

LECTURE EIGHT

Seed Programme Development

New and improved crop variety become a significant agric input only when pure high quality seeds are available to and be planted by the cultivator.

Justification and Mission of the seed program development is the extension of superior varieties performance demonstrated in breeding institution and test plots to all crop and where the variety are adapted.

This movement is best accomplished through organized and systematic efforts through both private and public institution and personnel.

A seed industry program consists of the following:.

1. Crop improvement and plant breeding program of which is seed program is an essential plant
2. Availability of seed- seed of most major crops are required multiplying input, have seeds are unique among production input in crop husbandry.
3. An efficient seed industry is the rapid rehabilitation of agriculture, a part from serving in agricultural development.
4. A completely objective economic and technical justification for effective seed programme industry.

Specific benefits of seed programme that produces and supplies a high quality seed of improved variety include:

1. increase in total yield resulting in introduction and the cropping pattern the society.
2. increase in yield resulting from higher physiological quality of plant seed (individual more production plant).
3. increase in recoverable yield as a result of greater varietal purity, more uniform maturation etc

4. more efficient utilization of fertilizers, irrigation and pesticides because of greater information of encourage and growth, better stands or more rigorous plants.
5. Reduction in plant rate when high quality seeds are available. The seed rate can be reduced by one half i.e 1ton - ½ ton.
6. Higher quality of production because of less contamination with other variety and more uniform maturation, have fever immature or withered seed.
7. Less re-infestation of the land with weed seeds.
8. Less disease in the soil and soil insect problem in seed beds and in the field as a result of immunization of plants infected by seed borne disease in seed production farm.
9. More rapid and efficient periodic replacement of variety.
10. Facilitate introduction of new crops into the agriculture of a region country.
11. Contributing to agric develop of a country.
12. Employment opportunity
13. Contributing to nation economic (GDP) growth.
14. Quality control.

Essential demand of seed programme are:

1. skilled knowledgeable manpower
2. Early development efforts were concentrated in the need for diffusion of efforts to build solid and pragmatic seed programme.
3. The quality of input into the programme.
4. The time frame is realistic, no crash program
5. Planning, evaluation and implementation

Sampling of Agricultural seeds

The importance of a representation sample must truthfully represent the quality of the seed lot from which it is drawn.

Seed sampling is usually done in two steps.

First, the sample to be submitted to a seed laboratory is drawn from the bulk seed lot and sent to the laboratory for analysis. This is known as the **submitted sample**.

Second, when it reaches the laboratory, it must be further divided to a size that can be analyzed.

This latter sample is used for the actual analysis and is called the working sample.

Submitted sample

Regardless of the condition, the seed lot must be properly sampled so that the sample is representative. There are rules for sampling by AOSA and ISTA. It provides for use of mechanical samplers, by use of standard sampling probes, tiers, by hand or by taking the entire container as the submitted sample.

Sampling process

A. **Bulk seed** : a trier or probe, is recommended though hand may also be used by taking a handful from well distributed points throughout the bulk. Hand sampling is limited by the difficulty of reaching all portions of large bulk lots whereas large probes (72 inches) in length can be used.

B. **Seed Bags** : when a seed lot consists of six bags or less, each bag should be sampled for well distributed point throughout the bags. If more than six samples from 5 bags plus 10% of the remaining bags.

C. **Seed small container** : seed in small containers should be sampled by taking at random an entire unopened container from the supply in order to obtain the minimum amount required for the working sample.

Subdividing the sample

Sample drawn from the various field may be too large for the submitted sample and should be subdivided before submitting to the laboratory. Avoid bias during division.

Mailing the sample

Labeled and placed in container. E.g place and address of owner, crop kind or the variety, tests required, lot number and number and lot of containers and bags.

Sub sampling

When the submitted sample arrives the seed laboratory. It is entered in the official log book and assigned a number and the accompany information is recorded. The sample then goes to the sub sampling areas in the laboratory and further divided into working samples and then assessed for the various tests. E.g purity, germination and others. The remaining portion of the sample is retained as an official sample in case of future tests are required.