

Pacific madrone provenance trial – fall 2013 assessment

Starker Forests site

Photos: R.Sniezko; Graphs: D.Savin



Pacific madrone trial: Starker Forest site -
fall 2013 assessment



- First site (of 5) being assessed in 2013
 - http://www.puyallup.wsu.edu/ppo/madrone/research/common_garden/Starker.htm
- 105 families, ~20 seedlings/family + border trees
- Previously assessed (1st time) in Oct 2012
- Assessed Sept 24, 2013
 - 7 people available from DGRC

Assessors (Sept 24, 2013)

- FS-Dorena GRC:
 - Sally Long
 - Angelia Kegley
 - Brian Luis
 - Doug Savin
 - Matt Buss
 - Kim Sanderford
 - Richard Snieszko

General Notes

- Survival is excellent at this stage; height varied by family and probably by location within the site
- The weeds weren't bad, although some blackberries had started growing in a couple of areas.
- The 'variegated' madrones I (RS) saw were all within about 3 rows of the fenceline
 - This is interesting and I've heard of a couple possible explanations....
 - See plot of locations in subsequent slide
- Insect damage was relatively minor, and varied somewhat by locality.
- Saw grasshoppers, ladybugs, butterfly, a rabbit, a praying mantis
- Blight varied by tree, but light on many trees.
- A few new dead trees, some from rodent damage (pulled out of the ground very easily)
- A little bit of dieback, in one case the sprouts from the base taking over, in other cases, branches taking over.
- No rust on the leaves.
- Relatively few trees with mostly 'reddish-green' leaves – but some nice ones.
- Large difference in size of leaves and serrated edges among the trees.

**2013 Oregon Pacific Madrone Site
Assessments**

Plant Condition

- 1 = alive
- 2 = dieback
- 3 = wilting
- 4 = dead
- 5 = missing

Total ht (cm): total height of seedling

leaders: 1 is default

Leader branching: 0 = no (default)
1 = branching

new growth: Active new growth on terminals
0 = none (default)
1 = buds swollen to a large degree
2 = flushing buds

blight sev: severity of symptoms on most severely impacted current season leaf

- 0 = none
- 1 = slight (<25% of leaf area affected)
- 2 = moderate (25 to 50% of leaf area affected)
- 3 = severe (>50% of leaf area affected)

