Planting date and environments affect sunflower development, yield and *Sclerotinia* head rot progression

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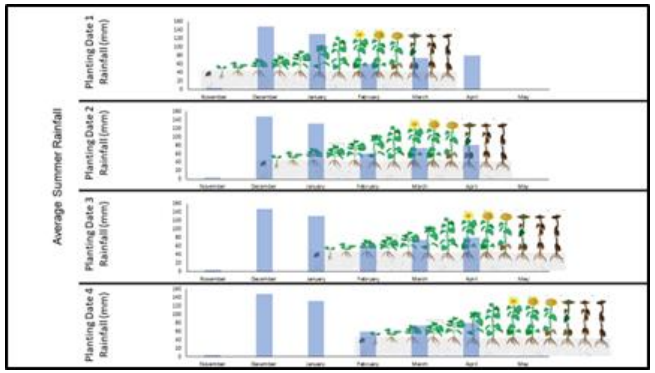
Introduction

Sunflower production in South Africa

Sclerotinia head rot occurrences

Aim



To investigate how planting date and environments influence sunflower development, yield and *Sclerotinia* head rot progression.

Results: Sunflower development and yield

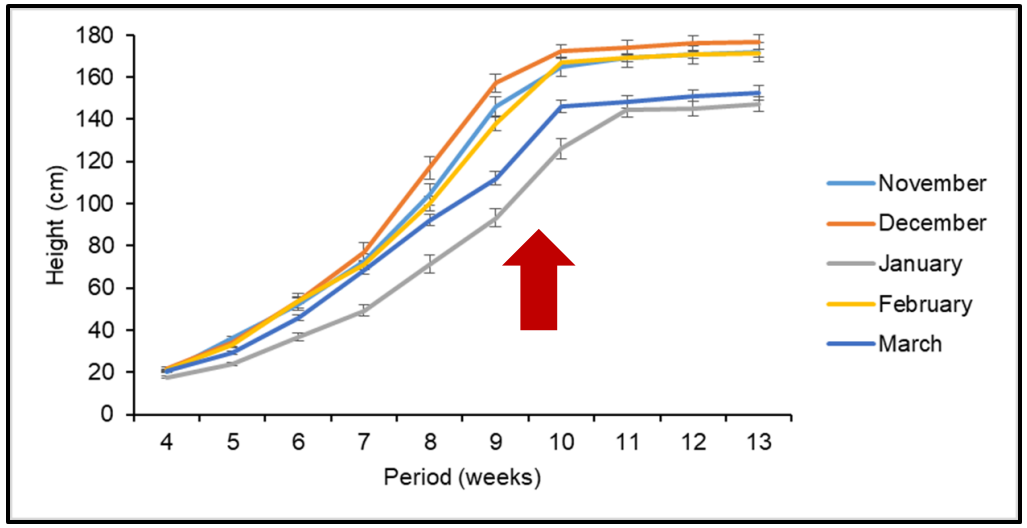


Fig 1: Plant height: January plants height increased slowly. n=15.

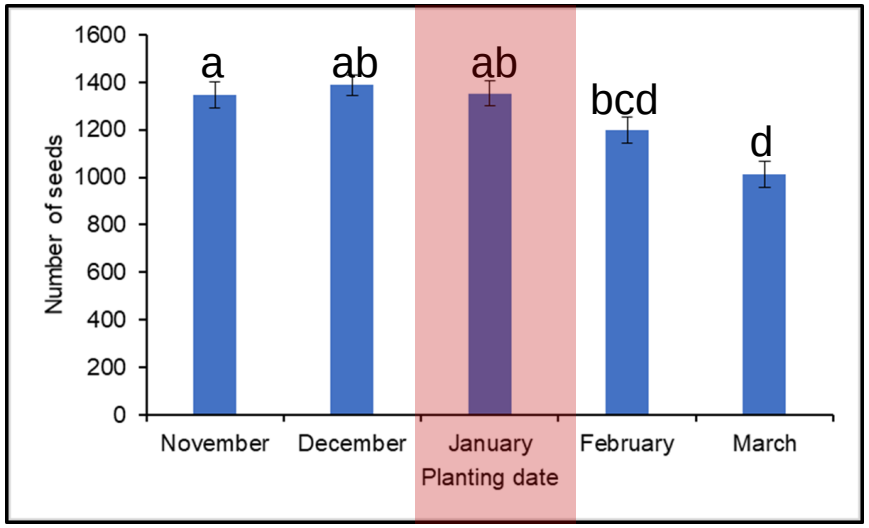


Fig 2: Number of filled seeds-November, December and January number of filled seeds were significantly to March at $p<.01$. n=15.

