



NAHEP-IDP UHS, Bagalkot



Internship in

**" Hands on training on seed grading, treating,
packing, GOT and seed quality testing"**



Date:

23 May to 28 May 2022

Venue:

**Indo American Hybrid Seed
Pvt. Ltd., Ranebennur,
Karnataka, India"**



Organizers

Director: Dr. R. K. Mesta, Principal Investigator, NAHEP-IDP, UHS Bagalkot

Co-Director : Dr. Dilip Masuti, Asst. Professor, KRCCH, Arabhavi

Dr. Renuka Hirekurbar, Asst. Professor KRCCH, Arabhavi



Internship programme report

on

“Hands on training on seed grading, treating, packing, GOT and seed quality testing”

An internship programme was organized for the 13 final year UG students of KRCCH Arabhavi campus from 23.05.2022 to 28.05.2022 at Indo American hybrid seeds India private Limited Ranebennur. Students reported to Mr. Santoshkumar, Indo American Hybrid Seed India Private Ltd. Ranebennur. He explained about the history and present working status of the company.

This internship covers various topics such as

1. Quality assurance

- Testing for germination %.
- Grow out test: It is the germination test conducted at nursery after 5 to 7 days of sowing.
- Between the paper method: Arranging the seed in between the paper in zig zag manner to reduce the competition. Take reading on 6th day. For every lot we must do two replications. Each replication should be labeled with crop name, lot number and replication number.
- Diaphenascopy: It worked on the principle of trans illumination that is difference in their optical properties. Physical purity for hybrids should be >95 % and for open pollinates it should be >80 %.

2. Processing section- Seeds harvested from grower's field are processed and graded.

- Seed wash in Tri-sodium phosphate @ 1 to 2 kg/kg of seeds to make it free from virus. It is mainly followed in chilli.
- Washed seed were centrifuge for 2 minutes to remove excess water
- Then seeds are drier at 25-30^oC and relative humidity 45-50%
- **Procedures for seed processing:**
The seed lots in sealed containers from grower/farmers farmers' field should be brought within 3 months from the date of final inspection of Seed Certification Office. The seed lots should be processed and sampled within 3 months from the date of receipt in the processing unit. Seed samples will be sent to Seed Testing Laboratories through Assistant Director of Seed Certification office to ascertain the quality of seeds. A seed testing charges of Rs. 15/- per sample should be remitted in the Assistant Director of Seed Certification Office.
- **Labelling, tagging, sealing and grant of certificate**

Certified seed should be tagged within 2 months from the date of test. A validity period of 9 months is given for the certified seed lots. If the seed lots are not sold or used within the validity period, then there is a procedure for validation i.e. extension of validity to already certified seeds seed lots



3. Revalidation section: Process of revalidation of seeds was explained. The company consists of two stores namely finish store and revalidation store

It is nothing but extension of validity period to the expired seed lots. For validation of seed lots application should be sent to Deputy Director of Seed Certification in a prescribed Performa. The addresses of Deputy Director of Seed Certification Offices are given separately. Validation fee should be remitted in the office of Assistant Director of Seed Certification after obtaining the permission for the same from the Deputy Director of Seed Certification. Within 10 days from the date of remittance of validation charges, validation work will be commenced by the concerned Seed Certification Officers and samples will be drawn and sent to the Seed Testing Laboratory through Office of the Assistant Director of Seed Certification for the purpose of ascertaining the seed standards. The seed lots possessing prescribed seed standards will be given an extension and validity period for 6 months from the date of test.

4. Packing section: Types of packing and labeling, different machines used for packing were covered under this section.

Packing: Usually tin and pouches were used for packing. Tin costs Rs. 30/unit and pouch cost Rs.5/unit. Tin prevents moisture from getting into the inside content. Pouches consist of three layers one is 12 micron polyester, second of 12 micron metalized polyester and third being 100 to 110 micro natural polyester.

Labeling: Label should contain name of the crop, variety, lot number, size of pounch, serial number, number of packets, date of testing, date of packing, date of expiry, checking authority, printed by and remarks.

Distribution: Packed seeds were distributed to either to dealers on credit bases and to farmers directly at glasshouse Bangalore.

Seed production: Detailed about seed production procedure such as selection of growers, selection of land, isolation distance and supervision were covered during the internship.

Calculation of % of pure seeds, inert material, other crop seeds were also delta during the internship.

$$\text{Physical purity} = \frac{\text{Pure seeds}}{\text{Total weight}} * 100$$

$$\text{Impurity} = \frac{\text{Innert matter}}{\text{Total weight}} * 100$$

$$\text{Other crop seeds} = \frac{\text{Other crop seeds}}{\text{Total weight}} * 100$$



Barcode printing on seed packets



Lectures during internship



Photo session with Indo-American Hybrid Seeds Pvt. Ltd. team