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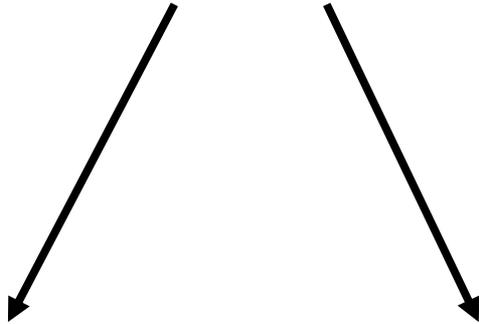
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# Landscape20 and Sports&Turf Pot Trials: Key results

Landscape<sup>◆</sup>20 Sports&Turf<sup>◆</sup>

# Objectives

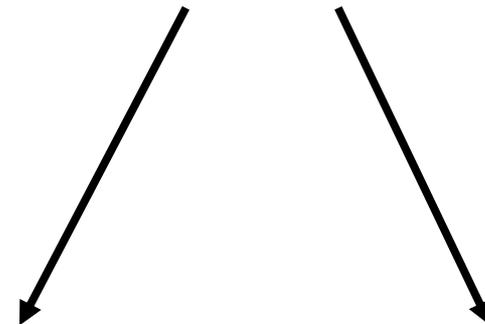
**Nutrient content and retention**



**Seeded  
situations**

**Turfed  
situations**

**Water retention**



**Seeded  
situations**

**Turfed  
situations**

Trials conducted in Autumn 2020



# Pot trial design

- Decided most effective way to do this was to run four pot trials



## Treatments

- Landscape20
- Tee mix (70:30 sand:peat mix)
- Clay loam soil
- Sand:soil mix (80:20 sand:soil)
- Sports&Turf
- USGA style free draining mix (80:20 sand:peat mix)

For water retention trials there were 30 pots (6 treatments x 5 replications)

For nutrient retention trials there were 36 pots:

6x different growing media

2x different nutrient inputs (no preseed or preseed)

3x replications



# Assessments

Common to all trials had weekly assessments of:

- Turf quality
- Turf colour
- Turf density
- Turf uniformity
- Turf stress
- Sward height
- Rooting length and density

Nutrient trials:

Soil chemistry at end of trial when destructively sampling pots for rooting

Seeded trials:

Days to germination

Grass establishment (maturity)



# Results: Turfed nutrient retention trials

- Pre-seeder effects meant data were separated into pots with and without pre-seeder
- Turfed trial did not show major visual differences between treatments
  - Nature of pre-existing support network from the turf rather than seeded areas
  - Sports & Turf and Landscape20 performed similarly
  - Sandiest mix (USGA) tended to perform slightly better, This was due to greater root development