blight inc: whole tree

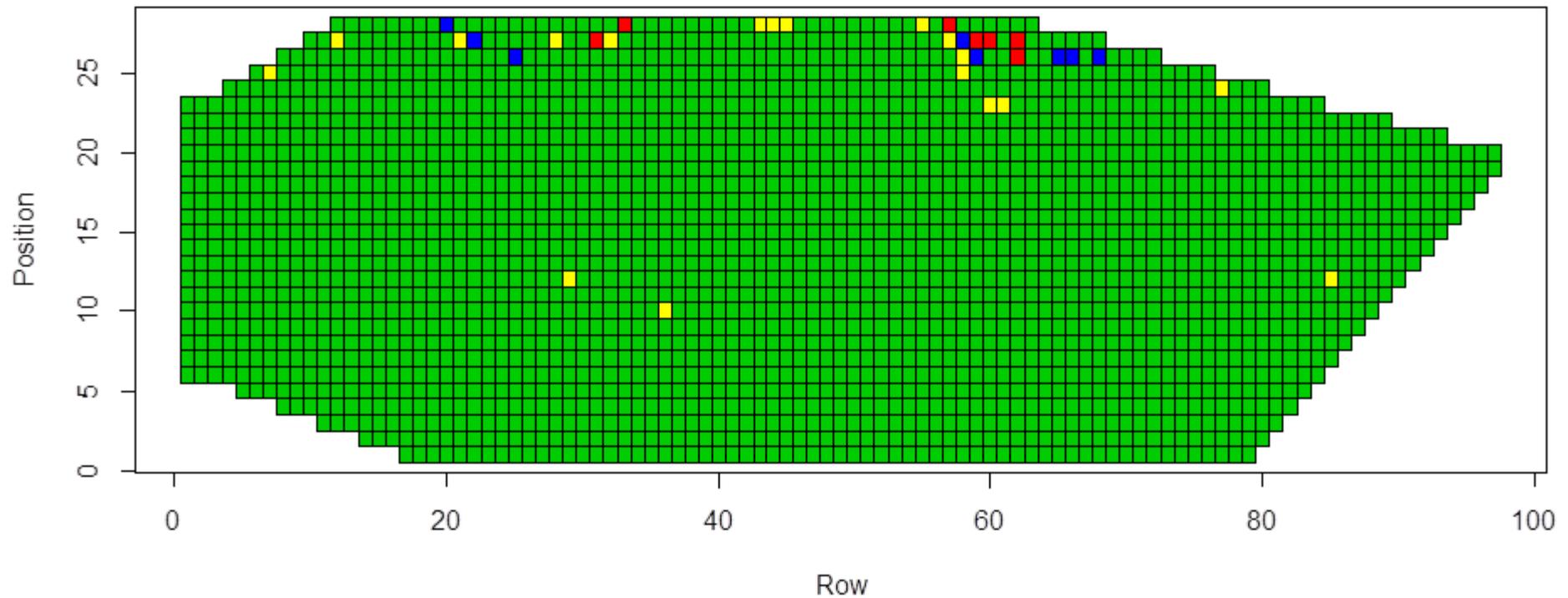
- 1 = <25 of leaves with severity rating
- 2 = 25-50% of leaves
- 3 = 51-75% of leaves
- 4 = >75% of leaves

Comments

- 1 = leaf rust present
- 2 = chewing insect damage present
- 3 = variegated foliage present
- 4 = browse damage evident
- 5 = Burrowing varmint activity around tree
- 6 = Reddish-green fully expanded foliage

Location of trees with variegated leaves. Note: most such trees are along the road, close to the forest area

Pacific Madrone, Starker Forest Variegation Incidence for Alive Trees, 102913, DRAFT (Red = 2012, Yellow = 2013, Blue = Both)

