

## INTRODUCTION

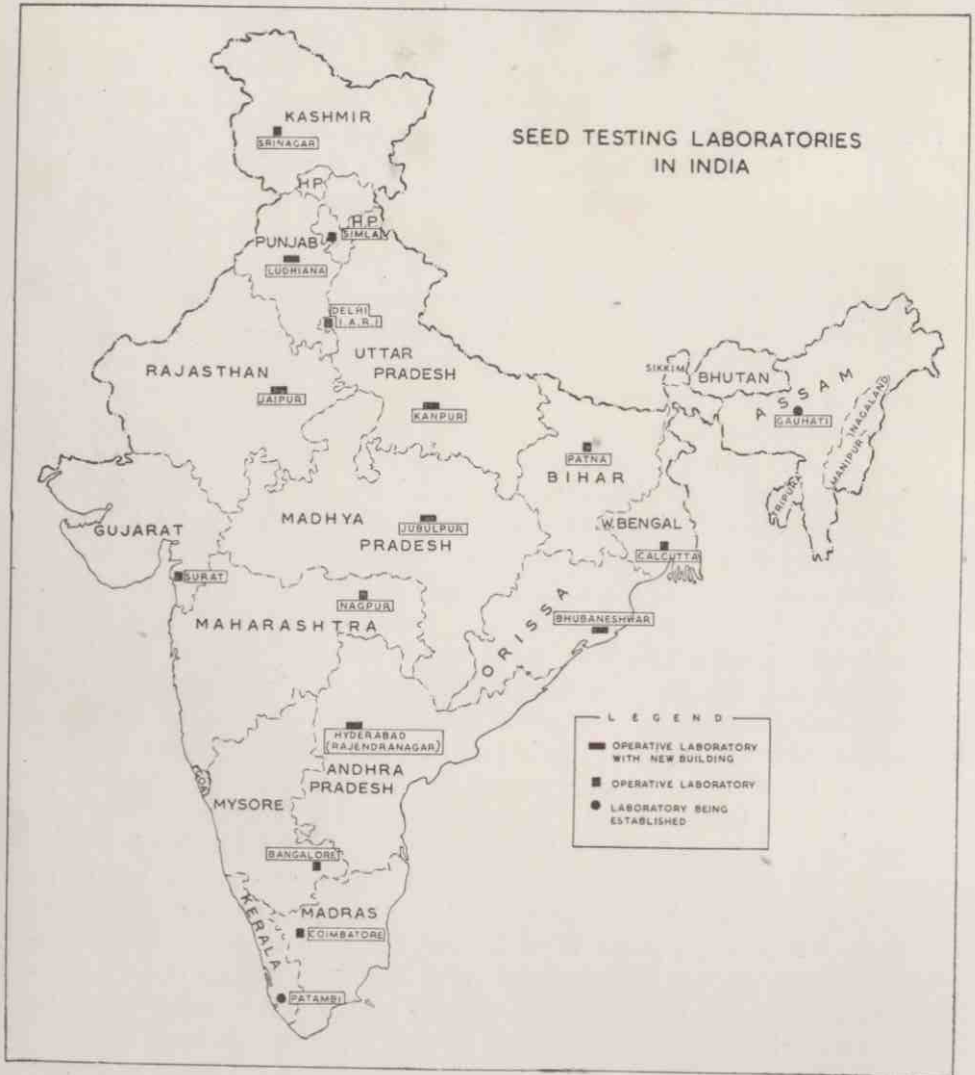
'May the seeds be viable' say the holy scriptures of India. The importance of good seed was realized even from the beginning of agriculture when man started cultivation with the scratching of earth. Keeping good seed is an age old tradition in India. The best plant, the best fruit of the plant are always preserved for seed with the greatest care. In modern times seed selection, seed extraction, processing and storage have been established on a scientific basis instead of on mere intuition and tradition. A scientific base has also been evolved on the systematic testing of seed for the various factors which control the quality of seed.

While in the Pre-Independence period the importance of the development of a good seed programme was emphasized by the various commissions and committees on agriculture, a regular programme on seed testing was started only during the Plan periods in the Post-independence period. A beginning was made with the establishment of four seed testing laboratories including the Central Seed Testing Laboratory at the I.A.R.I. with the Second Plan. The first three state laboratories were established at Hyderabad in Andhra Pradesh, Ludhiana in Punjab and Patna in Bihar. In the beginning these laboratories were meant for vegetable seed testing and consequently attached to the horticultural sections of the State Agricultural Departments. Subsequently with the development of seed producers, seed dealers and government seed farms for the multiplication of the seeds of important agricultural crops the establishment of seed testing laboratories became imperative. With the timely assistance of U.S.A.I.D. Mission in India it has been possible to establish one seed testing laboratory in each State (See Appendix X for addresses).

The main objective of seed testing in these laboratories will be to obtain accurate and reproducible results regarding the purity, composition, the moisture content, the rate of occurrence of weed seeds and the percentage of seeds that can be expected to produce normal seedlings under favourable conditions. In some instances such additional information as the presence of seed borne fungi, origin or varietal purity is desired.

Though primarily the seed testing laboratories are meant as service laboratories, when the seed law comes into operation they have to play a statutory role to implement the various provisions of the seed law. The seed analysis conducted in the seed testing laboratory will be valid in a court of law. Besides the uniform quality standards for seed it is also necessary to have uniformity in seed testing procedures so that the results of analysis obtained in one laboratory are reproducible in another laboratory.

The International Seed Testing Association, of which India is a member, has developed some standard procedures which are expected to



be guide-lines for all the laboratories in the world. However, there are certain details particularly for the tropical seeds under tropical conditions which need to be worked out for a country like India. This manual is expected to give the routine procedures of seed analysis to the seed testing laboratories. The manual alone may not serve the purpose to bring the uniformity in procedures and data unless it is followed up by referee testing between the different laboratories both at the national and international level.

In the preparation of this manual the opinion of almost all the seed testing officers of different states was taken into account by circulating the draft manual for their comments. The present manual may not be the final word in the procedures. Many more revisions will be needed in the light of our present and future experience to fulfil the various rules and regulations of the seed law and developing seed programme. However, it is hoped that the present manual will be a useful tool for not only the workers in the seed testing laboratories but also lecturer's in agricultural universities and colleges, seed producers, merchants and dealers, seed development officers and other agricultural workers. Since the Seed Act is now passed, observance of the rules and regulations under the Act may be guided by the procedures laid down in the manual.