

RUTGERS

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Spotted-Wing Drosophila in New Jersey Wine Grapes

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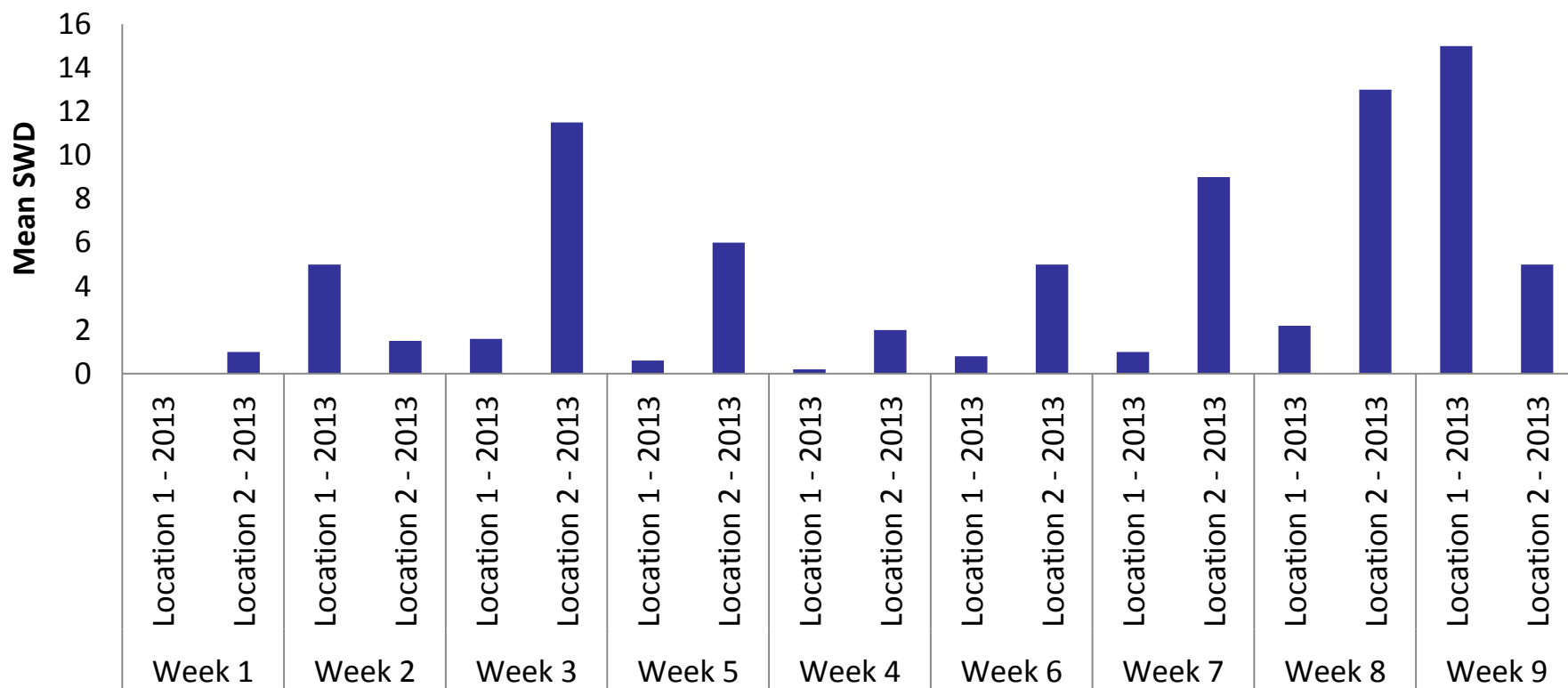
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1. **SWD Vinegar Trap Monitoring, Larval Salt Baths**
2. **Natural infestation**
3. **Field no-choice test**
4. **BMSB and SWD interactions**



