V.K.V GOVERNMENT DEGREE COLLEGE KOTHAPETA

(Accredited by NAAC "B" Grade)

(An ISO 9001:2015 Certified College by HYM International Certifications Pvt. Ltd.)

DEPARTMENT OF BOTANY

Student Study Project During the year 2020-2021

A STUDY PROJECT WORK ON SEED PROPAGATION

Submitted by 3rd year B.Sc.CBZ

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SEED PROPAGATION

CERTIFICATE

Certified that this study project entitled "seed propagation" in the V.K.V.GOVERMENT DEGREE COLLEGE CAMPUS kothapeta" was done by the III B.Sc., (CBZ) students for paper-VII-B (Nursery, Gardening and Floriculture) under my guidance

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2021-2022

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INTRODUCTION

Sexual propagation involves the union of the pollen (male) with the egg (female) to produce a seed.

The seed is made up of three main parts: the outer seed coat, which protects the seed; a food reserve (e.g., the endosperm); and the embryo, which is the young plant itself.

When a seed is mature and put in a favourable environment, it will germinate, or begin active growth.

In the following section, seed germination and transplanting of seeds will be discussed

Flower and Vegetable Seed

To obtain quality plants, start with good quality seed from a reliable dealer. Select varieties to provide the size, color, and habit of growth desired. Choose varieties adapted to your area which will reach maturity before an early frost.

Many new vegetable and flower varieties are hybrids, which cost a little more than open pollinated types. However, hybrid plants usually have more vigor, more uniformity, and better production than nonhybrids and sometimes have specific disease resistance or other unique cultural characteristics.

Although some seeds will keep for several years if stored properly, it is advisable to purchase only enough seed for the current year's use.

Good seed will not contain seed of any other crop, weeds, or other debris. Printing on the seed packet usually indicates essential information about the variety, the year for which the seeds were packaged, germination percentage you may typically expect, and notes of any chemical seed treatment.

If seeds are obtained well in advance of the actual sowing date or are stored surplus seeds, keep them in a cool, dry place. Laminated foil packets help ensure dry storage.

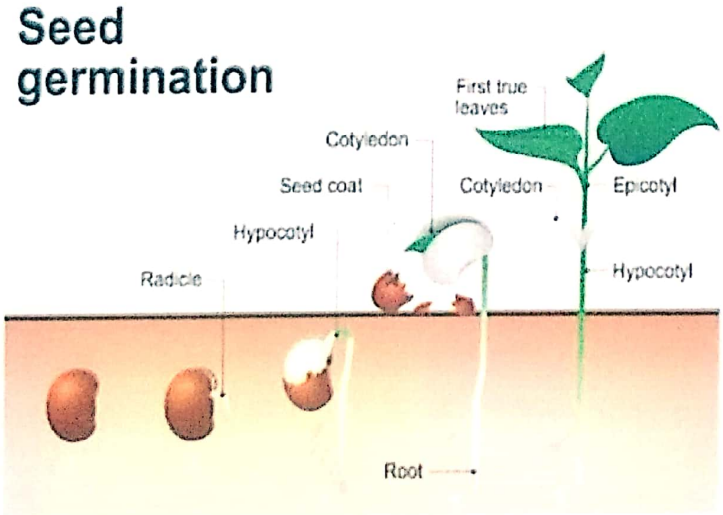
Paper packets are best kept in tightly closed containers and maintained around 40oF in a low humidity environment. Some gardeners save seed from their own gardens; however, if such seed are the result of random pollination

This is especially true of the many hybrid varieties. Most seed companies take great care in handling seeds properly. Generally, do not expect more than 65 to 80% of the seeds to germinate.

From those germinating, expect about 60 to 75% to produce satisfactory, vigorous, sturdy seedlings.

Germination

There are four environmental factors which affect germination: water, oxygen, light, and temperature.



Water

The first step in the germination process is the imbibition or absorption of water. Even though seeds have great absorbing power due to the nature of the seed coat, the amount of available water in the germination medium affects the uptake of water.

An adequate, continuous supply of water is important to ensure germination. Once the germination process has begun, a dry period will cause the death of the embryo.