

Veldwaarnemings by pekanneute in Noord Kaap

10 Oktober 2017

Hannes Hattingh



Waarna gaan ons kyk?

- Leaf scorch
- Temperatuur en invloed op wortelgroei
- Wortelgroei
- Waterbestuur
- Onkruidbeheer
- Waarnemings
- Opsomming



Leaf scorch



Skedulering en temperatuur op jongbome

- **Leaf scorch (UGA)**
- Grondtemperatuur > 100F (37.7grade C)
- Water gereeld help met grond temperature op klein bome (November)



Skedulering en temperatuur op jongbome

Irrigation Recommendations for Young Trees

- 1st year – 3rd Year:
 - Loamy sands = 100 gpw with microsprinkler
 - Deep sands or excessive dry periods = 170 gpw
 - Microsprinklers preferred for deep sands
 - Drip on loamy sand = 48 gpw
 - **Water regularly**
 - *every other day to keep consistently moist and minimize soil temp beginning in late May*

100gal = 378liter
170gal = 645



↑
November

Hulpmiddel

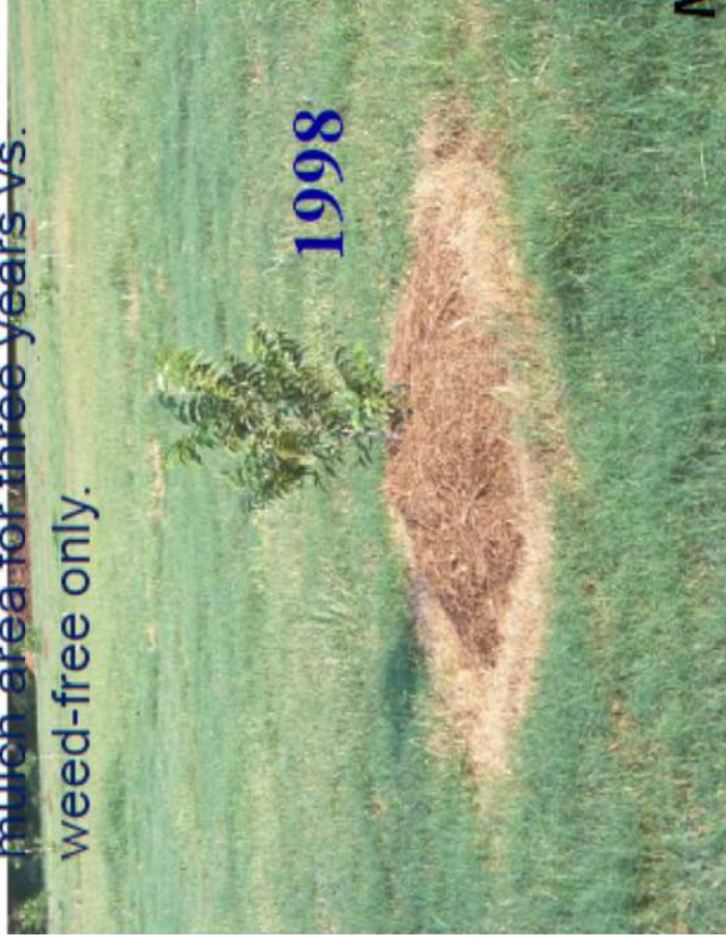


- ◉ (Foshee et al., 1996) (Alabama): 60% increase in cross-sectional trunk area after three years, compared to weed free checks.

- 10' x 10' x 12" Chipped Limbs, Leaves, Pine Straw, etc.

- ◉ (Smith et al., Oklahoma, 2000)

Trunk diameter increase was 36% greater on trees receiving 6' x 6' mulch area for three years vs. weed-free only.



