Internal quality requirements for seed companies including testing and record keeping

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What is Quality?

The extent to which requirements or expectations are met:

- requirements may be stated or implied
- quality refers to products and services

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What is Quality Management?

Definition

"Activities aimed at directing and running (controlling) an organisation regarding quality

Quality plan

- Explains how an organisation intends to apply the quality policy, to
- achieve the quality objectives and to meet quality system requirements

What is Quality Management?

- Quality control
- > Set of activities or techniques to ensure that quality requirements are being met

Quality improvement

▶ Enhance the capability to fulfil quality requirements

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Quality assurance

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- Set of activities to demonstrate that an organisation meets
- all quality requirements"

Why do seed companies need quality assurance?

The bottom line!!
 Our customers must have confidence
 in the quality of product/service which must be:

- Reliable
- · Relevant
- · Reproducible

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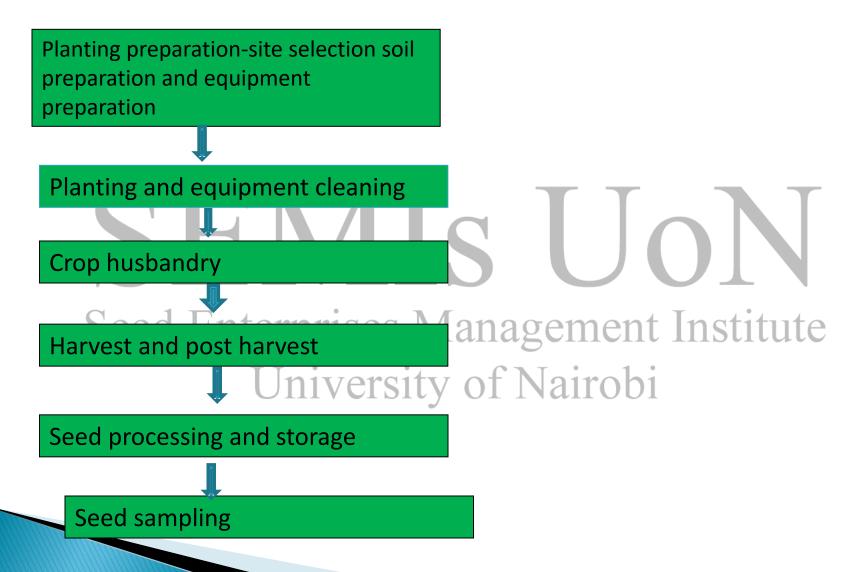
Building blocks of a QA system

Q-Manual (Level A)

Describes the quality system in accordance with the stated quality policy and objectives and the accreditation standard

- Documented quality system procedures
 (Standard operation procedures) (Level B)
 Describes the activities of individual functional units
- Other quality documents (Work instructions, forms, eports, etc.) (Level C)_{rsity} of Nairobi Consists of detailed work documents

Seed production work flow



Checks needed at every process

- Analysis of Product Integrity and Control Concerns (identification of potential risk).
- Determine Control Points (*Points to control the potential risk*).
- Establish Preventative Measures (activities to manage the risk).
- Establish Monitoring Procedures (verification of implementation actions).
- Establish Corrective Measures (activities to address NCs).

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- Establish Verification Procedures (to verify compliance)
- Establish Record Keeping and Documentation Procedures

Planting Preparation

- Seed source
 - Source be authentic source
 - Variety maintenance program
 - Pedigree records
- Grower selection Seed Enterprises Management Institute • Criteria

 - University of Nairobi Contract
 - Training

Planting Preparation

- Support
- Communication
- Equipment Preparation and cleaning
- Map of the farm location

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Planting

To ensure quality companies should provide a planting guide for the seed crop to the grower

- Time of planting,
- Seed Rate,
- Ratio of Female to Male parent gement Institute
- Method of sowing, ersity of Nairobi
- Machine cleaning,
- Seed packaging and labels preservation

Crop husbandry

- ▶ The companies should have:
 - Weed, pest and disease control produces
 - Crop nutrition program
 - Crop descriptors to aid in identification of offtypes
 - Guidelines on detasseling Seed Enterprises Management Institute
 - Field inspection procedures and timing
 - Crop standards (higher national standards)
 - Records for all operations

Harvest and Transport

- Harvesting mode (machine or hand)
- Moisture content at harvest
- Separation of males and females (hybrids)
- Identification of seed during transport
 - Identification of harvested raw seed agement Institute
 - Packaging and marking ersity of Nairobi
- Transport hygiene

Seed processing

 Procedures for processing and handling certified seed should be fully described.

This should include following:

- Seed delivery
- Drying of unprocessed seed agement Institute
- Storing unprocessed seed of Nairobi
- Storing unprocessed seed
- Sampling and Uniformity
 - Packaging and labelling

Seed storage

- Companies should have program for:
 - Control of pests and diseases for seed in store
- Monitoring seed storage conditions Institute University of Nairobi
 Records for all seed lots

Seed sampling

- Seed sampling procedures
 - Should be in accordance to international accepted

procedures – ISTA

- Appropriate sampling toolsagement
- Calibration requirement and records



Sampling equipment



QA in seed testing

- Procedures for sample reception
- Seed testing methods for be in accordance with international protocols -
 - Moisture Enterprises Management Institute
 - Purity University of Nairobi
 - Germination
- Storage of sample

QA in seed testing

- Integrity of data
- Equipment
- Record keeping
- Record keeping Seed Enterprises Management Institute
- Staff training University of Nairobi
- Membership and participation in PT

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