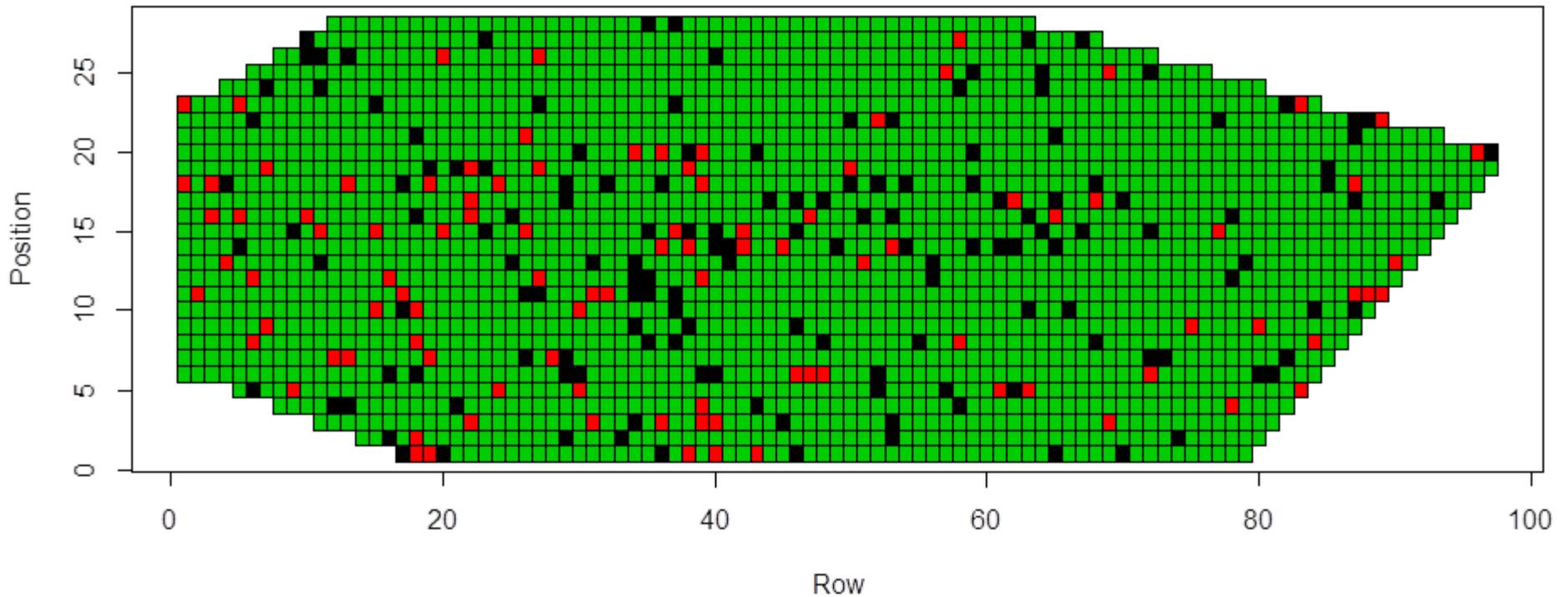


Variegated Trees

- It will be interesting to see how many years these persist and whether they are generally the same trees over years.
- M.E. (in 2012) suggested possibly due to [1] virus, or [2] herbicide
- We haven't looked at family trend, but believe it is fairly independent of that

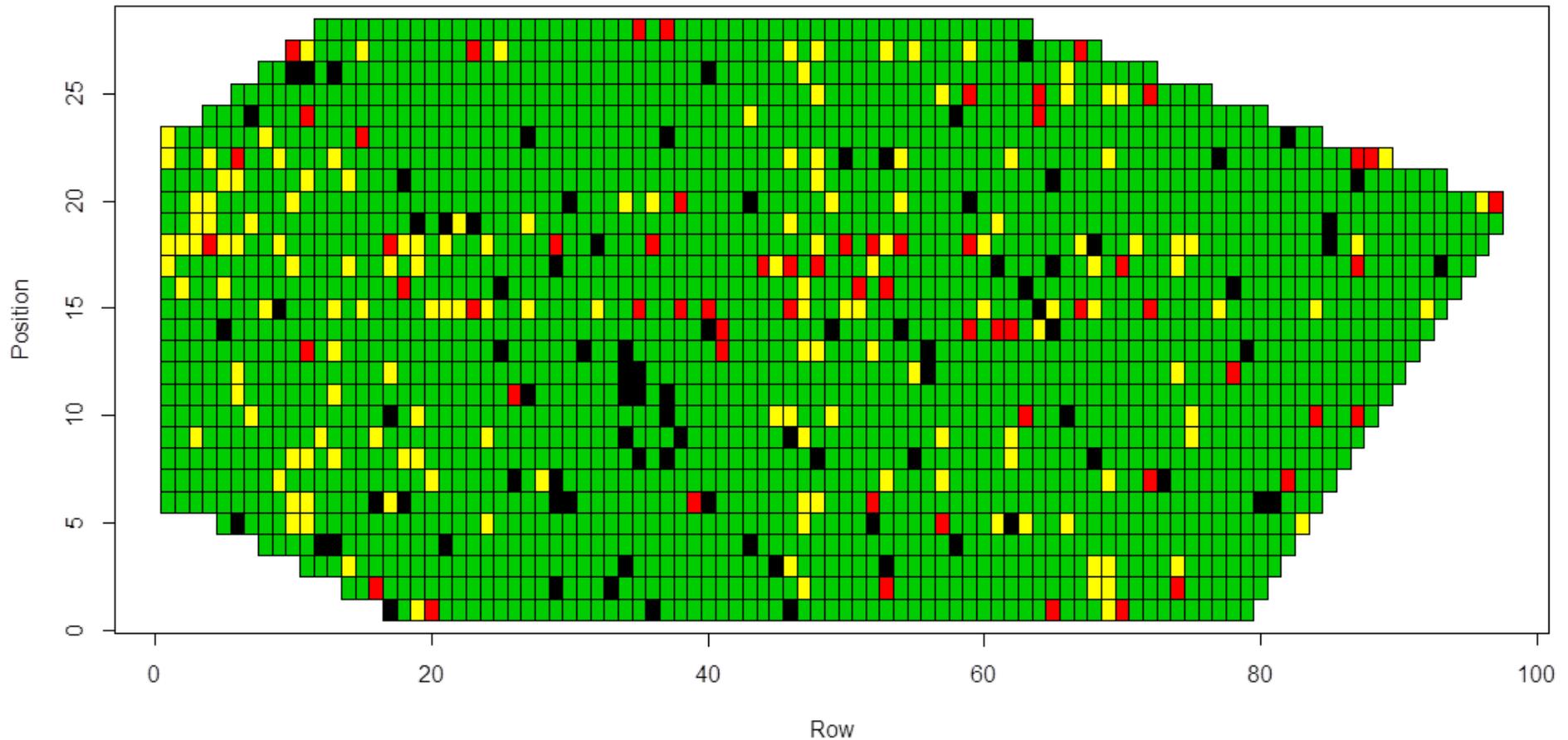
Growth increment from Fall 2012 to Fall 2013 reading.

