PennState Extension

New World Screwworm Information and Resources

What is the New World Screwworm?

The New World Screwworm (*Cochliomyia hominivorax*) is a fly native to the Americas whose larvae (maggots) are obligate parasites, meaning they feed exclusively on the *living* tissue of warm-blooded animals. This makes them distinct from typical blowflies, which are scavengers that feed only on dead or decaying tissue. Female screwworm flies are attracted to open wounds or mucous membranes, where they can lay roughly 200 eggs at a time. The eggs hatch into larvae that burrow "head-first" into the living tissue (much like a screw), causing a rapidly expanding and life-threatening condition called myiasis. The life cycle takes about 21 days in warm weather.

Current Situation & Detections

Currently, 7 confirmed cases have been detected in Texas and New Mexico. The U.S. successfully eradicated this pest in 1966 using the Sterile Insect Technique (SIT). However, a few reinfestations have occurred, most recently in the Florida Keys in 2016. In this current case, the Panama quarantine zone was breached in 2023, allowing the flies to migrate north through Central America and Mexico to the United States.

The USDA has a national disease response strategy and playbook ready for this exact scenario. An infested animal does *not* mean the whole herd must be culled; instead, the premises and surrounding area are placed under quarantine, and infested animals are treated and kept under quarantine until all wounds are fully healed and there is no reinfestation for 21 days. Within the quarantine zone, animals may leave if they are inspected and issued a movement certificate by a health official.

Impacts on Livestock, Wildlife, Pets, and Human Health

- Animals Affected: NWS is not picky—it targets all warm-blooded animals. This includes cattle, horses, sheep, goats, swine, companion animals (dogs and cats), and wildlife such as deer and feral hogs.

- Health Impacts: If left undetected and untreated, an infestation causes severe tissue damage, rapid health decline, and can be fatal to livestock in as little as 10 days.

- Human Health: While rare, human infestations can occur. NWS does not spread directly from person to person, but rather if a fly lays eggs in an open human wound or may target mucous membranes.

Food Supply and Food Safety Risk - It is important to emphasize:

- The U.S. food supply is safe, and NWS is NOT a food safety issue.

- You cannot catch screwworm from eating meat, poultry, dairy, or eggs.
- Animals that completely recover from an NWS infestation can safely enter the food supply, provided they pass standard USDA/FSIS inspections for food safety and humane handling. Severely infested animals are not allowed into food production.

However, this is a stress to an already stressed cattle industry in the United States, so there may be impacts to beef prices.

What is the PA Quarantine?
For preventative and monitoring measures, the Pennsylvania Department of Agriculture issued an Interstate and International Quarantine Order on June 9. This order establishes movement restrictions and import regulations, including animal health requirements, for susceptible domestic animals.

Farmers, ranchers, and horse owners should be vigilant monitoring and focus on prevention and rapid reporting.
Anyone who suspects an NWS infestation should immediately contact their veterinarian and report the suspected case to the Pennsylvania Department of Agriculture's Bureau of Animal Health and Diagnostic Services at (717) 772-2852. Prompt reporting is essential to protect Pennsylvania's livestock, pets, and wildlife.

FAQ

1. **Why PA is protected from natural expansion:** New World Screwworm is strictly limited by climate and thrives only in tropical or subtropical environments. Adult fly activity significantly drops off when temperatures fall below 59°F, and the pupae are killed when soil temperatures drop below 46°F. Because the flies cannot survive winter freezes, they cannot establish a permanent overwintering population in Pennsylvania.

2. **Why PA still needs to be vigilant:** While the fly will not naturally migrate and survive here, the primary way this pest spreads over long distances is through humans transporting infested animals in trailers. It is entirely possible for an infested animal to be transported from a southern state into Pennsylvania during our warmer summer months. Therefore, our risk isn't an expanding fly population, but rather the accidental import of an infested animal, which means anyone bringing animals into the state must carefully consider their origin and inspect them prior to travel.

3. **Look for the Signs:** Infestations often emit a distinct, foul "smell of death" or decay. Other signs include oozing, circular sores, unusually high numbers of flies around a wound, eggs that look like white correction ribbon tape, and animals exhibiting signs of severe pain (isolating themselves, depression, or rubbing).

4. **It is NOT Contagious:** NWS does not spread directly from animal to animal. Spread over large distances occurs primarily when humans transport an infested animal in a trailer.

5. **Wound Management is the Best Defense:** Standard fly spray is not enough. Producers must inspect animals frequently (especially high-risk areas like newborn umbilical cords, tick bites in ears, and the sheath/prepuce of male horses). Wounds should be treated promptly with approved topical medications (such as permethrin or coumaphos) and kept clean. Treat newborn umbilical cords with iodine daily until completely dry.

6. **Adjust Management Timing:** Encourage producers to postpone elective, wound-producing procedures (like castration, dehorning, ear tagging, and branding) to the cooler winter months when fly activity drops, if possible.

7. **Report Immediately:** Suspected cases must be reported immediately to a local veterinarian, the State animal health official, or the USDA Area Veterinarian in Charge. Do not wait.

Resources for Additional and Up-to-Date Information

- **USDA APHIS New World Screwworm Page:** www.screwworm.gov
- **FDA NWS Information for Veterinarians:** https://www.fda.gov/animal-veterinary/safety-health/new-world-screwworm-information-veterinarians
- **Oklahoma State:** https://extension.okstate.edu/programs/livestock-entomology/new-world-screwworm-info
- **Texas Animal Health Commission Infested Zone Map (In Real Time)** https://tahc.maps.arcgis.com/apps/instant/nearby/index.html?appid=8455917e956b474f995cc3b94d3ef54b&sliderDistance=1
- **Texas A&M AgriLife Extension NWS Page:** https://agrilifeextension.tamu.edu/new-world-screwworm
- **Response Playbook: New World Screwworm** https://www.aphis.usda.gov/sites/default/files/nws-response-playbook.pdf
- **Pesticides for Control of New World Screwworm** https://www.aphis.usda.gov/sites/default/files/pesticides-for-nws.pdf
- **New World Screwworm Fact Sheet (good map of historic overwintering and migration patterns)** https://extension.okstate.edu/e-pest-alerts/2025/screwworm
- **Penn State Fact Sheet https://extension.psu.edu/understanding-the-new-world-screwworm-biology-identification-and-prevention**
- **Scientific Research:** The reemergence of the New World screwworm and its potential distribution in North America. Valdez-Espinoza, U.M., Fadda, L.A., Marques, R. *et al.* . *Sci Rep* **15**, 23819 (2025). https://doi.org/10.1038/s41598-025-04804-9

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