

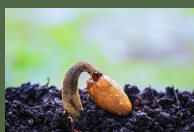
STEPS IN ESTABLISHING A SEED BUSINESS

Market research is an organized way for business people to get accurate information to help them plan and organize their businesses. For seed producers, market research can answer the following questions:

- For which crops and varieties do farmers want seed?
- What price are farmers willing to pay for seed?
- How much seed should a business produce each season to make it viable?
- What amount of seed are individual farmers likely to buy?
- From where would farmers prefer to buy seed?
- Which other customers besides farmers may be interested in buying seed?
- What are the laws on seed production for specific crops?

EQUIPMENT AND MATERIALS NEEDED FOR A SEED BUSINESS:

Good quality seeds



Fertilizer (Organic)



Insecticide



Sprayer for applying insecticide



Polythene sheets for drying seeds

Threshing rack

Platform sorter Sampling spear



Treatment drum

Chemicals for treating seeds

Polythene bags for storing and transporting seeds

Bags for packing seeds

Weighing Scales Silo (metal bin) for storing seeds

Storage shed

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Seed Entrepreneurship

By starting a seed business, you will benefit yourself and other farmers in your community, as higher quality seeds will produce a higher yield, which means more to eat and sell.

" THE TINY SEED KNEW THAT, IN ORDER TO GROW IT NEEDED TO BE DROPPED IN DIRT, COVERED IN DARKNESS & STRUGGLE TO REACH THE LIGHT " -

Sandra Kring



Introduction

Seed is the basis of life. Without seeds one can't think of life on the earth. Seed is the most precious gift of the nature to the mankind since they started cultivation thousands of years ago. The importance of seed in crop production is known to human being since Vedic period. There is clear mention in ancient literature Yajurveda "May the seed viable, may the rains plentiful and may the grains ripe days and nights"

Seed is a vital input in crop production. Seed is the critical determinant of agricultural production which depends the performance and efficacy of other inputs. Quality seeds appropriate to different agro-climatic conditions and in sufficient quantity at affordable prices are required to raise productivity. Sustained increase in agriculture production and productivity necessarily requires continuous development of new and improved varieties of crops and efficient system of production and supply of seeds to farmers. The purpose of a seed business is to produce good quality seeds for sale and to make money from providing this service. Every farmer should able to access healthy seeds which are genetically pure, with high seed vigor and good germination percentage. Timely availability of good quality seeds at reasonable prices may ensure good yield and profit to the farmers.

India is a vast country and bestowed with varied soils and different agro climatic zones, enabling year-round crop cultivation. By and large, most grains and pulses are grown during Kharif season, whereas, most of the vegetable crops are produced in Rabi season.

TYPES OF SEEDS

Traditional Farmers' varieties / Landraces

Farmers varieties are those varieties which have been developed by farmers and grown for so many generations to suit their ecological, nutritional, taste, medicinal, fodder, fuel, and other needs. Their physical and genetic qualities are relatively stable. These have sometimes been called landraces to distance them from the contributions that farmers have made towards their evolution through selection. These seeds are grown by farmers for generations and their genotype of is not altered by the breeders. These seeds are commonly referred as "Desi seeds".

Open-pollinated (OP) Seeds

Seeds produced through open pollination are referred as OP seeds. OP Plants are allowed to reproduce according to the impulse of the pollinators like bees and the wind, or whatever pollination mechanism they depend upon. Open pollinated can also refer to self-pollinating plants (eg. rice, tomatoes, lady's finger and beans), or cross-pollinating plants (maize, papaya, brinjal, gourds, cabbages, carrot etc.). It is usually used to describe plants that are not hybrids. Open Pollinated seeds can be just as vigorous, disease resistant, and commercially useful as hybrids if properly saved. These seeds could be either traditional, improved or selection varieties.

High Yielding Varieties

HYVs or Green Revolution seeds are developed by selecting and following principles of genetics. Though these seeds can be saved by farmers, they are non-sustainable due to vulnerability to diseases and pests and therefore need to be replaced after every few years.

