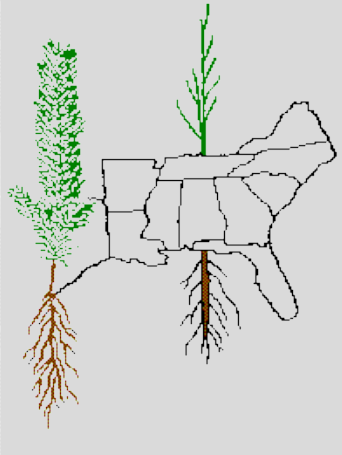
What we saw in the Nursery Coop Clinic in 2012



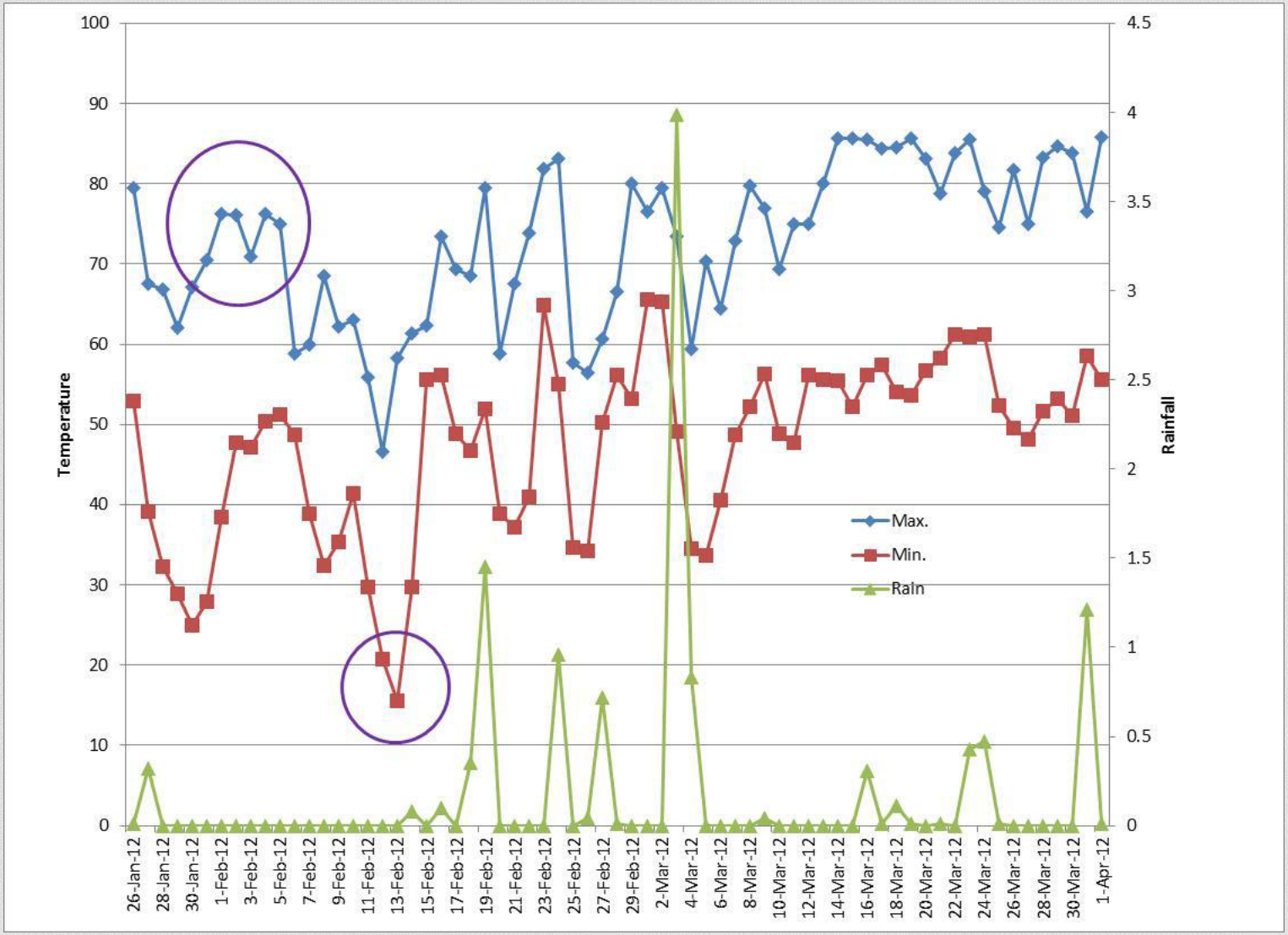
Tom Starkey

Management Alerts

- Potential for freeze injury
- Start your scouting of lygus early
- Change of fungicide sprays for Rhizoctonia