1998



2002

Minimum of 4 ft x 4 ft, 8 inches deep

Grondtemperatuur en invloed op wortelgroei

Wortel ontwikkeling vertraag 18-21 grade C

Wortels actiefste 29 grade C

As grondtemperatuur bo 37.7 grade kan wortels begin afsterf

Southeastern Pecan Growers



Grondtemperatuur en invloed op wortelgroei

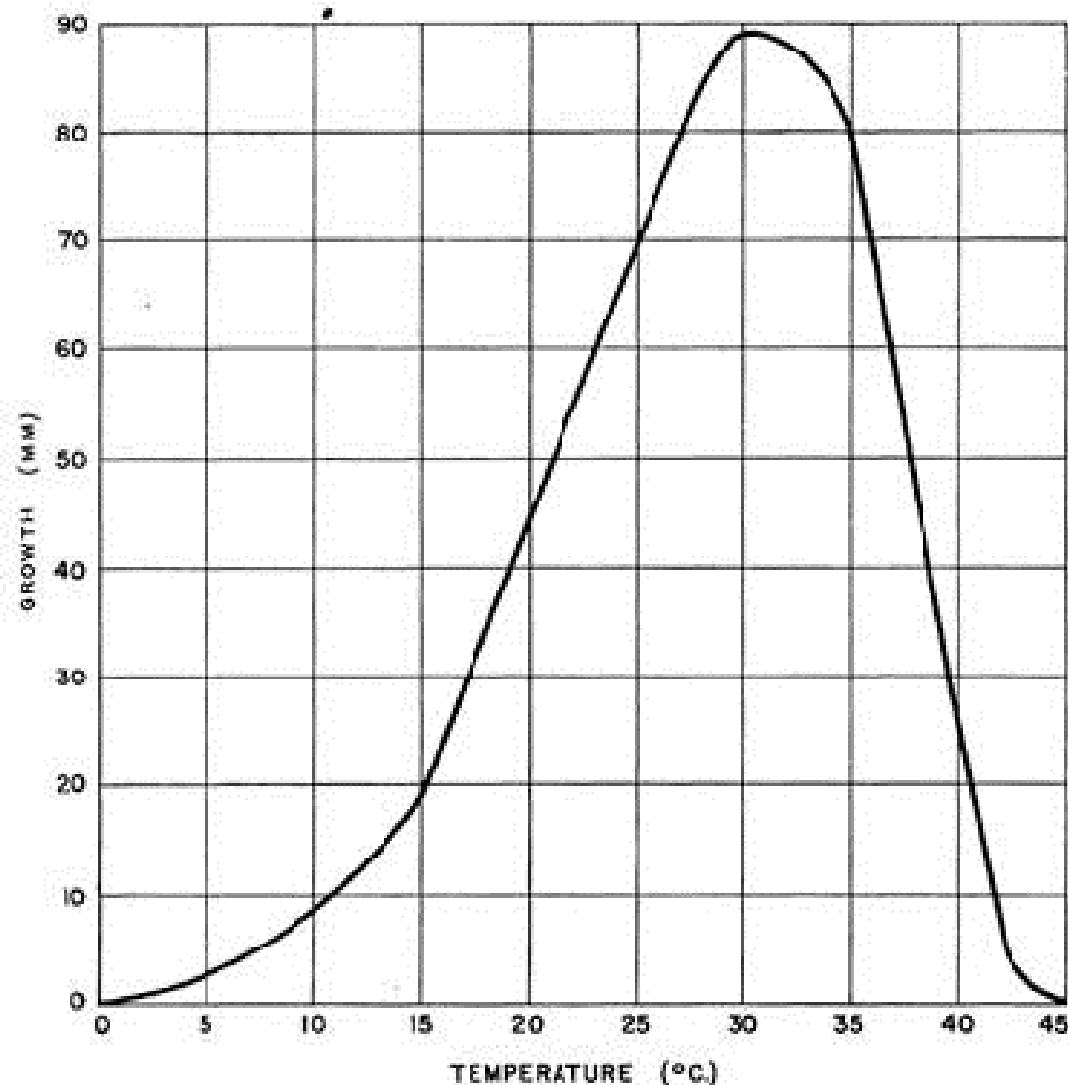
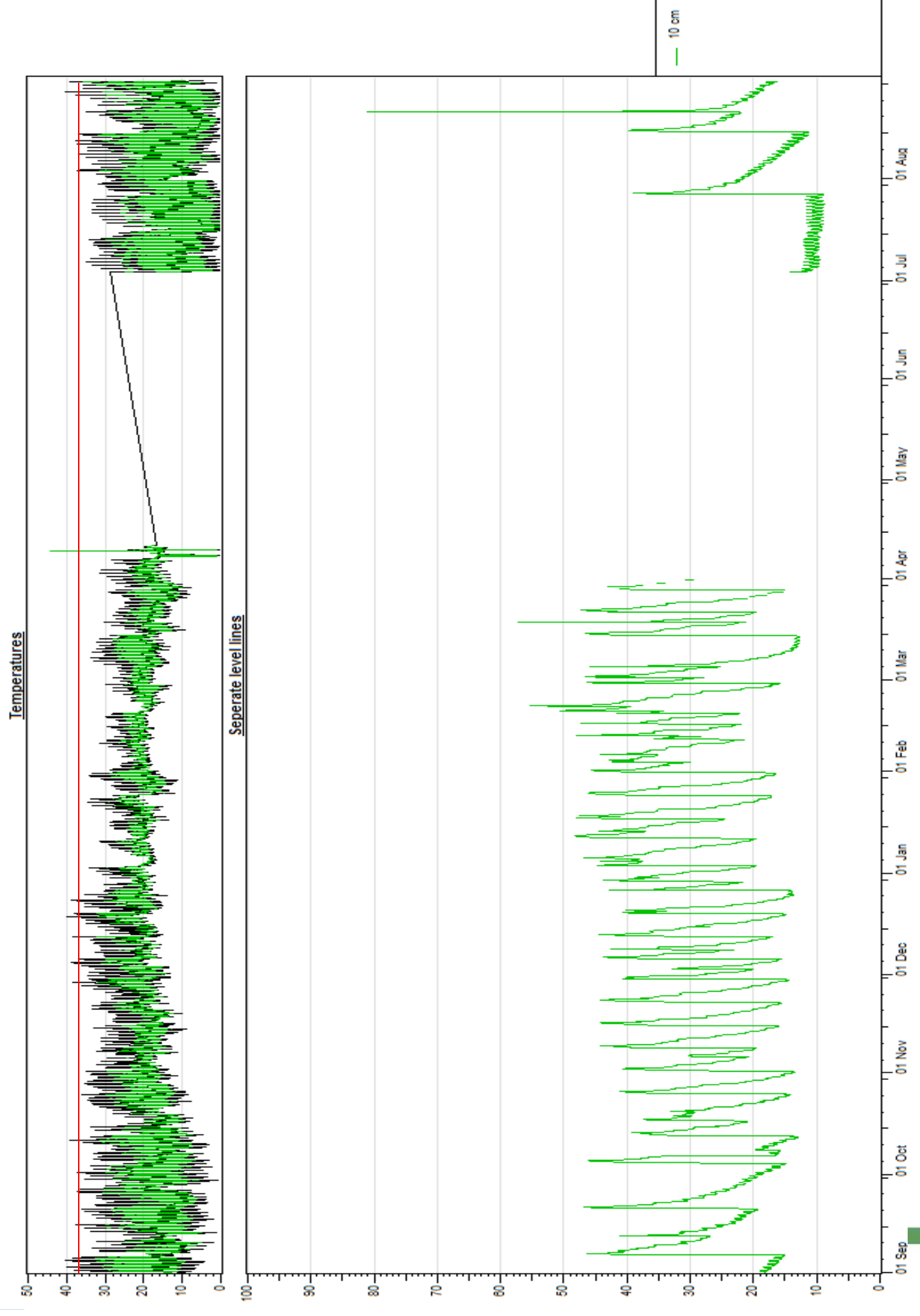


FIGURE 6.—Amount of growth made by 10 taproots when subjected to various temperatures for 24 hours.

