

# Excessive Heat Damage to Christmas trees in the PNW

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# Observations

- Heat Wave
  - 6/26-28
  - Heat dome event
  - Temps reached a high of 118 in some areas
- Damage observations in PNW
  - Damage is most severe in lower elevations across the Willamette Valley.
  - Damages in WA. as well

# Species impacted

- Damage levels (most to least)
  - Noble fir (wide range of damages)
  - Grand fir (mixed responses, generally like noble)
  - Nordmann & Turkish (generally leaders and new growth)
  - Trojan fir- leaders only
  - Douglas-fir (little damage- so far)
- Important questions
  - Is all the damage evident yet?
  - Should shearing/top work start now? or wait?

# Noble fir damages



- Types of damage (harvest size)
  - S. side of tree- red needles on current season age-class needles
  - S. side of tree- last years needles red and damaged (current season needles OK)
  - Top whorls with dead needles all the way around the tree
  - Wilted-dead current season growth
  - Wilted tops



Noble fir damage types



# Noble fir NWREC orchard- damage types



# Turkish fir damages (NWREC)





Turkish fir damages (NWREC)



# Damage to leaders and top whorls-Turkish fir



**Turkish fir- damaged leader and S. side branches**



**Damaged Korea X Lasiocarpa seedling-  
only a few interior needles green**



**Nordmann fir- 3 yr. old seedling (leader drooping and foliage burned)**



**Turkish fir- NWREC orchard**