Biggest surprise – what we didn't see

- Freeze Injury


Temperature
Rainfall
Max.
Min.
Rain
100
90
80
70
60
50
40
30
20
10
0
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
26-Jan-12
28-Jan-12
30-Jan-12
1-Feb-12
3-Feb-12
5-Feb-12
7-Feb-12
9-Feb-12
11-Feb-12
13-Feb-12
15-Feb-12
17-Feb-12
19-Feb-12
21-Feb-12
23-Feb-12
25-Feb-12
27-Feb-12
29-Feb-12
2-Mar-12
4-Mar-12
6-Mar-12
8-Mar-12
10-Mar-12
12-Mar-12
14-Mar-12
16-Mar-12
18-Mar-12
20-Mar-12
22-Mar-12
24-Mar-12
26-Mar-12
28-Mar-12
30-Mar-12
1-Apr-12

Other events

- Fusiform rust from a non-coop member on seedlings
- Tip blight – every year
- Heat injury on seedlings
- Rain + stress + damping off fungi
- Insect feeding on seedling stems near a weedy area

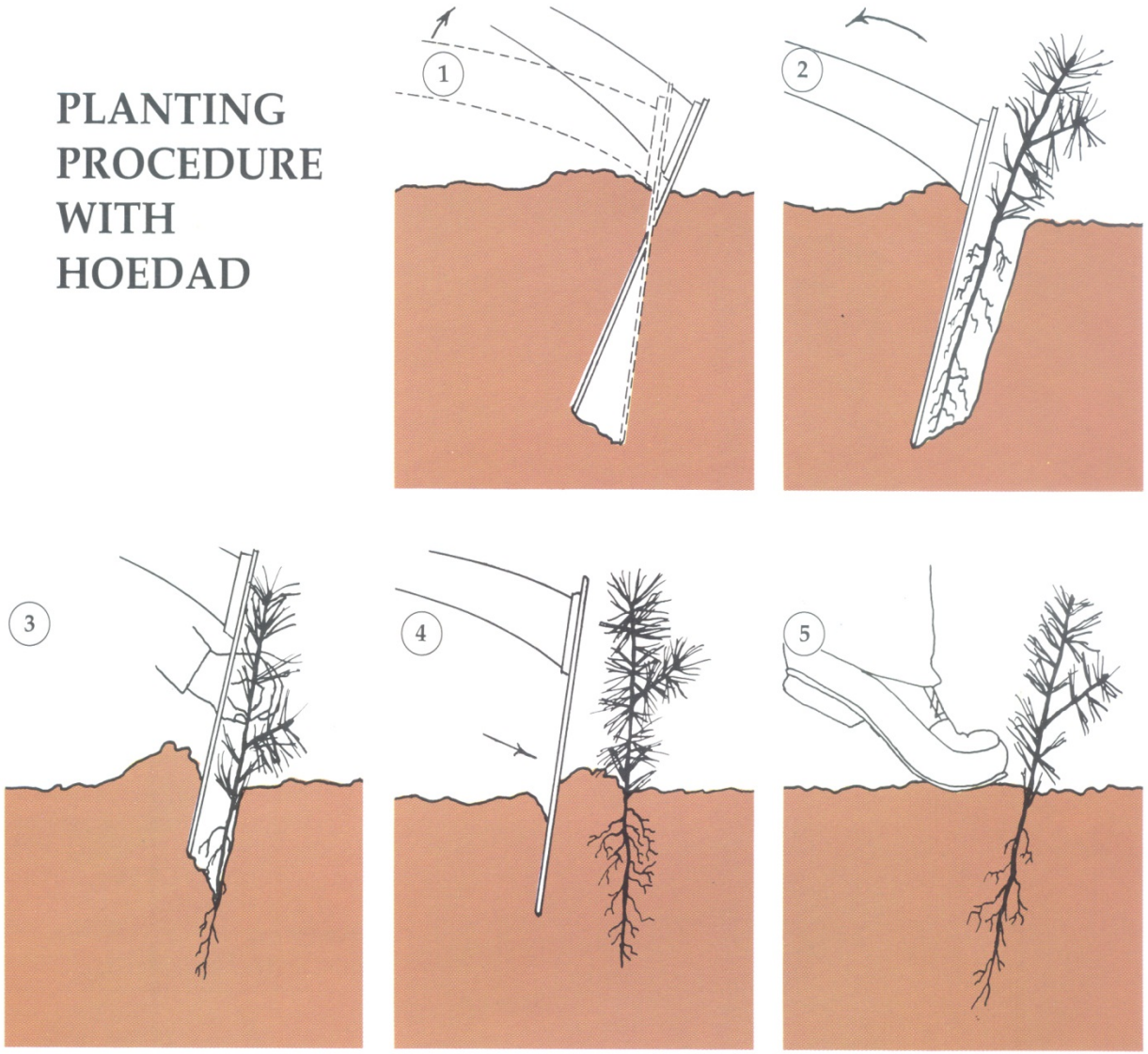
Other events

- Pales weevil
- Tip moth infestation
- Held over, root bound, chlorotic, container seedlings
- Unknown leaf spot of Eucalyptus