Block sepearte level lines: (10641) B 27 Pekan / Pekan



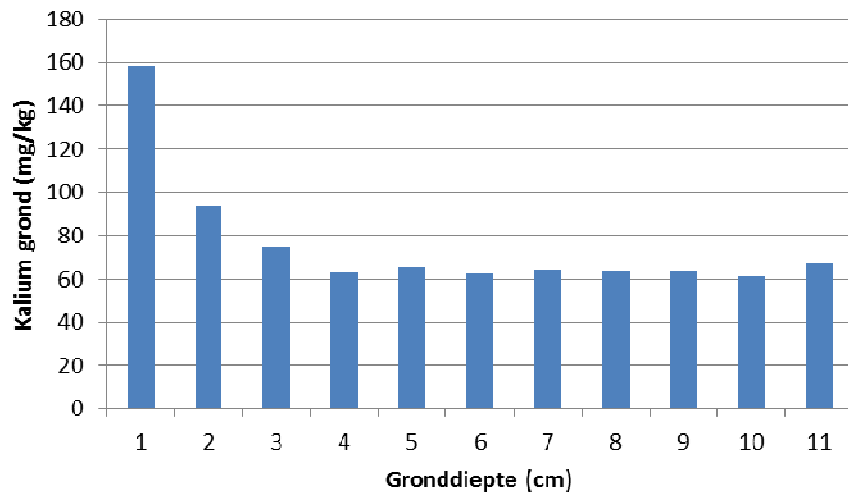


5 - 7cm

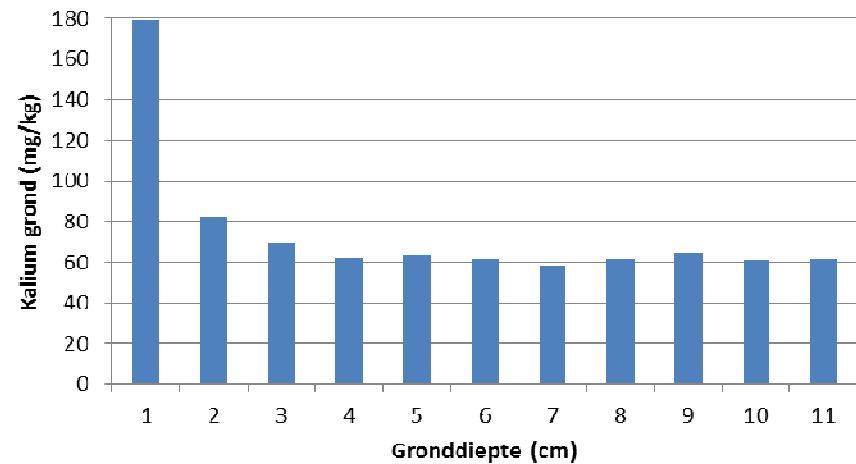


Kalium beweging

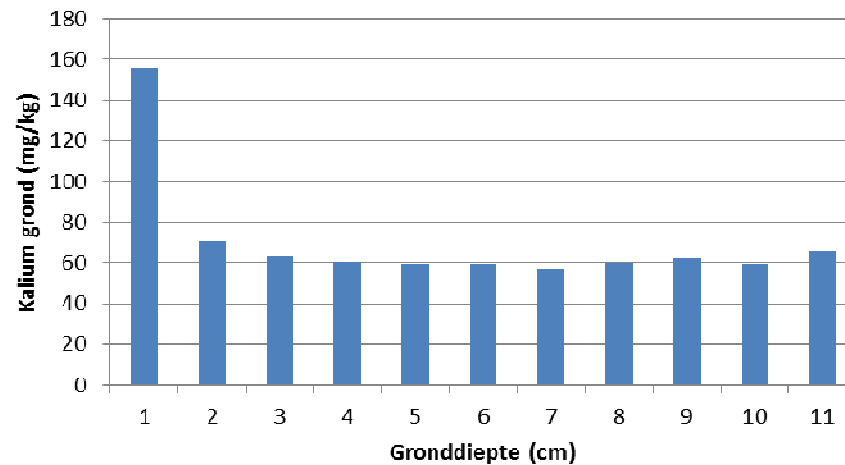
Kaliumkunsmis dan besproei



Besproei dan kaliumkunsmis

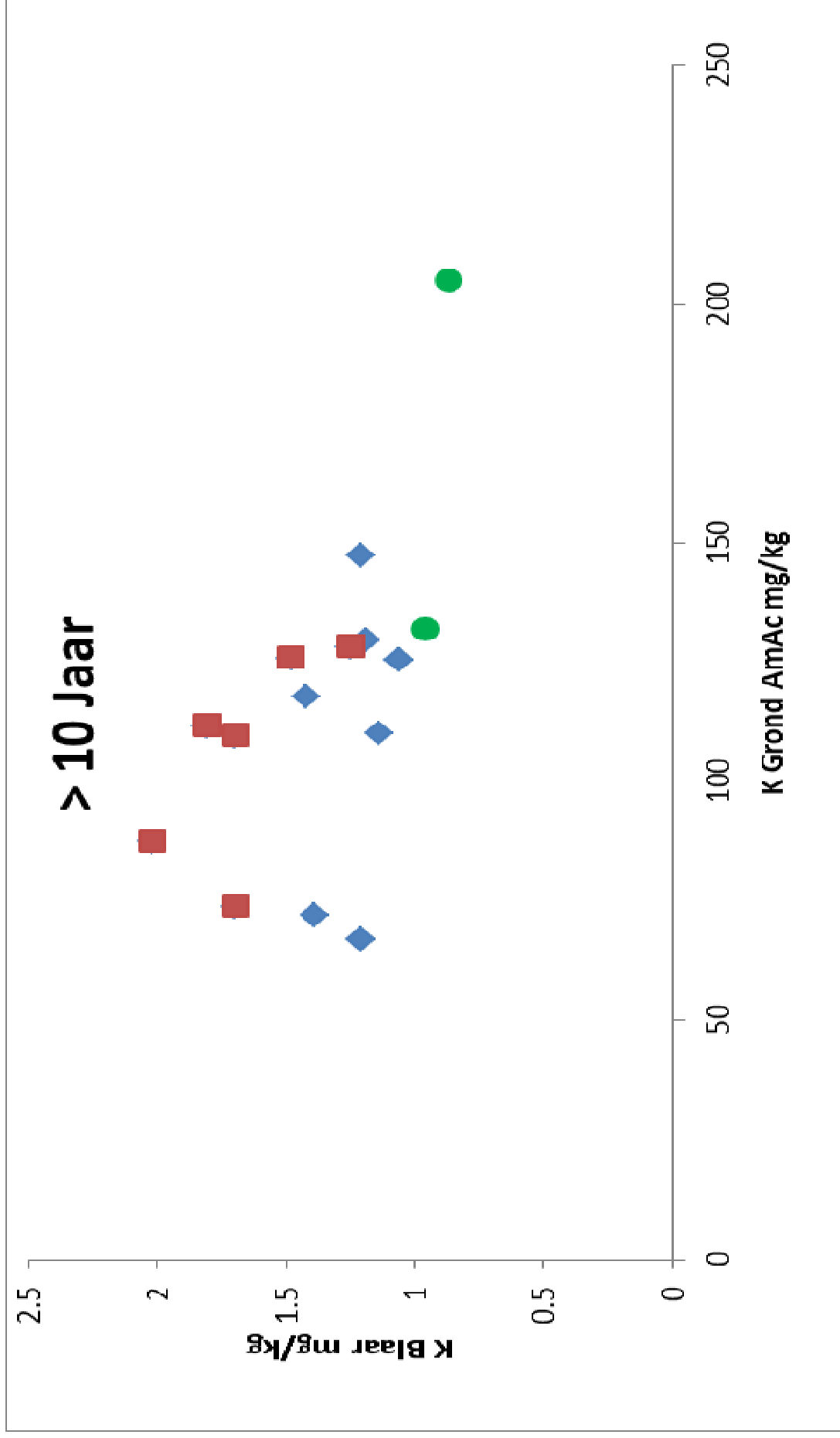


