



EXPERTISE



SUSTAINABILITY



QUALITY

# UNDERSTANDING DORMANCY IN SEED

## WHAT IS DORMANCY?

Before a seed germinates, it is in a state called quiescence which means the seed is lacking one or more of the primary factors for germination. These factors are water, temperature, oxygen and/or light. Once these factors have been introduced, a seed will normally germinate. For seeds that don't, they are considered dormant.

Primary dormancy involves a variety of reasons why the seed will not germinate. It may involve a very strong seed coat, that will not allow the seedling to emerge, or an immature embryo that needs to ripen further before germination. Secondary dormancy may occur when all factors are present for sprouting but one. This could be attributed to extreme temperature, missing light or excess moisture. Both kinds of dormancy may be broken in the lab with different dormancy breaking methods.

## HOW TO SUBMIT SAMPLES?

- Follow proper sampling procedures to build a representative sample.
- Package 250 grams into a sample bag.
- Submit the sample to one of our Canadian laboratories. Numerous options are available for delivery of the sample.
  - Courier
  - Sample drop off either during business hours or after hours (in our drop box)

## HOW DOES SGS BREAK DORMANCY?

- If seeds are dormant, there are numerous ways to break the dormancy, some which are applied in the lab, as approved by CFIA's Methods and Procedures for Testing Seeds. These include:
  - Pre-Chill or Mid-Chill
  - Potassium Nitrate or Gibberellic Acid
  - Temperature Fluctuation
  - Pre-Drying or Pre-Heating
  - Scarification
  - Light
  - Pre-Washing
- Overall, dormant seeds are not included in the germination category because it is very difficult to predict if seeds that appear dormant are truly viable. A dormant seed may be alive, but until dormancy is broken and the seed germinates, there is no conclusive way to confirm if the seedling has the capacity to produce a healthy plant under field conditions.

## TESTING SERVICES CAN BENEFIT YOUR ORGANIZATION. CONTACT US TODAY:

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WHEN YOU NEED TO BE SURE

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