Postfire Restoration of Soil Hydrology and Wildland Vegetation Using Surfactant Seed Coating Technology

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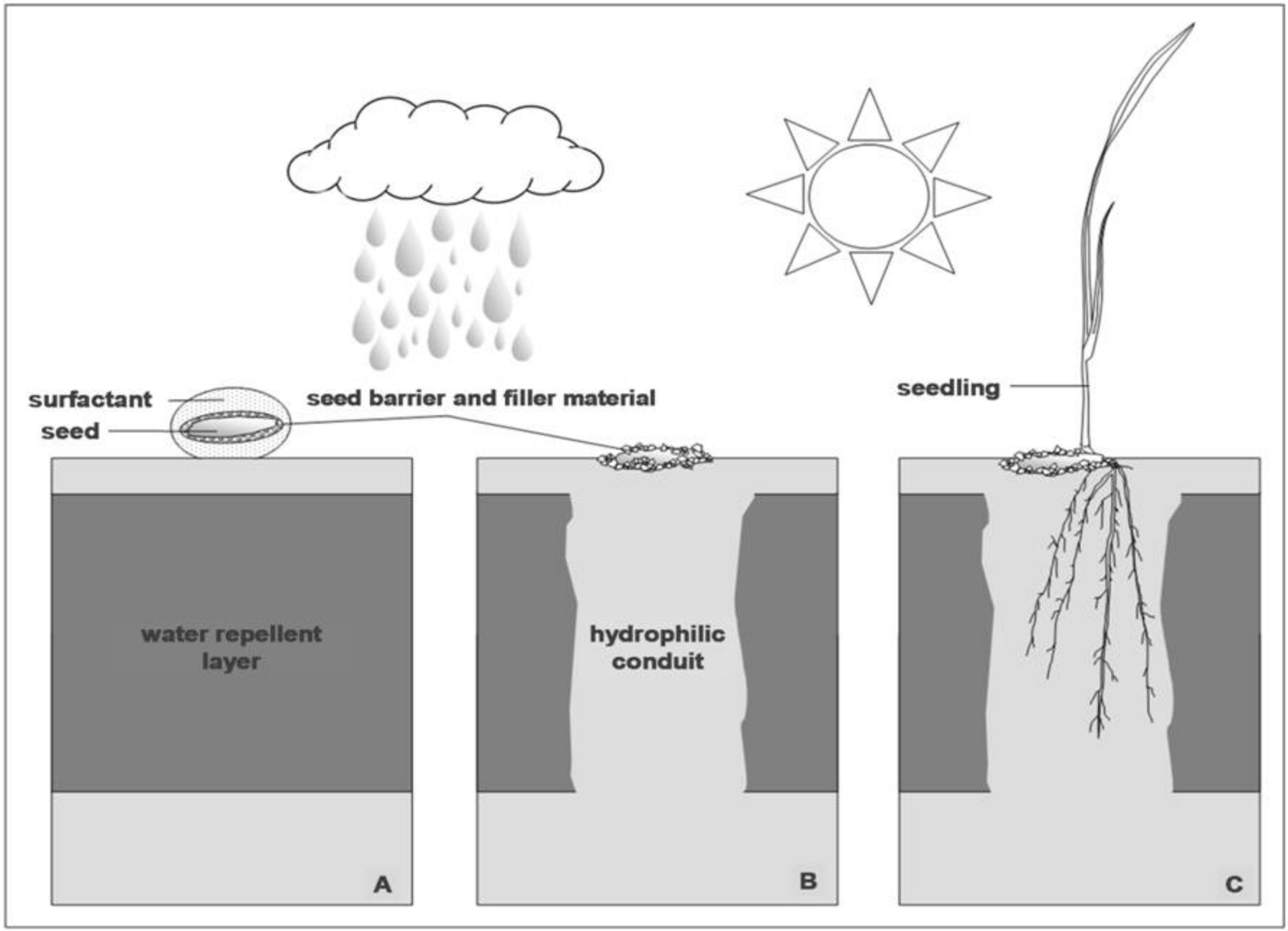
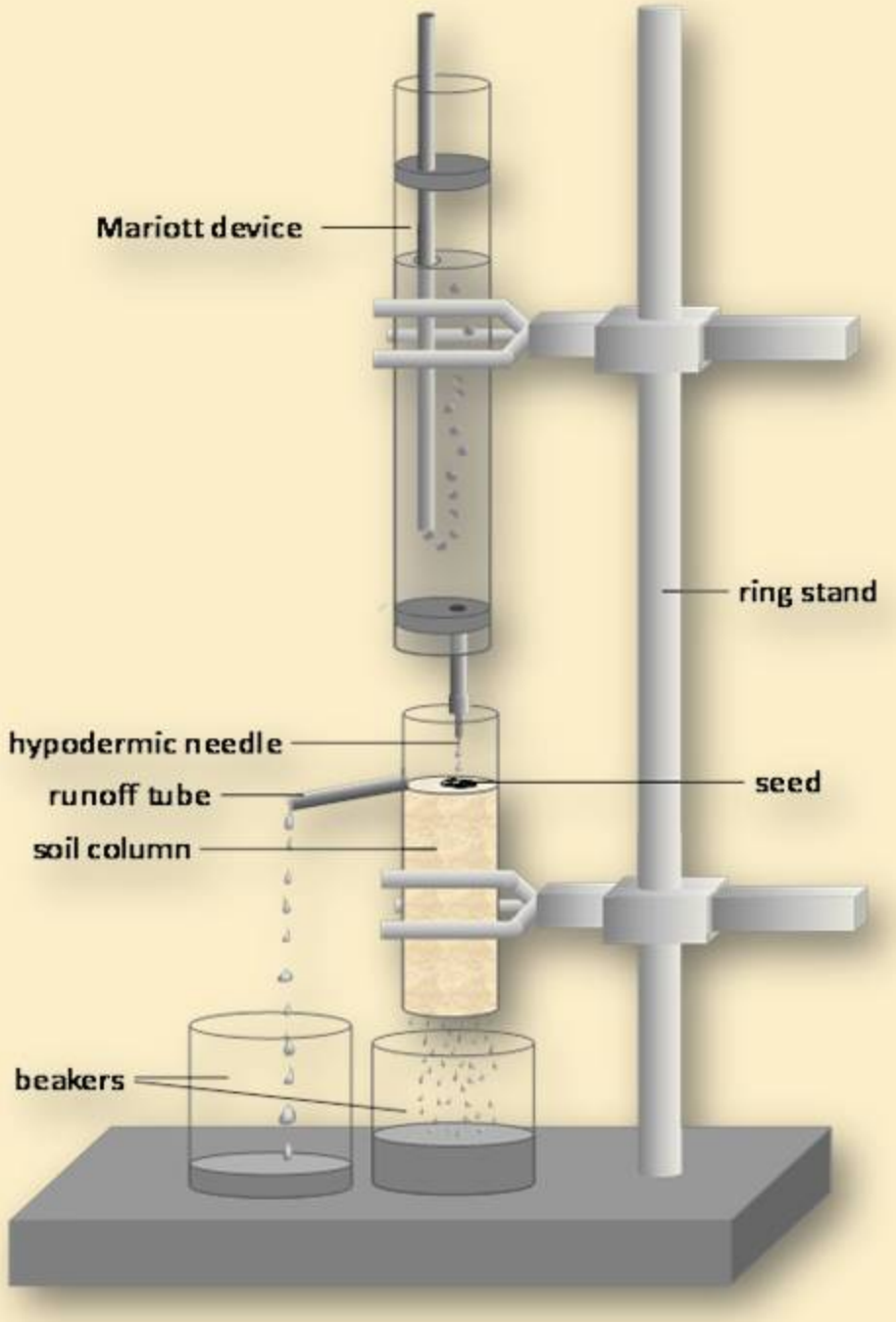

