

Understanding the Seed Packet

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Both home and commercial growers can use this NebGuide to understand the information provided with the seed packet and how to use it when planning a garden.

Introduction

Growing vegetables and flowers from seed can be economical and fun. Seed packets and seed catalogues provide information to help you have a successful garden. Here are the helpful parts of the packet back:

- Seed count
- Plant height
- Light
- When to sow
- Planting depth
- Plant spacing
- Days to maturity

Seed Count

Knowing how many seeds are in a package helps greatly when ordering seed and planning a garden. Large seed companies usually include this information on the package as either the number of seeds or the weight of seed.

It helps to know that 1M means 1,000 (one thousand) seeds. Often, the weight of the seed in the package is listed followed by the number in a larger weight unit (gram, kilogram, pound, or ounce). Doing the math will give you a good estimate of how many seeds are in the package.

However, since the seed of different plant types and cultivars (varieties) often differs in size and weight, the number of seeds per package will vary with each cultivar. Some crops for which this is particularly important include snap beans, sweet peas, garden peas and sweet corn. For the same number of mature plants of each cultivar, adjust the number of packages purchased to be sure to have sufficient seed.

Sometimes, the number of seeds per package of each type of seed can be found on the company website or in the catalog under ordering information or listed in the propagation/germination information in the catalog.

When comparing seed from several companies or across cultivars, be sure to consider if the seed is pelleted or not pelleted because that affects the package price and the number of seeds per package.

To determine how many seeds to plant to get the same final stand in the garden, the germination rate for each cultivar should be considered plus your personal “over plant” allocation to ensure that there will be sufficient plants to mature. It is easier to thin out extra seedlings than to have open space later.

With increasing seed costs, it is important to order sufficient seed yet not waste seed or plant more than are needed. If only a few plants are needed, it is not necessary to plant all the seeds in a packet.

Surplus seed often can be saved for a later planting date. Keeping seed dry and cool or at least at room temperature in a closed container is best. These measures prevent the seed from absorbing moisture from the air, which shortens seed viability.

A practice used by many growers is to add some calcium chloride or a desiccation package to the container and then put the packets in a refrigerator set for 45 degrees Fahrenheit. Don't put seed that is not enclosed in an airtight container into a frost-free refrigerator because the seed can dry out excessively.

Plant Height

Seed packets often include the mature plant height and width, which is usually also the size when it first blooms. Generally, plants are spaced in the garden at their mature width so that the edges of the plants just touch or overlap slightly when mature.

Light

On small packets of seed, and especially on flower seed packets, the light requirement is indicated. Full sun means at least six hours of direct sun per day. Partial sun means four hours of direct sun.

Morning sun and afternoon shade are best in our intense heat, especially for flowering plants native to a milder climate. Shade plants also need light but the light should be indirect or filtered sunlight. Most vegetables need at least six hours of sunlight to mature with good flavor.

When to Sow

The seed catalog or package will indicate when to sow the seeds for best results, including the days from seeding to germination and from germination to when the plants will be large enough to transplant to the garden or field. This last date is usually indicated by reference to the last frost date or an average minimum soil temperature. When day and night temperatures experience wide swings, be conservative in determining the average soil temperature by using the daily high and low soil temperatures over at least two weeks. For home garden seed packets, the days to germination indicates the number of days before the first sprouts emerge above ground.

Planting Depth

The correct depth to plant the seeds and the light needed to germinate are also found on the seed packet. If this information isn't given, sow seeds at a depth about two to three times the size of the seed and cover with soil or potting mix. For very small, fine seed, just pat the seed into the soil surface and use a mister to moisten.

Some seeds require exposure to light for germination to occur. These should be scattered on the surface of a firm bed of fine soil kept moist until well established. This may require misting several times a day. A very sparse scattering of fine vermiculite on the surface after seeding may be helpful in maintaining a moist substrate for germination. The seeds do not need full or even partial sun, just daylight to induce germination.

Plant Spacing

Often, several seeds are planted together or seeds are distributed down a row. The seed packet will indicate the appropriate plant spacing or it can be determined by the width of the mature plant.

Thin, or remove, excess seedlings once they are a few inches tall so the individual plants receive proper light and air circulation. If you leave all the seedlings crowded, they will grow leggy and may not thrive. Good air circulation helps reduce foliar disease.

Days to Maturity

The number of days to germinate the seed helps determine 1) when the crop will mature or flower; 2) if the season is long enough for crop maturity when directly seeded into the ground; or 3) if growing transplants will be necessary to have a long enough growing season.

To determine when to plant a second or late summer crop, calculate back from the first fall frost date for your location to schedule harvest prior to frost for frost-tender species.

When planting several cultivars of a specific crop, the relative days to maturity among the cultivars are fairly accurate. If one cultivar is listed as 75 days to maturity and another one is listed at 80 days, usually the two cultivars will mature about 5 days apart.

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