Spotted Wing Drosophila, Baiting and Trapping

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Spotted wing drosophila (SWD), Drosophila suzukii, is a new fruit fly species that has become a serious threat to fruit crops. Using a prominent and serrated ovipositor, the female SWD pierces and inserts her eggs inside healthy ripening fruit leading to rapid infestation of an entire farm. SWD causes significant damage to a wide range of hosts but is especially damaging to berry crops. Using traps, farmers monitor for the presence of SWD to determine when to spray insecticides. The current gold standard bait for SWD monitoring is apple cider vinegar (ACV). SWD can be readily distinguished from non-SWD fruit flies by several distinctive anatomic markings. The objective of this study was to discover which bait is most effective in trapping SWD on a blueberry farm. The different baits tested included distilled water, ACV, newly fermented blueberry wine made on the farm, blueberry wine+ ACV, red grape wine, red grape wine + ACV, and a commercially available synthetic SWD bait (Pherocon)+ ACV. This study showed "new blueberry wine" to be the most effective, most specific, most inexpensive, and most cost effective bait for trapping SWD. New blueberry wine trapped 27.5% of all the SWD, whereas ACV, the gold standard, only caught 4%. New blueberry wine preferentially traps female over male SWD.