Ag Fact!

- The benefits of keeping your Ag Notebook:

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- The benefits of keeping your Ag Notebook:
  - Keep portfolio of work/resume/etc
  - Keep SAE records/info
  - Have notes/resource for later use

AWARDS:

Chapter Degree: 45 hours of SAE (sophomores), 10 FFA activities

State Degree (Senior Seminar): 500 hours SAE (plus other reqs), 30 FFA activities

Sexual Reproduction

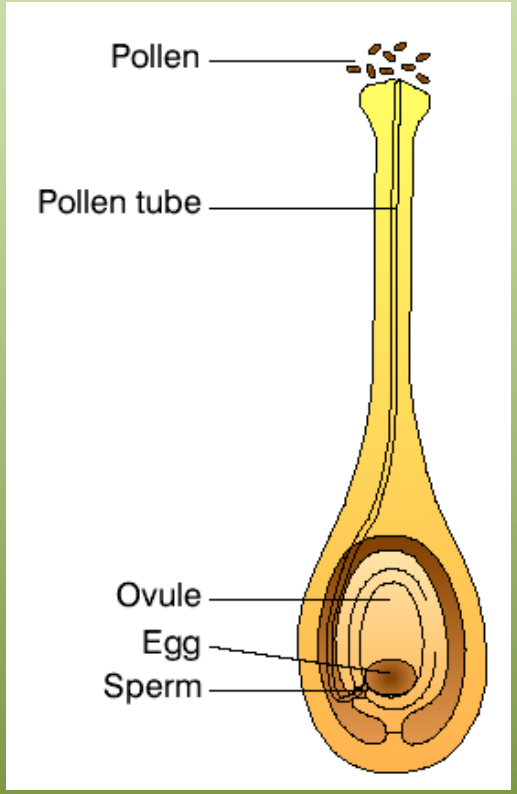
Plant Science
Introduction to Agricultural Science

- The beginning of the plant inside the seed, includes the stem, cotyledons, roots
- Moisture
- Oxygen
- Rain, wind, etc
- Outside covering
- When pollen from one plant pollinates another
- The energy source for monocots inside seeds (dicots use cotyledons)
- When a plant pollinates itself
- Bees, bats, birds, other insects
- The growing/sprouting of a seed into a plant

- Percentage of plants that survive transplanting; equation is (number surviving/number transplanted)
- When the plant has grown true leaves (not just cotyledons)
- Temperature (heating pad), moisture (misters), soil media (perlite, soil, peat moss)
- Scarification – the breaking up of the seed coat
- Temperature
- Percentage of seeds that germinate; equation is (number germinating/number planted)

Pollination

- Self Pollinating: when a plant pollinates itself
- Cross Pollinating: when pollen from one plant pollinates another

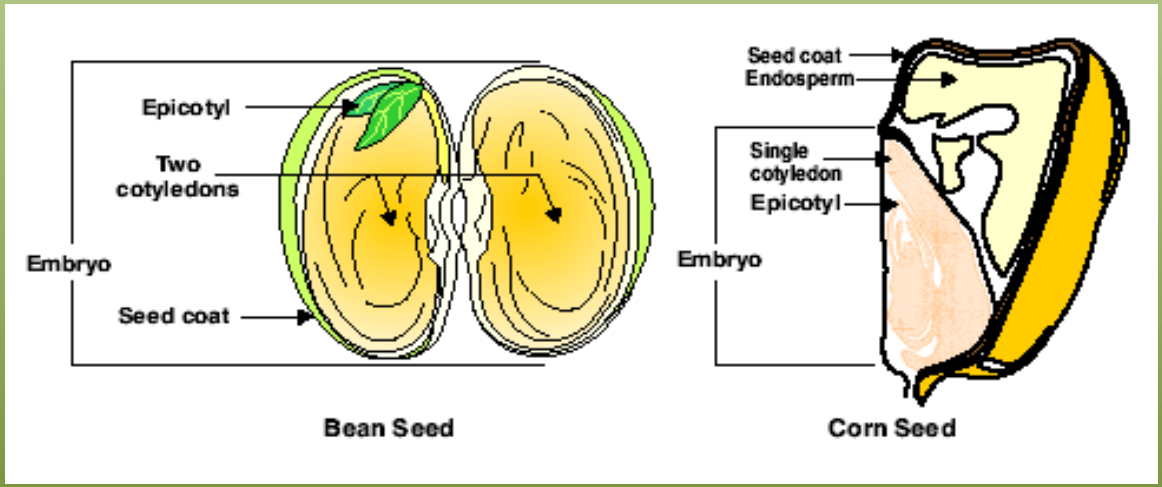


Pollination

- Moved by:
  - Weather: rain, wind, etc
  - Animals: bees, birds, bats, other insects

Seeds

- Seed coat: outside covering of the seed
- Embryo: the beginning of the plant inside the seed, includes the stem, cotyledons, roots
- Endosperm: the energy source for monocots inside seeds (dicots use cotyledons)



Seeds

- Germination: the growing/sprouting of a seed into a plant
  - Conditions for Germination:
    - Moisture
    - Oxygen
    - Temperature
    - Scarification – the breaking up of the seed coat

Management

- Germinating Seeds
  - Conditions: Temperature (heating pad), moisture (misters), soil media (perlite, soil, peat moss)
  - Germination Rate: percentage of seeds that germinate; equation is =

$$\frac{\text{Number of seeds that germinate}}{\text{Number of seeds planted}}$$

Management

- Transplanting
  - When to transplant: When the plant has grown true leaves (not just cotyledons)
  - Transplant rate: percentage of plants that survive transplanting; equation is =

$$\frac{\text{Number of plants that survive}}{\text{Number of plants transplanted}}$$

Put it in Practice!

- You planted 120 seeds, and 110 germinated. What is the germination rate?
- Of the 110 that germinated, you later transplanted them all, and 102 survived transplanting. What is the transplant rate?

Put it in Practice

- Use the two percentages from the previous page to figure out the following:
  - You have an order for 100 marigolds. If your germination rate is _____, and your transplant rate is _____, how many seeds must you plant in order to get 100 grown plants?
    - Hint: work backward, and do it in two steps!