I.
Product Knowledge

Topic 19

Classes of Seeds

FACT SHEET

I. Product Knowledge

<u>Topic 19:</u> Classes of Seeds

There are two main classes of seeds available in Africa:

Seeds saved from the field
Saving seeds from the field to plant next season is the most convenient and less costly option for farmers. These seeds saved from the field are usually bin-run seeds. Here, the farmer holds back a part of the harvest to plant next season. There is no testing, cleaning, or treatment on these seeds.

Although saving seeds from the field is an inexpensive way to get seeds, there are several disadvantages:

- There is very little control of seed **quality**. The quality will be above average in some seasons and below average in others.
- **Diseases** like fungi can be carried from one season to another.
- These seeds are **not cleaned**. The possibility of weed seeds growing between them is very high.
- These seeds are **not tested** in field tests to determine the germination percentages and purity of the seeds
- The seeds are stored on the farm until the next planting season. Seed losses due to **pests** occur.
- The seeds are stored without regard to **moisture content**. Seeds with too much moisture will rot during storage, have less germination, and produce low yields.

Not all seeds saved on the field have these disadvantages. Some commercial farmers have well-organized seed-saving projects in which the seeds are tested, cleaned, and treated. These seeds will maintain high percentages of germination and produce high yields.

Certified seeds
Certified seeds are seeds of high quality and superior cultivars produced under strict control and standards. Qualified and experienced seed growers produce certified seeds. They cost more than uncertified seeds but have the following advantages:

- Certified seeds are produced under strict seed certification standards.
- They have certified germination ability (percentage).
- Certified seeds are cleaned and meet specified limits for inert or weed seeds.
- The moisture content of certified seeds is tested prior to storage.
- The yield expectations under favorable conditions are tested.

- Certified seeds must pass a series of field tests to become certified.

Certified seeds are the starting point to better crop results. The top five benefits of certified seeds to farmers are:

- Farmers get clean seeds.
- Farmers get new genetics by improved seeds.
- Farmers get the most out of input costs—higher yields.
- Farmers have peace of mind—less risk of crop losses.
- Farmers stay in line with the latest seed technology.

By selling certified seeds, agri-input dealers will build a relationship of trust with farmers. They will come back for more!

ADDITIONAL INFORMATION

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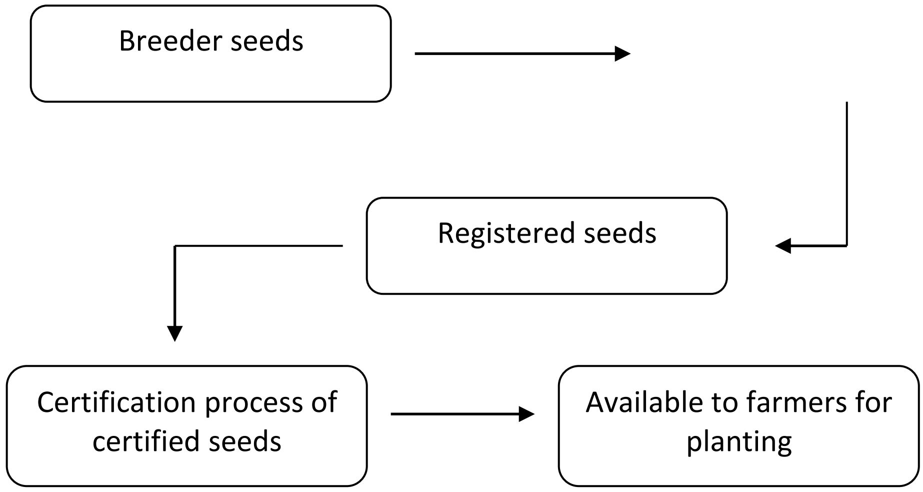
Topic 19: Classes of Seeds

There are several stages for the development of improved seed varieties:

- **Breeder seeds**: Breeder seeds are the initial source of the seeds usually produced by the breeder under conditions that have ensured that the specific traits of the variety have been maintained.
- **Pre-basic or foundation seeds**: These are the progeny of the breeder seeds and are produced under the supervision of the breeder or an agency designated by the breeder.
- **Basic or registered seeds**: Basic seeds are also produced under the supervision of the breeder or a designated agency and under the control of the seed quality control agency. Basic seeds are distributed for multiplication to contract growers.
- **Certified seeds**: The seeds that are produced by contract growers from the basic or registered seeds are inspected by the seed quality control agency for purity, germination, and other criteria. If the seeds meet or exceed the requirements, they are certified and called "certified seed." All certified seeds are tagged or labeled, indicating that they have passed inspection. Certified seeds can be used for seed production or for distribution to farmers to grow their crops.

