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Texas responds to New World Screwworm

In recent years, Texas lawmakers have mobilized to protect state agriculture and wildlife from the New World Screwworm (NWS), flesh-eating parasitic fly larvae detected in various South Texas counties in early June, nearly seven decades after it was previously eradicated from the United States. The Senate Committee on Water, Agriculture, and Rural Affairs was charged this interim with safeguarding Texas livestock from screwworm by working with state agencies to evaluate current containment efforts, strengthen biosecurity protocols, and improve coordination with federal and international partners. Prior to receiving its interim charges to study the detection and management of invasive species, the House Committee on Agriculture and Livestock also held hearings throughout 2025 to monitor the pest's northward movement and assess its potential economic impacts on state industries as NWS approached the Texas border with Mexico.

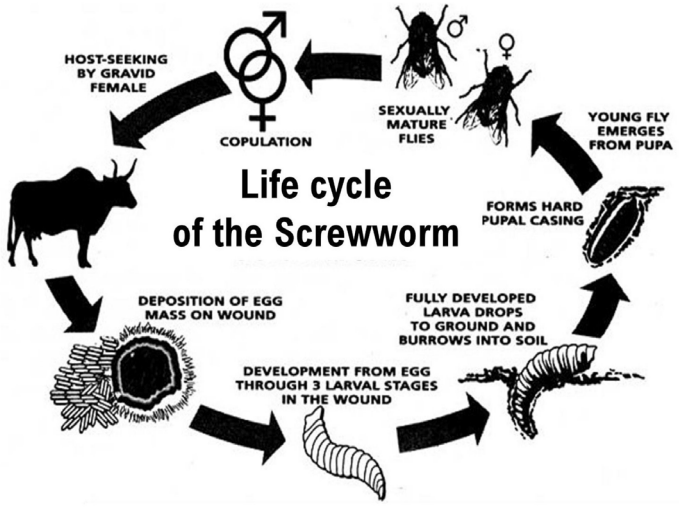
The World Health Organization (WHO) has listed NWS as one of the top six priority transboundary animal diseases to be eliminated in the Americas. Before it arrived in northern Mexico last year, NWS was detected in Central America beyond the Panama-based NWS barrier zone in 2023, and the pest was reported to have breached Mexico's southern border in November 2024. Following the screwworm's arrival in Texas on June 3, the governor issued a disaster proclamation to reassign emergency resources to the South Texas counties affected by NWS and directed the Texas Division of Emergency Management (TDEM) to activate the State Emergency Operations Center to an escalated response level to support NWS mitigation efforts. Officials from the United States Department of Agriculture (USDA) and the Texas Animal Health Commission (TAHC) have responded to active cases by providing laboratory diagnostics and distributing treatments, establishing animal movement restrictions in infested zones, releasing sterile flies, and surveilling relevant areas. TAHC has established 21 infested zones and inspected more than 71,000 animals in infested areas. USDA's Animal and Plant Health Inspection Service (APHIS) also approved the release of two NWS-infested zones in Texas at the end of August and several more throughout September and modified another in October.

With 51 cases of screwworm reported in Texas to date, state and federal officials also continue to consider ways to strengthen agricultural biosecurity through containment, eradication, and pharmaceutical treatments to prevent further spread. This focus report discusses the history of NWS in Texas, contemporary and historical NWS containment and eradication efforts, the pest's effect on Texas livestock and wildlife industries, and policy proposals being considered to strengthen state and federal NWS response and reduce the impact on beef production and other sectors. Additionally, the report examines concerns raised about the challenges to NWS mitigation posed by livestock trafficking in Mexico, a bilateral partner in the Texas agrifood economy.

Parasite profile

Endemic in parts of the Caribbean and most of South America, NWS is the larvae of Cochliomyia hominivorax, a warm-weather parasitic fly that feeds on the living tissue of warm-blooded animals and has a life cycle of 21 days. NWS flies can travel up to 12 miles per day and can infect livestock, wildlife, companion animals, birds, and humans, with newborns and wounded animals being more vulnerable to the pest.

Adult female screwworm flies lay up to hundreds of eggs in open wounds or other orifices of a host, such as its eyes or umbilicus. The pest is called screwworm because when the eggs hatch, the maggots use their mouth hooks to screw into the host's flesh. In untreated wounds, NWS larvae continue to consume the tissue, which can result in myiasis, a bacterial infection that can turn deadly in 7-10 days if left untreated. Once the larvae finish feeding, they fall off the animal and burrow into the ground, metamorphosing into more flies.



Source: Food and Agriculture Organization of the United Nations 1992 report

Past NWS infestations and eradiction in Texas

Over the past century, Texas has combatted several multimillion-dollar screwworm infestations that decimated cattle and wildlife and jeopardized the livelihood of ranchers and livestock raisers. In 1935, Texas registered more than 3 million active screwworm cases, which led to many livestock deaths and economic losses in the state. Screwworm is among the many critical invasive species the Texas Legislature has collaborated with federal agencies and industry partners to eradicate, including the cattle fever tick and the boll weevil, a small beetle that preyed on the state's multi-billion-dollar cotton industry.

