ProSelect®

The seven stages of germination

STAGE 1

A viable seed will consist of a plant embryo protected by a seed coat, and contain a food source, mostly starch, but also including other essential nutrients needed for germination.

STAGE 2

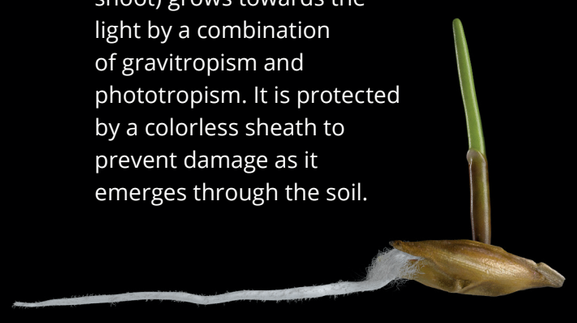
Sufficient water is key for germination to begin. The seed takes in a small amount of water, raising the seed moisture content and the seed swells breaking open the seed coat.

STAGE 3

The moisture triggers enzyme action in processes such as cell respiration. Oxygen is required by the growing embryo for cell respiration, which releases the energy stored in the starch to be used for growth.

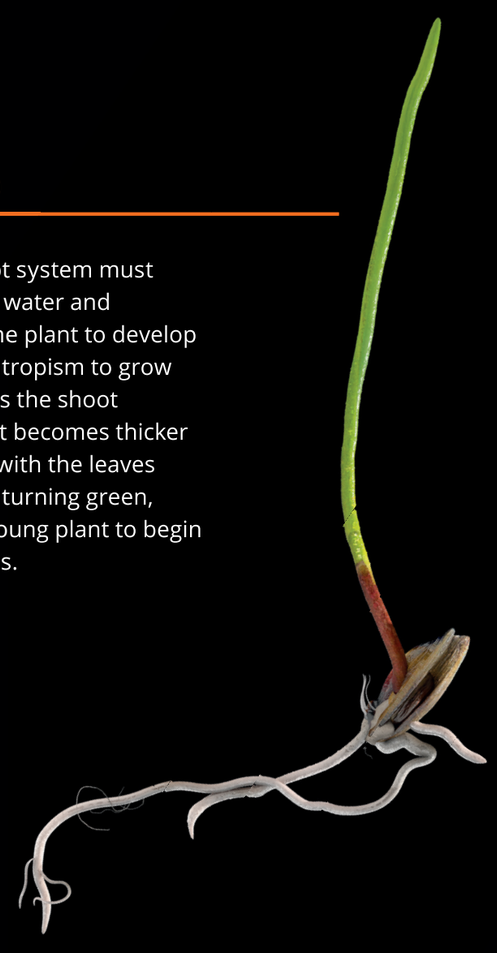
STAGE 4

The radicle (embryonic root) emerges from the seed first through the split seed coat.



STAGE 5

The plumule (embryonic shoot) grows towards the light by a combination of gravitropism and phototropism. It is protected by a colorless sheath to prevent damage as it emerges through the soil.



STAGE 6

The young root system must extend to find water and minerals for the plant to develop and uses gravitropism to grow downwards. As the shoot receives light it becomes thicker and stronger, with the leaves unfolding and turning green, allowing the young plant to begin photosynthesis.

STAGE 7

The germination phase ends with the seed carbohydrate source diminished and the young plant producing its own food through photosynthesis which can be used in respiration and growth. The roots will take up water and nutrients to continue to grow and support the plant's development.

Selected by the pros
to exceed expectations.

Find out more at proselect.icl-sf.com

ICL