FACT SHEET

NEW WORLD SCREWWORM

WHAT IS NEW WORLD SCREWWORM?

New World screwworms (NWS) are larvae or maggots of the NWS fly (Cochliomyia hominivorax), that cause the painful condition NWS myiasis. NWS flies lay eggs in open wounds or orifices of live tissue. These eggs hatch into dangerous parasitic larvae, and the maggots burrow or screw into flesh with sharp mouth hooks. The wound can become larger, and an infestation can often cause serious, deadly damage. NWS primarily infest livestock, but can also affect mammals, including humans, and birds.

The parasite was last eradicated from the United States in 1966, with costly efforts by federal and state animal health officials, livestock producers, and veterinary practitioners. Eradication efforts have continued in Central America, but the pest is considered endemic in Cuba, Haiti, the Dominican Republic, and South America.

CLINICAL SIGNS

Clinical signs of NWS myiasis may include:

- Irritated or depressed behavior
- Loss of appetite
- Head shaking
- Smell of decaying flesh
- Evidence of fly strike
- Presence of fly larvae (maggots) in wounds
- Isolation from other animals or people

TRANSMISSION

NWS infestations begin when a female NWS fly is attracted to the odor of a wound or opening of a live warm-blooded animal to lay eggs. These openings can include wounds as small as a tick bite, nasal or eye openings, umbilicus of a newborn, or genitalia. One NWS female fly can lay 200-300 eggs at a time and may lay up to 3,000 eggs during her lifespan.

Eggs hatch into larvae (maggots) that burrow into an opening to feed. After feeding, larvae drop to the ground, burrow into the soil, and emerge as adult NWS flies. Adult NWS flies can fly long distances, and the movement of infested livestock or wildlife can lead to spread of even longer distances.

DIAGNOSIS

There are several flies associated with wounds, but only NWS feed on living tissues, compared to dead tissues and fluids. The identification of NWS is done by larvae collection and evaluation. NWS larvae have a series of backwardly protruding spines around a tapered body, giving a screw-like appearance, helping to identify the pest. Anyone who suspects suspicious wounds, maggots, or infestations should notify a veterinarian immediately.

REPORTING NEW WORLD SCREWWORM

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.

PREVENTION

To avoid introduction of NWS keep open wounds clean and covered and treat clothing, gear, and people with proper repellents. When traveling, especially in NWS-infested areas, ensure pets and vehicles are inspected for NWS flies and larvae. Monitor pets and livestock for clinical signs of NWS and immediately report suspicions.

TREATMENT AND ERADICATION

Animals infested with NWS, myiasis, or secondary infection should be immediately treated with an appropriate method by a veterinarian. Left untreated, animals may die within one week of infestation.

Eradication of NWS infestations is accomplished through the sterile insect technique. Sterilized male flies are released to mate in an area with an established NWS population. Females, only mating once in their lifetime, then lay nonviable eggs. The population decreases without the addition of new larvae and dies off naturally over a few lifecycles.

REQUIREMENTS

Requirements related to the control and eradication of NWS can be found in Title 4, Part 2, Chapter 37, Screwworms, of the Texas Administrative Code.