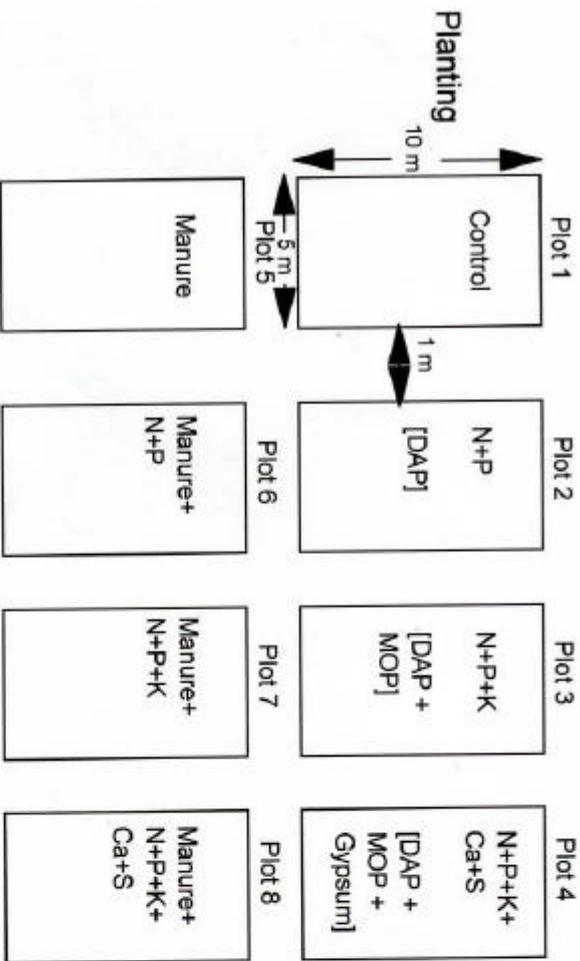


| | Planting | kg | N | P2O5 | K2O | MgO | CaO | S | micronutrients |
|-----------|----------------|------|----|------|-----|-----|-----|----|-------------------|
| Plot 1 | Control | | 27 | 69 | 0 | 0 | 0 | 0 | |
| Plot 2 | DAP | 0,75 | 10 | 34 | 17 | 0 | 33 | 15 | |
| Plot 3 | Kelgreen | 1 | 15 | 39 | 15 | 6 | 12 | 6 | B, Zn, Cu, Mo, Mn |
| Plot 4 | Mawuro | 0,75 | | | | | | | |
| | Toppingressing | | | | | | | | |
| All plots | Urea | 0,27 | 50 | 0 | 0 | 0 | 0 | 0 | |

KMDP Protocol 2: Limiting nutrient demonstration

Rationale

Demonstration plots are required to help farmers to identify the nutrients limiting crop production and to enable the design of new fertilizer formulae in co-operation with the private sector.



Use Farmers own seed

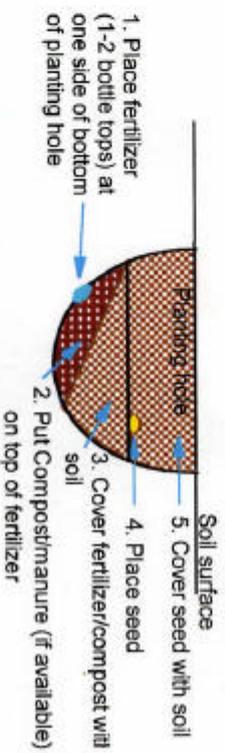
Manure: Apply 10 kg/plot in planting holes on plots 5, 6, 7, & 8 only.

Planting fertilizer: Place below and to the side of the seed (see diagram)

Spacing: 75 cm between rows; 25 cm within row; 1 seed per planting hole.

Guide for application of planting fertilizer

- Avoid contact between fertilizer/compost manure and seed
- Fertilizer is best placed below and to one side of the seed
- When available, always apply compost together with fertilizer
- Follow steps 1-5 below:

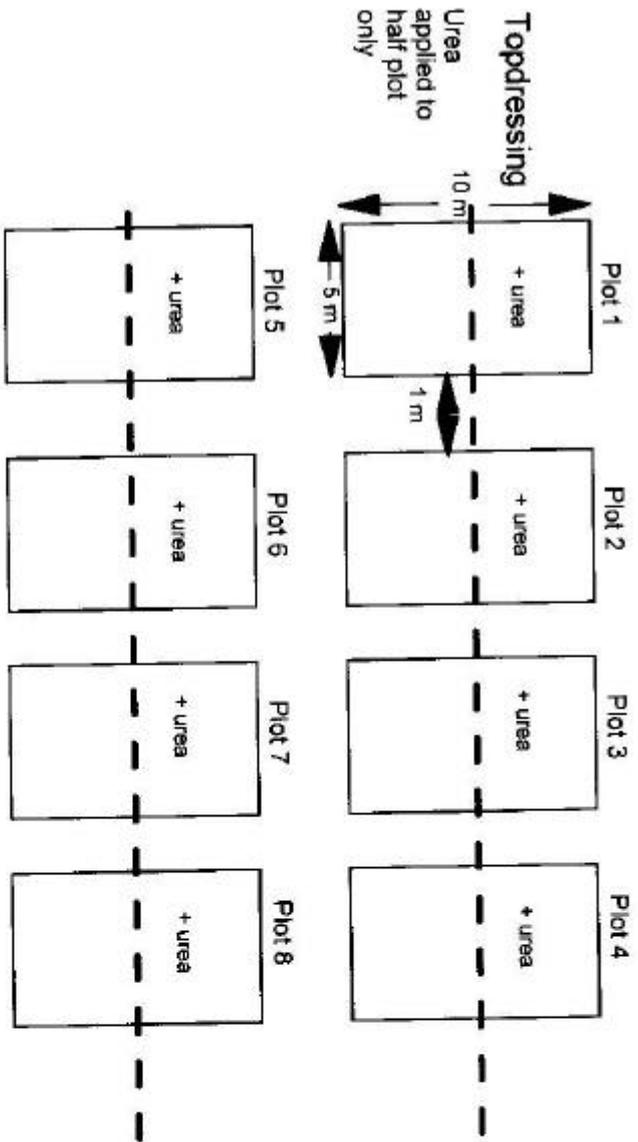


| | Planting | g/plot | DAP | MOP | Gypsum | Urea | Nutrients/ta | | | | |
|-----------|----------|--------|-----|-----|--------|------|--------------|------|-----|-----|----|
| Plot 1 | Control | | | | | | N | P2O5 | K2O | CaO | S |
| Plot 2+6 | N+P | 540 | | | | | 20 | 50 | 0 | 0 | 0 |
| Plot 3+7 | N+P+K | 540 | | 208 | | | 20 | 50 | 25 | 0 | 0 |
| Plot 4+8 | N+P+K+S | 540 | | 208 | 313 | | 20 | 50 | 25 | 30 | 10 |
| | Topping | | | | | | | | | | |
| All plots | Urea | | | | | 270 | 50 | 0 | 0 | 0 | 0 |

1 Kit contains:

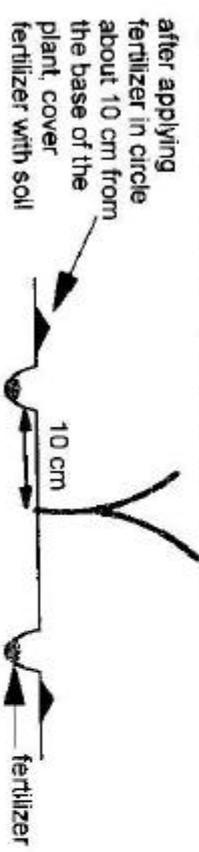
- 2 x DAP (540 g)
- 2 x [DAP (540 g) + MOP (208 g)]
- 2 x [DAP (540 g) + MOP (208 g) + Gypsum (313 g)]
- 8 x Urea (270 g)

KMDP Protocol 2: Limiting nutrient demonstration (cont.)



Guide for application of topdressing fertilizer

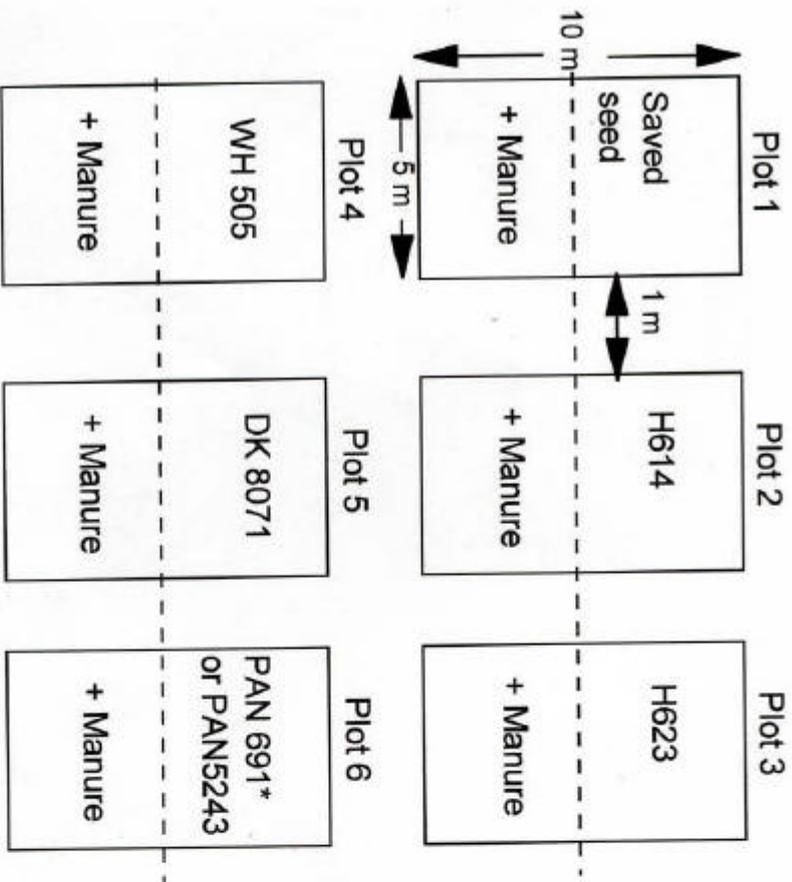
- If soils are deficient in nitrogen (maize leaf turns yellow in the middle), then your plants need Nitrogen fertilizer
- Use CAN or Urea fertilizer (Urea is about half the price of CAN per kg Nitrogen)
- After first weeding (plants about knee-high), apply 1 bottle top of urea or 2 bottle tops of CAN to the soil about 10 cm from the base of the plant.
- Cover the fertilizer with soil to prevent losses from rainfall



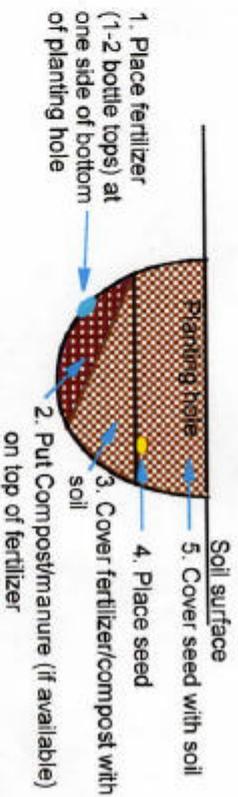
KMDP Protocol 3: Maize variety demonstration

Rationale

Demo plots are required to demonstrate the value of using improved varieties with fertilizer with/without manure.