Historical NWS management strategies in Texas primarily focused on developing larvicides to treat the wounds of infected animals, educating livestock owners, setting fly traps, and restricting infected livestock movements before the development of the sterile insect technique (SIT) in the 1930s. SIT involves mass producing and dispersing irradiated sterile male flies around infection sites to overwhelm native screwworm fly populations. The sterile males then mate with female flies, which mate only once in their lifespans, and produce unviable eggs that inhibit population growth. Fly release zones were calculated with precise flight lanes and fly quantities to provide the most efficient coverage over infested areas. The SIT eradication program was tested in various sites and expanded to the Southwestern United States and Texas in 1962, when 95 percent of screwworm cases reported in the United States were detected in Texas. The success of Florida's eradication program encouraged Texas ranchers to form the Southwest Animal Health Research Foundation (SWAHRF) to fund the Southwestern Eradication Program and the construction of sterile fly production facilities. These efforts prompted the 58th Texas Legislature to allocate funds for the program and garnered USDA support. In 1962, Texas opened two fly production facilities in Kerrville and Mission that began producing millions of sterile male flies to disperse across the state.

Despite implementation of sterile insect technologies and state action, Texas continued to see NWS incursions throughout the 1960s and 1970s. Livestock owners and Mexican and U.S. officials recognized the need to eradicate NWS from the Mexican border states to prevent yearly reinfestations in the southern United States. To achieve its eradication goal, Texas increased production of sterile male flies, reaching a maximum production of 205.5 million flies per week in May 1972. That year, the United States and Mexico signed an international treaty establishing a joint eradication commission and designating the Isthmus of Tehuantepec in southeastern Mexico, a natural bottleneck and the most convenient geographical area to contain the parasite, as the NWS barrier zone.

Although favorable weather patterns led to several screwworm incursions in the late 1970s, binational SIT eradication efforts to increase sterile fly production and coordinate aerial dispersals of fly release boxes proved

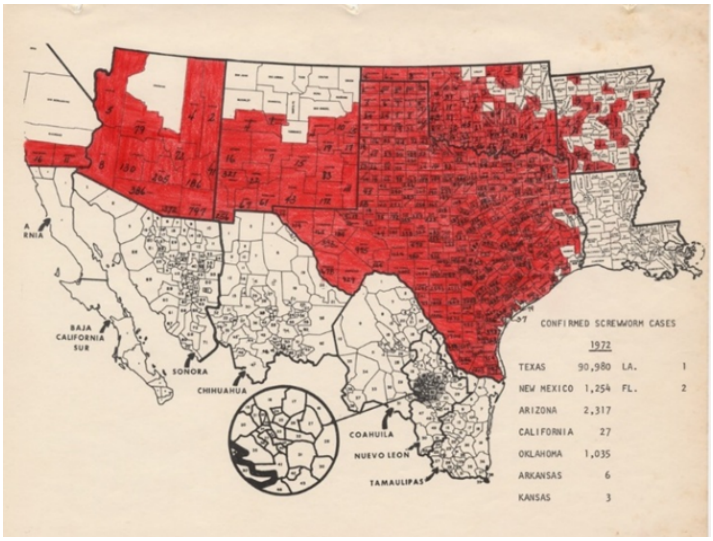
successful in reducing screwworm cases. With only two cases reported in Texas by 1980, the Mission sterile fly production facility closed in 1981, and the Kerrville facility remained open for research. In the late 1980s and 1990s, the U.S.-Mexico Commission reached cooperative agreements with other Central American countries and began releasing sterile flies over those countries. In 1991, APHIS moved the screwworm barrier zone from the Isthmus of Tehuantepec southward to another geographical bottleneck, the Darien Gap in Panama, to contain the fly beneath a lower latitude. Three years later, APHIS established a United States-Panama screwworm eradication program in Pacora, Panama, that mass-produces sterile male flies for dispersion in endemic zones. The program is known as COPEG for its Spanish acronym. Texas had remained screwworm-free since 1982 until this latest incursion.

State and federal responses

Since NWS crossed the Guatemala-Mexico border and entered the southern Mexican states of Oaxaca and Veracruz in May 2025, federal and state officials have initiated various response efforts to combat the fly's northward spread. Last June, Governor Greg Abbott directed TAHC and TPWD to establish a joint NWS Response Team to lead screwworm mitigation efforts. At the federal level, Texas Senator John Cornyn introduced the STOP Screwworm Act in the U.S. Senate, which would have authorized $300 million to build a sterile fly-rearing facility. In the state legislature, Texas House Agriculture Committee Chairman Representative Ryan Guillen also proposed legislation in August 2025 during the first and second special legislative sessions related to sterile fly distribution. HCR 11 would have urged Congress and the USDA to fund a screwworm control facility in the state, while HB 239 would have authorized TAHC to consider NWS when determining land values of quarantined agricultural land and expanded other land-use and reappraisal statutes to include NWS eradication efforts.

