

RENIFORM NEMATODE
RESISTANCE FROM
GOSSYPIUM ARBOREUM AND
G. ARIDUM

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Introgression of Resistance from *G. arboreum* (A₂-190) and *G. aridum*

A₂-190 (A₂A₂) X Bridging Line G 371 (A_hA_hD_hD_hD₄D₄)



F₁ (A_hA₂D_hD₄) X *G. hirsutum* (A_hA_hD_hD_h)



BC₄F₁



BC₄F₂

BC₄F₂ 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

- A₂-83
- A₂-87
- A₂-100
- A₂-113