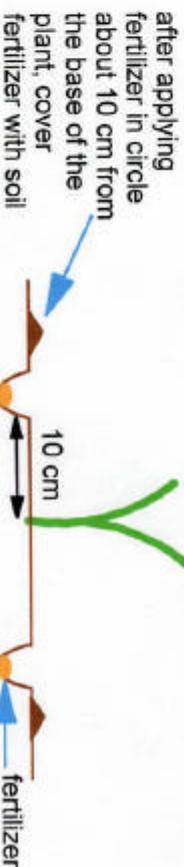


- Guide for application of planting fertilizer**
- Avoid contact between fertilizer/compost manure and seed
 - Fertilizer is best placed below and to one side of the seed
 - When available, always apply compost together with fertilizer
 - Follow steps 1-5 below:



Guide for application of topdressing fertilizer

- If soils are deficient in nitrogen (maize leaf turns yellow in the middle), then your plants need Nitrogen fertilizer
- Use CAN or Urea fertilizer (Urea is about half the price of CAN per kg Nitrogen)
- After first weeding (plants about knee-high), apply 1 bottle top of urea or 2 bottle tops of CAN to the soil about 10 cm from the base of the plant;
- Cover the fertilizer with soil to prevent losses from rainfall



* Use PAN 691 in Kitale/Eldoret;
use PAN 5243 in Bungoma

All plots:

Planting fertilizer: 1 kg Kelgreen/plot; place below and to the side of the seed (see diagram)

Manure: Apply 5 kg of manure in planting holes on half of each plot (see diagram)

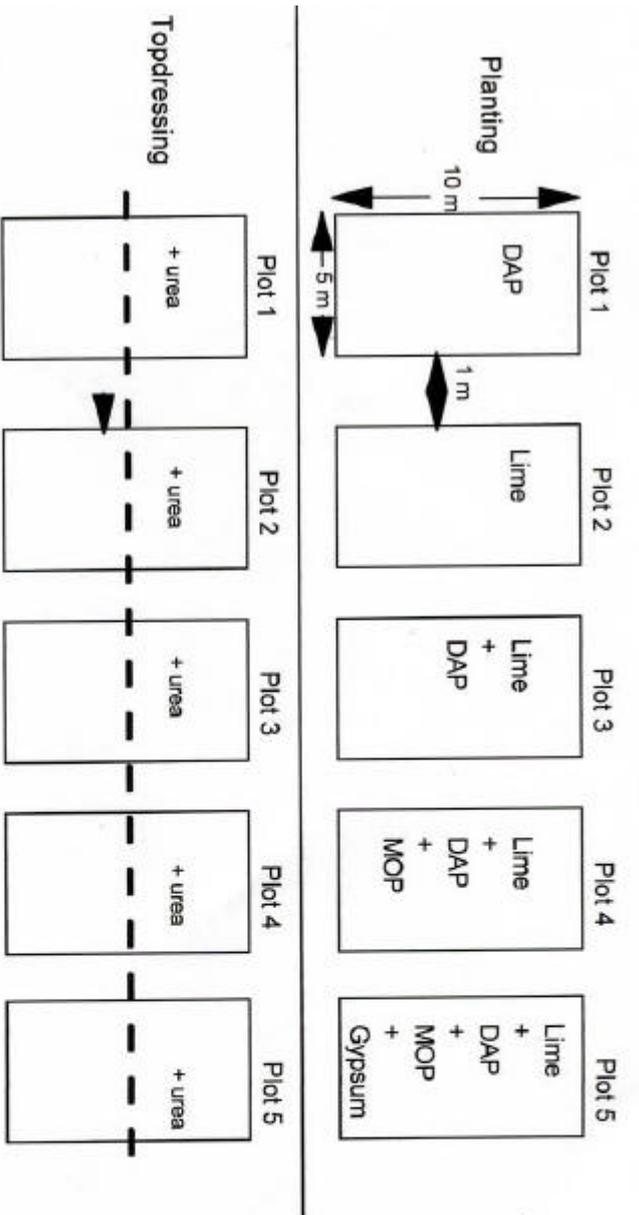
Spacing: 75 cm between rows; 25 cm within row; 1 seed per planting hole.

Topdressing fertilizer: 0.5 kg Urea/plot

KMDFP Protocol 4: Lime demonstration

Rationale

Demo plots are required to demonstrate the value of using lime as a soil amendment, with and without other nutrients.



1 Kit contains:
 4 x 10 kg Lime (Dolmax)
 2 x DAP (540 g)
 1 x [DAP (540 g) + MOP (208 g)]
 1 x [DAP (540 g) + MOP (208 g) + Gypsum (313 g)]
 5 x Urea (270 g)

Check soil pH; conduct demo where soil pH < 5

Use Farmers own seed

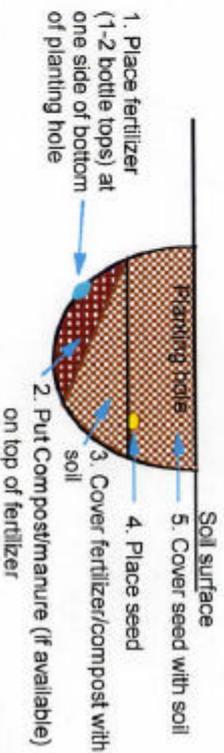
Lime: Spread evenly on soil surface and incorporate.

Planting fertilizer: Place below and to the side of the seed (see diagram)

Spacing: 75 cm between rows; 25 cm within row; 1 seed per planting hole.

Guide for application of planting fertilizer

- Avoid contact between fertilizer/compost manure and seed
- Fertilizer is best placed below and to one side of the seed
- When available, always apply compost together with fertilizer
- Follow steps 1-5 below:



Inputs:

Plot 2: 2000 kg Dolmax/ha

Plot 3: 2000 kg Dolmax/ha + DAP (20 kg N/ha + 50 kg P2O5/ha)

Plot 4: 2000 kg Dolmax/ha + DAP (20 kg N/ha + 50 kg P2O5/ha) + MOP (25 kg K2O/ha)

Plot 5: 2000 kg Dolmax/ha + DAP (20 kg N/ha + 50 kg P2O5/ha) + MOP (25 kg K2O/ha) + Gypsum (30 kg CaO + 10 kg S/ha)

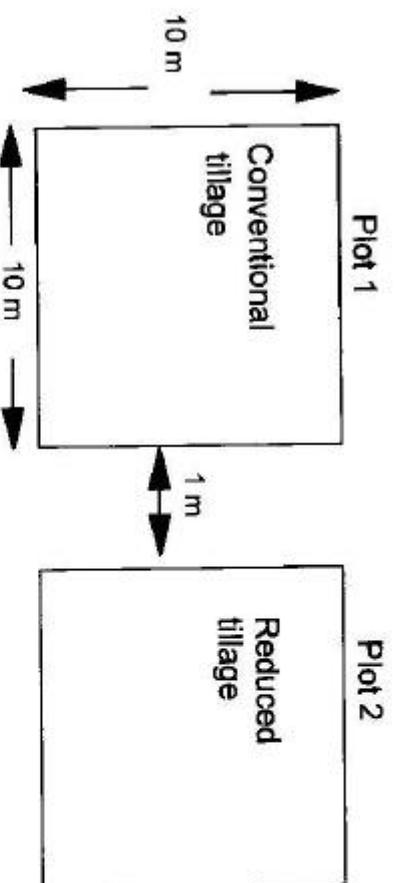
All plots: Toppingressing fertilizer: Urea (50 kgN/ha) to half plot only

All plots: Toppingressing fertilizer: Urea (50 kgN/ha) to half plot only

KMDP Protocol 5: Cultivation technique demonstration

Rationale

Demonstration plots are required to demonstrate the value of reduced tillage



Conventional tillage: 1 Plough + 2 harrow; Hand planting; Hand weeding

Reduced tillage: 1 Tyme/Chisel; Round-up (3l/ha); Hand plant; Hand weeding

Both plots: DK 8071 seed

Planting fertilizer: DAP (20 kg N/ha + 50 kg P₂O₅/ha) + MOP (25 kg K₂O/ha) + Gypsum (30 kg CaO + 10 kg S/ha)

Topping fertilizer: Urea (50 kg N/ha)

1 Kit contains:
2 x [DAP (1.08 kg) + MOP (416 g) + Gypsum (626 g)]
2 x Urea (1.08 kg)

2. Protocol dissemination and farmer training in demonstration establishment

A total of 535 demonstrations were distributed of which 297 were with the groups involved in the KMDP in the target districts during the first rainy season commencing in March/April 2003. Farmers were trained on the demonstration layout and the various treatments to be implemented. All demonstrations were managed by farmers. In order to take advantage of the two season production approach 140 Maize variety demonstrations were distributed through the Ministry of Agriculture in Kisii in July which one of the districts were the KMDP will be extended its activities to later during the year. For the current target districts it is only in Bungoma where there is usually a second season crop grown and to take advantage of this practice 200 maize variety demonstrations kits were distributed to farmers ready for planting during the short rainy season during the September/ October period.

