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1. Overview Of Seed Value Chain

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Seed Enterprise Management Institute

SEED DRYING, PROCESSING AND STORAGE COURSE

OVERVIEW OF SEED VALUE CHAIN

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OVER VIEW



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1. Introduction

- The seed industry is backbone of all agriculture because quality seed is starting point of all good agricultural practice
- Seed has potential to address both food security and poverty through income generation because the potential of agricultural production is locked up in the seed for other inputs to exploit
- To produce adequate food, a seed supply systems that adequately responds to the farmers requirements must be in place.

...INTRODUCTION

- Seed production and supply chain logistics transforms seed from research seed into a commercial product
- From production field processing follows involving removal of impurities, treat (with coatings and inoculants), package and distribute.
- This ensures quality and other needs are met to customer satisfaction, including purity and germination, availability.
- The process involves many varied actors, who should be a team for efficiency in value addition to enhance the seed product.
- Plant breeders (private or public) use seed companies to reach farmers, a process that is mediated and regulated by law, often through the NPPO agency

...INTRODUCTION

- The program is designed to promote an efficient seed industry through developing human capacity
- This program hopes to promote use of good seed to contribute into improved incomes and nutrition
- Good seed comes from good value chain seed systems.

Steps in Seed Production



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- This calls recognition of that there is need to:
 - Deploy new varieties from the researchers; research products must be delivered through the seed systems and facilitated by the agro-dealers.
 - Improve collaboration between NARS research system and the private seed sector if companies have to access good germplasm (research products) because linking private sector (private business) and public sector technical efforts is essential for success
 - In Africa, we need greater financial support and better infrastructures

Players in the Seed System

- Similarly, there is a need for streamlined seed policies and regulatory systems
- Better seed value chains are required to promote good cultivars through the agricultural system.
- Seed systems are only a component of the agricultural production system; once available, seeds require an appropriate environment of soils, rainfall, temperatures, disease and pest management protocols etc to be of use.

...PLAYERS IN SEED INDUSTRY

- To be deployed, a marketing system should also be in place to answer the demands which, if absent should be created
- A value chain is the sum of all interlinked activities that add value in the process of converting inputs into outputs which, in turn create competitive *financial* advantage to a product.

DEFINITION



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Development of a seed value chain (SVC) is all about promotion of a seed system which targets delivery of high quality seed in an efficient and sustainable manner.



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Development of a seed value chain (SVC) is all about promotion of a seed system which targets delivery of high quality seed in an efficient and sustainable manner.

A SVC has nine elements:

1. Cultivar development and release, itself a complex phase
2. Establishment of seed enterprises
3. Access to foundation seed
4. Access to inputs (i.e. purchasing or procurement)
5. Production and all post harvest processing operations
6. Marketing and selling (distribution and all associated logistics e.g. after sales services)
7. Seed research
8. Human resource development
9. Corporate infrastructure.

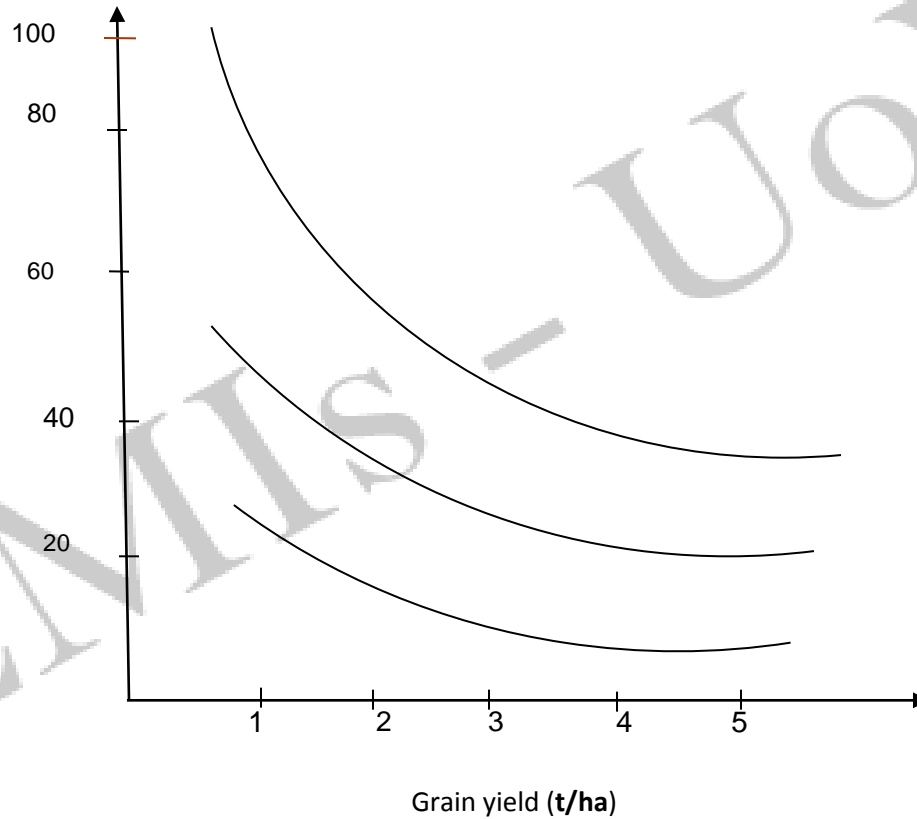
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Percent
of crop
yield to
pay for
seed

