

**SEED PRODUCTION, CERTIFICATION AND MARKETING****Theory**

Global seed market and International companies in seed market - India's potential for export of seed - problems and prospects of seed industry in India. - History and Development of seed industry in India - Formation of APSSDC, APSSCA and their Functions - Testing, Release and Notification of varieties - Deterioration of crop varieties and methods to control - Seed quality - Characteristics of good quality seed - Different classes of seed - Production of nucleus and breeders seed - Maintenance and multiplication of pre-release and newly released . varieties in self and cross-pollinated crops.

Seed Production-Foundation and certified seed production of varieties and hybrids in Rice, Maize, Sorghum, Bajra, Cotton, Groundnut, Sunflower, Castor, Tomato, Brinjal, Chillies, Bhendl, Onion, Bottle gourd and Ridge gourd.

Seed Drying - Forced air seed drying :- Seed processing plant and its establishment \_ Establishing a seed-testing laboratory - Seed testing procedures for quality assessment - Seed treatment - Types of seed treatment. Equipment used for seed treatment (Slurry and Mist - 0 - matic treater) - Seed packing and seed storage - Factors affecting seed longevity during storage and conditions required for good storage"- General principles of seed storage - Constructional features for good warehouse - Seed marketing - marketing structure, marketing organization, sales generation activities, promotional media, pricing policy - Factors affecting seed marketing - Seed certification, procedure for seed certification, field inspection and field counts etc.

Seed Act and Seed Act enforcement - Intellectual Property Rights, Patenting, WTO, Plant Breeders Rights - Varietal Identification through Grow Out Test and Electrophoresis.

**Practicals**

1. Seed sampling - Principles and procedures
2. Purity and Germination analysis

3. Purity and Germination analysis of rice
4. Purity and Germination analysis of sorghum and bajra
5. Purity and Germination analysis of maize
6. Purity and Germination analysis of sunflower
7. Purity and Germination analysis of tomato, brinjal
8. Purity and Germination analysis of chillies, bhendi
9. Estimation of Seed moisture- rice, maize and sorghum
10. Seed Vigour tests
11. Seed Viability tests
12. Grow Out Test and Electrophoresis for Varietal identification
13. Seed dormancy and its breaking methods
14. Visit to seed production plots
15. Visit to seed testing laboratory
16. Visit to seed processing units

#### References

1. Seed Technology Agrawal R L 1996. Oxford & IBH Publishing Company, New Delhi
2. Principles of Seed Cultivation and Testing Nema N P 1985. Allied Publishers Private Limited, New Delhi
3. Principles of Seed Technology Agrawal P K 1994. ICAR Publications, New Delhi