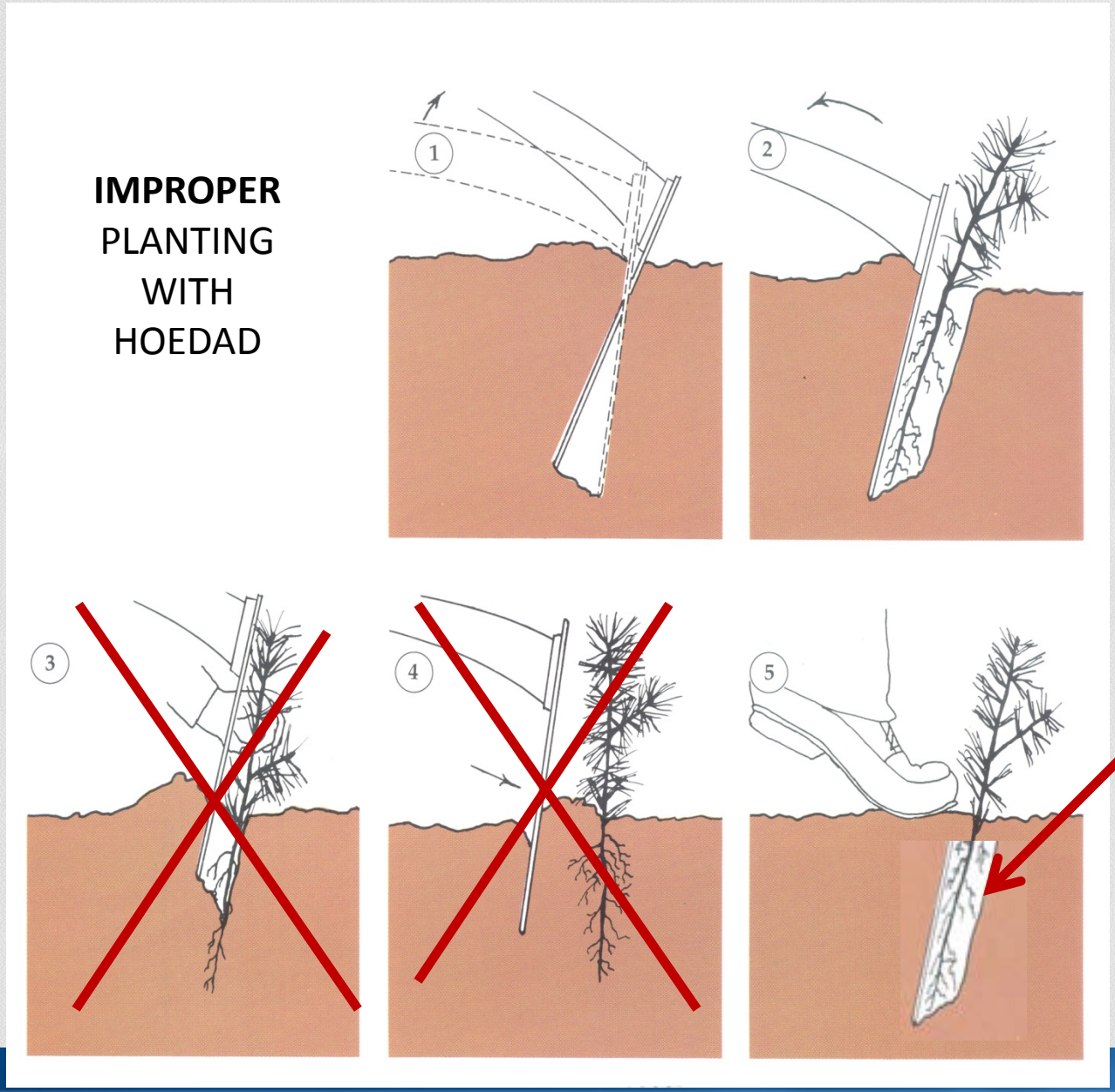
Other events

- Poor planting
  - Not deep enough
  - Scuff marks on seedlings
  - Improper use of hoedad

PLANTING PROCEDURE WITH HOEDAD

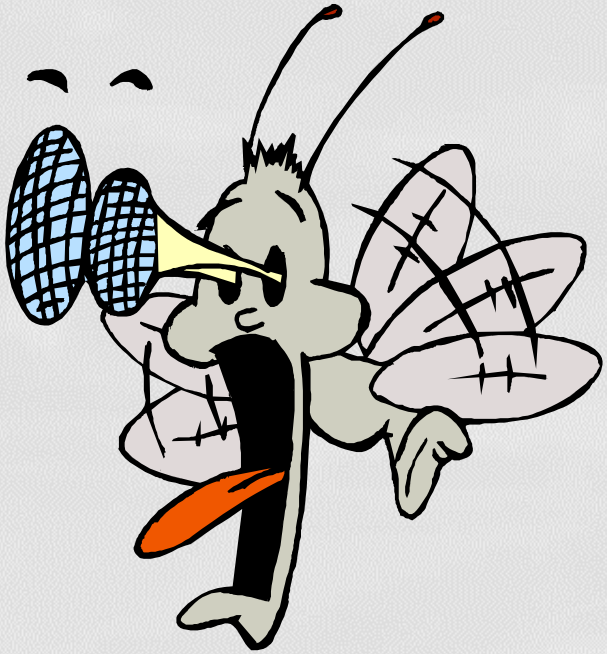


IMPROPER
PLANTING
WITH
HOEDAD



Lack of contact between the roots and soil

The most interesting “problem” we have seen in years occurred just a few weeks ago…….