These seeds are also called "Improved modern varieties", "Sarkari", "Society", "Vikas" or even "government" seeds as they were developed and / or distributed primarily by the public sector.

Heirloom Seeds

Heirloom refers to a variety of plant or animal that has been passed down from generation to generation. Usually a minimum of three (human) generations are required for a plant to be known as an heirloom.

The Heirloom seeds also refer to old (more than 100 years) commercial varieties. All Heirlooms are Open Pollinated, but not all Open Pollinated varieties are heirlooms.

Hybrid Seeds

Hybrid seed is a result of cross of 2 varieties. Hybrid Seeds are the first-generation seeds (F1) produced from crossing two genetically dissimilar parent species. The progeny of these seeds cannot economically be saved and replanted as the next generations will give much lower yields.

The corporate seed sector is involved mainly in the development of hybrid seeds including seeds of rice, maize, sorghum, vegetables, and food grains.

Traditional or indigenous seeds

Traditional or indigenous seeds are those produced, growing or living naturally in a particular country or climate. It is generally landraces, OP seeds or heirloom seed native to a particular place. The seeds are being selected and managed by local people in the local growing environment.

Genetically Modified Seeds

They are produced in the laboratory by artificially altering its genes from other plants, animals, viruses or bacteria in order to produce foreign compounds.

Bacteria (*Bacillus thuringiensis* – gram positive soil – dwelling bacteria) is introduced to make it Bt. Cotton, and Bt. Brinjal. This bacterium occurs naturally in the gut of caterpillars of various types of moths and butterflies, as well on leaf surfaces, aquatic environments etc. A genetically modified organism (GMO), also known as a transgenic organism, is any organism whose genetic material has been altered using genetic engineering techniques.

WHY BECOME SEED ENTREPRENEUR?

A seed business provides three important services to the community

1. **Good quality seed:** Although farmers are usually happy with the quality of their own seed, they often find that the seed obtained from markets, shops, or other farmers is not of good quality. In the case of beans and other grain legumes, the seed may be shriveled, mouldy, discolored or damaged by insects or it may even include seeds of other varieties. Potato seeds may be infected with bacterial wilt.
2. **Availability of seed:** Farmers are often faced with a shortage of seed at the time of planting. Having seed produced in the community, rather than in a far-off place, solves this problem.
3. **Introducing new varieties.** Researchers, and sometimes farmers, develop improved varieties of different crops but face difficulties in getting them out to large numbers of farmers. A seed business can work with researchers or farmer experimenters to multiply and sell improved varieties

Deciding which class of seed to produce

Four main classes of seeds are defined by the Association of Official Seed Certification Agency:

1. **Nucleus Seeds:** Nucleus seeds are the basic seed class for seed production. These seeds are maintained by the breeder for further multiplication. It is produced under the direct supervision of the concerned plant breeder. It is produced based on various crop multiplication techniques and methods. Nucleus seeds possess a high percentage of genetic purity (100%)
2. **Breeder Seeds:** Breeder seeds are produced using nucleus seeds in Research institutes or Universities under the supervision of a breeder. The entire production process will be monitored by the Scientists and Officers of the Seed Certification Department and by the representatives of the National Seed Corporation. The genetic purity of the breeder seeds is 100% and the tag provided for the breeder seed is golden yellow.
3. **Foundation Seeds:** Foundation seeds are produced from the breeder seeds. It is produced at Government farms or by private seed producers. Its production can also be taken up by the farmers by getting suitable breeder seeds. The genetic purity of the foundation seeds is 99.5% and its certification tag is white.
4. **Certified Seeds:** Certified seeds are produced from foundation seeds and are known as certified seeds. The production of certified seeds is taken up by the National and State Seed Corporation, private seed companies and also by farmers. The certified seeds should possess uniformity and purity as defined by the Department of Seed Certification. The genetic purity of the certified seeds is 99% and the certification tag provided is blue.
5. **Truthful label seed:** It is the category of seed produced by cultivators, private seed companies and is sold under truthful labels. This type of seeds does not come under the purview of the Department of Seed Certification. Field standard and seed standard is maintained as per seed act and certified seed stage. It has light green colour tag.