Table 7:

| District | Group | Protocol 1 | Protocol 2 | Protocol 3 | Protocol 4 | Protocol 5 |
|-------------|--------------------------------------|------------|------------|------------|------------|------------|
| Uasin Gishu | Progressive Farmers Moiben | 11 | 11 | 11 | - | - |
| Uasin Gishu | Sosiani | 30 | 10 | 10 | 3 | - |
| Uasin Gishu | Turbo | 3 | 7 | 5 | - | - |
| Lugari | Mumunyonzo farmers sacco | 15 | 10 | - | - | - |
| Bungoma | Farmer Field School network, Mabanga | 25 | 25 | 25 | - | - |
| Bungoma | Matarajio Farmers group, Kimilili | 5 | 21 | 21 | - | - |
| Bungoma | Tongaren | 13 | 13 | 13 | - | - |
| Trans Nzoia | Kiungani | 13 | 10 | 22 | 6 | - |
| Trans Nzoia | Kapsara | 12 | 14 | 17 | 5 | 1 |
| " | Kolongolo | 23 | 20 | 15 | 5 | 0 |
| " | Kaplamai division headquarters | 3 | 3 | 6 | - | - |
| " | Kwanza | 0 | 6 | 7 | - | - |
| " | Cherangani | 3 | 3 | 6 | - | - |
| " | Central division | 0 | 6 | 6 | - | - |
| " | Endebbes | 0 | 6 | 6 | - | - |
| " | Kiminini | 6 | 3 | 3 | - | - |
| " | Sabot | 3 | 3 | 6 | - | - |
| Total | | 165 | 171 | 179 | 19 | 1 |

3. Demonstration monitoring and farmer field days

In general, demonstrations showed a strong response to the application of Nitrogen and Phosphates at planting (see plate 1). At some sites (see plate 2), there was a response to Sulphur, indicating the need to include Sulphur in fertilizer formulations. Farmers greatly appreciated the demonstration of new maize



Plate 1



Plate 2

varieties (see plate 3), with other varieties consistently outperforming the traditionally-used

H614 variety. At most sites, the Mavuno fertilizer was starting to outperform other planting fertilizers (see



Plate 3

The field days were spread out between June and August 2003. The aim was to reach as many farmers as possible in the target areas, to disseminate and train on new and improved technologies through the field visits to the demonstration sites. A total of 2370 Farmers attended the field days. The details of Farmer Field Days are illustrated in table below.

plate 4). The response to the Kelgreen was good in the Bungoma area were crop cuts are now being carried out. There was very good response to liming in Sosiani area in Uasin Gishu.

Farmer field days were organized in all the focal areas.



Plate 4

Table 8:

| Date | Group | No. of Female farmers Participants | No. of Male farmer Participants | Other participants | Total |
|-------------|-------------------------------------|------------------------------------|---------------------------------|--------------------|-------|
| June 2003 | Kolongolo | 27 | 60 | | 87 |
| July 03 | Matarajio | 93 | 141 | 306 | 540 |
| July 03 | Mabanga FFS Network | 99 | 204 | 256 | 559 |
| July 2003 | Kabisi | 41 | 145 | - | 186 |
| August 2003 | Sosiani | 92 | 137 | Not recorded | 229 |
| August 2003 | Progressive farmer group | 35 | 145 | | 180 |
| August 2003 | Mumunyonzo farmer's group | 28 | 139 | Not recorded | 167 |
| August | Kapsara tea Sacco | 38 | 159 | - | 197 |
| August | Kiungani Coffee growers Association | 50 | 175 | | 225 |

4. Promotional campaigns

FIPS Africa has developed a new promotional concept involving fertilizer and seed companies. For any 1 kg of Mavuno fertilizer farmers purchase (Ksh 30), farmers receive a 150 g packet of maize seed of their choice, free of charge.

In Kisii district from the beginning of August, FIPS Africa has worked with Athi River Mining to promote 50,000 packets of Mavuno fertilizer together with mini-packs of Kenya Seed Co, Western Seed Co., and Monsanto. The campaign is continuing in parts of Bungoma district in advance of the short rains season.

5. Development of Kenya Maize Handbook

The Handbook is in preparation and is due to be published at the end of 2003. The hand book will contain a number of chapters that detail out the biology of the maize, agronomic practices that maximize production, fertilizers, chemicals and seed varieties as well as conservation tillage with a view to providing the farmers and other interested parties including extension service providers a reference manual that will ensure maximization of yields at reduced costs.

IR 7.1.3 Sustainable Uses of Natural Resources for Agriculture

KMDP has teamed up with Effective Micro-organism (E.M.) firm which is using user-friendly bacteria to accelerate the fermentation and decomposition of plant and animal waste and residues in the preparation of compost. This technique was in great demand by farmers as they can now make own compost within a short period at very low costs. It is expected that many farmers will use the maize stover after the harvest to make compost instead of burning the stover as has been the case in the past.

So far three composting demonstrations have been carried out and at the same time three stockists have been identified to distribute the EM kit in the target districts. More demonstrations will be carried out in the coming months after the crop harvest during which time there will be a lot of plant residues in the farms.

IR 7.1.4 Increased Participation of the private sector in Delivery of Services Strengthened

KMDP has worked closely with the private sector companies in the following areas:

(a) Improved fertilizer formulations

FIPS Africa has worked closely with Athi River Mining Company (ARM) to develop and formulate the *Mavuno* fertilizer (10% N- 26% P₂O₅- 10% K₂O- 10% CaO- 4% MgO- 4% S +B, Mn, Mo, Zn, Cu) which is a blend of DAP and a compound containing K, Ca, Mg, S, B, Zn, Mn, Mo, and Cu. FIPS Africa is also working with ARM to design a top dressing *Mavuno* fertilizer which will have 30%N -5%S This fertilizer is a blend of Urea and Gypsum

(b) Package improved fertilizer formulations and appropriate maize varieties into small packages.

FIPS Africa has worked with the following companies who have co-operated in providing the following products in small packages for sale to farmers:

Athi River Mining:

Dolmax (agricultural lime) - 5 kg bags;
Mavuno (planting) fertilizer - 1 kg bags;
Mavuno (topdressing) fertilizer - 1 kg bags;

Kelchemicals

Kelgreen fertilizer (1 kg bags)

Kenya Seed Co.

Maize varieties - 1 kg bags

(c) Provision of demonstration materials

Kenya Seed Company, Pannar, Western Seed Company, Monsanto, Athi River Mining Company, Pioneer Hybrid International, Bayer, Osho Chemicals, have all provided materials for KMDP demonstrations free-of-charge.

(d) Provision of promotion materials

FIPS Africa has worked with the following companies who have co-operated in providing the following products in small packages for FIPS-Africa's promotional campaigns:

Western Seed Co.:

WH 505, WH 403, WS 909, WS 202 - 150 g bags
(Total number: 40,000)

Kenya Seed Co.:

H614, H623, H625, H627, H629, H9401 - 150 g bags
(Total number = 50,000)

Monsanto:

DK 8071 - 150 g bags (total = 10,000)
Round-up herbicide - 10 g packets

(e) Participation in farmer field days

Representatives of Kenya seed company, Bayer E. A Ltd. Osho Chemicals, Twiga Chemicals, and Athi River Mining company participated in the Farmer Field Days. The companies were very focused on promotion of their products and took time to explain to farmers on the use and expected benefits

DISCUSSION

FIPS Africa is currently undertaking crop cuts from the field demonstration and from the results the programme will be able to gauge the yield levels and cost of production among farmers who will have adopted the cultural and technology practices demonstrated to them as activities commenced at the start of the current season. The impact of the technology transfer through the programme in terms of maize production is not to be expected until the end of the second season (i.e. October 2004).

4.3 MAIZE MARKETING AND TRADE

4.3.1 INTRODUCTION

Since 1993 when the National Cereals and Products Board (NCPB) ceased to set prices, control movements and purchase the bulk of maize, alternate but inefficient market mechanisms have evolved. Marketing costs account for 40-60% of the retail price of maize. The large spread between the import and export parity prices (KSh 1,550 and KSh 322, respectively) is a strong indicator of market imbalances and market inefficiencies. When the government controlled all aspects of maize marketing, information on spatial and temporal price variations was inconsequential to farmers. Now, farmers need reliable and timely price discovery information.

Business services were developed by the Kenya Maize Development Programme with the aim of increasing access to reliable market outlets. This is within IR 7.2 on increased maize trades domestically, regionally and internationally in terms of volume and value. The IR has the following IRs:

IR 7.2.2 Improved performance of maize marketing information systems and

IR 7.2.3 Improved Services for maize trade.

KMDP DELIVERABLES FOR YEAR 2003.

During the first year of operation (2003), KMDP is expected to deliver the following deliverables that are geared towards providing appropriate solutions to the constraints highlighted by stakeholders along the maize value chain.

Percentage change in volume of maize trade entering domestic, regional and international markets.

- A **5% increase** in harvest-time prices for maize being sold by the farmers that are participating in the Kenya Maize Development Programme.

Percentage change in value of maize trade entering domestic, regional and international markets.

- A 5% increase in the value of maize entering the domestic markets.

Number of hardware and software developed for providing market information.

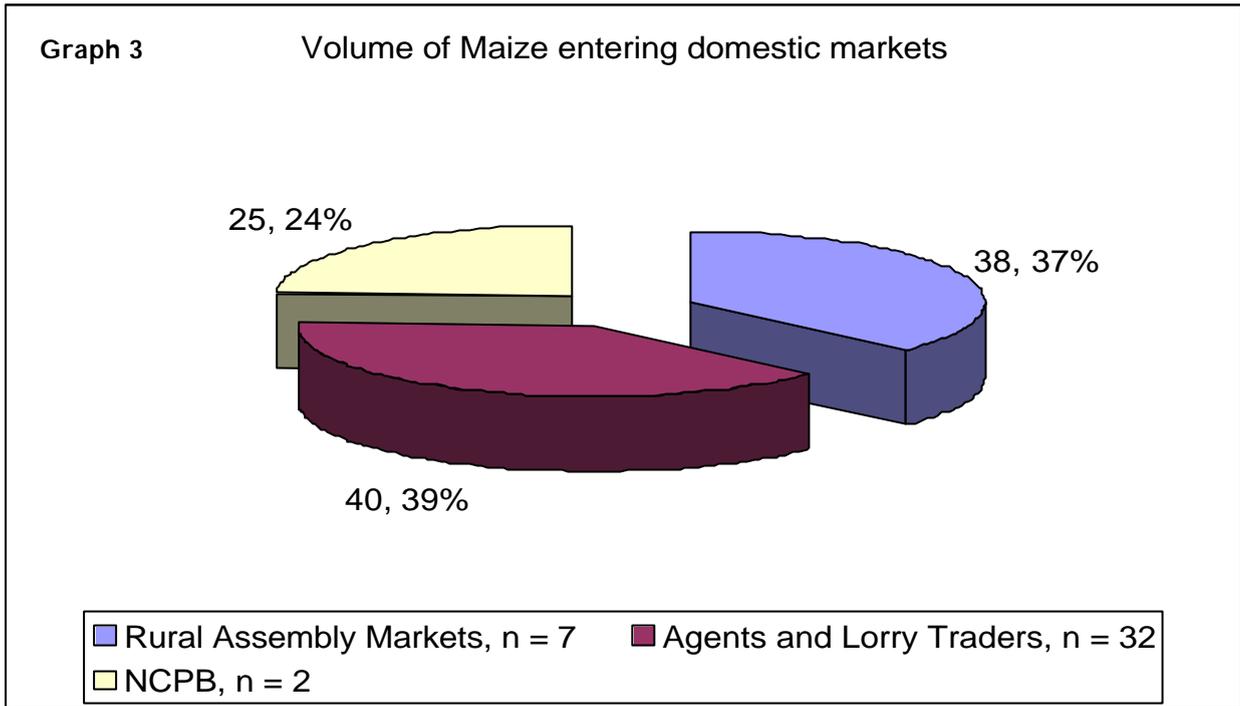
Number of users accessing market information systems.

