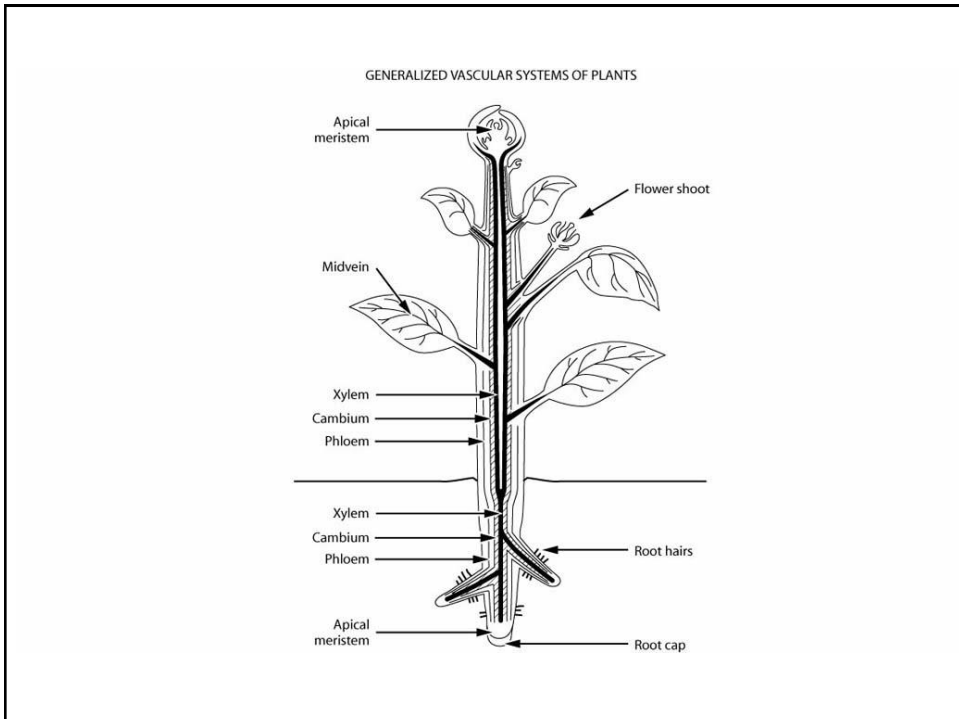
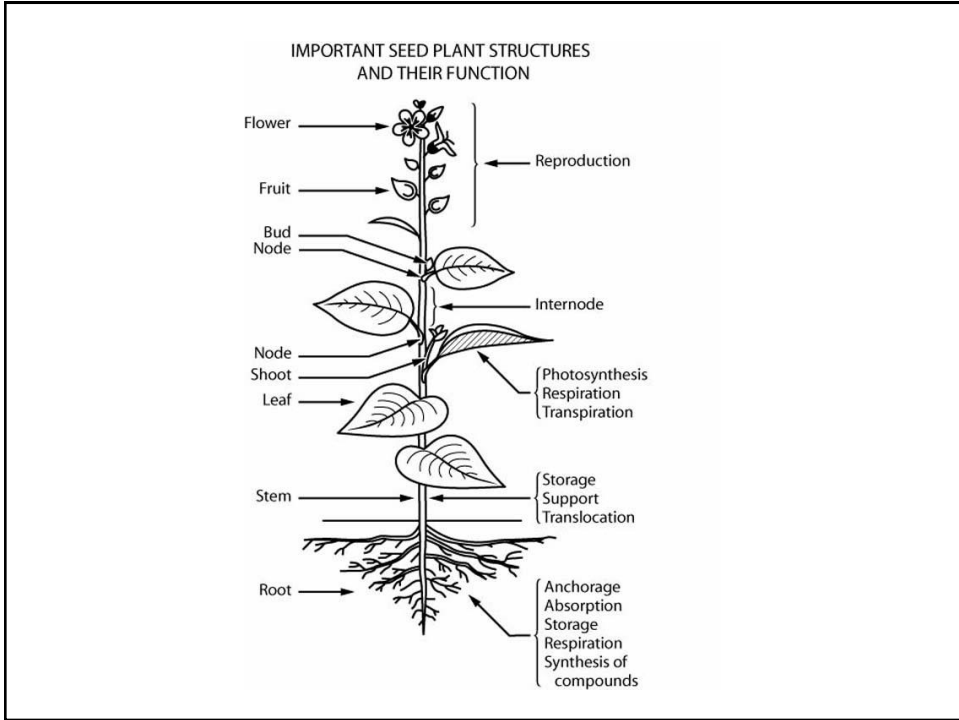


