

Sterile Insect Technique

A Proven Tool For Fighting New World Screwworm

New World screwworms (NWS) are larvae or maggots of the NWS fly (*Cochliomyia hominivorax*), that cause the painful condition NWS myiasis in warm-blooded animals, including livestock, wildlife, humans and birds. NWS has successfully been eradicated from the United States before using a proven combination of surveillance, animal movement controls, sterile insect releases, and public outreach.

The Sterile Insect Technique

The sterile insect technique (SIT) is a proven tool for fighting the spread of NWS and protecting American agriculture and natural resources. Female NWS flies only mate once in their lives, so if they mate with a sterile male, they lay unfertilized eggs that don't hatch. Releasing sterile flies just outside of affected areas helps ensure flies traveling to new areas will only encounter sterile mates and will not be able to reproduce.

According to the USDA, the release of sterile flies is safe, environmentally friendly, and offers a sustainable, non-toxic alternative to chemical pesticides. It poses no risk to wildlife, livestock, or people. SIT, when paired with surveillance, movement restrictions, and education and outreach, is an effective tool for controlling and eradicating NWS.

Dyed Flies

It is important to continue ongoing surveillance efforts while releasing sterile insects, so it is possible that sterile NWS flies could be found in certain areas. To ensure officials can tell the difference between sterile and wild NWS flies, USDA dyes the sterile pupae, and the dye transfers to the sterile flies when they hatch.

The fluorescent dye will glow under UV light and may also be visible to the naked eye. If a sterile fly is captured in a trap, this dye allows animal health officials to quickly rule the fly out as a threat. If you spot a suspicious fly in areas where dispersals are occurring, chances are, it's a sterile fly beneficial to eradication efforts.

Producer Guidance

Sterile NWS flies in an area do not result in infestations and are a safe tool for reducing NWS egg production that may lead to infestations. The dispersal of sterile flies may not be noticed in day-to-day operations, but targeted dispersal of sterile insects and other tools are critical components of an effective strategy to fight NWS.

Monitoring animals on a regular basis for wounds and potential infestations is a critical compliment to the SIT. Avoid creating unnecessary wounds, clean and treat any wounds, check for signs of myiasis, and report suspicious wounds or infestations as soon as possible.

Reporting

The Texas Animal Health Commission (TAHC) must be notified within 24 hours of all suspected and confirmed cases of NWS. Reports can be made to any TAHC region office by anyone, not just veterinarians or diagnostic laboratories. Suspected infestations of NWS should be immediately reported. Contact Texas Parks and Wildlife for suspicions in wildlife.

