EVALUATING THE EFFICACY OF FLUOPYRAM SEED TREATMENTS AND IN-FURROW NEMATICIDE APPLICATIONS FOR MANAGING RENIFORM NEMATODE (ROTYLENCHULUS RENIFORMIS) FROM 2016-2019 IN NORTH FLORIDA

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Abstract

Nematicide application is an important strategy for managing reniform nematode (RN), a major pest of cotton. This research examined efficacy of fluopyram nematicide at managing reniform nematode in North Florida. Small plot research trials under high RN pressure were conducted in Quincy, Florida from 2016-2019 on Dothan-Fuquay loamy sand. The first experiment examined in-furrow application of Velum Total (fluopyram and imidacloprid) at 0, 8, 10, 12, 14, and 18 oz/a. For this experiment, three trials were conducted (2016, 2017, and 2017). Velum Total reduced RN soil abundances compared with control at harvest in 2016 (18 oz/a rate only) and at 47 days after planting in 2017 (14 and 18 oz/a). All rates of Velum Total except 8 oz/a increased normalized lint yield (percent of control) but did not affect absolute lint yield. The second experiment compared in-furrow applications (1) Velum Total 14 oz/a, (2) Propulse 13.6 oz/a (fluopyram and prothioconazole), (3) AgLogic 15GG 7 lb./a (aldicarb), and (4) untreated control. Trials were conducted in 2018 and 2019. AgLogic 15GG reduced RN eggs/gram root at 47 days after planting compared with Propulse or control, but none of the products affected lint yield. The third experiment compared seed treatments: (1) COPeO (fluopyram), (2) Aeris (thiodicarb and imidacloprid), and (3) base fungicide/insecticide only. Four trials were conducted (2017, 2018, 2018, and 2019). Neither seed treatment affected RN populations at midseason or lint yield. In summary, in-furrow fluopyram can be effective for managing reniform nematode but may not provide control every season.