4.3.2 BASELINE SURVEY

A baseline survey carried out by the Kenya Maize Development programme revealed the following information regarding the four deliverables in IR 7.2.

Volume of maize trade entering domestic markets:

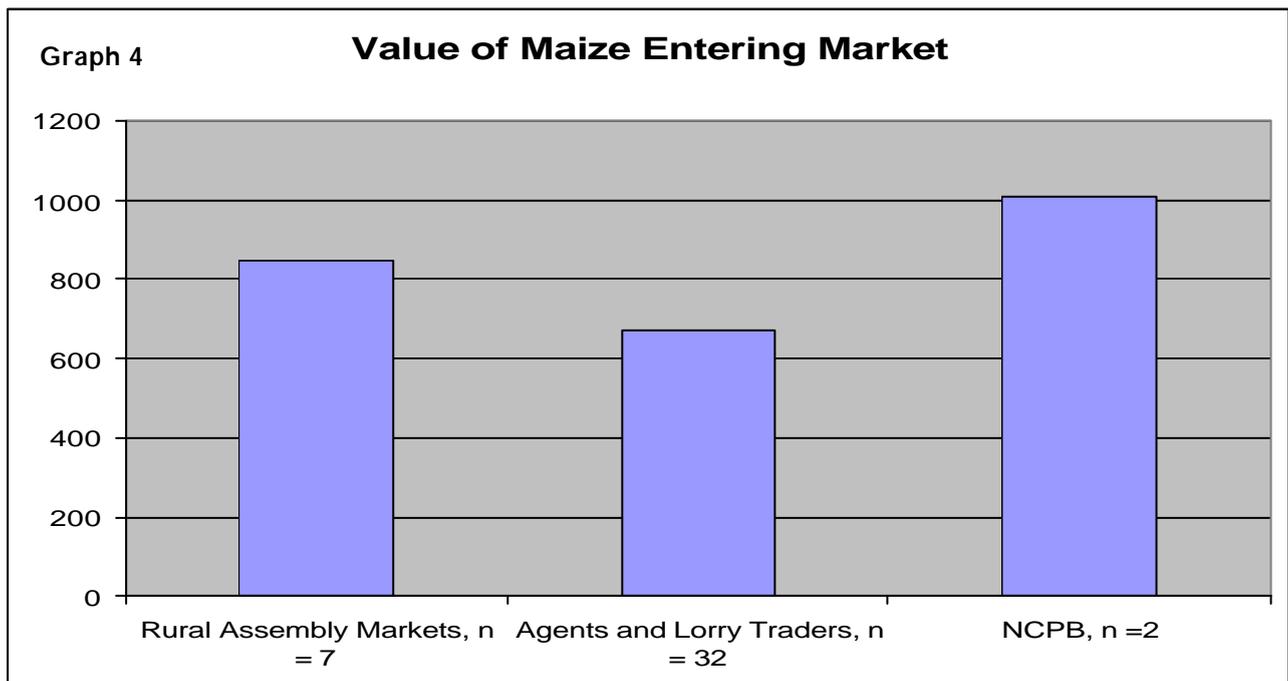
The average volume of maize sold by each farmer was 103 by 90 kg bags. This maize entered the market through rural assemblers, agents and lorry traders to Millers and the National Cereals and Produce Board.



Value of volume of maize sold by farmers domestically

The average value of maize entering domestic markets was Ksh. 819 per 90 Kg bag. From the graph below, it was revealed through the baseline survey that the average value of maize entering the domestic markets through rural assemblers was approximately above Ksh 850.00; and through lorry traders was Ksh. 680.00. Those whose maize entered the market through NCPB were able to secure a better price of Ksh 1010.00.

Small scale farmers are often faced with exploitation by middlemen and brokers who pay low prices to farmers even when the markets outside the region were offering better prices. This compared to the volume of trade entering markets in the above chart is the reason why more maize entered through the traders and the middlemen but attracting a lower value of only Ksh. 850.00 and Ksh. 1010.00 for rural assemblers and lorry traders respectively.



Marketing Information Sources and Utilization

The main sources of market information to the farmers in the three study districts included newspapers, newsletters, market information centers, traders, fellow farmers, and radio. None of the interviewed farmers accessed market information through electronic sources or website.

Table 9: Frequencies of use and non-use of various sources of market information (n = 47)

| Source of Market Information | Frequency of Use | Frequency of non-use |
|------------------------------|------------------|----------------------|
| Newspapers | 21 | 26 |
| Newsletters/magazines | 1 | 46 |
| Market Information Centers | 6 | 41 |
| Traders | 45 | 2 |
| Fellow Farmers | 45 | 2 |
| The Radio | 38 | 9 |

Majority of the interviewed farmers get access to and use market information from fellow farmers and traders. A sizeable proportion of farmers also accesses market information through the radio. Newsletters/magazines are the least used sources of market information.

4.3.3. INTERVENTIONS AND OUTPUTS/RESULTS.

In order to increase access to reliable markets, activities were strategically developed according to the sub IRs as follows:

- Facilitate capacity building of producer groups to create sufficient critical mass to address post harvest issues, improved and standardized qualities and marketing strategies capacity
- To facilitate the dissemination of marketing information and intelligence to farmers, traders groups and millers.
- Facilitate the mobilization and formation of farmer groups and associations.
- Linking smallholder producers and their organizations to marketing service providers

1. Facilitate capacity producer groups to create sufficient critical mass to address Post Harvest Handling issues, improved and standardized qualities and marketing strategies capacity.

Quality control of maize as part of the effort to establish uniform grades and standards, and the associated price differentials as rewards for the delivery of standard grades⁴ is one of the key areas that is being addressed by the programme. Post Harvest Handling is aimed at promoting the delivery of mill-ready, value-added maize to the markets. Kenya Maize Development programme is working in collaboration with the Cereals Millers, the National Cereals Board and other major consumers of mill ready maize to define minimum standards for maize purchases. Farmers are being assisted in meeting these standards.

Farmer and trader groups have been sensitized on post harvest handling activities; Harvest timing, Stooking, De-husking, Shelling – hand and machine, Cleaning and drying, Grading, Bagging, Pest management and Storage and Bulking. In total, seven (7) farmer groups were sensitized with a total participation of **1618** farmers and traders in attendance. Out of the 1,618 participants, **1,230** were male and **388** (24%) female. The Post Harvest Sensitization was carried out in the four target districts.

⁴ Grades and standards will be established in collaboration with the Cereal Millers Association and the WFP.

2. Facilitate dissemination of marketing information and intelligence to farmers, traders, and millers

Provision of timely, accurate market intelligence is one of the key activities the KMDP has been focusing on in this year. . Farmers, traders and millers have been accessing unreliable and untimely price discoveries that lead them to making decisions that do not take full advantage of the market opportunities.

This year the programme facilitated linkages into identified existing marketing and marketing information systems / networks. New modes of disseminating marketing information and intelligence were developed. A short messages system (SMS) was developed to enable farmers, traders and millers access information through their mobile phones. This was achieved with the collaboration of one of the Mobile Phone service providers, Safaricom Ltd

With a subscriber base of over 1 million users, Safaricom offers a very good opportunity to meet many players in the Agricultural sector and especially to the 1.6 million small scale farmers countrywide. The SMS system provides the programme the way out to reach the maize deficit areas with accurate market information.



Dr. Mukhebi (in a blazer left) and a farmer during the official launch of the SMS Sokeni channel

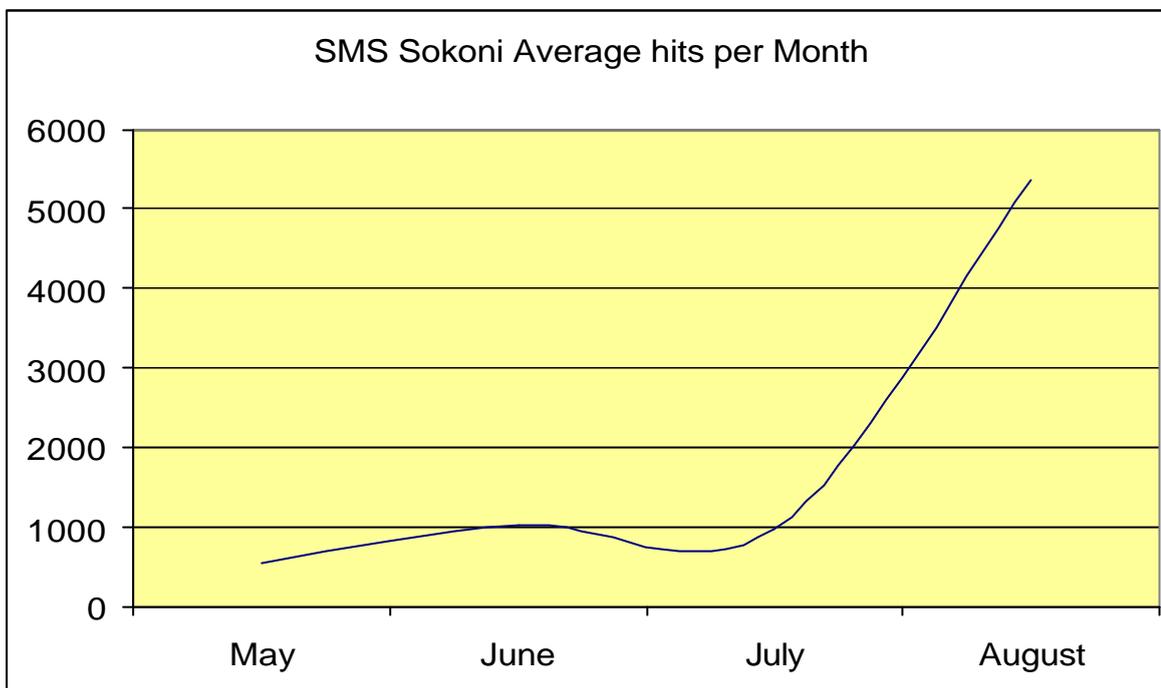
Impact of the SMS

- With the cost effective charges for messaging the small holder farmer and trader groups can access the information together as groups and correspondingly lower their individual costs tremendously.
- Farmers and other market participants will have timely access to price discovery information and market mechanisms (trade opportunities) and will act on that information to secure higher unit margins
- Through timely market information, small holders will be able to make informed decisions and avoid being exploited massively by middlemen as in the past
- Many maize stakeholders will be able to utilize the SMS services because the private service provider (Safaricom) is increasingly rolling out its network coverage to the rural areas, the small holders domicile.
- Other partnerships with other mobile private service providers like Kencell are being pursued and this strategy is expected to lower the cost of the SMS service enabling the small holders to access the service in great numbers and frequency.

