

Identifying Maintainer (CMS B) Lines in Chile

Cesar N. Moran-ASSURED-2003-New Mexico State University-
Dept. Agronomy & Horticulture





Hypothesis

A small percentage of randomly selected male Jalapeno Peppers will be maintainers.



Objective

To identify maintainer (CMS B) lines with in Jalapeno pod types.



Materials

- ◆ 202 Progeny plants (CMS A)
- ◆ Randomly selected Jalapeno plants
(**CMS B**)



Three Plant Lines

- ◆ CMS A Line (Female Sterile Parent)
- ◆ CMS B Line (Male Fertile Parent)
Maintainer
- ◆ CMS C Line (Male Fertile Parent)
Restorer



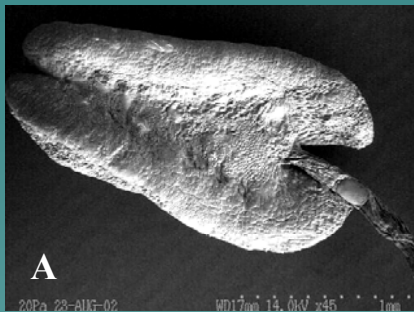
Methods

- ◆ Crossing Plants

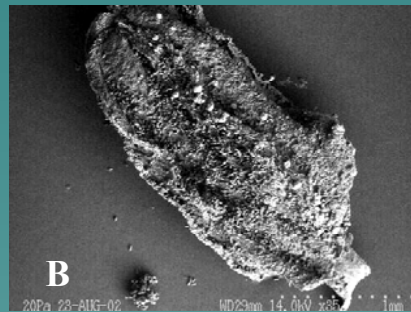
Manually Pollinated Not Self Pollinated

- ◆ Scoring

Check Anthers for pollen



Absence of pollen



Presence of pollen



Methods

- ◆ Progeny Test
 - 100% Sterile
 - 100% Fertile
- ◆ 100% Sterile Indicates Male Parent is CMS-B Line

Pedigree

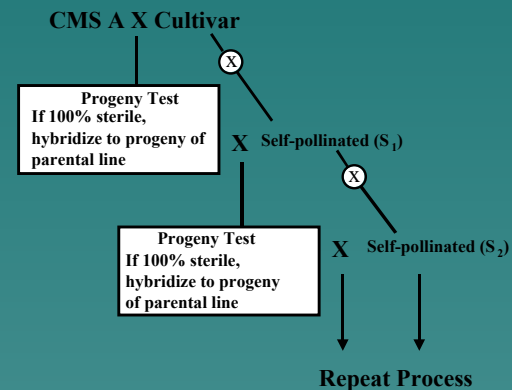


Figure 2. Modified backcross breeding method to develop stable CMS system in pepper.



Methods

- ◆ Self pollinating cultivars that were identified as CMS B lines.



Results

- ◆ 3 CMS B lines

03C1316 12 plants

03C1319 07 plants

03C1326 09 plants

- ◆ 16 Fertile lines



Conclusion

- ◆ CMS B lines been found for other pod types (see Fig. 3)
- ◆ Jalapeno is not one of those plants
- ◆ Additional breeding will be conducted.
- ◆ Objective was obtained

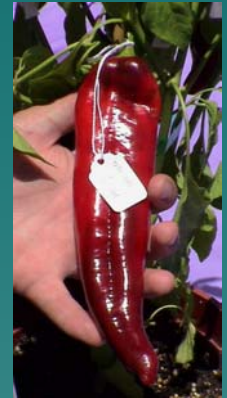


Fig 3. Anaheim CMS A breeding line resulting from hybridization with CMS B breeding line.

THE END