Intro to Crop Management:

Plant Structure and Activity

Franz Niederholzer, UC Farm Advisor, Colusa/Sutter/Yuba Counties
Rich Rosecrance, Professor, CSU Chico

Plant Structure

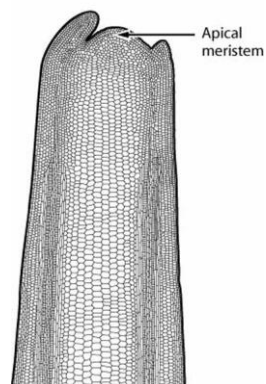


Meristems

- Apical
- Lateral

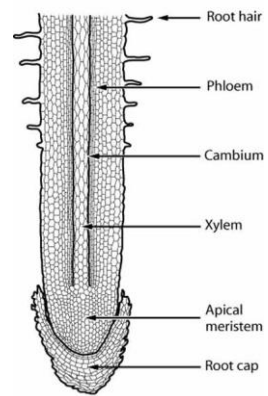
Apical Meristems

APICAL MERISTEMS
OF SHOOTS AND ROOTS



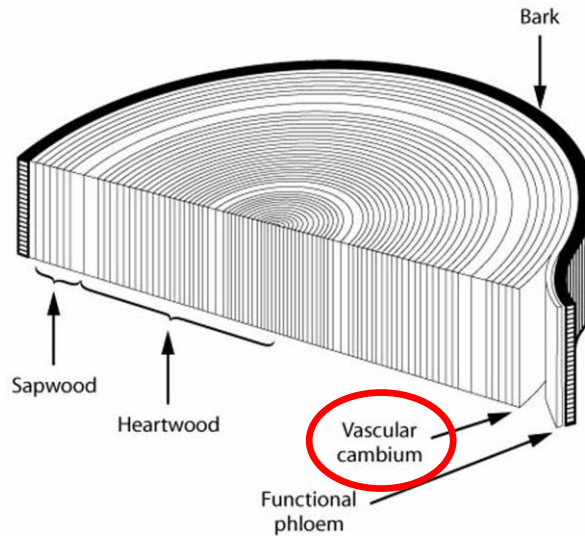
SHOOT

APICAL MERISTEMS
