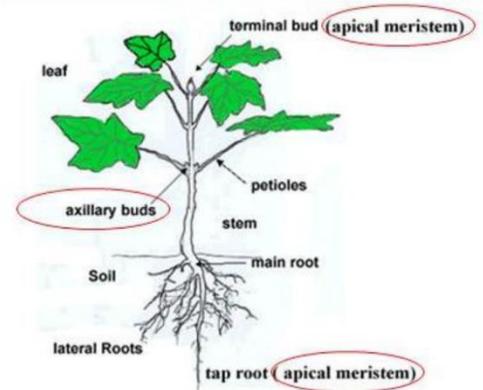


Plant Morphology ~ What a land manager needs to know

Meristems (or buds) – Three major types:

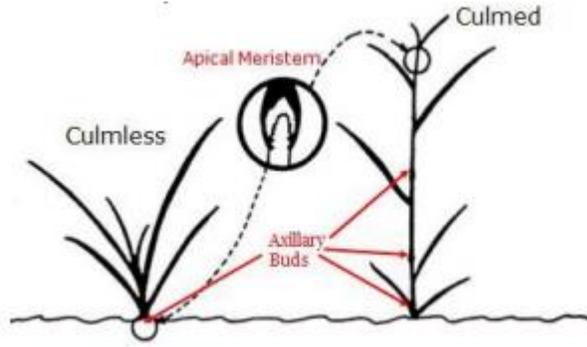
- **Apical** or terminal – located at the tips of shoots and roots
 - Responsible for _____
- **Axillary** or lateral – located in the axil of the leaf and stem or just above the node on a stem.
 - Responsible for _____
- **Intercalary** – Only in grasses at base of leaf, sheath, and internode.
 - Responsible for _____



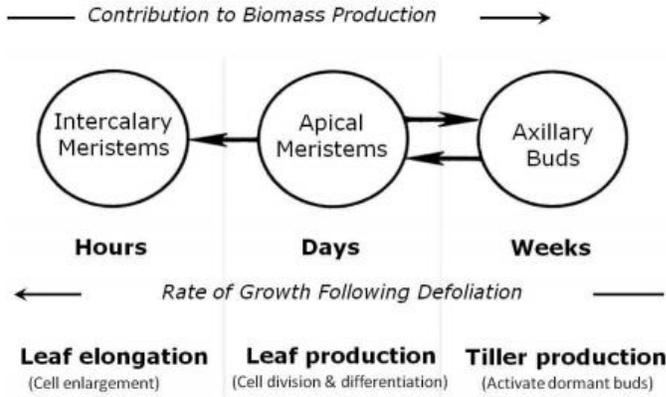
Forbs & Woody Plants

- Meristems (or buds) – Three major types:
 - **Apical** or terminal – at tip of shoot.
 -
 -
 - **Axillary** or lateral –
 -
 - **Intercalary** – Only in grasses, not found in forbs or woody plants. (With a few exceptions like horsetail, *Equisetum*)
- Other Meristems
 - Lateral meristems forming spines & thorns
 - Adventitious meristems:
 -
 -
- Apical Dominance over Axillary Buds
 - If axillary meristem is removed
 - Axillary buds will be stimulated and grow
 - Axillary buds become new apical buds for each stem
- Grass Morphology
 - Phytomer = node + _____ + sheath + blade
 - Tiller = _____
 - Plant = a group of tillers
- Grasses and Grass-like Plants
 - Meristems (or buds) – Three major types:
 - **Apical** or terminal – at tip of shoot or tiller
 -
 - **Axillary** – located just above the node.
 -
 - **Intercalary** – Base of leaf, sheath and internode.
 - Responsible for growth of leaf, sheath, and internode.
 - Apical bud become seed head
 - Axillary but at bas of internode. Gives rise to new tillers

- Location of Apical Meristem Matters

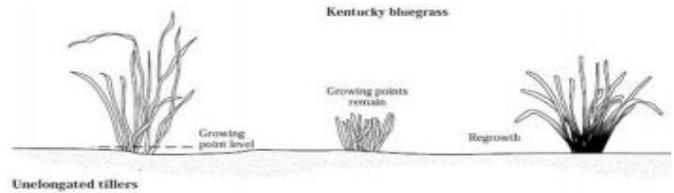


- Meristematic Contribution to Grass Growth



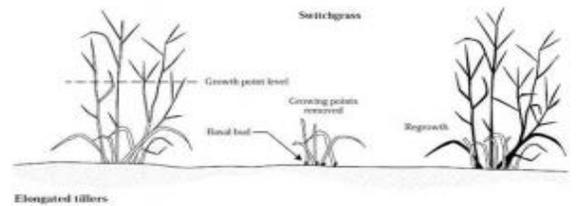
- Location of Growing Points

- If the growing point is present growth continues.
- If removed - growth stops and new growth must initiate from a dormant bud.



Location depends on season:

- Early in the growing season ...
- As the season progresses ...



Intercalary meristems

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What determines if and how a plant regrows after disturbance?

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