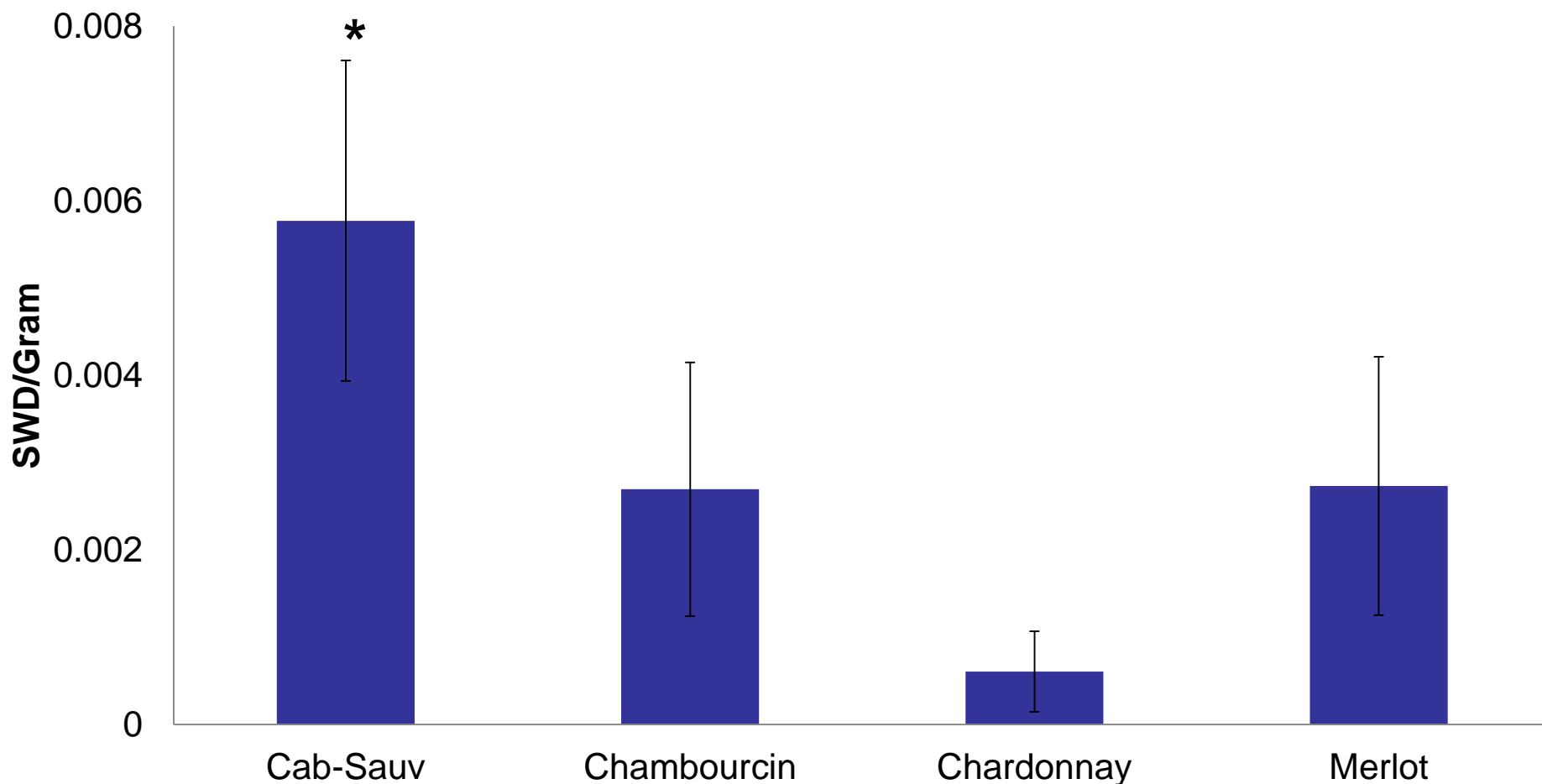
SWD Vinegar Trap Monitoring and Larval Salt Baths

- Sampled 2 vineyards using ACV traps
- Prevalent throughout ripening of grapes
- No larvae found in grapes after 8 weeks of salt baths in August and September



- Starting at veraison, collected 5 grape clusters/variety/week
 - Commercial vineyard 1: significant increase in Cab. Sauv. infestation in mid Sept. and in Chambourcin in early Oct.
 - Cab. Sauv. increased infestation at 4 and 7 weeks past veraison
 - Chardonnay and Merlot had low but constant fly damage until harvest