Besproei dan kaliumkunsmis + ammonium



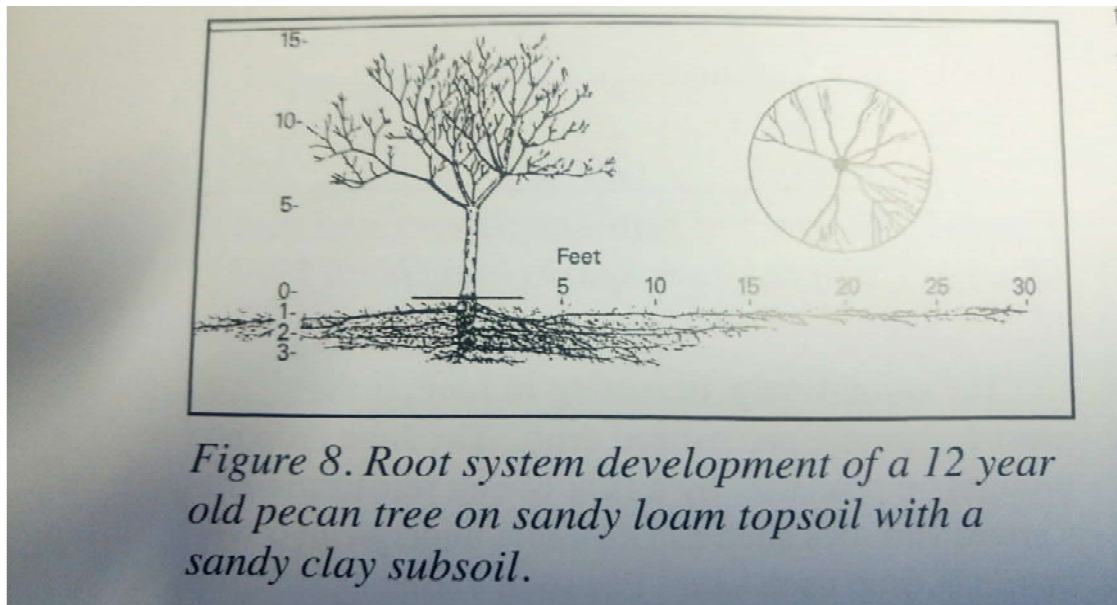






Wortelgroei

- Die wortel verspreiding van 'n volwasse boom kan tot 2 x die bopgrondse groei wees.
- Swak dreinerings en lae pH kan wortelgroei beperk.



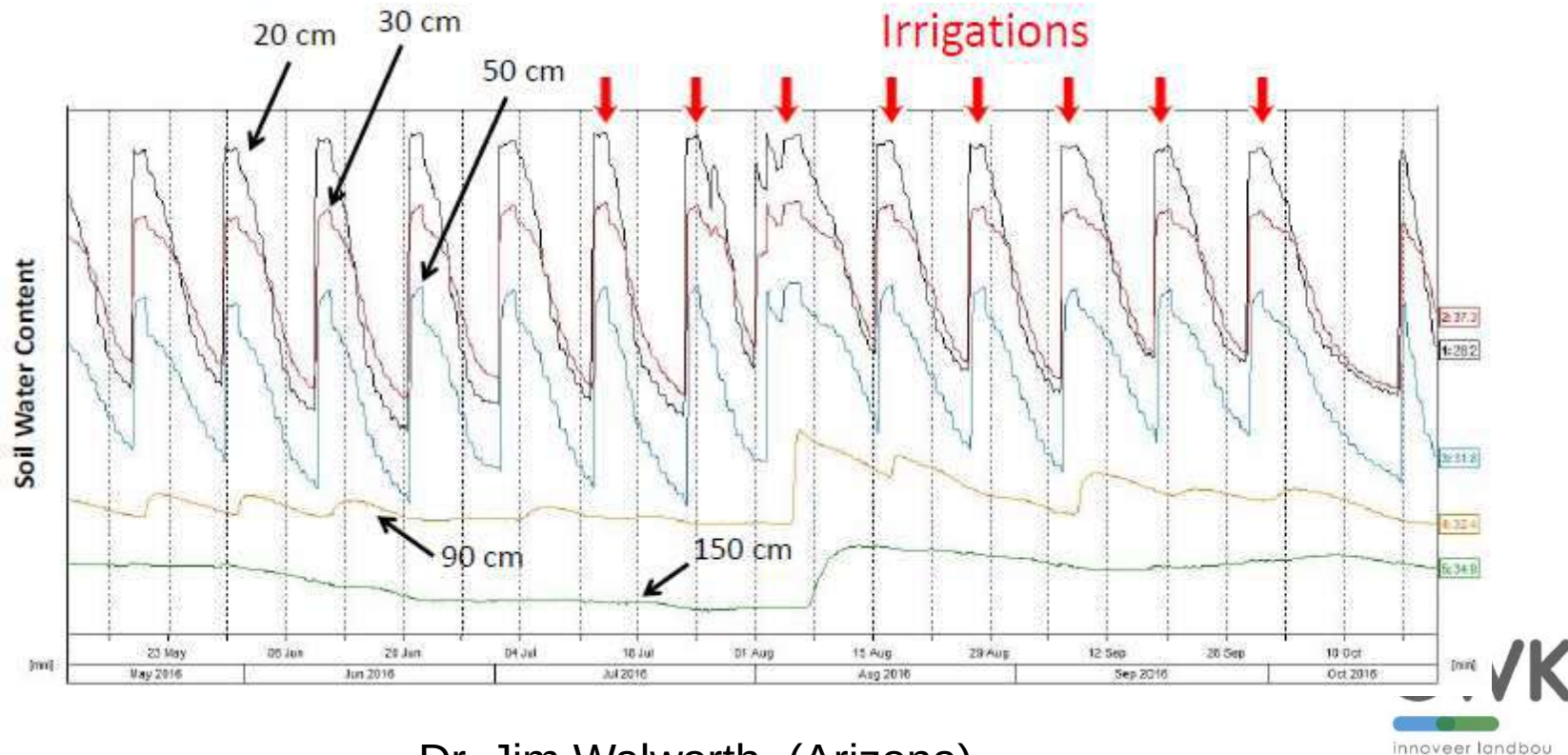




Wateronttrekking (diepte)