Seed: Grain Price Ratio



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Defining a Value Chain



- A value chain (VC) is a sequence of events from production of raw material to full transformation into a final product to be purchased by the consumer.
- Thus VC analysis characterization of each stage that a product experiences from initial product conceptualization, to provision of inputs, through primary production, to intermediate trade, to processing, retail marketing to final marketing. By implication, some value is added at each node.

....Value chain defined

Seed sector is a complex of processes that interact:

- They involve many actors all of them essential to each other's success! Supportive and influences.
- These determine how fast and how large the sector grows.
- They are at the mercy of various bottlenecks and opportunities.



Seed Value Chain

1. **Development:** a costly process undertaken by N.A.R.S (NARIS & universities), C.G.I.A.R and some large seed companies.

- Bottlenecks:**
- High staff turnover (in N.A.R.S)
 - Poor research infrastructure
 - Inadequate funding
 - Lack of appropriate germplasm
 - Ever present threat of new pests, diseases
 - Climate change threat

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- *Opportunities:* -Public and private breeding linkages to make germplasm available.
 - incorporation of new breeding tools (e.g. MAS & DH technique)
- *Support:* - Government, private sector, donors & NGOs.

Variety Testing Participatory cultivar Testing

- Development varieties and research stations (controlled environment) need on farm testing; to confirm superior performance. On target environments with farmer inputs, sometimes simultaneously with cultivar development.



Advantages of Systematic Variety tests:

- Tests superiority over standard checks
 - Confirms adaptability in target areas.
 - Which entries meet farmer preferences.
- *Bottlenecks:* -influences regulation authorities that demand lengthy testing before registration. (This must be confronted).

Poor infrastructure, data inaccuracy.

3. Registration of Varieties

- Actors here are seen as variety development, same influences & supporters.
- ❑ *Bottleneck:*
- Needs to be through a known and trade system that is regulated nationally, regionally & globally.
- Have to be registered using known procedures, lack of rights & high cost & lengthy times.

4. Production and Marketing

- Requires the most attention and innovation in seed value chain.
- Production & conditioning/processing requires carefully selected farm (land resources) and staff, physical infrastructure e.g. machinery & irrigation.
- Storage also optimizes production, often small companies may only hire;
- Throughout quality assistance is partially essential.
- Production of F seed is particularly demanding on quality control.



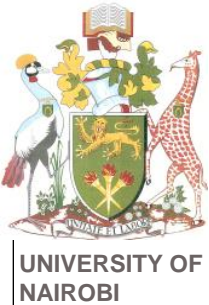


...Systematic testing

5. *Marketing and Distribution*

- It is a specialized area different from usual commodities. E.g. special packs required over a very short period, can die. Prices are controlled by productivity & government policy. An example rural development, farm credit, input/output pricing & market of the grain or financial production.
- Success is controlled by efficient promotion of the production; so provide information to farms & retailers and respond to their queries appropriately.
- Storage (skills & facilities) are necessary.

CONCLUSIONS



- Success of a seed business is controlled by three factors: valuable *research products*, careful *production of the products* as per regulations and *good marketing strategies*. All these are heavily interdependent on each other.
- Efficient seed production, processing and distribution under quality assurance standards may still not work as expected due to the influence of *external factors*;
- Four of these are particularly patent:



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- Restrictions from the national regulations set on seed quality standards
- Inappropriate market restrictions
- Low farm productivity that makes the enterprises unprofitable.
- Functionality of grain (and value added) markets.

Success in seed is intertwined with success in agricultural economy, and seed is only one of the key factors.

THANK YOU FOR
LISTENING