surfactant
seed
seed barrier and filler material
seedling
water repellent layer
hydrophilic conduit
A
B
C

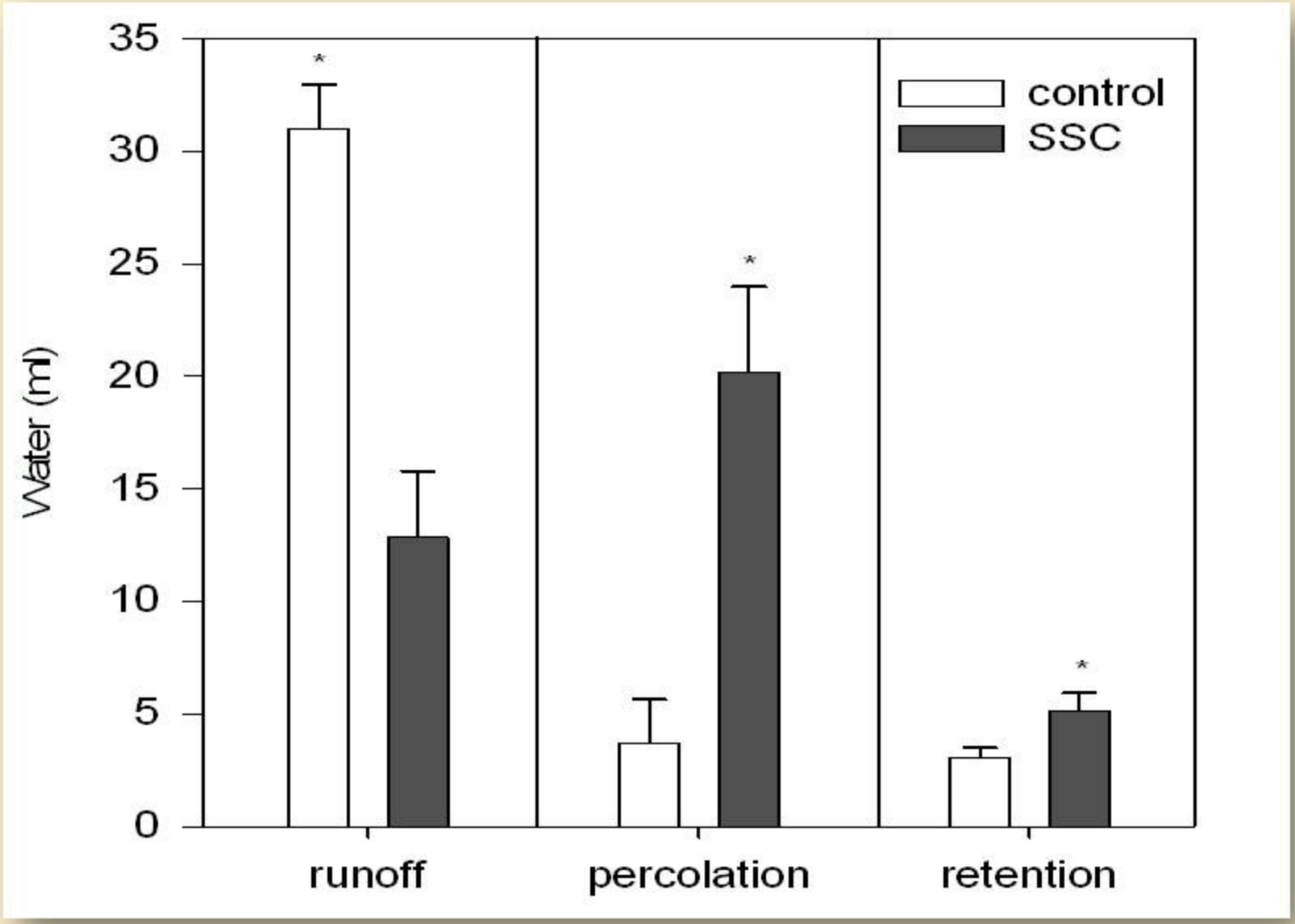
Objectives

1. Establish the efficacy of a surfactant seed coating (SSC) in ameliorating soil water repellency.
2. Determine the influence of SSC on seedling emergence and survival.

