Development of germplasm and cultivars with two new sources of resistance to Root Knot Nematode from the wild species *A. stenosperma*

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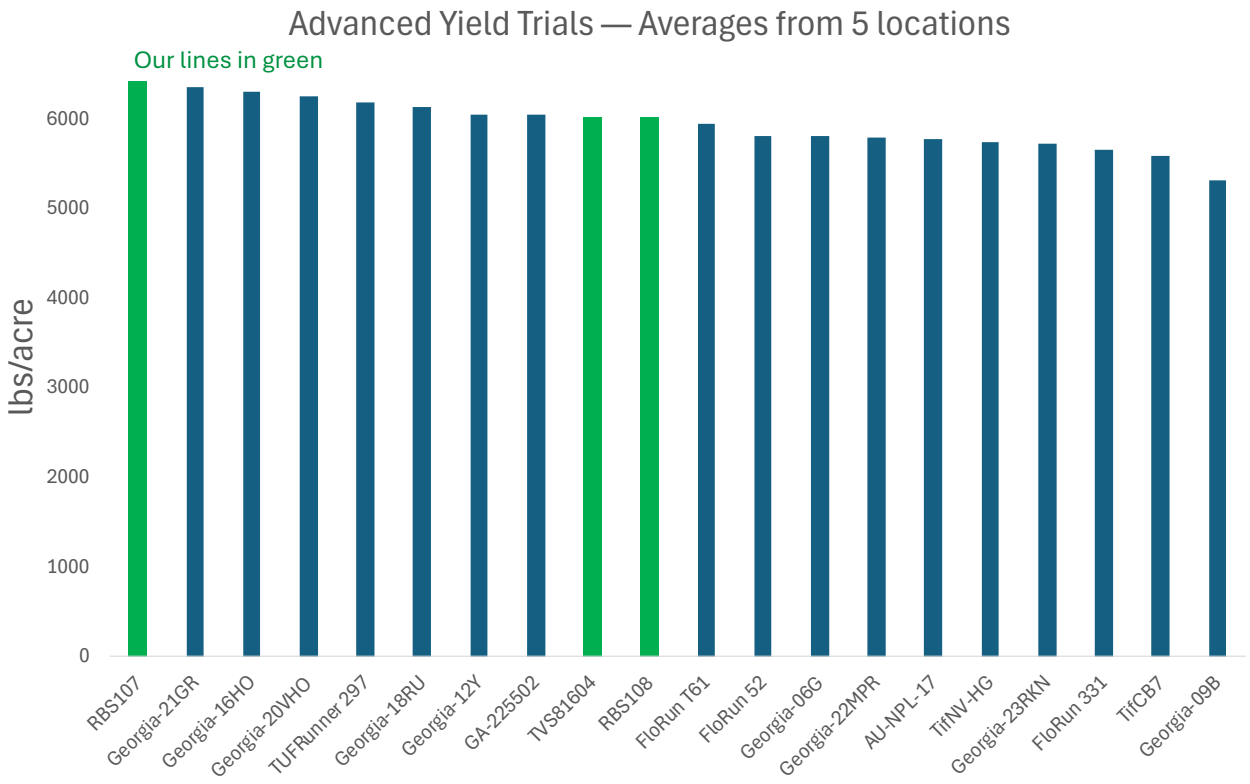
Overview

This research builds on our previous introduction of two new wild species resistances to root-knot nematodes from *A. stenosperma,* one from chromosome A02 and one from A09. Peanut lines with these new genetics are completely resistance to nematodes, elite-yielding, and in some cases carry other useful traits, such as resistance to TSWV.

Results

In replicated multilocation trials, one of our most advanced lines with the chromosome A02 nematode resistance yielded more than all the elite controls. In the Statewide multilocation trials it was placed in the top-yielding statistical group.



The highest-yielding line was RBS107, which carries the A02 nematode-resistance introgression. Trials were conducted at five locations with four replications at each. Because the trial was designed to test yield potential, all locations were free of nematode pressure, and a standard plant-protection regime was applied at all sites.

Another of our lines, in addition to being nematode resistance was rated as the most resistant to TSWV, outperforming all the controls and other test lineages.