# SEEDS underground

*presents...*

PART 1

UNLOCK THE MYSTERY OF SEED DORMANCY!

# THE Seed Detective

By: The Magik Garden

Prisons | seeds | choose | to | Live | inside

Inside each seed is a LIVING embryo, packed with a finite amount of nutrients, aka the endosperm.

This helps to develop the embryo, and later feed the seedling (for a short while). However, in storage, it keeps the embryo alive.

If the seed doesn't germinate, eventually it depletes.

Grasses, in many cases, need to finish developing in dry storage (6-12mo) to improve germination. Otherwise, there are a few types of dormancy...

PHYSICAL - i.e. seed coat

PHYSIOLOGICAL - conditions (ie temperature/moisture) change chemistry in seed

MORPHOLOGICAL - under-developed embryo which continues to develop

NONDORMANT - germinates readily

(many have a combination ↑)

## the BAD seed

**DO YOU KNOW WHERE YOUR SEEDS ARE?**

Seriously, where do you keep your seeds?

DON'T LET YOUR SEEDS GO BAD! KEEP THEM IN THE DARK (AND COOL, DRY*)

*I keep mine in the fridge, where they can't escape...*

*most seeds keep dry

## A KEY TO FIGURING OUT DORMANCY

IS THE SEED COAT PERMEABLE TO WATER?

- NO → DOES IT GERMINATE W/IN 2 WEEKS AFTER SCUFF + SOAK?
  - YES → PHYSICAL DORMANCY
  - NO → PHYSICAL + PHYSIOLOGICAL DORMANCY
- YES → DOES IT GERMINATE WITHIN 30 DAYS AT SEASOAL HABITAT CONDITIONS?
  - NO → either embryo is underdeveloped + has morphological + physiological dormancy
    - OR -
    - developed embryo with physiological dormancy
  - YES → EITHER DEVELOPED + NONDORMANT OR MORPHOLOGICAL (SHORT) DORMANCY

OK, BUT THAT DOESN'T HELP...

NO, BUT I CAN GIVE YOU SOME GENERAL RULES OF GREENTHUMB:

- SPRING/SUMMER RIPE SEED
  - sow immediately or warm + moist > cold + moist (some will germinate and overwinter as rosettes)
- FALL RIPE SEED
  - store warm + dry if grass, then sow late winter (30 days cold + moist)
  - otherwise, cold + moist
- SOME DOUBLE-DORMANT AREN'T ACTUALLY DORMANT, they germinate hypogeally.

(HYPOGEAL → SENDS OUT RADICLE BUT NO LEAVES UNTIL YEAR 2)

→ SOME NEED SEVERAL CYCLES WARM + COLD - DON'T GIVE UP! (THEY'RE STUBBORN)

- TINY SEEDS USUALLY NEED LIGHT TO GERMINATE. SURFACE SOW.

30 > 60 > 90 > 120 DAYS?! IN MOST CASES, 60 DAYS IS ENOUGH FOR WARM OR COLD PERIOD. GENERALLY, MORE COLD = BETTER

**NOT FREEZE!** 40°F IS COLD + MOIST

FREEZING HAUS THE PROCESS KIND-OF