Seed maize Industry in the Kenyan Highlands.

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Introduction

• Seed is one of the most critical inputs in agricultural production.

• Good quality seed has significant potential of increasing on-farm productivity and enhancing food security.

• With the advent of liberalization in 1989, local and foreign seed companies have come up.

• Seed sector in the Kenyan highlands consists of formal and informal sub-sectors.
The informal sub sector in the highlands caters only for 5% and involves mainly cases where farmers use seed from unregulated sources, such as recycled seed of hybrids.

On-station study on recycled seed reported a yield reduction of 20-30% on first recycling of commercial hybrids.

The formal seed sector (representing 95% of the market) operates through an established regulatory act (Cap 326).
The formal seed sector started with the establishment of Kenya Seed Company in 1956 in Kitale.

Kenya’s annual seed maize requirement varies from 25,000 to 35,000 metric tons with 80% of this being planted in the Kenyan highlands.

KEPHIS was established in 1996 and does variety evaluation, release and registration, plant variety protection and seed certification.
Problems of the seed maize sector in the highlands

- Inaccessibility to affordable credit
- Prevalence of adulterated seed in the market
- High cost of seed
- Poor infrastructure
- Lack of strategic seed reserves.
Participants in the Highland seed industry

- The public sector agencies involved include Kenya Seed company and KALRO.
- Despite the liberalization of the seed industry, the private sector participation in production and marketing of highland maize varieties has been very minimal.
- Private companies include Western Seed company, Freshco seed company, East Africa Seed company, Elgon Kenya LTD, ADC, Monsanto and Agri seed.
Seed companies, NGOs, CBOs

• As at 2008, there were 73 registered seed companies in Kenya who undertook any of the following activities;

• Research, production, processing and marketing of seed

• Import, repackage and market seed
### Seed Companies CBOs and NGOs cont’d

- CBOs and NGOs deal in seed obtained from registered seed dealers, the informal seed sector and from imports.
- They are involved in collection, multiplication and distribution of seed.
- In the highlands these include NGOs like ACDI VOCA, Kenya Maize Development Program (KMDP)
Challenges and constraints in seed production and processing

- Maintenance and breeder seed schemes are constrained by lack of sufficient funds.
- The method of maintenance and production of breeder’s seed used by different breeders differ even in the same crop (Maize).
- It is difficult to attain the recommended isolation distances for hybrid seed production due to population pressure on land.
Challenges and constraints cont’d

- Contracted Seed growers sometimes do not have access to sustainable credit schemes for purchase of farm inputs and services.
- Some companies have inappropriate seed processing and handling technologies.
CHALLENGES AND CONSTRAINTS IN SEED QUALITY

• Seed quality control is effected through certification by KEPHIS- Inadequate staff
• Some seed merchants extensively use inappropriate packaging materials, which may not maintain the quality of seed during storage.
CHALLENGES IN MARKETING AND DISTRIBUTION

• Low quality and/or fake seed has continued to be marketed largely due to inadequate monitoring, making farmers lose confidence in the seed industry.

• Although adoption of improved seed in the Kenyan highlands is over 90%, there is limited affordable credit for seed dealers and farmers.
• Although the seed industry is liberalised, the market in the highlands is mainly dominated by a few.
• Some seed stockists have poor storage facilities this result in rapid deterioration in seed quality.
PLAYERS IN SEED MAIZE INDUSTRY IN THE HIGHLANDS

• Breeders and researchers - public, private, NGO
• Foundation seed bulkers - Public, private, NGO
• Certified seed producers - corporate, Government, contract growers, NGOs
• Processors and packagers - Private Government, NGOs
• Marketers/Awareness creators - seed companies, extension agents, NGOs
PLAYERS IN SEED INDUSTRY
CONT’D

• Distributors-agents and agro dealers, private seed companies, NGOs, government entities, multilaterals

• Policy makers and regulators-government and government contracted entities
# CATEGORY OF SEED SOURCES IN THE HIGHLANDS

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal for profit, Private</td>
<td>Monsanto, Agri seed</td>
</tr>
<tr>
<td>Formal, parastatal, varied</td>
<td>KSC, KALRO seed unit, ADC</td>
</tr>
<tr>
<td>Government, sold</td>
<td>KALRO Seed Unit</td>
</tr>
<tr>
<td>Government, Free</td>
<td>Kenyan government free seed program for the poorest farmers</td>
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</tbody>
</table>
VARIETY RELEASE

• The seed and plant varieties Act, cap 326 of the laws of Kenya, guides the regulatory process of variety release, seed certification and seed production.

• Upon satisfactory performance after 2 or 3 years, the NPT committee evaluates the results and recommends for release.

• Varieties that have outstanding performance in the NPT, must also have undergone through DUS testing.
VARIETY RELEASE

• The NVRC then officially release the variety
• Upon recommendation of the NVRC, the minister of agriculture gazettes the new variety.
Seed companies operating in the Highlands

<table>
<thead>
<tr>
<th>Seed company</th>
<th>Crop</th>
<th>Variety</th>
</tr>
</thead>
<tbody>
<tr>
<td>East African Seed Co</td>
<td>Food and horticultural crops</td>
<td>KH600-15A</td>
</tr>
<tr>
<td>Faida (OCD)</td>
<td>Food and horticultural crops</td>
<td>FS650</td>
</tr>
<tr>
<td>Monsanto Kenya Ltd</td>
<td>Food and horticultural crops</td>
<td>KH600-22A</td>
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<tr>
<td>Pannar Seed</td>
<td>Food and horticultural crops</td>
<td>Pan691, Pan683</td>
</tr>
<tr>
<td>ADC</td>
<td>Food crop and horticultural crops</td>
<td>KH600-23A, KH600-16A</td>
</tr>
<tr>
<td>Agri-Seeds Ltd</td>
<td>Food crop</td>
<td>KH600-19A, KH600-20A, KH600-21A</td>
</tr>
<tr>
<td>Western seed company</td>
<td>Food crop</td>
<td>WH699</td>
</tr>
<tr>
<td>Freshco international</td>
<td>Food crop and horticultural crops</td>
<td>KH600-11D, KH600-4E, KH600-16A,</td>
</tr>
<tr>
<td>KALRO seed unit</td>
<td>Food crop and horticultural crops</td>
<td>KH600-11D, KOPV01(HAC)</td>
</tr>
<tr>
<td>Kenya seed company</td>
<td>Food crop and horticultural crops</td>
<td>H614D, H625, H626, H6210, H6213, H6218, H628</td>
</tr>
<tr>
<td>Elgon Kenya</td>
<td>Food crop</td>
<td>KH600-16A</td>
</tr>
<tr>
<td>NASECO</td>
<td>Food crop</td>
<td>KH600-24A</td>
</tr>
</tbody>
</table>
Produce of farm surplus for prosperity
THANK YOU