



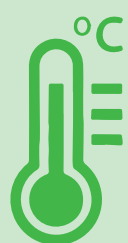
InteliGro
intelligent crop solutions

SEED STORAGE

Seeds are living organisms and incorrect handling or storage can greatly reduce their performance. InteliGro recommends that all seed should be used in two years or less from purchase, but the following information should help increase shelf life potential.



Temperature



- High temperatures and humidity may reduce seed vigour and germination. Therefore, seed should be stored in a cool, dry place, out of direct sunlight and in closed containers. Seeds are packed at industry-recommended moisture percentages. Containers must be kept closed to prevent humidity from damaging the seeds.
- We recommend storing that untreated seed as well as seed treated with fungicide at 15°C. Seed that is either primed or treated with insecticide should be stored at 15°C or less. Generally, every 5°C decrease of storage temperature doubles the average shelf life of the seed.
- Low-temperature storage is advantageous for maintaining seed viability whereas seed storage at fluctuating temperatures is detrimental to seed quality.

Shipping of Seed



- During shipping, seed requires the same temperature conditions as in storage. It should not be stored near a heat source or in direct sunlight.
- When on board of a ship, seed should be stored below deck and away from boilers and other sources of heat.
- While loading and unloading, avoid placing the seed in direct sunlight or in hot or humid places.

Germination Tests



- We recommend testing each seed lot for germination every six months (every three months for primed seed).
- The germination test should be conducted by ISTA or other nationally or internationally recognised laboratory. Germination results from field tests may vary from laboratory results and should not be used for labelling.

Hard Seed



- The drier the seeds, the better their shelf life. Reducing moisture below 8% might result in "hard seed". Hard seed resists germination even under favourable conditions - because it does not absorb enough water. When planted, the seed gradually absorbs water, germinates and produces seedlings over an extended period of time.
- A seed lot containing 50% of hard seed is similar to a lot containing 50% dead seed, because neither produces a stand of seedlings when they should. Beans and peas are particularly subject to this condition and therefore should not be dried to the same degree as other seed. If they have been overdried, germination will improve, if they are if exposed to a humid conditions for two weeks before planting.

Quick Facts

- Storage lifespan may be extended to 10 or more years under proper conditions.
- Seed moisture and storage temperature are the most important factors in determining how long seed can be stored.
- The drier the seeds are, the longer they will last.

Primed Seed



- Priming is a process that brings the seed close to the point of germination. Priming the seed may help the seed grow, especially under stressful conditions. Because the priming process reduces the shelf life of seeds, primed seed should be planted in the same year that it is primed.
- InteliGro recommends primed seed to be stored at 15°C .
- Primed seed should undergo a germination test six months after priming and every three months after that.

Handle Seed with Care



- Seed can be damaged by rough handling. Seeds have a hard, but fragile coating protecting the living organism within.
- Corn, pea and bean seed are especially susceptible to damage from rough handling. Bags of these seeds should not be thrown or dropped because the seed coats and embryos can crack, resulting in seed that won't develop properly.

Seed Packaging



- Seed should be protected from high atmospheric humidity, storage insects and pathogens.
- Hermetically sealed containers such as laminated aluminium foil pouches and cans are preferred as the ultimate packaging for longterm storage.

Storage Pests



- Poor sanitation during storage can result in the presence of pests, such as insects and the activation of storage fungi and bacteria which are commonly found on seeds.
- These storage pests are more active at higher temperatures and at higher levels of seed moisture.
- Storage pests can be controlled by maintaining sanitary storage conditions, regular fumigation, seed treatments as well as by sustaining low temperature and relative humidity.

Storage Temperature Requirements for Sweetcorn



- Sugar and other flavour components in sweetcorn decrease rapidly at room temperature. To prevent these changes and the loss of moisture from kernels through the husk, storage in cool, moist conditions is required. Loss of sugar is about four times as rapid at 10°C than at 0°C.
- At 10°C, about 60% of the sugar may be converted to starch in a single day, whereas only 6% is converted at 0°C. Cold storage at 0°C - 1,5°C and high humidity (95-100%) are required to maintain a high sugar content for extended periods of time.
- Sweetcorn can be stored with cabbage, greens, and Irish potatoes because all these commodities require lower storage temperatures than other vegetables.
- Sweetcorn may be adversely affected by storage with melons and tomatoes because these crops produce the gas ethylene.