OF SHOOTS AND ROOTS



ROOT

Lateral Meristem



Roots

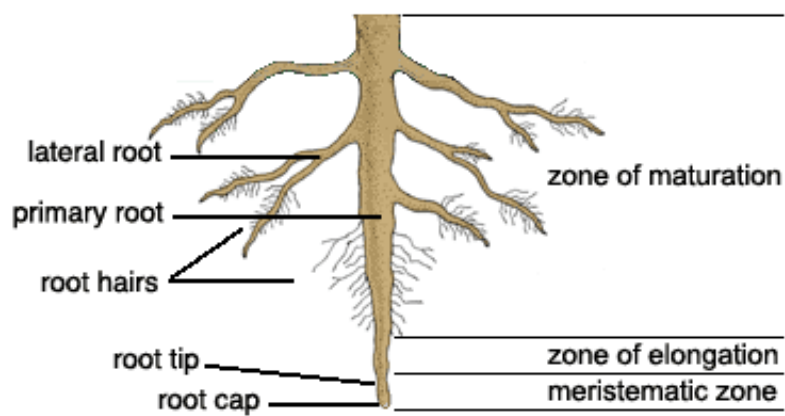
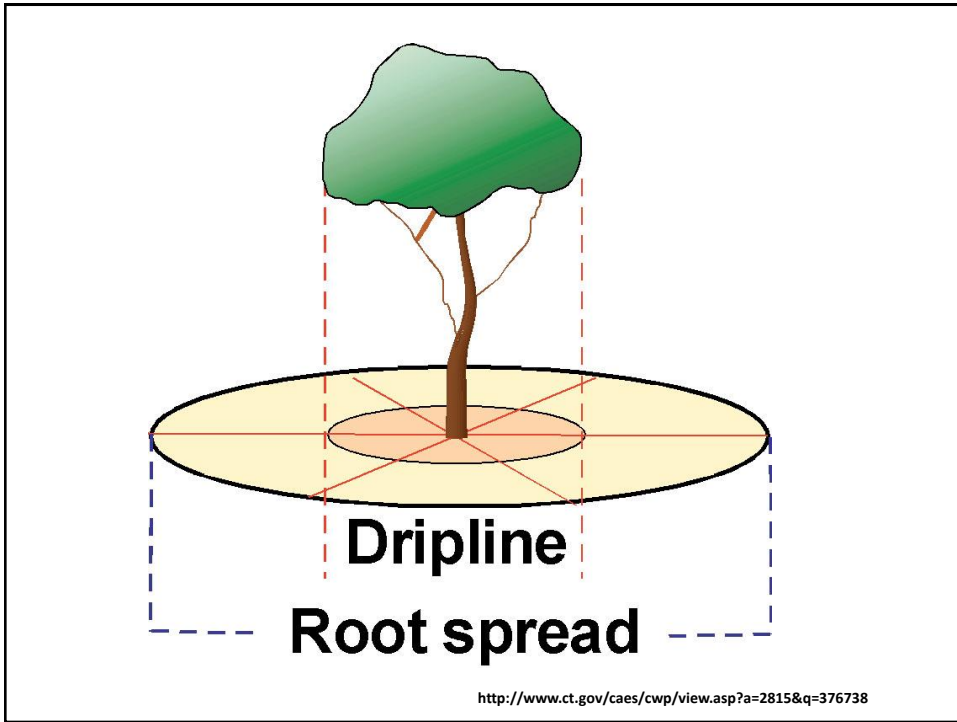


Figure 2. Root Structure

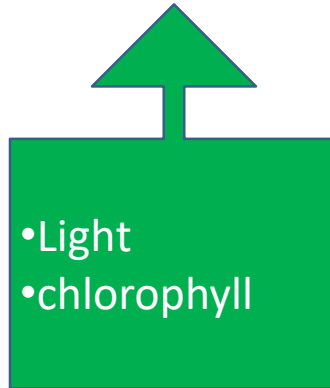
<http://extension.oregonstate.edu/mg/botany/roots.html>



Plant Growth

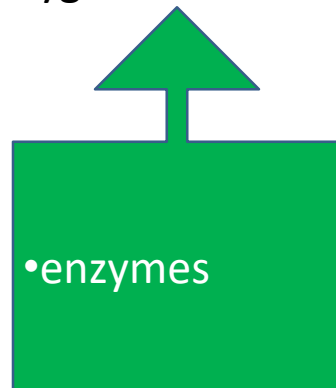
Photosynthesis

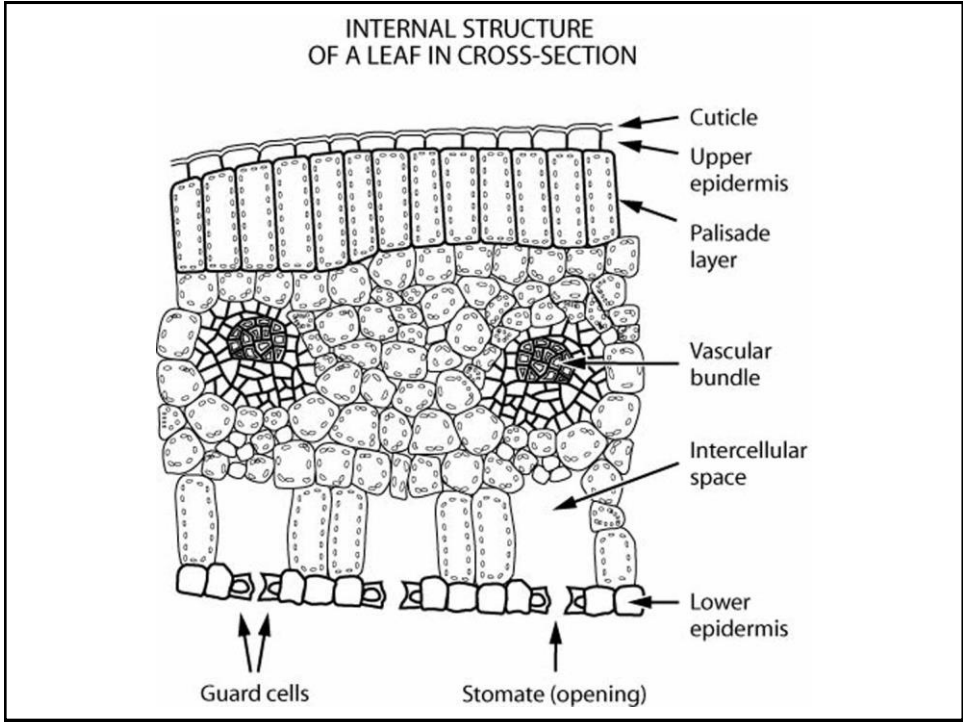
Carbon dioxide + water \rightarrow sugar + oxygen



