SEED AND GRAIN

The biological process by which seeds and grains are formed is basically the same, but the two are quite different with respect to functions and objectives of production.

Seed is meant to be used for producing good crops whereas grain is meant for food, feed or raw material. Therefore, both commodities have to be handled differently. Any attempt to use grain as seed is bound to reduce the potential yield and hence ought to be discouraged.

Seed is nature's bridge for conveying improved and superior characteristics between generations and to farmers fields and hence must be true to type.

Seed is a mature embryo which contains a immature plant in the form of a living embryo.

Seed differs from grain in that it represent the fruit of plant breeding research. Thus, the true value of improved yield lies on the genetic potential it embodies to assure high yield, quality produce, resistance against diseases, drought and insect pests, desirable maturity period, fertilizer responsiveness, efficient utilization of solar energy and other good attributes in the commercial crop.

The old proverbial adage, "As you sow, so shall you reap" sums up man's understanding of the importance of seed. The type of seed planted sets the limit to the effectiveness of the more expensive input like fertilizer, crop protection chemicals and management cost in food crop production.

Seed, in this context, is the basic input in agriculture. It is also an instrument of change. Seed serve as a catalytic agent to enhance productivity.

SEED INDUSTRY

Seed industry is an industry/unit which involves interlocking operations that will ensure production and distribution of high quality seed at the right time, price and quantity. Is an industry set to maintain quality of seed for farmers' utilization.

The basic components of seed quality are:

1. Superior, high yielding variety
2. Genetic pure(high purity level)
3. High germination percentage
4. Free from seed-borne diseases
5. Free from insect pest
6. Free from other crop seed
7. High seedling vigor
8. Good consumer acceptability
9. Free from noxious weed seed
10. Free from inert matter
11. Safe moisture content
12. Of good physical appearance
13. Field inspected and certified

The requirements are by no mean simple. But the seed men must endeavour to build into their seeds these quality factors so as to gain and retain the confidence of farmers.

FUNCTIONS OF SEED INDUSTY

1. Plant breeding including genetic research..There are different types of seed:

Breeders seed(UK)	Breeder seed (USA)
(pre-basic)	
Basic seed	Foundation seed
Certified seed-1st generation (C1)	Registered seed
2nd generation(C2)	Certified seed
Farmers seed	Farmers seed

2. Cultivar assessment: When the breeder releases a cultivar, it is then sent to seed expert at different locations for testing for distinctiveness, uniformity, stability and value for cultivation and use (VCU).This is to ensure that the variety is superior in all ramification to the existing ones.

3. Multiplication: Must ensure rapid multiplication of seeds without undue contamination to the farming community.

4. Processing: This involves drying, cleaning, packaging and storage.

5. Marketing and Procurement: Any of the seed must be able to sell itself. Marketing is not a problem if the seed is good and seed are procured through different channels.

6. Control: Quality control includes legislation, certification and testing. Legislation is binding with regards to sale of seed (seed law).---minimum standard in UK, truth-in- labeling in USA. Certification is to ensure correct quality cultivar.pre-and-post control measures are in place

7. Quarantine : Plant materials containing disease and pests which are foreign to a country are detected at the country boarder post.

8. Exte nsion Activity: This is to allow farmers to benefit from the funding of research work in the area of seeds.

The philosophy of seed industry

The production of seed in the developed part of the world have developed from simple procedure of saving part of a crop to plant in next year into a highly specialized enterprise.