14 September



11 November



# Turfed nutrient retention rooting depth



Landscape 20



Sports&Turf



USGA



Tee mix



Sand:soil mix



Clay loam soil

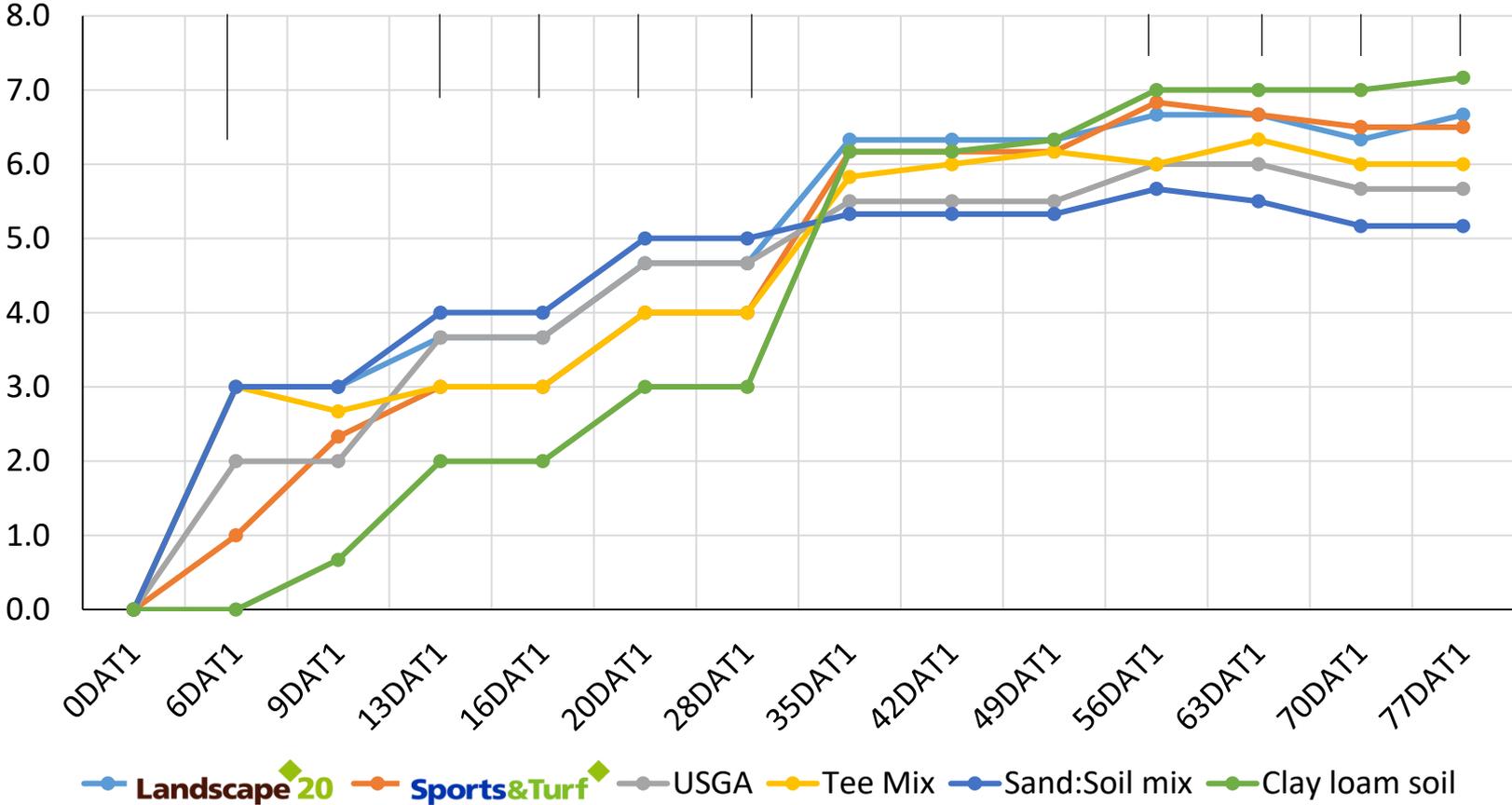


# Seeded nutrient retention trial

- Key differences were in pots without pre-seeder
- Differences most evident at end of trial
- **Landscape<sup>20</sup>** :
  - Green and less stressed turf
  - Optimum growth rates
  - Longer roots than a number of other treatments
  - On other metrics it performed similarly to competitor mixes
- **Sports&Turf<sup>20</sup>** :
  - Overall performance similar to the USGA mix
  - Slightly slower germination than Landscape20 but similar to USGA mix
  - At end of trial was greener with less stress symptoms
  - When pre-seeder was applied, had longer roots than other mixes (except USGA)