Short Message Services (SMS) demand since May, 2003.

Since May 2003 when the SMS system was developed, the average hits per month has been growing tremendously and as at August, the number of hits recorded a high of 5347. This is an indication that the need for information cannot be overlooked in trying to bring efficiencies in the maize marketing value chain. From the graph, it is evident that the rise in the number of hits in August can be attributed to the timing of the harvest season.

Graph 5 SMS average hits per month



3. Market Information Points/Centers.

One of the most cost-effective ways to provide the rural small holders with timely market information has been the establishment of Marketing Information Points (MIPs) and Marketing Information Centers (MICs).

A MIC is a simple office facility equipped with a phone, fax and a computer connected to the internet. KACE, the KMDP partner compiles marketing information from domestic, regional and international markets and sends the information via e-mail to the MIC.

The MIC downloads and prints the information for use by clients at the less equipped MIPs located in the rural areas whose infrastructure is less developed.

Commodity prices for different commodities and markets are displayed on notice boards that are mounted outside the bureaus whereby clients especially the small holders are able to come and gather information for various commodities and markets. Clients place commodity offers to sell while others made bids to buy using the boards as makeshift trading floors.

In an effort to bring information closer to the farmers, KMDP has facilitated the design, acquisition and distribution of Commodities and Markets Information boards to key strategic areas, at the key agro-vets' shops where many small holders buy their inputs and at the venues where small holder groups meet regularly. This is because most farmers in rural settings have got limited access to mobile phones and internet facilities.



A market information centre (MIC) in Bungoma - Farmers and traders view the offers and bids of the day



A Market Information Board - Information brought closer to people.

By the end of year 2002, KMDP partner KACE had established a total of 6 MICs and MIPs consolidated and by the end of year 2003, two more facilities are expected to be established with a similar number for the consequent year. KACE has a strategic plan to rollout and replicate itself regionally especially in Malawi, Uganda and Tanzania.

4. Business Fair

This was the first business fair organized in a rural setting where farmers took centre stage. The main objective of the Business Fair was to bring together all the key private sector maize stakeholders together with farmer and trader groups in a one-stop kind of a setting so that they can interact, bond and initiate long-term business linkages. This will enable the small holders to benefit from bulk buying of inputs from the exhibitors and bulk selling of maize to transporters and millers who were exhibiting at the Business Fair.

Twenty Three (23) private sector companies exhibited their services and products at the Business Fair. These included chemical companies, fertilizer companies, seed companies, credit and machinery providers. Large and small millers as well as small holders' capacity building consultant firms and NGOs also exhibited.



A Private company exhibits its products, a chance for farmers to interact with the private sector

Approximately, 5,000 farmers and traders attended the business fair and majority of them visited KMDP partners' stands and were briefed on the programme's activities.

The business was also aimed at enhancing collaboration with the key players in the maize value chain. During the year, the partners in the KMDP programme have been working in collaboration with other key players to bring efficiencies in the maize value chain. Some of the activities related to marketing that the programme participated through the partners include the following:

- Workshops organized by KACE in collaboration with Hans Seidel Foundation to mitigate on issue related to Grain Marketing in a liberalized economy.
- Field days organized by Cereal Growers Association in collaboration with Kenya Agricultural Research Institute (KARI).
- Workshops organized by KACE, collaborating with Hans Seidel Foundation on Marketing Information Data Collection, Analysis and Appropriation. This was aimed at improving the quality of market information collected for dissemination
- Nairobi International Agricultural Business Fair.

5. Grain Warehouse Receipting System

Agricultural markets, especially for low value commodities such as maize are characterized by the following constraints:

- Long chains of transaction between the farm-gate and consumers
- Lack of competitiveness among traders
- Poor access to appropriate and timely market information
- Small volumes of highly varied and ungraded quality of products

Poorly structured and underdeveloped markets

As a result, markets are inefficient, with high transaction costs to both sellers and buyers. The Kenya Maize Development Programme is developing a Grain Warehouse Receipting System that will create an enabling environment for inventory credit which will contribute to domestic and export trade through the exchange. The system will bring with it the following advantages in the maize marketing value chain:

- Improved quality
- Improved price
- Storage to reduce on post harvest losses
- Can either sell immediately for cash or forward contract with millers
- Sustainable as it is private sector driven

Collaboration has been going on in the development of the Grain Warehouse System with the major stakeholders being:

- Stanbic Bank - the bank through which access to DCA loan guarantee Fund (USAID)
- Pipal (Financial advisor) – the financial advisor
- Lesiolo Grain Handlers – Private warehouse
- KMDP and CGA assembly of farmers – Farmer assembly / training
- Kenya Millers Association – millers to buy maize from farmers.

DCA has committed itself to guarantee the Grain Warehouse Receipting system to the tune of USD 2.5M. The programme will initially work with Farm Systems, a group of about 6000 farmers from Nakuru who will be linked to Lesiolo Grain Handlers, a private grain handling facility also situated in Nakuru. The idea is the farmers will either sell in consolidated groups directly, or sell forward at pre agreed prices to millers like a futures market; giving them flexibility on collecting money at better prices than those offered in the open market.

This will be the first time that a grain market has been totally private sector driven with no market distortions. This will be a major step in the liberalization of the grain industry in Kenya. Due to the nature, some individuals in government / parastatals may perceive this as future restrictions to business opportunities. This is not being widely disseminated and the entire infrastructure is not in place. It is hoped to have all in place by year end 2003 or early 2004.



***Lesiolo Grain Handlers
Nakuru: Kenya's newest,
independent grain handling
and storage facility with 16
storage silos capable of
storing 1800 tons each.***

Facilities:

- ***High tech,
computerized cleaning
and drying equipment***
- ***Sophisticated laboratory***
- ***Modern weighbridge.***

4.4 BUSINESS DEVELOPMENT SERVICES

IR 7.3 Increased Access to Business Support Services:

4.4.1 Introduction:

Business Support Services, known in the development world as Business Development Services (BDS)⁵ is seen as a means to an end; raising household income which is the ultimate goal of the programme, and creating employment. The impact of BDS activities will be seen in cost effectiveness of the services, sustainability of the services and the outreach.

It should be acknowledged that BDS approach cuts across the whole programme. All the other IRs have to take these approaches in achieving the programme objectives.

Deliverables for Year 2003

The Kenya Maize Development Programme (KMDP) working together with the SO7 team developed a number of indicators to evaluate and assess reporting progress towards achieving the strategic objective. Specific performance indicators for increased access to business support services were as follows:

- 2.1 Total number of smallholder farmers accessing business services
KMDP's target was to have 200 smallholder farmers accessing business services.
- 2.2 Total number of business service providers participating in the KMDP BDS program target areas.
The target here was to have at least 5 BDS providers participating in the KMDP programme.

Initially, before the BDS paradigm was introduced as a key aspect of the programme the following sub IRs had been proposed in the RFA⁶:

- Policy Environment promotes Enterprise Development
- Financial Markets developed and Strengthened
- Non – Financial Services Delivered cost effectively.

Increased access to Business Support Services has been contributing to the programme and the SO7⁷ Intermediate Result through ensuring:

- a. Expanded access to business development services by smallholder farmers.
- b. Increased services provided by private sector are used by maize farmers.
- c. Increased demand for services by maize farmers; and
- d. Active and sustainable learning by farmers on technologies, business services, product quality, and marketing arrangements.

From these objectives, it is envisaged that there will be an overall economic change in the business, i.e. Increased profitability and sustainability of the business; economic change in the community, i.e. Increased access to goods and services and income to rural households; and effectiveness of institutional change, i.e. the increased effectiveness of training, management counseling, loans, and other efforts to help the poor with business development.

4.4.2. Business Support Services Programme Activities:

In order to achieve the above objectives, the following activities were carried out in year 1. These activities were:

- Facilitate Institutionalization of the BDS in order to have standard of quality for BDS providers. Develop a system of accreditation and ranking and a BDS accredited providers' Directory.
- Facilitate Capacity Building for BDS providers e.g. "FaaB" ToT etc

Many Business Development Service (BDS) providers in Agribusiness in Kenya today are not able to offer competitive consultancy services not because they do not possess adequate knowledge in their different areas of specialization but because they have not developed their consulting skills. These consultants offer consultancy services purely on the basis of their

⁵ BDS refers to that range of non – financial services that helps an entrepreneur to operate and grow their businesses. These services may include: Market Access, Infrastructure, Input supply, Training / technical assistance, Technology / product Development.

⁶ RFA stands for Request for Application from the USAID.

⁷ Strategic Objective 7 (SO7) is a USAID strategic objective to increase rural household incomes through selected sectors in the country through four intermediate results: increased productivity, increased Agricultural trade, increased access to Business Support Services, and increased effectiveness of smallholder organizations.

specialized technical training whereas they have not been exposed to training in consulting. This was clearly articulated by the providers during the Farming as a Business Workshop held in Egerton University on 22nd April 2003.

Present in the meeting was the USAID KMDP CTO, Dr. Julius Kilungo and senior ACDI/VOCA staff. During this brainstorming meeting, the service providers identified a lack of BDS understanding and lack of professional consultancy skills as some of their major constraints in service provision to small enterprises. Other constraints included;

- Need for a Network among the service providers
- Certification and Quality assurance for the service providers
- Development and adaptation of training materials relevant to the small scale maize farmers
- Need for upgrading of skills of the providers
- Need to conduct a BDS demand market assessment tin the target areas.
- Need for having information sharing forums for the SE's and service providers.

