

**RENIFORM NEMATODE RESISTANCE RATINGS
FOR 288 SOYBEAN CULTIVARS TO HELP
SELECT ROTATIONAL CROPS
FOR RENIFORM INFESTED FIELDS
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Abstract

The object of this study was to find if soybean cultivars with resistance to reniform nematode (RN) *Rotylenchulus reniformis* were available for rotation with cotton in RN infested cotton fields. All cultivars and breeding lines included in the Arkansas and Mississippi soybean variety testing programs were tested in pots in the greenhouse for resistance to RN. Resistance was measured as a percentage of the reproduction of RN on the standard RN-resistant cultivar "Forrest". Resistant varieties Forrest and Hartwig, the susceptible variety Braxton, and inoculated fallow soil were included as checks for the 288 cultivars and breeding lines. All entries were replicated at least 5 times in clay pots 10cm diam. A single soybean plant in the dicotyledon stage was planted in fine loamy sand soil in each pot and 1166 vermiform reniform nematodes were added per pot including the fallow infested soil checks. Plants were inoculated on 17 June 1998 and harvested one replication per week starting 1 September 1998. RN was extracted from both the soil and roots and the number per pot determined. Of the 288 lines 13 proved to have less reproduction than Forrest. They are Delsoy 5710 (0.26%), S94-1956 (U of Missouri (0.43)), Terral TV4770 (0.49), NK S53-Q7 (0.52), SC91-2007 (Clemson (0.54), Riverside Robin-5 (0.62), Deltapine DP 5806RR (0.68), Accomac (0.73), Agripro AP 588RR (0.80), Terral TV 5797 (0.80), Hartz H5181RR (0.92), HBK R5411 (0.95), and Eagle seed ES 48N (0.96). An additional 16 lines supported less than 150% of the reproduction on Forrest while 41 more supported between 150 and 200% of the reproduction on Forrest. Reproduction on the remaining 218 lines exceeded 200% of the reproduction on Forrest and ranged from 202 to 820%. This data shows that several soybean varieties may be useful in reducing RN numbers when used in rotation with cotton.