Stand Water Relations (Virginia Tier III)

Andy Laviner and Tom Fox

Treatments:

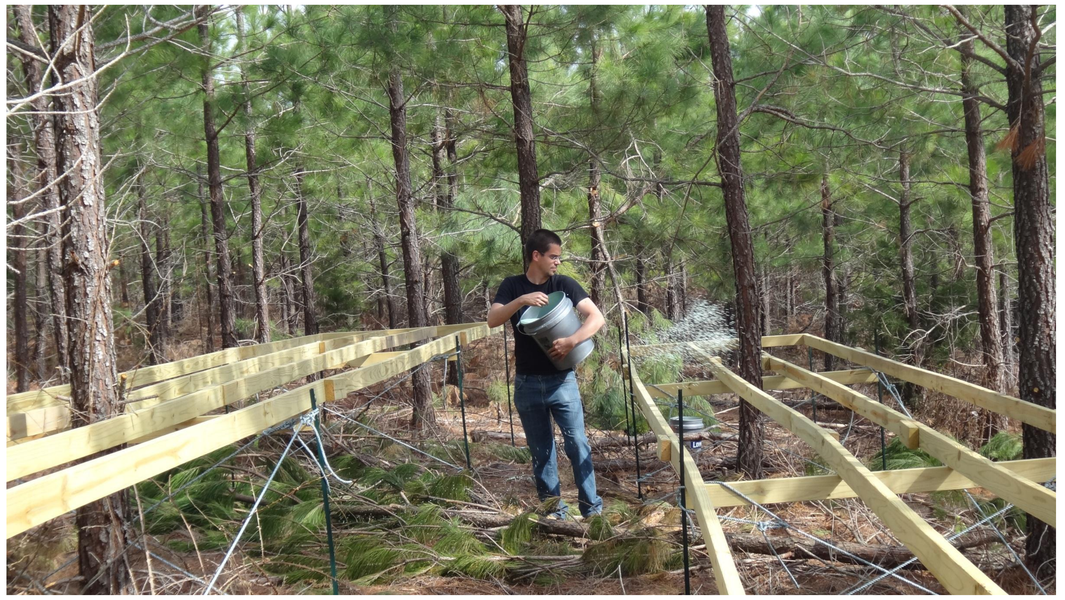
- (C) Control
- (D) Drought (30% reduction in throughfall)
- (F) Fertilized (200N, 25P, 50K, micros)
- (FD) Fertilized + Drought

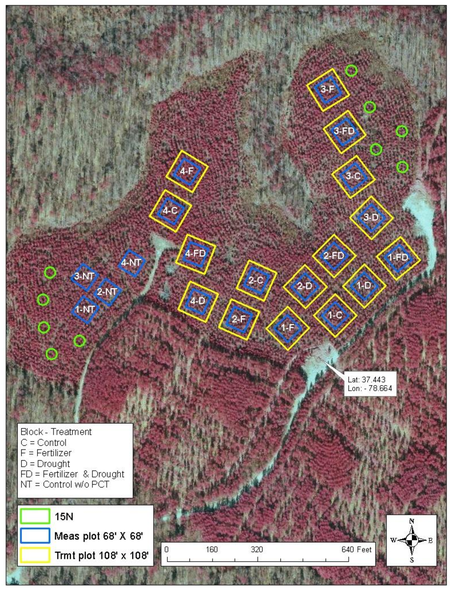
Hypotheses to be tested:

1. Improved stem volume growth of fertilized stands will be maintained under drought conditions (Treatment rank F > FD = C > D)
2. Root growth allocation will be shifted deeper in the soil as result of imposed drought.
3. Planted pine experiences equal water stress due to hardwood and volunteer pine competition as planted pine under 30% throughfall reduction.

Relationships to explore/model:

1. Throughfall as a function of Leaf Area at the stand and sub-stand level.
2. Soil Moisture as a function of Throughfall.
3. Stand level water balance.





Additional measurements to be made/used:

1. Throughfall variability.
2. Automated soil moisture with depth.
3. Root biomass with depth.
4. Leaf area through time.
5. Sap flux.

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