# Seeded trials: No pre-seeder turf colour



# Seeded trials: Root length without pre seeder



Landscape 20



Sports&Turf



USGA



Tee mix



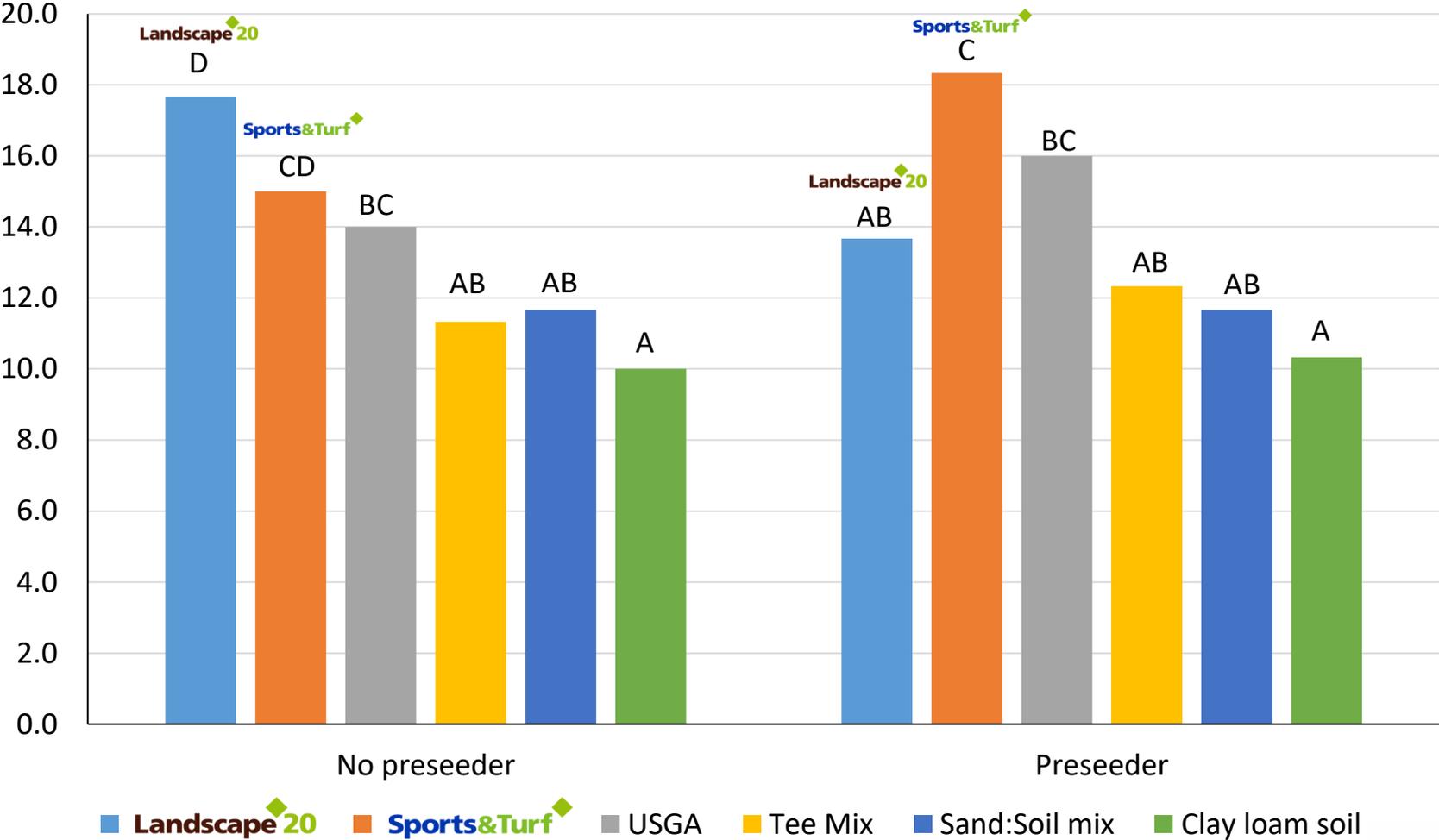
Sand:soil mix



Clay loam soil



# Seeded trials: Root length



# Seeded trials: Nutrient content of treatments

Treatment	pH	P <sub>2</sub> O <sub>5</sub> (mg/l)	K <sub>2</sub> O (mg/l)	Mg (mg/l)	Ca (mg/l)
No pre-seeder					
<b>Landscape 20</b>	7.4	74	>241	146	>2000
<b>Sports&amp;Turf</b>	7.6	79	>241	51	>2000
USGA	5.4	19	22	45	997
Tee mix	5.0	13	12	45	1036
Sand: soil mix	6.7	36	28	55	968
Clay loam soil	6.9	89	>241	214	>2000
Pre-seeder applied					
<b>Landscape 20</b>	7.4	81	>241	154	>2000
<b>Sports&amp;Turf</b>	7.3	76	>241	56	>2000
USGA	5.6	25	22	36	789
Tee mix	5.0	19	19	50	1230
Sand:soil mix	6.6	35	30	73	1147
Clay loam soil	6.7	78	>241	201	>2000



# Key findings: Nutrient retention trials

- Both Landscape20 and Sports & Turf performed well and would be excellent seed and turf bed materials
- Both were comparable, if not better, than comparison mixes
- Both had measurable higher nutrient contents
- Landscape20 was optimal material in terms of promoting plant health and growth



# Results: Water retention trials

- **Turfed trial:**

- As with the nutrient retention trial differences were less clear with turf installed
- It took time (around 25 days) for more severe turf stress to be observed
- Sandier mixes tended to dry out quickest (USGA)
- Sports & Turf became more stressed at end of trial than Landscape20 and the heavier textured mixes
- Landscape20 performed similarly to the comparison mixes and had less stress symptoms than the sandiest mixes.
- Rooting density was optimal in Landscape20 and Sports & Turf compared to the heavier textured mixes



