

Orientation of Sorghum Midge, *Stenodiplosis sorghicola*, Females (Diptera: Cecidomyiidae) to Color and Host-Odor Stimuli¹

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ABSTRACT Sorghum midge, *Stenodiplosis sorghicola* (Coquillett), is one of the most important pests of grain sorghum worldwide. Sorghum midge adults emerge in the morning, mate at or near the site of emergence, and then the females proceed in search of sorghum crop at flowering for oviposition, and some visual and odor stimuli play an important role in host finding and oviposition process. We used a glass apparatus with two (Y-tube) arms to study the orientation of sorghum midge females to visual and odor stimuli under laboratory conditions. Most sorghum midge females were attracted to yellow (30%), followed by green (26%), red (23%), and blue (10%). Sorghum midge females responded more quickly to yellow, followed by red, green, and blue. However, under dual-choice conditions, differences in numbers of sorghum midge females attracted to yellow versus green, red versus blue, and blue versus green were not significant. More sorghum midge females were attracted to sorghum panicle odors plus red (47%) or yellow (40%) colors than to host odors alone (31%). Information on the color preference of sorghum midge females could be exploited for developing suitable traps to monitor its abundance in combination with kairomones or pheromones.

KEY WORDS sorghum midge, *Stenodiplosis sorghicola*, color stimuli, host odor, plant resistance, attraction, *Sorghum bicolor*

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