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Certified Seed

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WHAT IS CERTIFIED SEED?

A bag of certified seed should carry a label certifying that it is the seed of the particular cultivar named on the label. This label, which, clearly identifies the seed lot can only be issued by the Certifying Authority which, in the NT, is the Seeds Group in the Pasture Development Section of DBIRD. The certified seed label guarantees that the seed is both true to label and true to type. It also certifies that the seed meets minimum standards of quality in purity and germination. Certified seed is of known genetic origin. Records are kept of it from the time of release by the plant breeder until it is marketed as certified seed.

WHY SOW CERTIFIED SEED?

The selection of seed a farmer sows is critical to the success of crop and pasture production. Seed cost is usually only a fraction of the total cost of production. In most cases, it is more profitable to pay slightly more for the best seed available, i.e. certified seed, rather than accept cheaper seed of doubtful origin or poor quality. Buyers get the quality of seed they pay for. Seed should not be bought on price.

If seed is free from mechanical damage and has a moisture content low enough for storage, the components of seed quality in order of importance are:

1. Genetic quality (varietal purity).
2. Freedom from diseases and pests.
3. Freedom from weed seeds and undesirable crop or pasture impurities.
4. Germination strength.
5. High seedling vigour.

The last three above points can be determined by testing seed in a seed testing laboratory, but varietal purity and disease freedom cannot. These can be assessed through knowledge of the origin of the seed together with careful and close field inspection during the growth of the seed.

Seed certification programs have been developed to give farmers the advantage of seed of reliable quality.

CATEGORIES OF SEED

The various categories of seed are presented below:

1. Breeder's seed. This is generally a small amount of seed produced under the direct supervision of the breeder or originator of the cultivar. It is true to type and is the source of all other categories of seed.
2. Prebasic seed. These are the generations of seed between breeder's seed and basic seed. The generations are as few as possible to avoid contamination. The seed crops are controlled by the breeder and/or the certifying authority to avoid genetic and physical contamination of the seed.
3. Basic seed. This seed is the basis of all seed certification programs and is intended for, and is used for, the production of certified seed.
4. Certified seed. This is produced from basic seed. It is usually used for sowing crops and pastures, not for further seed multiplication.
5. Commercial seed. This type of seed can come from a range of sources. It can come from seed companies, such as sorghum and maize cultivars. Commercial seed can be from a certified seed crop which has not met the certification standards. It can also come from a seed crop sown with certified seed, or a pasture that has been locked up and harvested on an ad hoc basis.

Care should be taken when purchasing commercial seed. It may or may not be true to type or up to standard in terms of seed quality.

When purchasing any seed, always insist on an official seed test analysis report before purchasing the seed. A seed test is official if a trained, certified seed sampler has drawn the seed sample according to the rules of the International Seed Testing Association. If another person has taken the seed sample there is no guarantee that the sample submitted is representative of the seed lot sampled.

SEED CERTIFICATION PROCEDURES

The processes of certification are briefly listed below:

1. An application for registration must be made for an area to produce certified seed. Any grower may register to produce certified seed.
2. Basic seed should be purchased from DBIRD or seed approved for use by the Seed Certifying Officer.
3. The area must be inspected by a certifying officer prior to cultivation. A grower needs the area clearly identified and must provide the previous cropping history. The area must be free from volunteer plants of the same species and isolated from other crops of the same species.
4. At sowing, machinery must be thoroughly cleaned to prevent contamination.
5. Crop inspections are necessary to maintain isolation, remove off types (rogue the crop), and certify freedom from noxious weeds and diseases.
6. At harvest, headers, bins and other items in use need to be thoroughly cleaned to prevent contamination. The seed must be clearly identified.
7. Before processing, seed cleaners or graders need to be thoroughly cleaned. Seed is to be packed in new bags and clearly identified.
8. Chemical treatments of seed are applied if necessary.
9. The seed is sampled by a certified seed sampler and tested for purity and germination.
10. The final stage of the process is labelling the seed bags, if the seed meets certification standards.
11. Records are kept of all stages.
12. The seed is not officially considered certified until a sticker is placed on the label on the bag. The sticker will show the cultivar name, details of the seed test (date, purity and germination) and a seed lot identification number (Registration Code) such as 98.CP.C.06.A.1. This number clearly identifies the seed lot and allows the certifying authority to answer any enquiries about the particular seed lot.

Typical codes will be as follows:

98	=	year of harvest
CP	=	genus and species i.e. *Centrosema pascuorum*
C	=	cultivar i.e. Cavalcade
06	=	grower or property
A	=	paddock
1	=	line of seed

ADVANTAGES OF SEED CERTIFICATION

1. It prevents wastage of plant genetic resources. Seed certification schemes ensure that superior cultivars remain pure and are not contaminated by inferior types and weeds.
2. It guarantees correct labelling.
3. It provides a seed crop inspection service.
4. It identifies seed lots.
5. It provides a reliable seed sampling and testing service.
6. It encourages specialist seed growers.

DISADVANTAGES OF SEED CERTIFICATION

1. Certification rules must be followed, which reduces growers' management options.
2. Forms need to be completed.
3. There may be delays in operations until a certifying officer can inspect the crop.
4. Certification fees must be paid.
5. The cost of seed production may be increased by the need for isolation, time spent rogueing, cleaning etc.
6. Basic seed is generally sold at a premium to growers, so the crop costs more to establish.

OVERALL

The availability of reliable supplies of good quality seed of the best cultivars is important to farmers in earning their living. The Government supports this objective by providing seed certification and seed testing services because the advantages flowing to the seed industry, seed buying farmers, and the community as a whole fully justify the extra inputs.

The Northern Territory seed certification programs operate on a voluntary basis as there is no legislation governing their operation.

The recent approach puts more responsibility on the certified seed grower and seed cleaner, with the certifying officer/authority making sufficient spot checks to ensure that the job is being done correctly.

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