# Water retention trials

September



November



December



# Results: Water retention trials

- **Seeded trials:**

- Landscape20 took longer to germinate
- Landscape20 established more quickly
- Germination and establishment in Sports&Turf pots was similar to comparison mixes
- Landscape20 performed well under increasing drought stress helping to maintain healthier and happier grass plants for longer, with better turf density.
- Sports & Turf performed similarly to the sandier mixes (USGA)

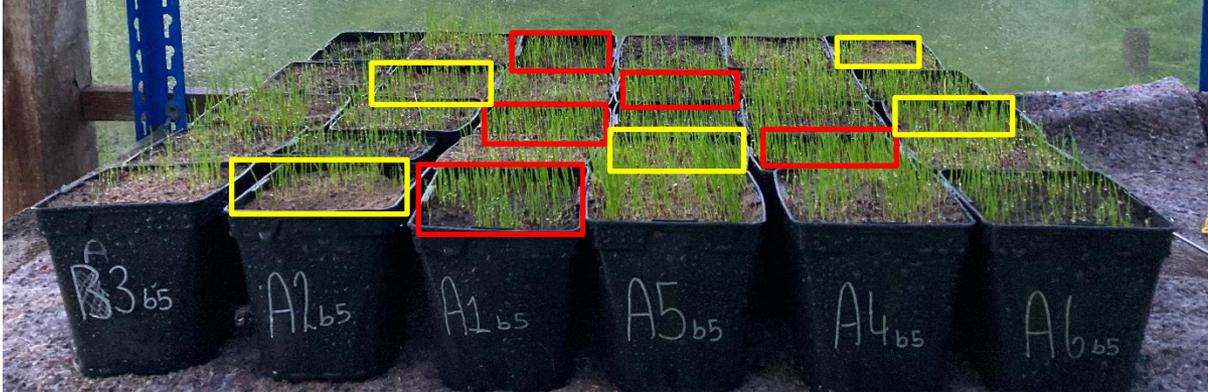


# Seeded trials: Germination and establishment

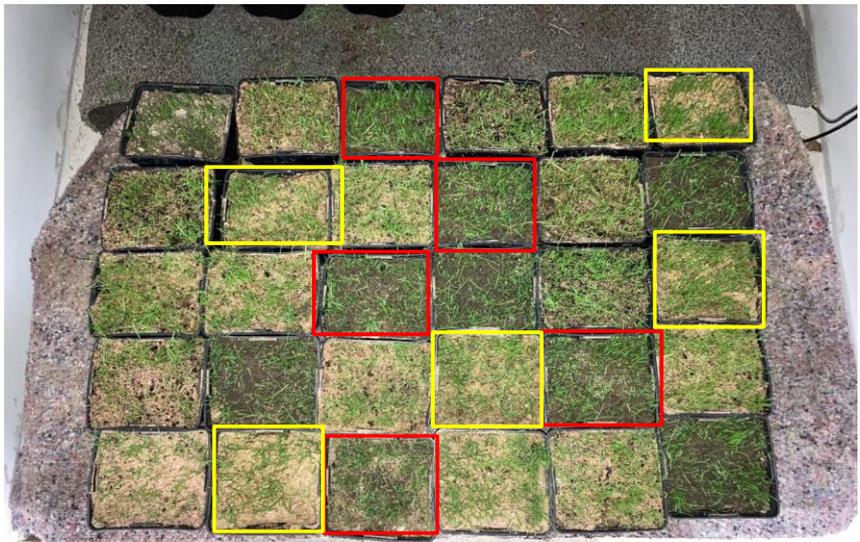


 Landscape 20

 Sports&Turf

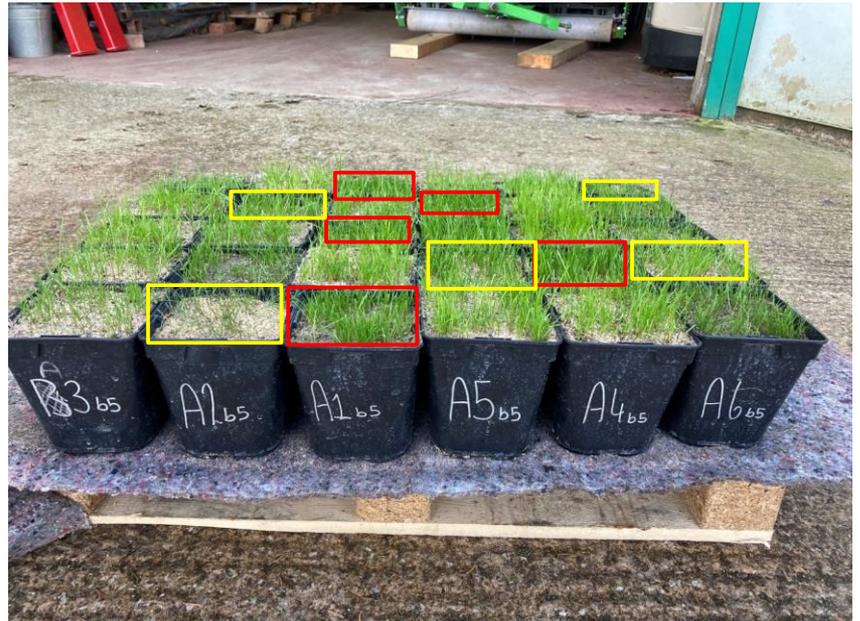


# Seeded trials: Germination and establishment



 Landscape 20  
 Sports&Turf

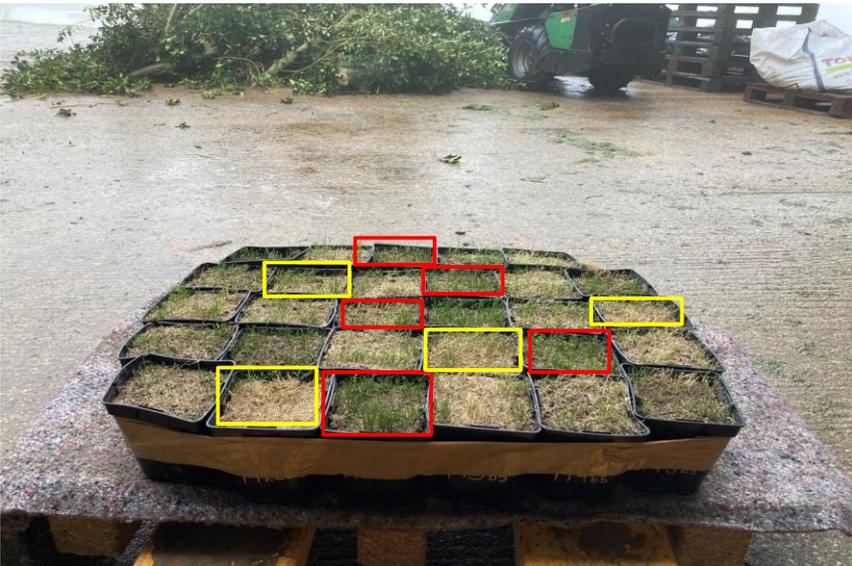
Dry down (23 December)



Dry down (31 December)