The route to a certified seed:

Foundation seeds



INSTRUCTIONS

I. Product Knowledge

<u>Topic 19:</u> Classes of Seeds

Materials needed

- ☑ Flip-sheet board with flip-sheets
- ☑ Markers (1 black, 1 blue, 1 green, 1 red)
- ☑ Colored cards
- ☑ Kraft paper (or other large piece of paper)

Time needed: 45 minutes

Preparations:

- ☑ Flip-sheet with the heading *Classification of seeds*
- ☑ 2 colored cards with the following word:
  - *Seeds saved from the field*
  - *Certified seeds*
- ☑ 18 colored cards with the following words:
  - *Seeds not treated*
  - *Seeds are not clean*

- *Weed seed presence high*
- *Inert matter presence high*
- *Variable seed quality*
- *No field tests*
- *Unknown moisture content*
- *Unknown germination %*
- *Low price*
- *Seeds are treated*
- *Seeds are clean*
- *Limited weed seed presence*
- *Limited inert matter*
- *Constant high quality (pure seed)*
- *Passed field and seed tests*
- *Controlled moisture content*
- *Known germination %*
- *More expensive*

Set up

Attention:	Ask the participants if they know the difference between Grade 1 and Grade 12 in school. They will answer that Grade 1 is a child's first year in school and Grade 12 is the last.
Title:	Tell participants the title while showing the flip-sheet with the title: *Classes of seeds.*
Credibility:	Explain your experience in the seed industry.
Objectives:	To explain the different classes of seeds as well as the advantages of each main class.
Benefits:	Understanding the difference between the two main classes of seeds will help you to advise customers on which seeds will be the best to plant.
Direction:	During this session, we will focus on the classification of seeds. We will look into the two main classes, followed by the advantages and disadvantages of each.

Delivery

Explanation, **D**emonstration, **E**xercise, and **G**uidance:

1. Ask the participants how a child advances in school from one grade to another. Lead them to this answer: They need to pass an exam or test. Tell them that seeds also need to pass tests to get certified.
2. Show participants the two cards with the words *Seeds saved from the field* and *Certified seeds.* Paste the two cards on the wall next to each other.

3. Ask participants what the phrase "**seeds saved from the field**" means. Guide them to the answer: These are seeds that are saved from the previous season to plant again in the new planting season. Tell them that this has been a common practice in Africa for centuries.
4. Ask the participants what the term "**certified seeds**" means. Guide them to the answer: They are seeds that are developed by the seed industry to enhance the type of crop. The seeds are tested and certified through a strict set of requirements. Tell them that this is a common practice worldwide.
5. Shuffle the set of 18 colored cards.
6. Divide the participants into three groups. Hand each group six of the colored cards. Tell them that these cards relate to either certified seeds or seeds saved from the field. Participants must discuss each colored card and **allocate** it to one of the two **classes of seeds**. Tell them that they must also discuss what the words on the colored cards mean. Allow time to discuss.
7. Let participants paste the cards under the correct heading.
8. Discuss the cards one by one. Ask the group that allocated the card to explain what the card means. Ask if other groups agree with the class where the card is pasted. If everyone agrees, continue with the next card till all cards are discussed.
9. The results should be as follows:
    a. **Seeds saved from the field**
        - *Weed seed presence high*
        - *Inert matter presence high*
        - *No field tests*
        - *Seeds not treated*
        - *Seeds are not clean*
        - *Variable seed quality*
        - *Unknown moisture content*
        - *Unknown germination %*
        - *Low price*
    b. **Certified seeds**
        - *Seeds are treated*
        - *Seeds are clean*
        - *Limited weed seed presence*
        - *Limited inert matter*
        - *Constant high quality (pure seed)*
        - *Passed field and seed tests*
        - *Controlled moisture content*
        - *Known germination %*
        - *More expensive*
10. Ask participants to explain why the certified seeds are so **expensive**. This is because they are tested. Ask them which class of seeds is the best for **sustainable**

food production in Africa. This will be certified seeds. Why? Because the yields will be higher.

Finish

Summary: Summarize by using the colored cards.

Questions: Ask if anyone has a question or comment.

Evaluation: Ask participants to name three differences between seeds saved from the field and certified seeds.

Next step: In this session, we learned about the two main classes of seeds and what each of them means to the farmer. In the next session, we will discuss the characteristics of seeds.

Distribute the **fact sheet** to all participants.