

**Comparing in-furrow insecticides in single and twin row pattern at different plant populations.** 2024 crop season. R.S. Tubbs, and M.R. Abney

Tomato spotted wilt virus (TSWV) has been a primary concern for peanut growers in Georgia for several decades. The leading in-furrow insecticide for combating TSWV incidence and thrips damage is phorate. Oxamyl (reg. as Vydate C-LV by Corteva) is also registered for use in peanut as an insecticide and nematicide targeting thrips and nematodes including root knot, sting, ring, and lesion. Phorate is the only proven insecticide to reduce TSWV, but oxamyl brings multiple species efficacy.

This experiment tested factorial combinations of three variables and was conducted at the University of Georgia's Attapulgus Research and Education Center in Southwest GA. The tested treatments included three insecticide treatments ((None, phorate, oxamyl), two row patterns (single, twin), and two plant populations (optimum [planted at 6.3 seed/ft], sub-optimum [planted at 3.2 seed/ft]). Data collection included yield, grade (Total sound mature kernels [TSMK]), TSWV, and plant stand after emergence (ESC).

An interaction occurred only for ESC, and twin row had greater stands than single row while the high seeding rate had greater stands than the lower seeding rate. For all other tested variables, the only treatment effect that resulted in differences was due to the plant populations. Yield was increased by 13.7% with the denser population over the sparse. TSMK was improved by 1.0% in the denser population. And TSWV was reduced by nearly 5.0% in the denser population compared to the sparsely populated.

Incidence of TSWV in this location was moderate (14-19% in most treatments). These results do not provide sufficient evidence that oxamyl effectively reduces TSWV, yet phorate did not result in reduced incidence of TSWV compared to the non-treated either. Further data would need to be collected to determine the effectiveness of oxamyl as an alternative to phorate to help with combating TSWV. Oxamyl is not currently marketed as a product for reducing TSWV and should continue to be considered a material for targeting thrips (independently of TSWV) and nematodes.