- Elevated temperatures at the vegetative stage leads to stunted growth and small capitula in sunflower.
- Sunflower plants have an adaptive mechanism which counters heat stress at vegetative stage by enhancing floral traits, yield components and yield.

Results: *Sclerotinia* head rot

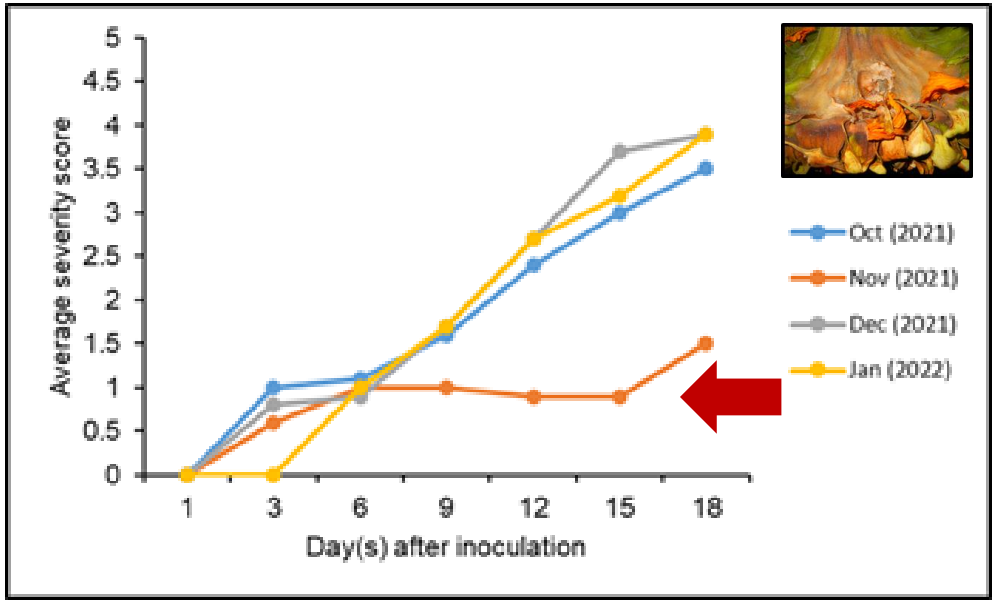


Fig 3: Disease progression: SHR progressed slowly on November plants.

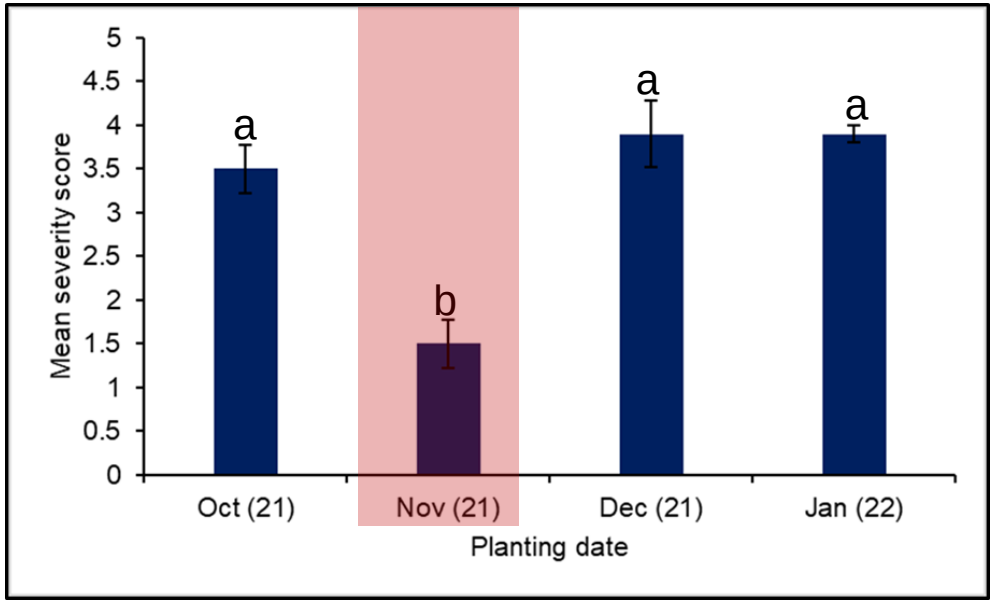


Fig 4. Disease severity: Difference of severity score means between plantings. Letters above error bars show non-significance between plantings at $p<0.01$.

- Slower *Sclerotinia* head rot progression can result in sunflower plants recovering from initial infection.
- Although limited, this study highlights the role of humidity in the disease progression of *Sclerotinia* head rot, and planting dates that reduce flowering time coinciding with these factors might be another avenue to limit the damage caused by this disease.