

# Integrative Biology 102: Lecture Outline

## Fruits & Dispersal

### Lecture Objectives

At the end of this lecture (and after studying the text), you should be able to:

1. indicate the location and sequence of events of the general sexual life cycle of plants in flowering plant fertilization, fruit and seed development.
2. describe the double-fertilization of plants.
3. dissect a simple fruit and list the flower parts from which the fruit and seed structures developed.
4. list and explain the functions of the fruit.
5. describe the fruit ripening process and its connection to co-evolution with dispersers.
6. give examples of commercial applications of the use of plant hormones in the fruit industry.
7. give examples of plants that make use of wind, water, explosive dehiscence and animals to disperse their fruit.

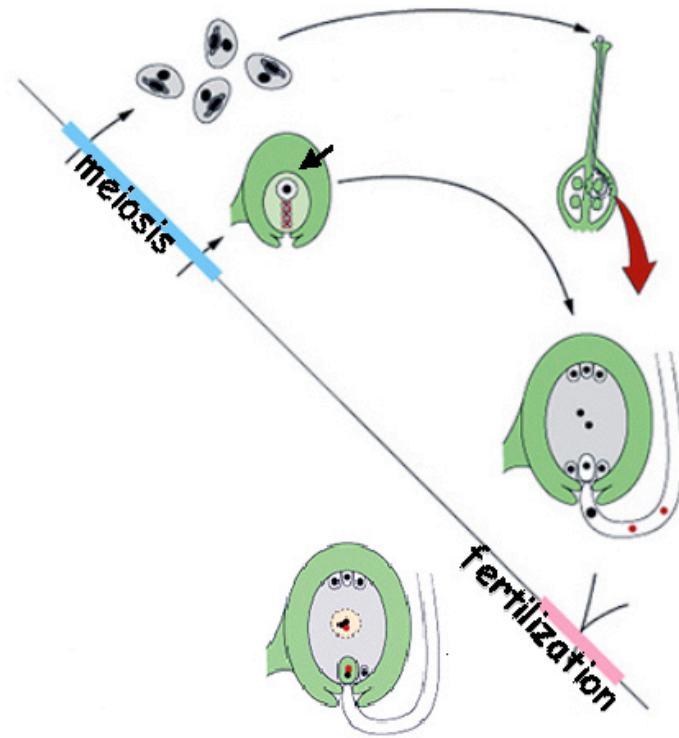
**Reading:** Leventin & McMahon Chapter 6

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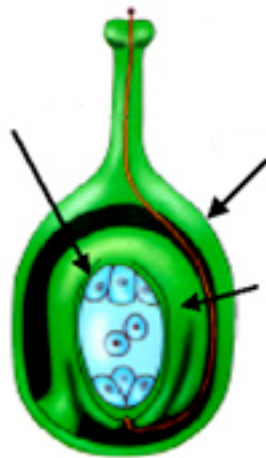
### Terms

- |                    |                |                 |
|--------------------|----------------|-----------------|
| * dehiscent        | * simple fruit | * complex fruit |
| * gibberellic acid | * auxin        | * ethylene      |
- 

1. Gametophyte development



## 2. Double fertilization and development of fruit



- \* Ripening process

- \* Examples of variety in fruit types
  - o simple, fleshy

- o simple, dehiscent, dry

- o simple, indehiscent, dry

- o complex

- \* Commercial applications

### 3. Dispersal

- \* Importance

\* Agents

o Animals

o Wind

o Water

o Explosive dehiscence

**For the next lecture on *Green Revolutions*, read Ch. 9.5-9.6 and Leventin & McMahon Chapter 15. Be able to answer the following questions:**

- In what ways is industrial agriculture dependent on fossil fuels?
- What alternatives to industrial agriculture will be able to produce enough food to feed the peoples of the world?