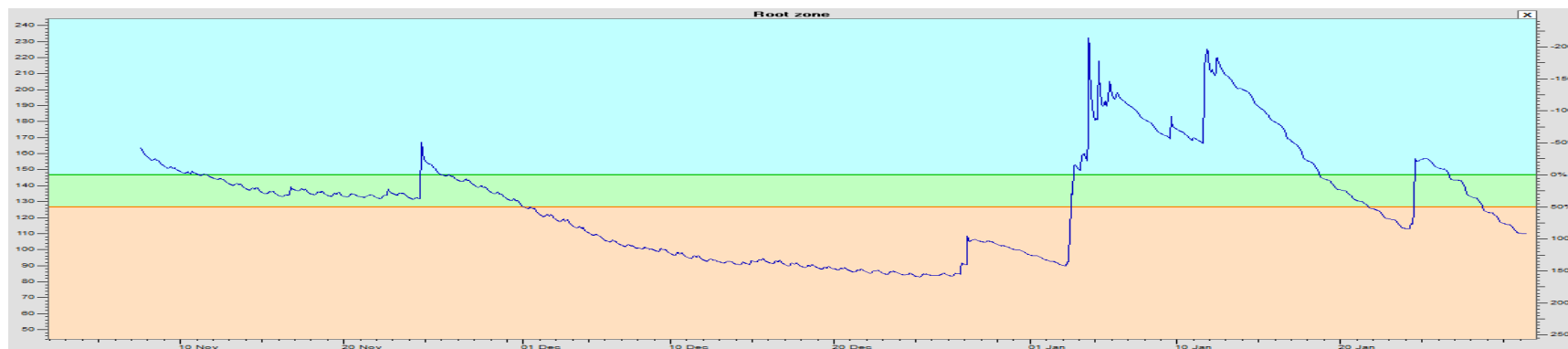
Where is water needed?

The active pecan rooting zone is ~ 1 meter

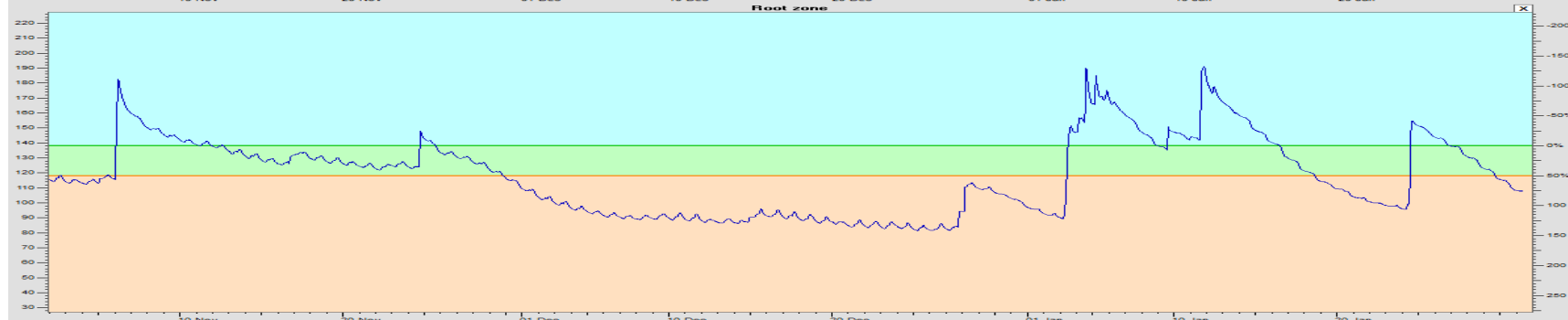


Dr. Jim Walworth (Arizona)