1. Service Providers Workshop

A Workshop "Smallholder Business Training Level 1" for service providers that were part of the Farming as a business (FAAB) was organized by ACDI-VOCA between 28th - 30th May 2003. It had been one of the outputs of the FAAB workshop in Egerton University in April 2003. It was an important intervention in the growth of local consulting skills for professionals who provide business development services to farmers, stockiest and traders. Many Business Development Service (BDS) providers in Kenya today are not able to offer competitive consultancy services not because they do not possess adequate knowledge in their different areas of specialization but because they have not developed their consulting skills and do not understand the market paradigm.. These consultants offer consultancy services purely on the basis of their specialized technical training whereas they have not been exposed to training in demand driven SE consulting.

The ACDI-VOCA training of Consultants workshop aimed to achieve the following objectives:

- Strengthen and stimulate effective BDS supply
- Assess Consultancy (Strengths, Weaknesses and Opportunities) to offer BDS to \small holder farmers, stockists and traders.
- Explore/identify and practice identified consultancy behavior requirements
- Determine personal and maize sub-sector development priorities and formulate action plans for tackling the priorities

2. Service Providers Workshop Output:

- A **network** of Agri - Business service providers has been initiated in Western Kenya with the aim of bringing together a pool of Agri business and management professionals in Kenya. This will act as a forum for sharing and exchanging ideas, information and new developments related to the agricultural sector. The network will also establish a national organ to promote, regulate and maintain standards through professional practice in agribusiness and management consultancy. The first meeting of the network was held in 5th of August 2003 and was attended by one of the KMDP officers.
- A **Website** is being designed for the Agri business providers' network. This website will be ready by December and will initially be hosted by the KMDP website. The information to be contained in the website will include the name of the network, purpose and mission, list of consultants and providers and their profiles, updates of recent findings, projects, developments and publications, online newsletter and membership application form.

Table 10: List of Service Providers and the Number of Their Associates.

| Name of Service Provider | Number of consultants running the consultancy | Number of affiliate associates |
|--|---|--------------------------------|
| Pert Networks Limited: | 5 | 50 |
| Agri-Business Development Consultants (ABDC) | 6 | 6 |
| Agri-Team Consultants | 2 | 7 |
| Anchor Development Solutions | 2 | 7 |
| SetPro Consult | 2 | 4 |
| Beth Ndungu's | | |
| Mary Nzomo | | |
| Etang Kenya (Came in after the training) | 4 | 10 |
| Total | 21 | 84 |

See appendix _ for profile of consultants.

3. Facilitate Capacity Building for BDS providers

a) Farming as Business work shop

The first “Farming as a business” workshop was held on 20-27 April, 2003 at CMRT in Egerton University. The workshop was organized by ACDIVOCA-KENYA and was attended by 25 farmer trainers, private sector service providers, Ministry of Agriculture Officers as well as a representative from USAID



Why Farming as a Business (FAAB) Workshop Objectives

- 1) To equip the farmer trainers and other participants with appropriate and simplified analytical business management tools that will guide them towards making sound business decisions.
- 2) To extend the knowledge through the participants to farmers groups and associations so as to achieve multiplier effects in decreasing risks and costs and increase profits among smallholders participating in the project and beyond.
- 3) To re-orient extension workers and KMDP partners towards the modern thinking of farming as a business for their optimum collaboration as stakeholders in agricultural development through efficient use of resources

Farming-as-a-Business guides most farmers to the unavoidable conclusions that collective actions contribute to increased efficiencies and profits, and that saving for future investments is more beneficial than borrowing at high interest rates. For many groups, this course will be a prerequisite for more advanced training in the establishment and management of registered producer organizations. The materials are designed to furnish clients with the analytical and problem-solving tools required to make decisions about how to conduct business operations.

In the workshop farmers learn to identify and choose between alternative markets; to make decisions about whether not to store their maize; whether to invest in improved inputs; to save for reinvestment or to borrow; to transport their maize or not; to be a member of a producers’ organization or to conduct business individually. Millers and other market participants will have similar decisions to make concerning how they wish to conduct their businesses.

Output:

- 59 private Agri business consultants have been trained in “Farming as a Business”.
- 14 farmer trainers have been trained in “Farming as a Business”.
- Of the first Agri business Consultants are actively training farmers.
- 7 of the farmer trainers trained are training farmers in their groups.

B) NEW TRAINING MATERIALS

KMDP in collaboration with Hanns Seidel Foundation of Germany⁸ has developed a farmer-friendly “farming as a business” training manual. This manual is culture friendly in that it introduces the concept in form of a story set in a village (Kijiji Punda)

⁸ The Hanns Seidel Foundation is based in Munich, Germany. It is a ‘political foundation’, i.e. affiliated to a political party, the Christian Social Union (CSU). However, the foundation operates as an independent, private organization. In 2002, it was represented in 55 countries worldwide. In Kenya, the foundation started to work in 1987. Here, the main objective is political education. This includes Civic Education and Political Dialogue. Other fields of activities are the promotion of agricultural market organizations (in cooperation with the Kenya Agricultural Commodity Exchange) and local youth development in Uganda. In partnership with KACE, HSF conducts workshops for farmers and other stakeholders on ‘Agricultural Marketing in a Liberalized Economy’. The essence of the workshops is to convey the message that liberalization raises challenges for the private entrepreneur and increases the need for timely market information. Liberalization also makes it imperative for small-scale farmers to combine into business associations if they are to become a market force in the liberalized economy. Where such associations are

with a traditional maize farmer (Mali Ngumu). This methodology has incorporated most adult learning methodologies. This manual was used to facilitate the first workshop in April.

The development of a more simplified version of a farmer trainer's workbook and a farmer's workbook is in advanced stages and is being field tested currently.

Other training materials which have been developed by the KMDP include:

1. Post Harvest Handling Manuals – these are aimed at training the farmer on post harvest handling techniques to ensure quality and standardization before the maize goes to the market.
2. The Seven Steps of Association formation: adapted from ACDI/VOCA's vast library worldwide to fit the Kenyan setting.
3. Business Planning Handbook for both Brokers/ traders and small and medium millers.
4. Association Committee Strengthening Manual.

4. Millers Sensitization Workshops

Small and medium scale millers play a very important role in the value chain. According to studies conducted by ACDI VOCA in Nairobi, Small and Medium scale millers, small-scale hammer millers process 40-50% of maize meal, with percentages being considerably higher up-country. Small millers are operating at about 60% capacity utilization, and they cite inconsistent quality, high prices, electricity costs and poor marketing as deterrents to capturing a greater share of the maize meal market. A small miller⁹ (3-4 90 kg bags per day), who was interviewed said that small maize millers in Nairobi could purchase a 90 kg bag of maize from the local wholesaler at KSh 800. He said the if millers were able to hire a vehicle and purchase a load of 100 bags directly from farmers in the HPMZ, the per-bag cost, delivered to his/her mill, would be KShs 600.

A workshop held with the millers was aimed at looking at the constraints and opportunities in the value chain and the possibilities of the millers to establish associations/buyers cooperatives to give them enough buying power to directly purchase maize at reduced costs from producers. Direct contact with producers will also allow millers to exercise a higher degree of quality control. Millers were also introduced to the idea of adding value to their finished products and penetrate in to the untapped market of nutritional flour.

Twelve (12) small millers attended the workshop and a task force was formed to come up with a working document for the millers that will give guidelines on the approach to take while developing programmes for the small millers within the project. The task force was also required to look into possibilities of network of small millers from different parts of the country so as to have a forum where they could meet and share ideas.

5. Brokers Sensitization Workshop

Despite the services they provide to producers, brokers and rural-based assemblers are viewed as being exploitative and are generally misunderstood. KMDP therefore brought together brokers and traders to discuss various opportunities and constraints. Through participatory workshops, KMDP facilitated formation of a brokers association to enable more efficient service delivery and take advantage of market linkages.

The workshop was attended by **30 brokers** along the value chain from Kitale town. Two brokers from the Neighbouring Uganda were also invited to come and share their experiences and successes.

6. Sensitization workshop with Pert Net works

Leaders play a vital role in the dissemination of information and stimulating adoption of information, especially in a rural setup. A sensitization meeting was therefore organized in Eldoret that brought together the opinion leaders in the region.

111 leaders of all walks of life were represented in the workshop that saw the KMDP agenda and the concept of the private sector approach being introduced to the leaders.

formed, HSF continues to promote and consolidate them. In the same vein, in partnership with ACDI/VOCA and KACE, HSF is funding Farming as a Business training for farmers' representatives.

⁹ Mr. Shikami of the Small Millers' Association of Nairobi (SMAN). Figures from December 2001.

4.5 CROSS CUTTING ISSUES

4.5.1 HIV/AIDS Awareness

HIV/AIDS is a medical problem, but it has social and economic dimensions as well. In Africa smallholder farmers do not have access to fully operating medical services. At the family level, medical costs associated with caring for the sick and the bedridden have to be borne along with the funeral expenses of family members when they die. Besides the cost of drugs, conventional and traditional medical treatment, household caring for AIDS patients is faced with meeting expenses for additional food to comfort the sick.

HIV/AIDS intervenes and affects smallholder farmers, their farming systems and overall productivity. Cash incomes and labor are partly diverted to cope with and/or compensate for the effects of the disease. This leaves less labor for farm and off-farm activities as well as reducing the amount of money available to the household. Cash or inputs intended for use on agriculture is often to pay AIDS related expenditure. Where households own livestock, and cash is lacking, livestock may be sold to pay for medical and funeral expenses.

The impact on labour.

In most rural communities HIV/AIDS is now resulting in labor shortages for both farm and domestic work. Besides the labor loss of the patient through lengthened sickness and death, family members have to divert time to care for the sick and thus neglecting farm and off-farm activities. This results in loss of potential income.

Decline in crop yields .

There are many factors that are attributed to the effects of HIV/AIDS in that there is a limit to availability of labor, for tasks that are yield enhancing like early land preparation, early planting, weeding, harvesting and basic effective cultural practices. These factors in turn have resulted in decline of soil fertility, increase in disease and pest, changes and delays in cropping practices and decline in production outputs.

Decline in livestock production.

The HIV/AIDS leads to livestock, being frequently sold to pay medical bills and funeral expenses. Decrease in labor productivity results in lower levels of livestock care, which in turn affects incomes earning capacity.

Declining status of nutrition and health.