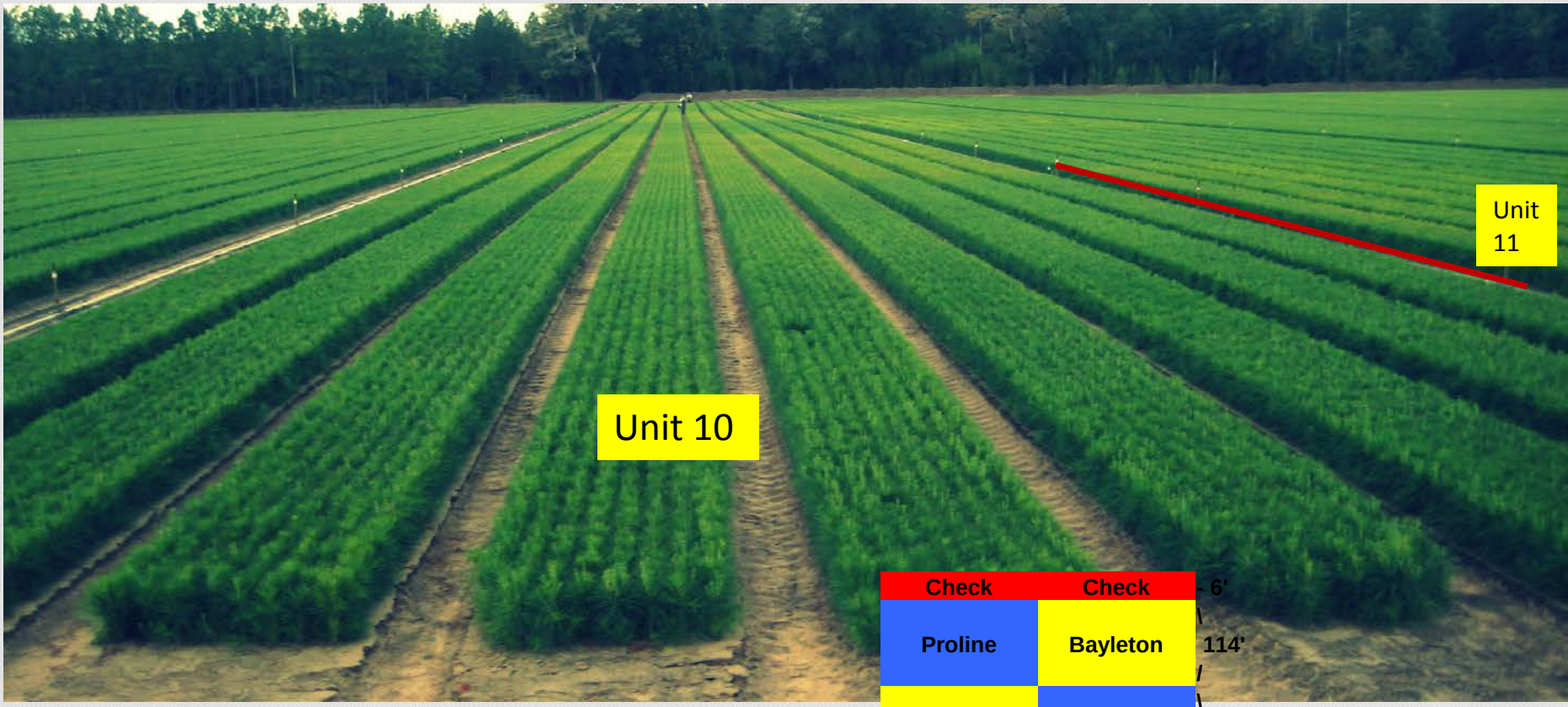


Research Toward Increasing Nursery Productivity

Research Toward Increasing Nursery Productivity

History

- Study initiated April 2011. Purpose of study – to compare Bayleton @ label rate to Proline @ label rate on slash pine in 2 nursery units
- Nursery is a sandy textured soil
- Proline applied @5.5 fl oz/a starting early May for 5 sprays (every 14 days)
- Bayleton applied 8 oz/a early May for 4 sprays (every 21 days)
- No significant seedling differences detected in 2011
- No soil tested done in 2011
- April 2012 whole unit sown in loblolly pine
- Normal fertilization and management applied to all units
- Bayleton applied on whole unit
- 2 Proline applications made in Aug/Sept @5.5 fl oz/a for Rhizoctonia
- Normal fertilization program stopped sooner than in 2011
- Streaking noticed in Mid October 2012



Unit 10	Unit 11	
Check	Check	6'
Proline	Bayleton	114'
Bayleton	Proline	120'
Proline	Bayleton	120'
Bayleton	Proline	120'
Proline	Bayleton	120'
Bayleton	Proline	120'

