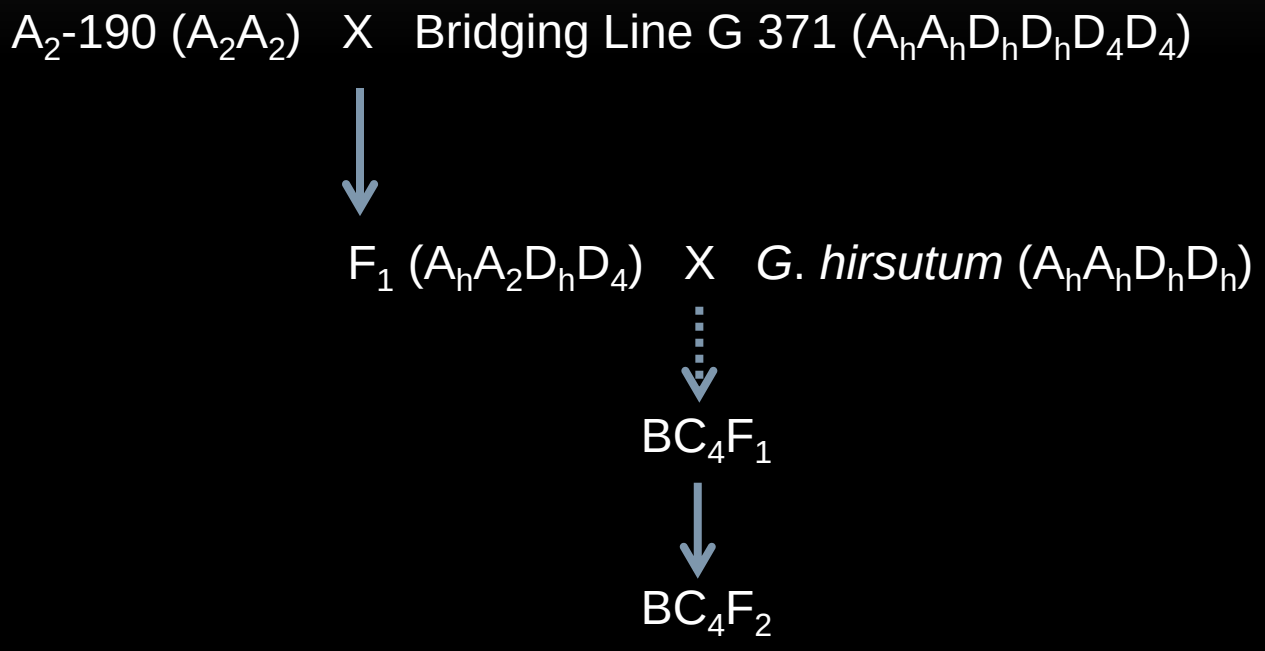
RENIFORM NEMATODE RESISTANCE FROM *GOSSYPIUM ARBOREUM* AND *G. ARIDUM*

John Erpelding, Research Geneticist
Sally Stetina, Research Plant Pathologist

Introgression of Resistance from *G. arboreum* (A_2-190) and G. *aridum*



BC_4F_2 Population Evaluation

G. *arboreum* and *G*. *aridum*

115 progeny rows (1,938 plants)
920 plants selected based on agronomic desirability
6 plants with *G*. *arboreum* and *G*. *aridum* DNA marker fragments
143 plants with only *G*. *arboreum* DNA marker fragment
14 plants with only *G*. *aridum* DNA marker fragment

G. *arboreum*

91 progeny rows (1,733 plants)
370 plants selected based on agronomic desirability
103 plants selected based on DNA marker analysis

G. *aridum*

71 progeny rows (1,160 plants)
290 plants selected based on agronomic desirability
5 plants selected based on DNA marker analysis

Undesirable traits frequently observed in the introgression populations

- Photoperiod sensitivity
- Tall plants
- Green cotton
- Small bolls
- Poor boll retention

Evaluation of the *G. arboreum* germplasm collection

Reniform nematode resistant *G. arboreum* germplasm

75 accessions evaluated
40% showed resistance

Potential new sources of resistance

- A_2-83
- A_2-87
- A_2-100
- A_2-113