Experiment 1



Experiment 1 Results



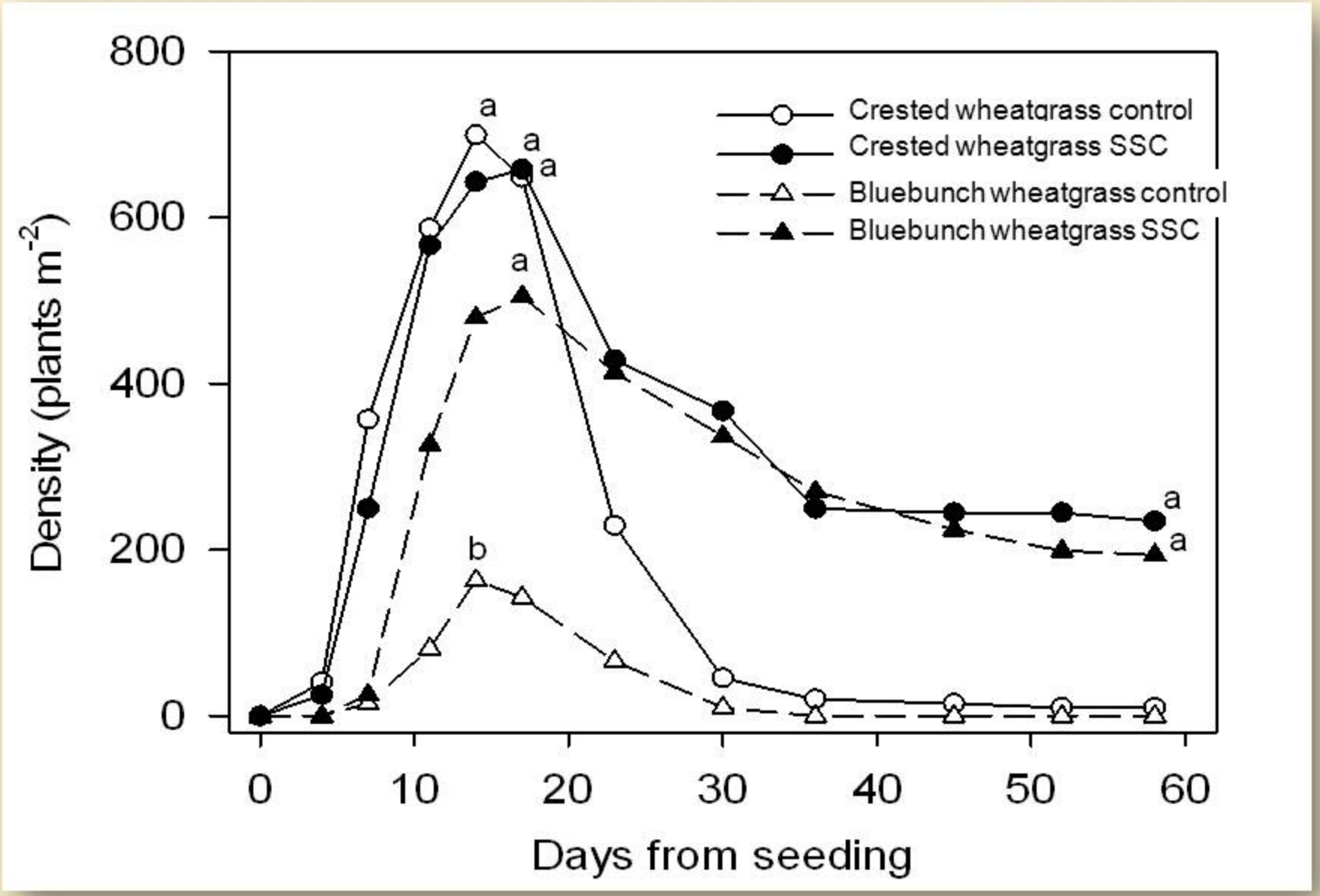
Experiment 2

The influence of SSCs on seedling emergence and plant survival was evaluated in the greenhouse.