Pacific Madrone, Starker Forest 2013 Height Increments for Alive Trees, 102913, DRAFT (less than 5 cm growth is red, otherwise green)



Mortality in 2012 or 2013, or dieback in 2013

Pacific Madrone, Starker Forest 2013 Mortality (Red)
and 2013 Dieback (Yellow) with 2012 Dead/Missing in Black, 102813, DRAFT



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DSCN0604.jpg



DSCN0608.jpg





DSCN0656.jpg

DSCN0646, 649, 661.jpg







One of the variegation Pacific madrone at Starker Forests site – they occurred within ~3 rows of the road (DSCN606-607.jpg)





DSCN00619-0620.jpg



DSCN0627-0628.jpg



orest site -

DSCN0631-0632.jpg



DSCN0637-0638.jpg



Forest site -
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Forest site -
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DSCN0611-612.jpg





DSCN0613-614.jpg



DSC0615.jpg



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3
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DSCN0616-0617.jpg



DSCN0618.jpg



0619.jpg



New growth occurring in late Sept 2013 (DSCN0622-0623.jpg)





DSC0629-0630.jpg



rest



CP26 with leaf spots (DSCN0634.jpg)



DSCN0635-0636.jpg





Tall, single stemmed madrone
(DSCN0639-0640.jpg)



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Leaning tree
(DSCN0641-0642.jpg)



Leaf spotting on a KL10 tree (DSCN0643-0645.jpg)



Two recent dead trees (DSCN0650-0651.jpg)





DSCN0652-653.jpg





Leaf spot on old leaves
(DSCN0658-0659.jpg)



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Reddish-green foliage on trees of 2 families (DSCN0660, 0662.jpg)



Red-green foliage on FW10 tree

(DSCN0672-0674.jpg)



Pacific madrone trial:
fall 2013 as

Red-green foliage on WV6(2) tree
(DSCN0677-0678.jpg)



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DSCN0675-0676.jpg





DSCN0664.jpg





DSCN0665, 0666, 0668.jpg





New growth at top of SA5(2)

DSCN0681-0682.jpg



Forest site
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OR1 (1) tree

(DSCN0684-0685.jpg)



rest site -

DSCN0686-0687.jpg



PA1 and SR3 trees (DSCN0689, 0691.jpg)



PF1(2) and BC8 trees (DSCN0692, 0694.jpg)





DSCN0698.jpg

DSCN0688, 0699.jpg



Pacific madrone trial: Starker Forest site -
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Madrone >1m

(DSCN0670-0671.jpg)



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