In most AIDS affected communities there has been change in the volume and types of crops produced in the farming systems. Most labor intensive, high nutrition crops are left out and reliance on low value starchy staples increases, resulting in impoverishment and declining incomes in the farming communities.

HIV/AIDS Messages that effect Maize Production

KMDP has been addressing issues of HIV/ AIDS through “edutainment” (a combination of educational messages and entertainment). Story-telling is one of the arts Africans have traditionally used to make sense of their lives and to help people respond to new events and challenges. Drama and humour are powerful tools to pass on messages that are normally regarded as taboo. The following messages have been passed across to the farmers:

- Awareness of, and understand how HIV/AIDS is transmitted and best methods of prevention.
- That with increased productivity and sufficient resources to feed and care for the sick the farmers will not left in a compromising situation. In addition with increased outputs, it is prudent to save for a rainy day.
- That behaviour that leads to the transmission of HIV/AIDS should not be encouraged. It is the duty of the group members to discuss openly to inform those around them about the dangers of HIV/AIDS and how to prevent it.
- That those infected with HIV/AIDS should be cared for and shown affection while counseling them to positive living.
- If a group member is sick or is attending to a sick relation, it is important that other members of the group help out with the fieldwork. This will ensure that a particular member will still harvest and sell a decent crop despite diverted attention. That is the essence of working together



EDUTAINMENT - Using puppeteers to pass across the HIV/AIDS messages

4.5.2 Gender Mainstreaming

Throughout the activities carried out in the programme gender issues have been addressed with the aim improving the capacity of women and the youth to recognize and overcome their problem. It must be recognized that marginalized members of our society play a very important role in the agricultural sector both as providers of farm labour and as household managers (in the case of women). Women are the most affected when it comes to gender issues. In the areas targeted by the KMDP, gender inequality was seen terms of the following elements which if addressed could empower them:

- **ACCESS:** in order for women to make meaningful progress they need to have equity of access to resources, such as training opportunities, land and credit. KMDP has been addressing this by empowering women towards the path of recognize their lack of access to resources as a barrier to growth and overall well being, and take action to address them.
- **CONSCIENTIZATION:** inherent structural and institutional discrimination needs to be eliminated for women to take appropriate action to close gender gaps or inequalities.
- **PARTICIPATION:** by involving women in taking decisions alongside men equally. KMDP has been encouraging women to work collectively and increase their representation in the male dominated farmers groups.
- **CONTROL:** The ultimate goal of KMDP is to see a balance of power between men and women with neither party showing dominance over the other. At this stage, women will be able to make decisions over their lives and the lives of their children, and play an active role in maize farming.

4.5.3 Management of Agricultural natural resources and overall environmental compliance.

1. Pesticide Evaluation Report and Safer Use Action Plan (PERSUAP) Study

Kenya Maize Development Programme in collaboration with the other SO7 partners managed to conduct a Persuap Study in the target areas of the programmes to establish baseline on use of pesticides. The study came up with the following findings:

Introducing proven practices: Within the KMDP recommendations are / will be made for the use of specific products to ensure a successful and profitable crop for the farmer. The pesticides have been widely tested and used under many growing conditions. This has resulted accurate and reliable recommendations on the label to ensure safe use and efficacy. The farmer does not have to test or adjust pesticide recommendations, which reduces the chance of mis-use – either poor performance or crop injury or accidental human / environmental hazard.

The technologies being introduced must be seen as a 'package' with all components contributing to the success of the crop. As a promotion of these technologies, Monsanto Kenya Ltd. is promoting the "Mashindi Pack" (the 'Winner's Pack'), which contains treated certified maize seed

Seed treatments: When seed companies treat seed with a broad spectrum insecticide and fungicide targeting soil pests, the product used and the dosage rate will be accurately and correctly applied. It will be registered by the PCPB and specific for the common soil pests associated with that crop. It will not be necessary for a farmer to handle these products and be exposed to them when treating his own seed.

Seed treatments are preventative and can protect the young crop for 3 – 4 weeks after planting, which does away with some early post-emerge insecticide treatments. They ensure a healthy crop at the start of the growing season.

Pest tolerant cultivars: Traditional crop breeding techniques select new cultivars for their resistance to various diseases and insect pests (host plant resistance). This is perhaps the most efficient method of preventing pest damage to crops. Many maize cultivars are resistant to diseases such as grey leaf spot. Plant breeders (both government and private) must be encouraged to select new lines to include such benefits.

Genetic modification (biotechnology): This technology is specific and, as techniques and knowledge develop, it will become highly pest specific. The concept is to make a plant resistant to attack from a specific insect or group of insects (or diseases) by inserting a gene known to have that characteristic, into the host plant. The *Bt* gene makes maize resistant to Lepidoptera pest attack and thus it is no longer necessary to treat maize with an insecticide for stalk borer control. This is commercial in many countries and has greatly reduced the use of insecticides in maize. The most well-known maize with this technology is Yieldgard[®] maize by Monsanto. Maize resistant to nematode attack as well as Coleoptera (beetle) is being developed for commercial release. This will result in a huge reduction in pesticide use in maize.

There can be no doubt that the SSF will benefit greatly from this technology – the farmer will not need to apply insecticides to the seed, nor to the soil for soil dwelling insects, nor for stalk borer control and the storage pests will also be controlled.

It is necessary for countries to have legislation in place to allow this technology to be introduced. Kenya does have proposed legislation being considered for ratification.

Biological control agents: Numerous efforts are being made to control pests with their natural enemies, diseases, predators or parasites. This technology will not eliminate pests but will contribute to the reduction of potentially threatening pest populations. Research, breeding and monitoring of these agents requires much specialized knowledge and facilities. In Kenya, ICIPE is doing work on fruit fly control with pathogens, maize stalk borer and bollworm control with parasites. By having this research capacity, other developments can be expected in the future.

The recognized leading countries in developing these technologies are the United States, Australia and South Africa. It will be to Kenya's advantage to form an association with these countries to benefit in the long term.

Crop rotation: This is an important aspect of pest management in that diligent and programmed crop rotation can easily reduce pest populations, specifically soil dwelling insects and diseases. Some pests such as nematodes have a wide host plant range but there are nematodes, which are very specific in the choice of host plant. By rotating maize and dry beans (or other non-grass crop) the potential pest populations will be greatly reduced.

Intercropping is counter productive in a pest management programme and will ensure the survival of all pests of all inter-cropped crops. This will also make acceptable pest management and control very complicated. Intercropping should be discouraged.

Pest and disease scouting: Farmers must scout their crops at least once a week and observe/search for any pests and diseases. Farmers must be familiar with the biology of the pests on the crops planted so that they know where to search for the eggs and young growth stages before crop loss damage is significant. Use can be made of insect traps to record adult pest flight patterns. Records of scouting counts from each land and each crop must be kept so that pest population build-up can be monitored as well as the effect of any treatment applied to control the pest. KARI, EOs, technical advisers and commercial growers should develop the scouting methodology and interpretation.

Economic threshold pest and disease levels: Farmers must know how much damage a pest can cause to the crop before the yield is reduced and an economic loss is incurred. When a low population of a pest such as maize stalk borer is recorded, a corrective insecticide spray must be applied immediately before the young larvae can penetrate the plant stem. Maize can tolerate a low level of aphid infestation and it may not be necessary to apply a corrective treatment. KARI, EOs, members of the AAK and commercial growers should compile recommendations for scouting pests in each major crop as well as determine the economic threshold levels.

Weed management: Uncontrolled weeds are the major yield limiting factor in SSF maize production. Hand weeding is exceptionally time consuming and labour intensive if it is to achieve its aim of a weed-free crop. Herbicide use should be targeted at the perennial weeds that are the most problematic. Residual herbicides will also reduce the potential for weeds to shed seeds. However, cultural aspects such as having a mulch soil cover to inhibit weed seed germination, having an even and dense crop stand to shade out weeds, hand hoeing small weeds and preventing weeds from flowering by slashing, will all contribute to a reduction in weed pressure and thus herbicide use. Any weed on the farm must be prevented from flowering and shedding seeds to prevent a problem in the future.

2. Training on Compost Establishment and Management.

Teaming up with Effective Micro organisms (EM), issues related to environmental management are being addressed by the programme. Farmers are being trained on how to prepare composting using microorganisms. The fundamental principle of this technology is to introduce a group of beneficial microorganisms to improve soil conditions, suppress putrefying (disease inducing) microbes and improve efficacy of organic matter utilization by crops.

Farmers through their farmer groups are being trained and practically shown how to prepare compost using this technology.



Farmers are practically shown how they can use EM technology to prepare their compost

5.0 CHALLENGES

1. While BDS has been fronted as the best paradigm that will ensure sustainability of programmes, it was realized that the model does not always fit.
 - Who is the facilitator, and who are the providers?
 - What is in line with the approach?
 - What is not?
 - What might be the reasons why the program has been designed this way?
 - How might it have been designed differently to better fit the approach?

2. Measuring the impact today versus sustainability tomorrow. Donors are looking for what impact their programmes have so that they can match them with the funding. On the other hand the programme is designed to have a long term effect on sustainability. Developing sustainable programmes need long term strategies. Therefore there is need for:
 - Donor education
 - Rethinking targets and indicators
 - Drawing on Market Development support

3. The programme approach does not work well for the poor, who are our target in the programme. As much as we are introducing new technologies and ideas to them there is slowness in the rate of adoption as they do not have the resources to acquire services. The challenge is in addressing the following pertinent questions:
 - Can you embed all services?
 - What kinds of subsidies are acceptable and for how long?
 - How do you interest the private sector in the poor?

4. The consumers of BDS services in the KMDP are rural farmers where the situation is totally different in the due to the following factors:
 - Physical isolation
 - Underdeveloped infrastructure
 - Cultural and/or linguistic barriers
 - Limited access to high value markets
 - Lack of market information
 - Lower levels of education
 - Monopolistic marketing arrangements

5. What of command economies?
 - The government's role
 - The power of parastatals
 - Paternalistic attitudes
 - Weak private sector

6.0 OTHER ACTIVITIES

ADMINISTRATION

Kenya Maize Project activities formally began in October 2002 with Patrick Carey, HQ Project Coordinator, visit to Kenya. Patrick worked closely with Lucy Njuguna and Guantai to interview candidates for staff positions, locate new office space and begin the NGO registration process. Lucy had been the contact person for ACDI/VOCA in Kenya and later joined by Stanley Guantai to recruit and interview personnel. Joshua Walton was also able to visit Nairobi to give guidance and direction in the preparatory activities. By the end of October, 2002, most of the key personnel were identified, including the new Chief of Party, Steve Collins.