# Seeded trials: Germination and establishment

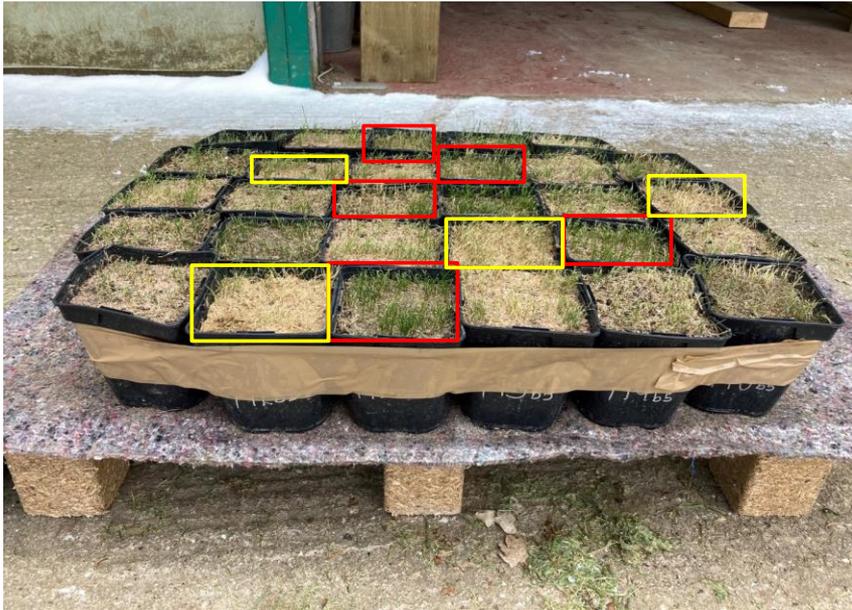


Landscape 20



Sports & Turf

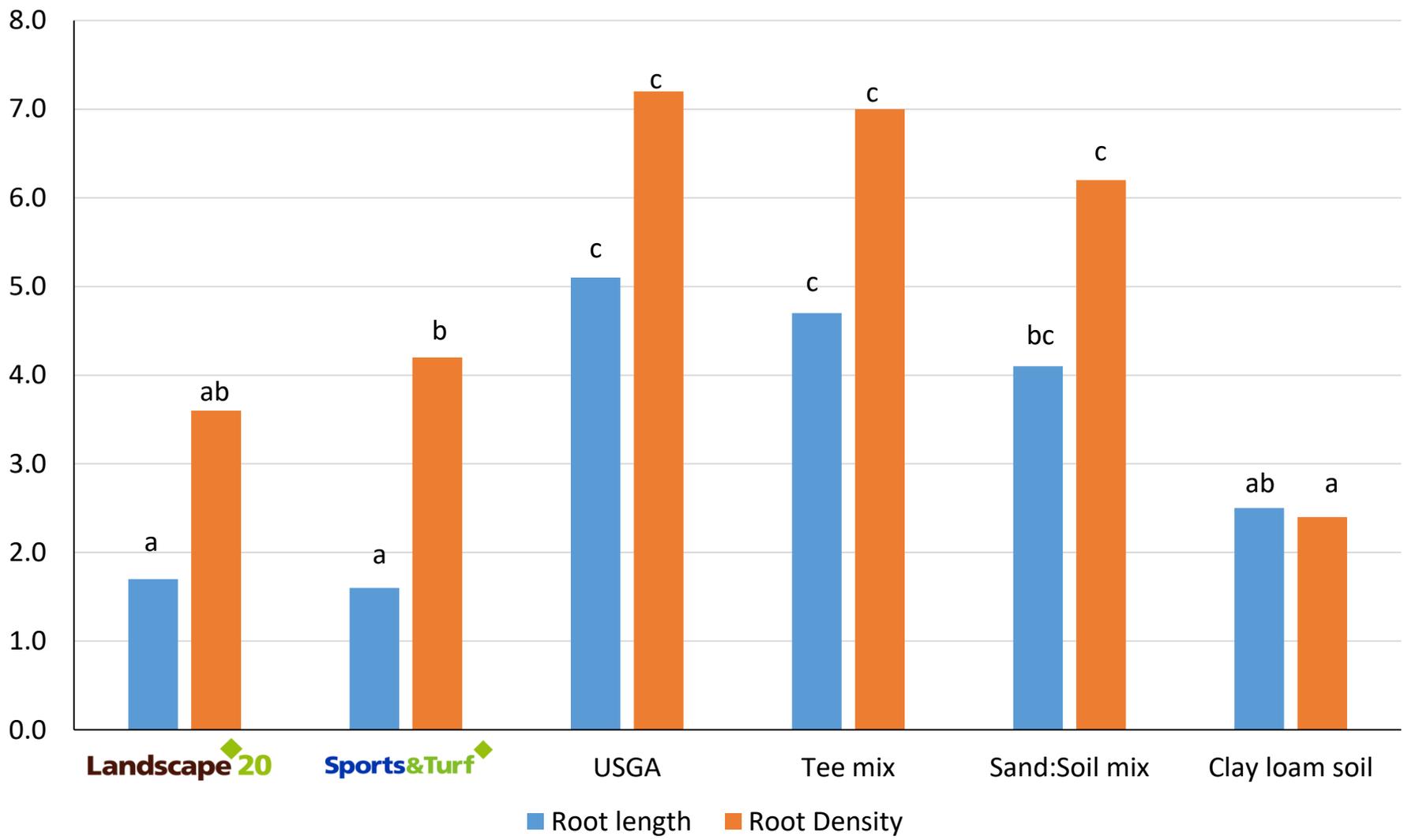
Dry down (4 February)



Dry down (9 February)



# Seeded trials: Rooting length and density



# Key findings: Water retention trials

- Landscape20 was the overall optimum treatment as it helped mitigate effects of droughting and slowed the rate of decline through droughting
- Sports & Turf performed similarly to similar high specification sandy growing media
- In situations where water savings are required or water inputs will be limited Landscape20 is an excellent choice

