

Multistate Project S-1076:
Fly Management in Animal Agriculture Systems and
Impacts on Animal Health and Food Safety (2019-2024)

January 5-8, 2021

January 5 (11amET – 2pmEST)

Welcome and Introductions Becky Trout Fryxell (Chair)

S-1060 Officer Reports:

Alec Gerry (Past-Chair) Erika Machtinger (Vice Chair)
Chris Geden (Secretary) Wes Watson (2021 Local Arrangements Chair)

Advisor Reports / Program Leader:

Dave White (S-1076 Administrative Advisor)
Lakshmi Matukumalli (USDA-NIFA National Program Leader)

Objective Activities: *Participants will present an update on recent activities related to the multistate project. Presentation limited to 15 min per participant for each objective. You may present during more than one objective.*

Objective 1. New technologies for management of biting and nuisance flies in organic and conventional systems (Led by Watson)

- Novel push-pull strategies (NE, NC, USDA-NE, USDA-FL)
- Evaluation of improved monitoring systems (USDA-NE, CA, TN, NM)
- Novel toxicants, biopesticides, & delivery systems (FL, PA, NE, NM, TX, USDA-FL, USDA-NE)
- Non-pesticide management options (mechanical) (AU, FL, NC, NE, PA, TN, USDA-NE, USDA-FL, USDA-TX)

January 6 (11amET – 2pmEST)

Objective 2. Insecticide resistance detection and management (Led by Kaufman and Scott)

- Assessment of insecticide resistance (TX, NY, USDA)
- Leveraging the *Stomoxys* and *Musca* genomes for novel control measures (NY, USDA)

Objective 3. Investigation of the microbial ecology, epithelial immunity, and vector competence of biting and nuisance flies (Led by Nayduch)

- Identification of the key bacterial strains and their metabolites playing a major role in oviposition and larval development of stable flies (TX, KS, USDA)
- Investigation of the innate immune response of filth flies (KS, USDA)
- Consequences of fly-bacteria interactions: selection effects and evolutionary outcomes (USDA, TX)
- Animal and human pathogen acquisition, dispersal, and deposition by muscid flies (AU, NC, MA, KS)

January 7 (11amET – 2pmEST)

Objective 4. Characterize population biology of biting and nuisance flies (led by to be determined)

- Characterize effects of climate and landscape features on dispersal (KS, TX, USDA-NE)
- Phenology of biting and nuisance flies (AU, FL, KS, TN, USDA-NE)
- Genetic structure of biting and nuisance fly populations (TN, TX, USDA-NE)

Objective 5. Extension and community engagement (*Led by Gerry*)

- Improve project website to maximize extension and community engagement
- Demonstrate research value to stakeholders and funding decision-makers
- Seek funding to support these extension/outreach efforts by developing proposals that will be submitted to various granting agencies including our Regional IPM Centers.

January 8 (11amET – 2pmEST)

Business Meeting:

- Selection of 2022 meeting location
- Old Business
- New Business