Roots and stress mitigation

- Until 6th to 7th leaf (~25-30 days), mostly lateral with 70% of roots in top 10"
- Minimize root injury during side-dress application or cultivation
- 7-8 weeks (>V12): roots have reached the center of the row and 4 ft. depth
- Nutrient uptake: root hairs and mycorrhiza
- Roots and SOM
  - High root density and immobile nutrients, e.g. within <0.1"; wheat may only exploit 5% of available P
  - Early damage
    - Opportunity for recovery
    - Greater risk of later damage
    - Branching stimulated
  - Roots are costly to produce; often 50% of photosyntheate: root loss or unnecessary root production = yield loss