The nascent ACDI/VOCA-Kenya team were housed and given logistical support by the Kenya Agricultural Commodity Exchange (KACE. Steve started with ACDI/VOCA-Kenya in November and immediately began the process of procuring equipment and vehicles, locating hiring and contracting process and relocation to the new ACDI/VOCA-Kenya offices in Nairobi.

Introductory Meeting

The ACDI/VOCA-Kenya team joined the other SO 7 partners during the introductory meeting by the USAID/Kenya Deputy Director.

The other SO 7 Partners are the Delloitte Touche' Tohmatsu(DDT) on BDS and the Land O' Lakes(LoL) on the Dairy Project.

The Business Development Services Workshop

During the month of November the team participated in the Business Development Services workshop together with the other SO7 partners. The STTA team from AFE led the workshop and it is during this time that it became apparent that there was a need to review the KMDP plans to fit in with the proposed BDS paradigm.

7.0. FINANCIAL REPORT

KMDP ANNUAL FINANCIAL REPORT

KMDP is a project contracted to ACDI/VOCA for a period of four years with a budget of USD 5,900,000.00 by USAID. The project started in September 2002 with an obligated amount of USD 2,250,000.

Staff recruitment and office set up plans (including renting of office space) began in September 2002, but the actual setting up started in January 2003. Majority of the staff also joined KMDP in January 2003.

This has made our burn rate look because the field project activities started in earnest in February 2003.

The office set up involved the renting of offices, which are situated in Westlands, on Muthangari Drive gate 209 and buying of office furniture and Office equipment took place between January 2003 and February 2003. The buying of motor vehicles and motor cycles was done between April and June 2003.

The following expenditure figures will help in understanding this.

Table 11 Obligated Funds and Expenditure for 2003/2004

OBLIGATED FUNDS FOR 2002/2004 & THE EXPENDITURE FOR 2002/2003

| | USD |
|--|---------------------|
| OBLIGATED AMOUNT - 25/9/02 - 31/1/04 | 2,250,000.00 |
| EXPENDITURE 2002/2003 | 1,274,046.35 |
| UNEXPENDED OBLIGATION AS AT 30TH SEPT.2003 | 975,953.65 |
| INCREMENTAL FUNDING 1/10/03 - 30/9/04 | 1,200,000.00 |
| Obligated funds available for 2003/2004 | 2,175,953.65 |
| UNEXPENDED OBLIGATION AS AT 30TH SEPT.2003 | 975,953.65 |
| As per the work plan - KMDP Expenditure - 1/10/03 - 31/1/04 | 443,564.00 |
| ***Activities that were budgeted for 2002/2003 not carried out as at 30/9/03 | 109,551.80 |
| | 422,837.85 |
| | 975,953.65 |

| **** NB | USD |
|---|-------------------|
| Consultants & Volunteers | 8,151.78 |
| Savings and Credit | 5,000.00 |
| Member Training | 4,500.00 |
| Planning and Orientation Workshop | 2,250.00 |
| TOT's in Small Holder Associations and Savings and Credit | 7,500.00 |
| Maize Stakeholder's Workshops | 2,000.00 |
| Maize Hand Book | 28,000.00 |
| Monitoring and Evaluation | 27,000.00 |
| KACE | 5,690.00 |
| CGA | 5,690.00 |
| FIPS | 5,690.00 |
| Volunteer per Diem | 8,080.00 |
| TOTAL | 109,551.78 |

The project work had started earlier in December 2003, with baseline survey to the new areas where KMDP was venturing into. This was carried out by the ACDI/VOCA together with the Sub-Grantees KACE, FIPS and CGA.

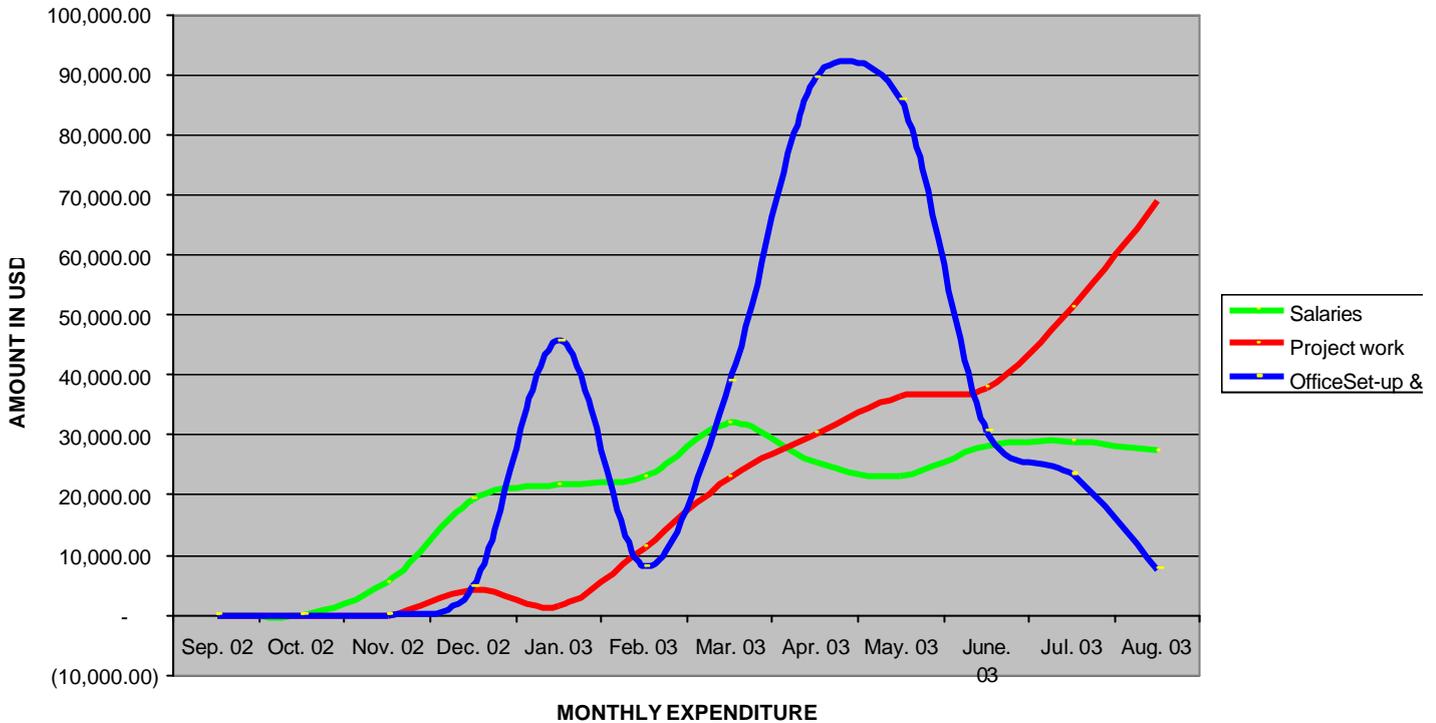
In February 2003 the field staff began the project work in earnest and this has continued to increase as reflected by the graph below.

Table 12 Expenditure Breakdown

| KENYA MAIZE J394 | | 2002-2003 | | | | | | | | | | |
|-----------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|-----------|------------|
| Expenditure Breakdown | | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 | 2002-2003 |
| | BUDGET | Sep. 02 | Oct. 02 | Nov. 02 | Dec. 02 | Jan. 03 | Feb. 03 | Mar. 03 | Apr. 03 | May. 03 | June. 03 | Jul. 03 |
| Salaries & Service | 322,503.00 | - | - | 5,360.65 | 19,191.65 | 21,675.16 | 22,983.62 | 31,912.79 | 25,368.71 | 23,135.14 | 28,117.68 | 28,871.46 |
| Project Work | 661,138.00 | - | - | - | 4,121.91 | 1,417.19 | 11,189.49 | 22,952.98 | 30,150.09 | 36,440.18 | 37,740.65 | 51,261.36 |
| Setup & Operations | 401,754.00 | - | - | - | 4,656.67 | 45,636.92 | 8,004.69 | 38,796.70 | 89,533.55 | 85,804.50 | 30,520.95 | 23,404.66 |
| Total Costs | 1,385,395.00 | - | - | 5,360.65 | 27,970.23 | 68,729.27 | 42,177.80 | 93,662.47 | 145,052.35 | 145,379.82 | 96,379.28 | 103,537.48 |

Graph 6 Expenditure comparisons as at 31st August 2003

EXPENDITURE COMPARISONS AS AT AUGUST 31ST 2003



As shown by the graph the project expenditure has steadily been increasing as compared to office set up and operations expenditure which has gone down. The salaries have remained on average at the same level except where occasionally there is a rise due to the payment of staff benefit cheque in the following month.

PROJECTIONS

With everything in order at the KMDP “home front”, its focus is to put its all into the project work for which it was set up to do. From November 2003, which is the second year of the operation, KMDP is moving to new areas. Operations in Year 1 target areas will continue even as new districts target in Year 2 are taken on. Therefore the project expenditure will continue to rise steadily. Following is our projections for the two years 2002/2004.

Table 13 Expenditure Breakdown 2003/2004

KENYA MAIZE J394

Expenditure Breakdown 2002-2004

| | BUDGET | Oct. 02 - Dec. 02 | Jan. 03 - Mar. 03 | Apr. 03 - Jun. 03 | Jul. 03 - Sep. 03 | Oct. 03 - Dec. 03 | Jan. 04 - Mar. 04 | Apr. 04 - Jun. 04 | Jul. 04 - Sep. 04 | TOTAL | VARIANCE |
|------------|--------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|------------|
| Salaries | 651,682.00 | 24,552.30 | 76,571.57 | 76,621.53 | 81,007.60 | 76,867.24 | 76,298.71 | 77,754.41 | 76,624.07 | 566,297.43 | 85,384.57 |
| Project | 1,354,184.00 | 4,121.91 | 35,559.66 | 104,330.92 | 138,945.03 | 174,232.47 | 181,890.70 | 180,938.70 | 186,983.70 | 1,007,003.09 | 347,180.91 |
| Operations | 517,697.00 | 4,656.67 | 92,438.31 | 205,859.00 | 48,342.90 | 44,357.25 | 26,498.25 | 28,600.25 | 16,487.25 | 467,239.88 | 50,457.12 |

Graph 7 KMDP Projected Expenditure Comparison FY1& FY2

KENYA MAIZE DEVELOPMENT PROGRAMME COMPARISON OF PROJECTED EXPENDITURE FY1 & FY2 (2002-2004)

