

If the crop is approved, the seed producer is provided with sufficient bags for the area he intends to sow. But the process of sampling and testing according to the prescribed rules continues until the seed is finally certified and the labels and seals are issued and affixed to the bags. Labels for pre-basic, basic, certified-I, and certified-II seed are shown in Figure 6.4.

**Labels.** Labels may be either adhesive or non-adhesive. The information may be printed on both sides. Labels are required to be rectangular with square corners, and be colour-coded as follows.

- |                                |                                 |
|--------------------------------|---------------------------------|
| a. Prebasic                    | White with diagonal violet line |
| b. Basic seed                  | White                           |
| c. <del>Certified seed-I</del> | Blue                            |
| d. Certified seed-II           | Red (improved seed)             |

The following information must appear on the labels provided by the Federal Seed Certification Department:

- a. Species (botanical name)
- b. Cultivar name
- c. Category
- d. Reference number
- e. Date of issue of certificate

### 6.5.2 Pakistan's seed certification system

The following governmental agencies exist in the country to ensure that a sound seed certification programme is implemented and its objectives are fulfilled in the best interests of the public.

1. Federal Ministry of Agriculture
2. National Seed Council
3. Four Provincial Seed Councils/Seed Corporations
4. Federal Seed Registration Committee
5. National Seed Registration Department
6. Federal Seed Certification Department

Figure 6.5 displays the organization of these agencies.

**Advantages of certification.** Agricultural development as a whole benefits from the seed certification system in the following ways.

1. Growers get high-quality and genetically pure seed.
2. Seed merchants deal in authentic and high-quality seed.
3. Seed producers act on an already-established, rigorous quality control programme that is usually beyond their own resources.
4. Farmers get the desired variety in the form of certified seed with all the characteristics they are looking for.

**Seed legislation.** Seed laws are designed to guarantee the smooth and orderly marketing of seed and provide legal protection to buyers and sellers.



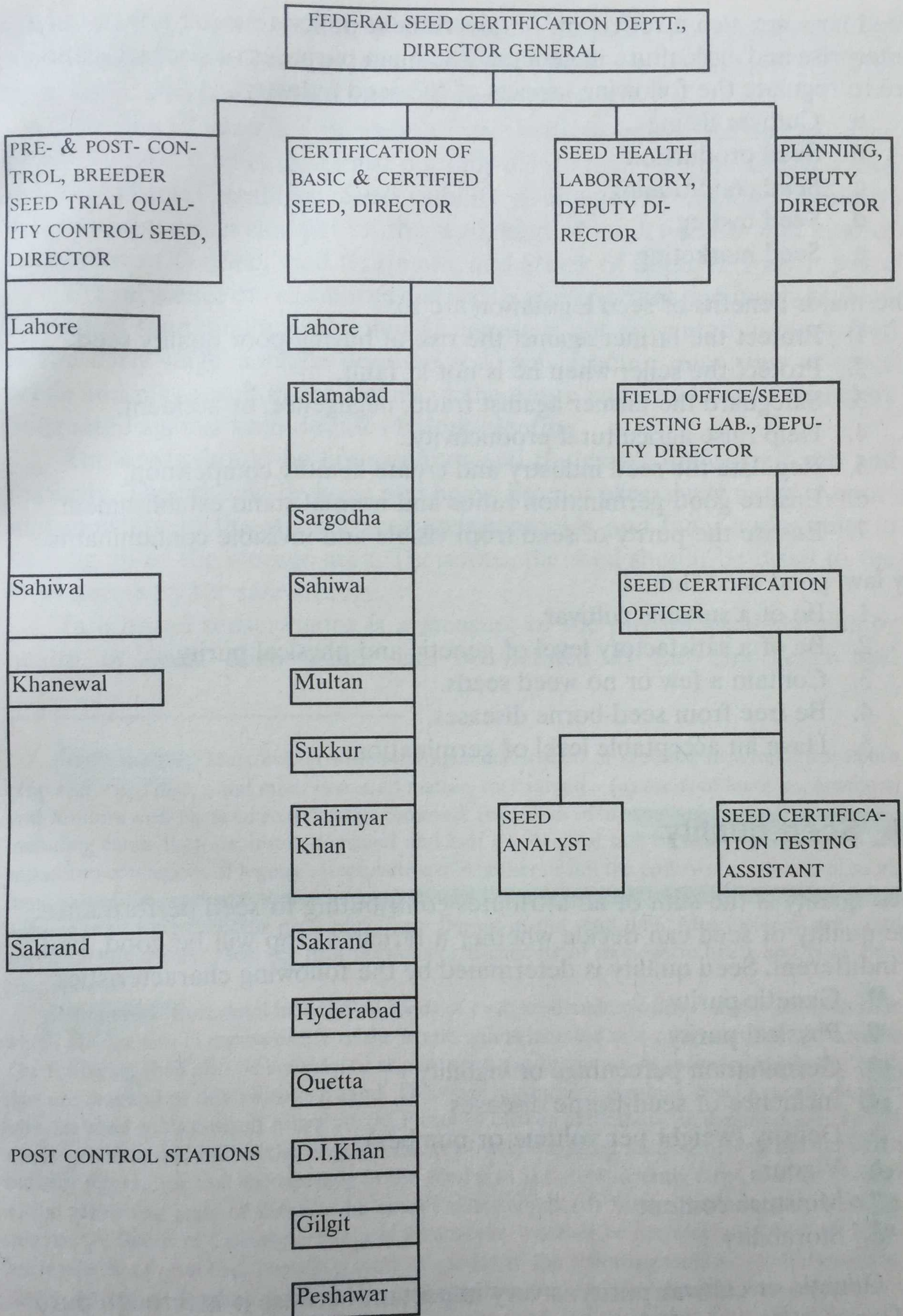


Figure 6.5 Organization of the Federal Seed Certification Department



Seed laws are also a reflection of government policy towards private seed enterprise and agriculture in general. The main purposes of seed legislation are to regulate the following aspects of the seed industry.

- a. Cultivar listing
- b. Seed production
- c. Seed conditioning
- d. Seed testing
- e. Seed marketing

The major benefits of seed legislation are to:

1. Protect the farmer against the risk of buying poor quality seed.
2. Protect the seller when he is not at fault.
3. Safeguard the farmer against fraud, negligence, or accident.
4. Help raise agricultural productivity.
5. Regulate the seed industry and create healthy competition.
6. Ensure good germination ratios and normal stand establishment.
7. Ensure the purity of seed from visible and invisible contaminants.

By law, good seed should:

1. Be of a suitable cultivar.
2. Be of a satisfactory level of genetic and physical purity.
3. Contain a few or no weed seeds.
4. Be free from seed-borne diseases.
5. Have an acceptable level of germination.

## 6.6 Seed quality

Seed quality is the sum of all attributes contributing to seed performance.

The quality of seed can decide whether a farmer's crop will be good, bad, or indifferent. Seed quality is determined by the following characteristics.

1. Genetic purity
2. Physical purity
3. Germination percentage or viability
4. Incidence of seed-borne diseases
5. Density (weight per volume or number)
6. Vigour
7. Moisture content
8. Storability

Genetic or cultivar purity is very important because it is through pure and true-to-type seed that farmers can reap the fruits of the breeder's efforts. Physical purity refers to the kind or variety in the mixture of a seed