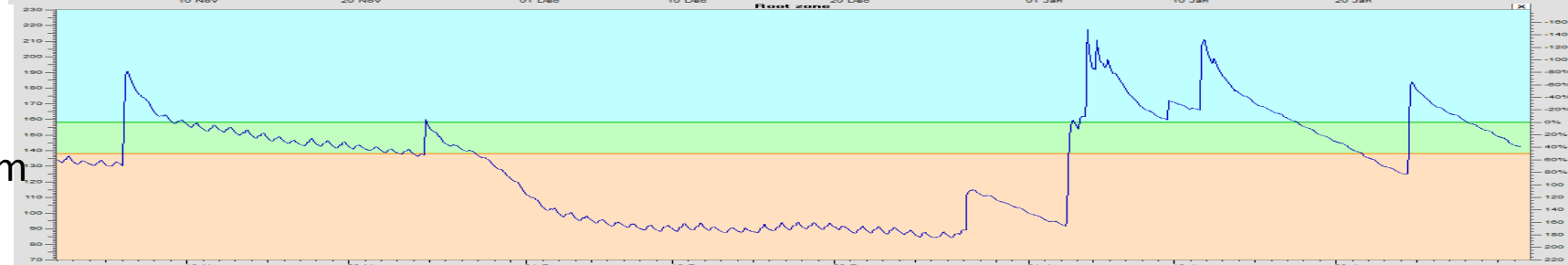
1m



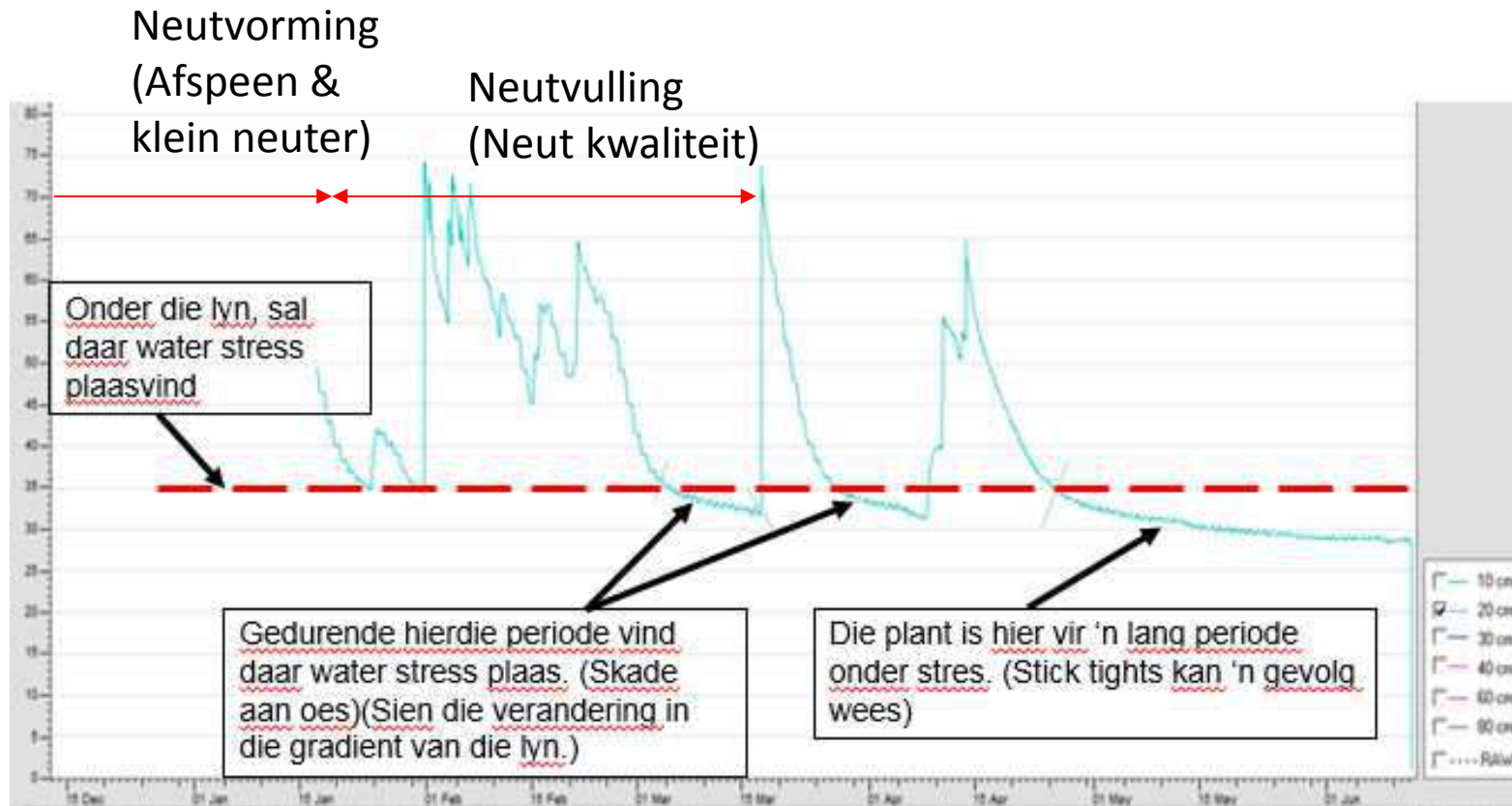
2m



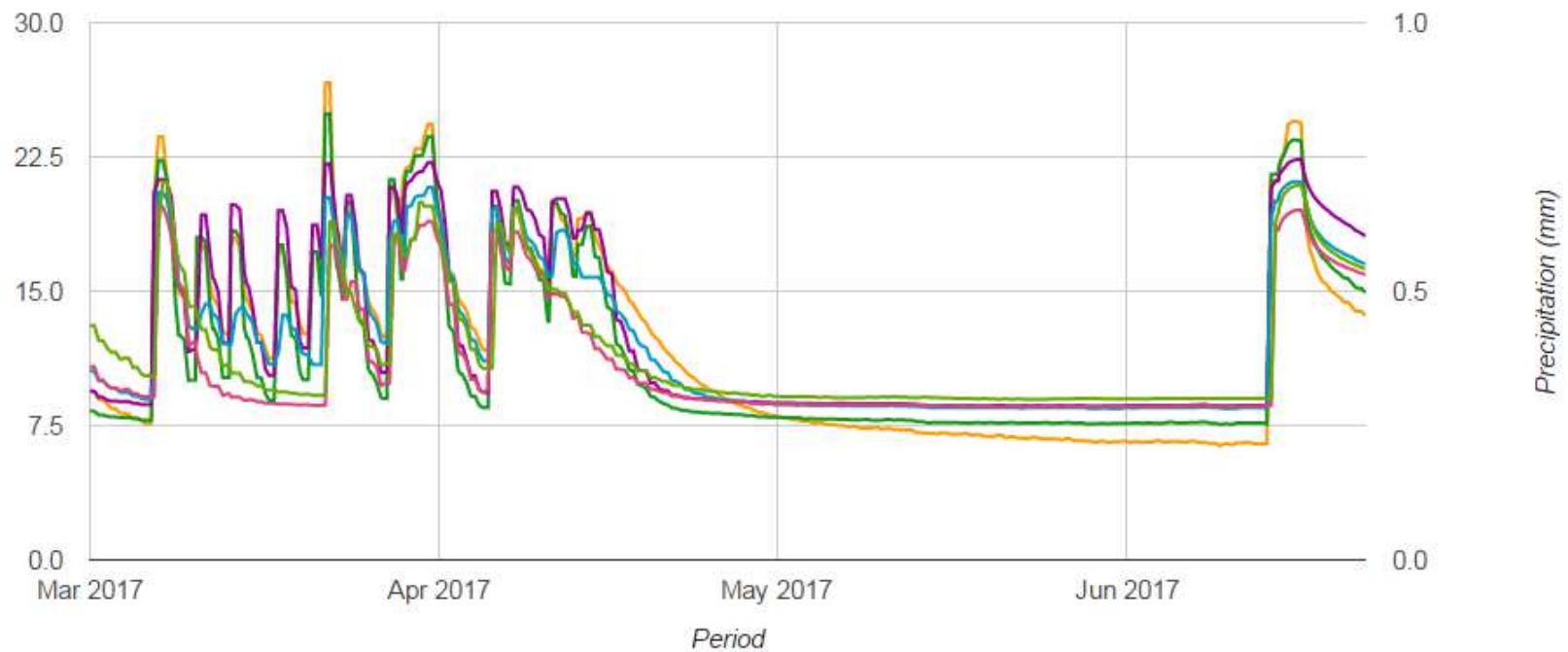
3.5m



Waterstremming



Vogsensors



Onkruidbeheer op jongbome



Onkruidbeheer op jongbome



Weed Control is Key to Faster Establishment and Development

Competition from water & nutrients.



