Spray volume and timing evaluations for early emergence applications of Proline for peanut stem rot management.

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Recent work has shown that prothioconazole (Proline, 5.7 fl oz/A) can be applied in a banded (3-4 inch), high volume (40 gallon per acre) spray 2-3 weeks after planting to control the early onset of stem rot caused by Sclerotium rolfsii. Growers anxious to adopt early emergence (EE) applications expressed reservations about the high spray volume required. Therefore trials were conducted to compare Proline applications at 10 versus 40 gallons per acre, and timings of 2, 3, 4, or 5 weeks after planting (WAP). A standard stem rot program of Provost 8 fl oz/A (prothioconazole + tebuconazole) applied broadcast at sprays 3-7 was also included. Three trials with 5-6 reps each were conducted in 2011 using Tifguard peanut. All trials were coversprayed with chlorothalonil, but the first two sprays were omitted to determine if the EE sprays had an effect on leaf spot (primarily Cercospora arachidicola). Pod yield could be combined across trials, and there was no difference in yield between the different spray volumes at any of the four application dates. All treatments increased yield compared to the nontreated control except for the 2 WAP sprays. There were generally increasing yields with later application timings, and the 5 WAP applications gave similar yields as the Provost 4 application block (about 800 lb/A increase above chlorothalonil alone). Due to interactions, trials could not be combined for analysis of disease ratings. Leaf spot epidemics were not severe due to dry weather, but nearly all Proline applications reduced disease intensity, and the later application timings usually gave the best control. Severe stem rot occurred in two trials, and most Proline treatments reduced disease incidence. Later application dates were usually more effective, and generally provided control similar to the four sprays of Provost. Results support the use of early emergence applications of Proline, and indicate that lower spray volumes and possibly later timings can be used.