Alternative Arboviral Testing Methods in Southeastern VA - Jamie Durden

A. No longer have access to PCR testing
B. Disease issues
    1. EEE
        a) *Culesita melanura*
        b) Great Dismal Swamp provides a reservoir
        c) Other know vectors
            (1) *Cq perturbans*
            (2) *Ur sapphirina*
            (3) *Cx salinarius*
        d) Sentinel chickens
        e) High year
        f) 2005
        g) 2009
        h) 2012
        i) 2013
        j) 2014
    2. WNV
        a) *Culex pipiens* and *Cx restuans*
        b) A few other minor vectors
        c) Urban issue
        d) Sentinel chickens
        e) Big years
            (1) 2010
            (2) 2012
            (3) 2014
    3. 2014 was big for both
C. Some history
    1. Mosquito control since 1940s
    2. EEE testing since 1999
    3. Added WNV testing in 2001
    4. Once the money started running out, the testing stopped
D. Options
    1. VecTest
        a) Started in 2010
        b) All cities by 2011
        c) Discontinued product
        d) Switched to VecTOR Test
    2. Strips can be WNV, EEE, or both
    3. Two different protocols
    4. Equipment varies
    5. Test interpretation can be difficult
    6. PCR gold standards
        a) Confirmation rates with VecTOR Test - 98.3%
        b) False positive
            (1) Better than VecTest for *Culex* spp
            (2) Both were low accuracy with *Cs melanura* and WNV
            (3) Good accuracy for EEE and *Cs melanura*
        c) False negative
            (1) 5.6% WNV
            (2) 12.9% EEE

7. Some additional work needs to be done
8. Cost
    a) Startup - $20000
    b) Cost of strips depends on disease being tested