Spinach Introduction

- *Cleome serrulata* has been used as fresh greens and natural dye by the Navajo & Pueblo Tribes.
- Consistent supply could be of benefit as a local source of food and dye.
- This may require managed plantings.
- Germination requirements unknown.

Materials & Methods

Seed collected from 7 locations in NM, AZ, & UT

2018 Germination Treatments

- 4 weeks chilling at 4, 7, or 10C ±
- ± Promalin® (GA_{3} & BA); ± Novagib® (GA_{3}); ± MaxCel® (BA); ± Novagib® + MaxCel®; ± H_{2}O_{2}
- Seed soaked for 4 hours
- 25 seeds per rep; 5 replications
- Canyon De Chelly seed source.

Spinach Results

Soaking Trial 2017

- Treatments include GA_{3}+H_{2}O_{2}, H_{2}O_{2}, and No Treatment
- GA3 increased % germination at all temperatures except 20°C
- As temperatures increases, % germination decreases
- Navajo Spinach does not germinate at 20°C
- Increasing chilling time does not improve germination
- Inconsistent T50 and T10/90 between 4 and 8 week trials

Gibberellin Trial 2017

- Germination improves when seed are treated with Promalin®
- % germination at 10°C was very low compared to 4°C or 7°C treatments when GA_{3} used alone.
- Germination uniformity (T10-90) varied by treatment

Peach Introduction

First recorded sighting in Southwest by Spanish missionaries in 1619.

Found growing with Pueblo and Navajo Tribes

Seed propagated (Land Race)

Only 2% of original orchards remain

Fruit Characteristics

- White free-stone (most common)
- Yellow Free-stone
- Small

Genome Mapping

- DNA analysis to compare Old World peach varieties to Southwest varieties

Seed sources

- 2 Hopi, AZ
- 2 Canyon Del Muerto, AZ
- Multiple from Navajo Mountain, UT

Dendrochronology

- Compare ring widths with oral histories regarding irrigation management
- Determine life span
- Time period

Discussion

Final results for peach will be Fall 2018.