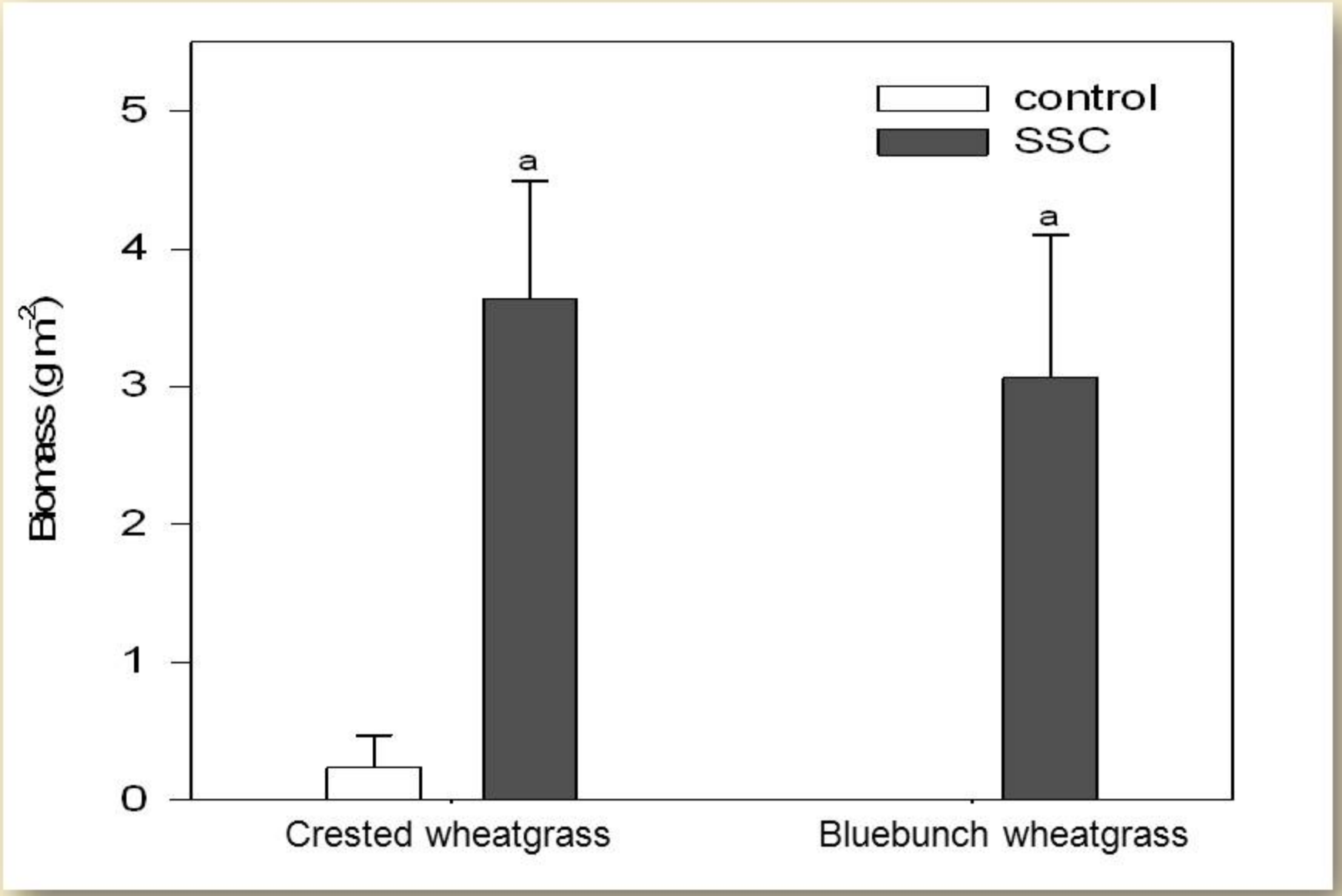
Two species:
Bluebunch wheatgrass
Crested Wheatgrass

Two treatments:
Control
SSC

Experiment 2 Results- Density



Experiment 2 Results- Biomass



Conclusion

SSC technology may improve reseeding success in post-fire water repellent soil.

There is some variation by species, but in general plant emergence, survival and biomass production is enhanced by SSC treatment.

Additional studies are required to refine coating rates, materials, and techniques, and confirm these findings in the field.

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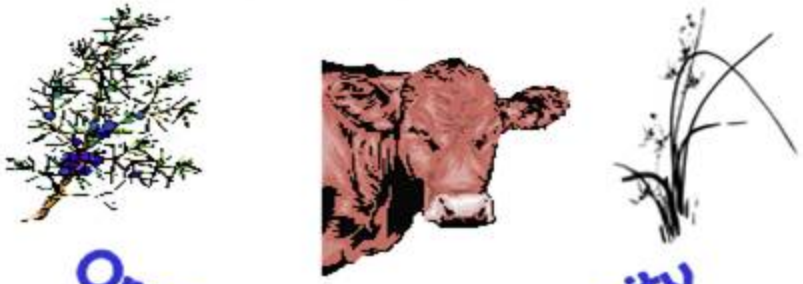

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