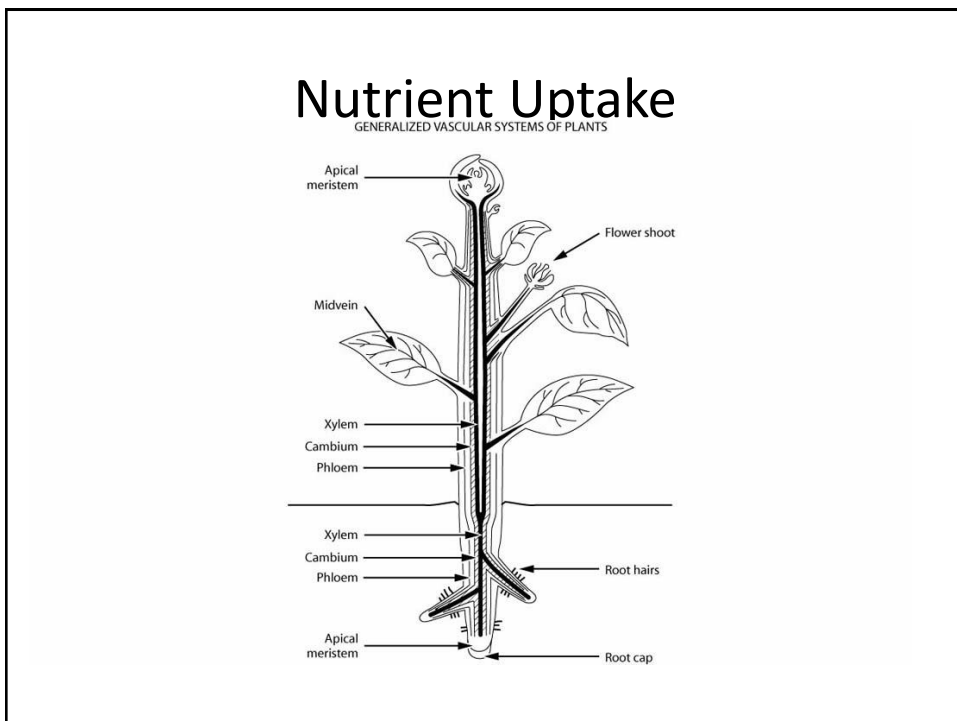
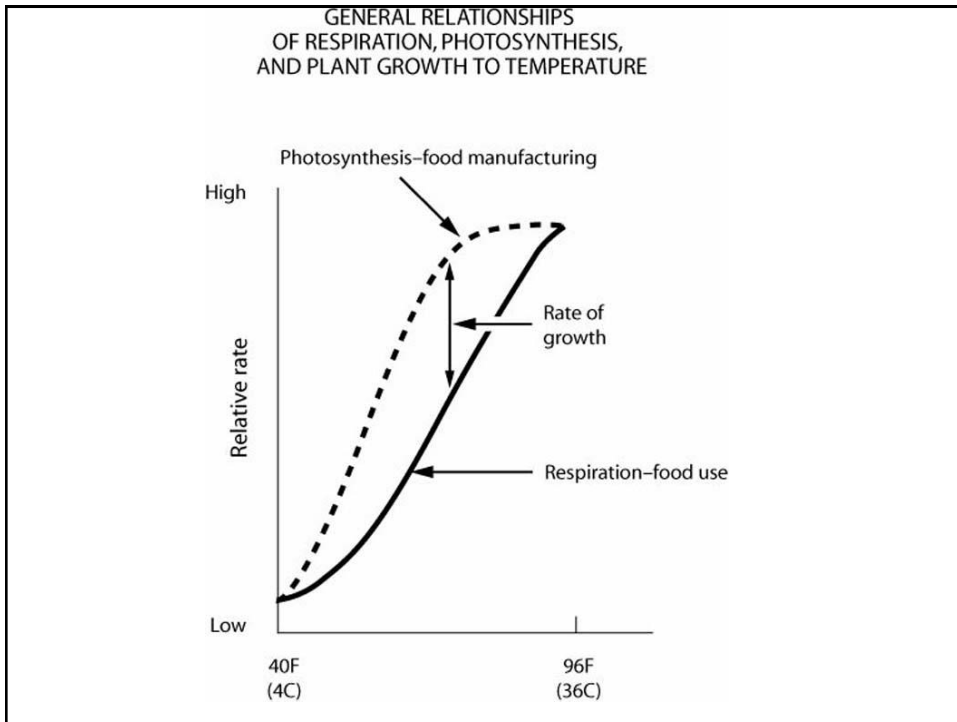
Respiration