Results

- Sample of each plot were taken Oct 2012.
- No differences in RCD, Dry wt top, dry wt roots,
- No difference in root morphology (root length, root diameter, root volume, root tips and root forks (a measure of mycorrhizae).
- See next page for foliar and soil analysis. Each value for each fungicide is the average of 6 plots.

	FOLIAGE				SOIL	Lbs/a	
			SIG				SIG
	Bay	Pro			Bay	Pro	
N%	1.94	1.32	<.0001	Nitrate N	0.91	0.77	
P%	0.28	0.22	0.0002	P	59.67	55.17	
K%	0.93	0.93		K	63.67	72.33	
Mg%	0.11	0.12		Mg	22.67	19.00	
Ca%	0.34	0.36		Ca	162.33	147.50	
S%	0.14	0.11	0.0002	S	55.50	52.83	
Bppm	5.83	6.00		B	0.20	0.20	
ZNppm	63.00	61.17		Zn	1.30	1.25	
MNppm	827.67	787.00		Mn	37.17	19.00	0.06
Feppm	171.17	160.33	0.03	Fe	66.50	48.50	0.04
Cuppm	6.67	6.17		Cu	0.60	0.63	

Slash Pine

	Percentage Fill		Final		
Slash Pine	Week 5	Week 17	RCD (mm)	HT (cm)	Biomass (gm/sqft)
Proline + No Plug	91.9 a	91.7 a	3.7 ab	26.8 a	92.3 a
No Proline + No Plug	86.4 a	72.5 b	3.6 b	24.4 b	64.0 b
lsd	5.9	8.2	0.1	1.4	8.5