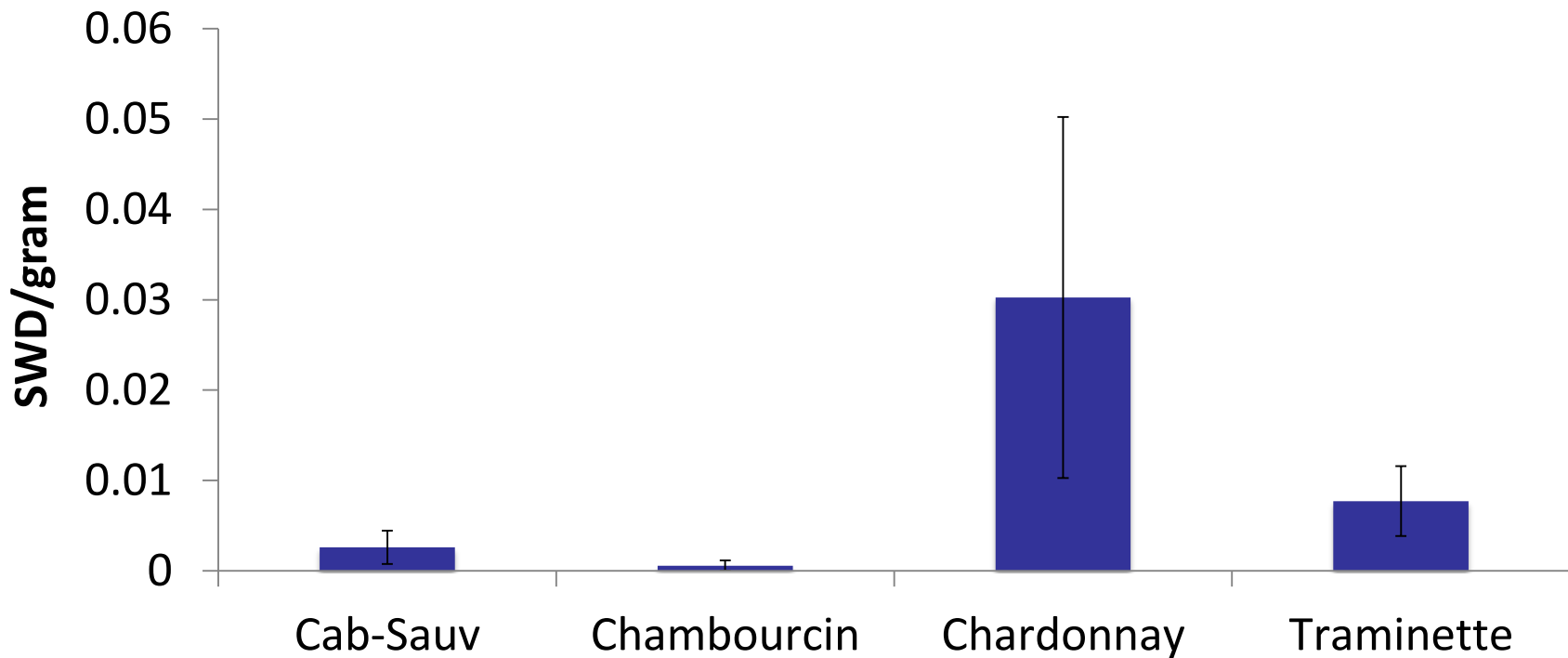
- Overall Cab. Sauv. infestations higher than in Chambourcin or Chardonnay
- Low impact SWD infestation – Max. 8/cluster. Average >1/cluster in all varieties. In Chambourcin this is approx. 11,000 SWD/acre.



- Determine grape varietal and phenological susceptibility
 - Cabernet Sauvignon, Traminette, Chambourcin, and Chardonnay,
 - 5 female and 2 male were added for three days
 - Infestation began at veraison and continued biweekly



- Determine grape varietal and phenological susceptibility
 - No strong trend of varietal selection, significant increase in Chardonnay infestation in late August
 - Overall low infestation
 - Higher than natural infestation, differences in variety



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Chambourcin



- **BMSB and SWD interactions**
 - Same as manipulated infestations, but included pre- or post-exposure of grapes to BMSB adults for one week and assessed for damage
 - Cab. Sauv. more susceptible to fly infestation when BMSB attacks after oviposition, associated with reduced berry weight
 - No clear trend in interaction data between SWD and BMSB in Chambourcin or Traminette
- **African Fig Fly**
 - At 1 commercial vineyard, 3 AFF were covered from Cabernet Sauvignon clusters, 1 from Merlot and 1 from Chambourcin



- Evaluated Malathion and two rates of Exirel for SWD control in blackberry
- Two timings (3 weeks apart)
- Collected fruit at 0, 3, 7, 14 DAT
- Fruit held for 2 weeks