- ⊙ **Smith and Wolf, 1999, determined that 1-2 cool season annual weeds followed by 1-2 warm season annual weeds in a 10 x 12 area around the tree reduced cumulative growth over 3 years from 51%-79%.**

Weed Control Study: Auburn Univ. 1989-1994

Cumulative Profit/Loss \$ / Acre

Leaf	Weedy	Mowing	Weed Free
4th	-1920	-1936	-1970
5th	-2284	-2316	-2184
6th	-2663	-2712	-2175
7th	-2473	-2520	-389
8th	-2182	-2276	528

Cultivar: Desirable, Irrigated

Foshee et al., Proc SEPGA 1996

How much weed free area do you need?

3 feet

7 feet

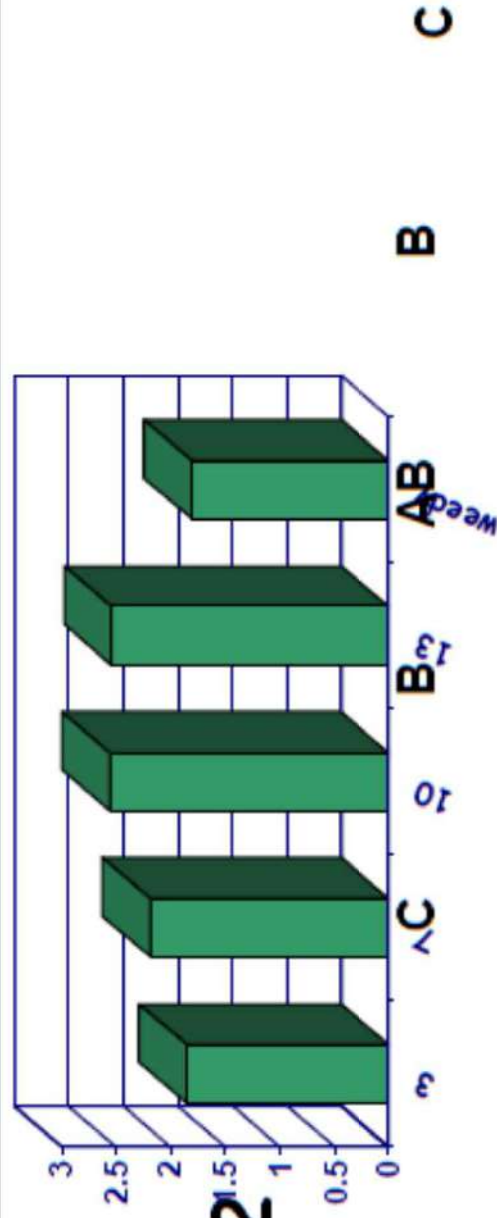
10 feet

13 feet

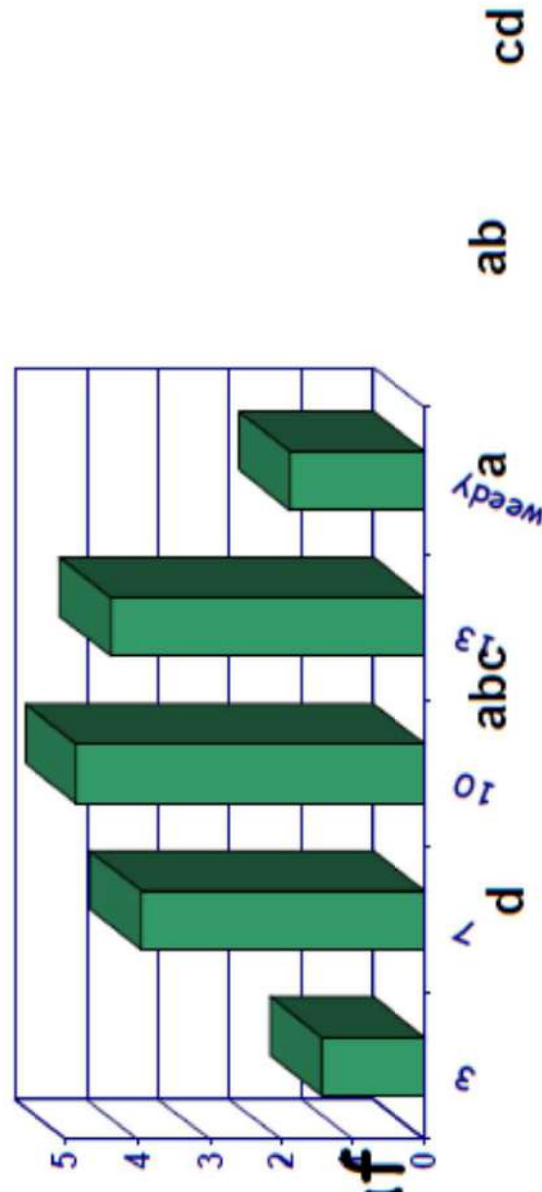


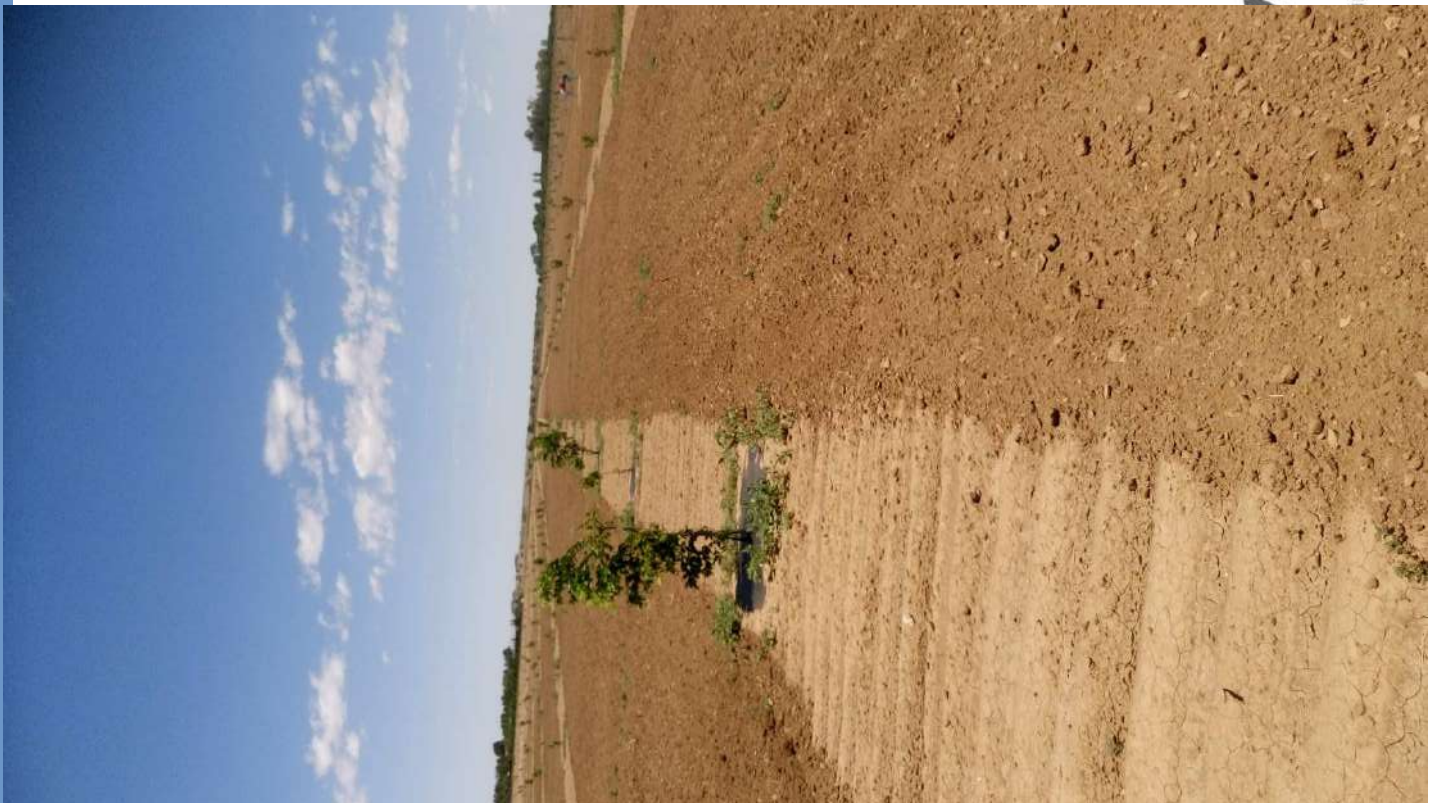
1998 Weed Study, Auburn Univ.; Desirable

Trunk Growth: 1998-2002



Yield 2001, 4th leaf







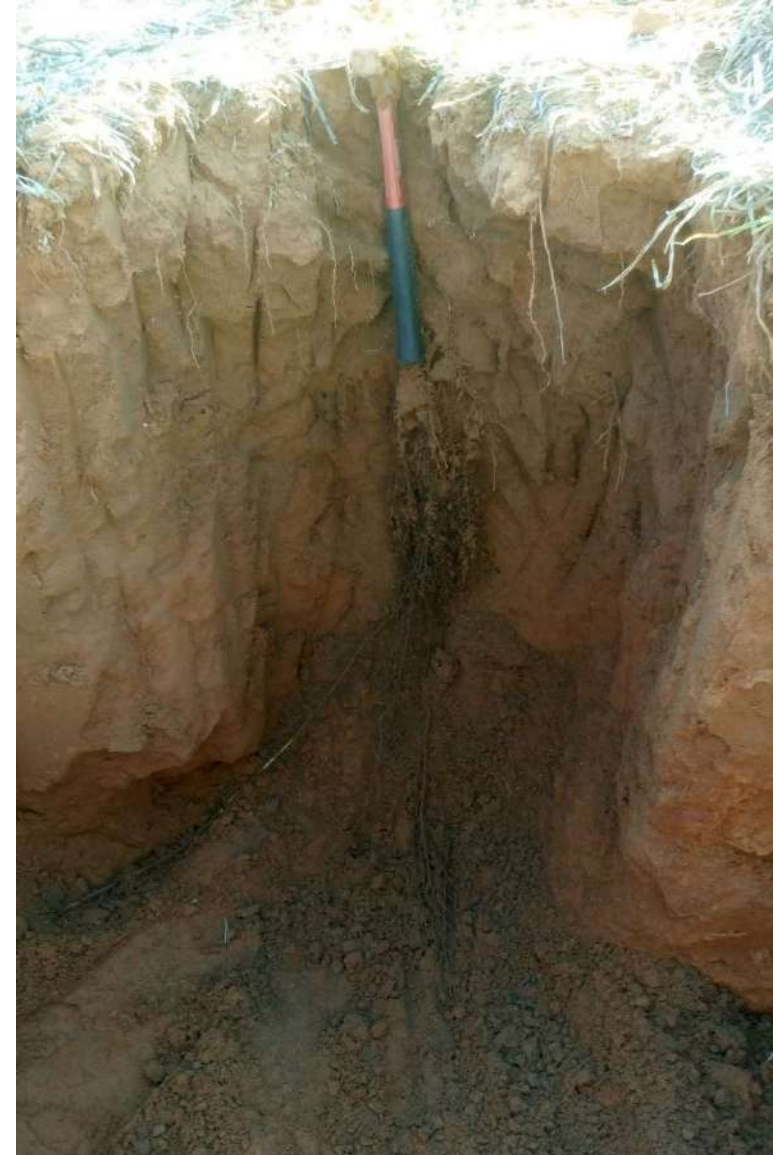
Waarnemings



Neofusicoccum parvum



Wortelontwikkeling (vestiging)









Sink tekort



Sink tekort



Nikkel tekort



Nikkel tekort





Opsomming

- Waterbestuur
- Onkruidbeheer op jongbome
- Deklaag
- Bemesting – meet om te weet

Baie dankie!!