Sugar + oxygen \rightarrow carbon dioxide + water

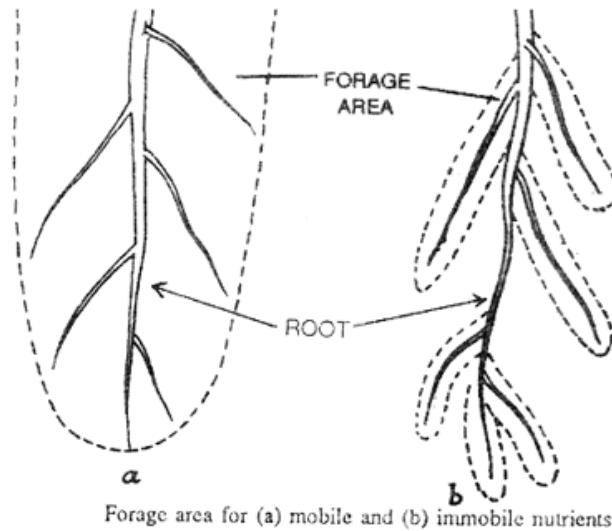




Energy



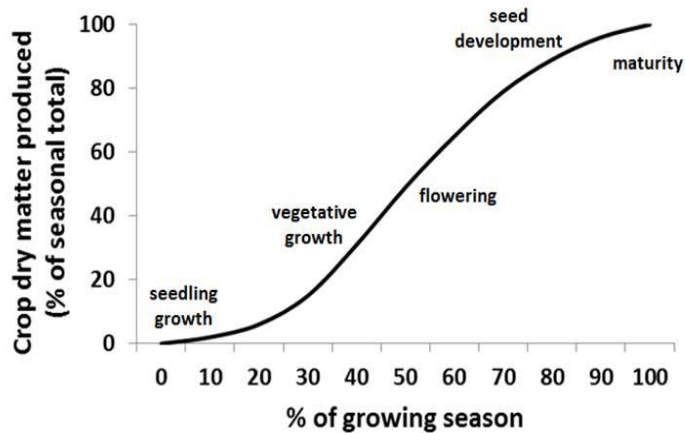
Nutrient Uptake



Stages of plant development

- **Seed Germination**
- **Juvenility**
- **Maturity**
- **Reproduction**

Annual crop dry matter production follows an “S” curve pattern.



Plant Growth Regulators

- Auxins
- Gibberellins
- Cytokinins
- Ethylene
- Abscisic acid

Plant Growth Regulators

- Auxins
 - Phenoxy herbicides, NAA
- Gibberellins
 - ProGibb[®], etc. (GA3)
- Cytokinins
 - Prestige[®]
- Ethylene
 - Ethrel[®]
- Abscisic acid
 - ProTone[™]