Although these legislative initiatives did not advance, the USDA invested $750 million in the construction of a sterile screwworm fly production facility at Moore Air Base in Edinburg, Texas, and announced the opening of its sterile fly dispersal facility along the Mexican border in Tampico, Tamaulipas, two months later. The Edinburg facility opened on February 9. Additionally, citing a severe and imminent threat posed by the screwworm's northward spread, the governor issued a statewide disaster declaration in January. Among other executive actions, Gov. Abbott also announced a free online course developed by AgriLife Extension, USDA-APHIS, TAHC, and TPWD to train and certify more NWS inspectors in identifying the pest and safely treating and moving animals to ensure the continued protection of livestock commerce following the arrival of NWS in Texas. Several county judges also have issued disaster declarations to better position their counties to receive emergency funds and to qualify for potential federal funds. In its legislative appropriation request hearing this September, TAHC requested $26 million in exceptional item funding for ectoparasite response focused on screwworm and other emerging threats. More than 1.39 billion flies have been released in Texas since February 2026.

Source: National Agricultural Library historical PSA



Source: 1972 Map from NAL

State screwworm response agencies

Texas Department of Agriculture (TDA) promotes state agriculture, consumer protection, and economic development in the state's diverse regions. The department has partnered with other agencies by providing biosecurity and strategy assistance to screwworm mitigation efforts.

Texas Animal Health Commission (TAHC) protects livestock and fowl from emerging animal diseases. The commission is responsible for coordinating screwworm response efforts as part of the NWS Response Team appointed by the governor and helped AgriLife develop an animal movement guidance platform based on species, movement type, origin, and destination locations.

Texas Parks and Wildlife Department (TPWD) is responsible for managing the state's natural and cultural resources, including wildlife health. TPWD is also part of the state's joint screwworm response team and is the lead agency conducting wildlife surveillance and assisting in enforcing animal movement restrictions in infested zones.

Texas A&M AgriLife Extension Service provides scientific research and programs in agriculture, natural resources, health, and life sciences. The service administers the statewide pest, disease, and quarantine rapid alert system in collaboration with TDA, TAHC, and TPWD as required by HB 1592, adopted by the 89th Legislature. AgriLife Research and the AgriLife Extension Service have contributed to NWS mitigation efforts by preparing fact sheets, guidance documents, and surveillance support to help detect screwworm and reduce its impact.

Texas Veterinary Medical Association (TVMA) represents veterinary medical professionals and is responsible for educating veterinarians on the pest and acting as a resource to professionals and pet owners.

Office of the State Chemist is the regulatory agency that administers the Texas Feed and Fertilizer Control Acts. Responsible for 25 million tons of feed and fertilizer with a market value of $15 billion, the agency has worked closely with the FDA and feed manufacturers to develop NWS medicated feed.

Federal agencies also have invested resources to supplement state action. APHIS Veterinary Services recently approved additional funding for TAHC to hire more personnel to strengthen NWS inspection capacity. In May, the USDA's Agricultural Research Service opened a federal research lab in Kerrville to serve as a cattle industry resource. USDA has granted nearly $1.3 million to Texas A&M and TAHC to fund screwworm response and foreign animal disease preparedness programs. The federal agency has also awarded nearly $105 million to several breakthrough projects led by Texas universities through its NWS Grand Challenge, a grant program for innovative screwworm eradication strategies launched in January. USDA has placed thousands of fly traps along the border, deployed an APHIS strike team to Texas to assist state efforts, and released its NWS Response Playbook on April 8. However, some industry stakeholders have raised concerns that federal response to NWS has faced limitations from budget and staffing cuts to certain agencies.

Impact on livestock trade and wildlife

Some analyses of past outbreaks suggest that the screwworm's return to the United States could cause billion-dollar economic losses to Texas' livestock and wild game industries while endangering animal and public health. NWS has posed further economic challenges for consumers and members of the beef supply chain in the highly integrated cattle market. Since November 2024, cross-border trade has been subject to numerous closings and re-openings due to NWS, creating a volatile trade environment for Texas beef and livestock industries. While cross-border trade resumed in February 2025, the United States again halted cattle imports in May 2025, announced a phased reopening of cross-border livestock trade in June 2025, and closed the border to imports that July. The economic effects of repeated border closures to Mexican cattle imports have also impacted feedlots and meatpackers. According to the Federal Reserve Bank of Dallas, ranchers on both sides of the border have

benefited from rising beef prices due to diminished beef supply. However, producers could be harmed in the long term by higher costs due to cattle loss, added labor for inspecting and treating animals, and veterinary services and medication, according to the APHIS NWS economic impact report.

Citing Sonora's safer NWS management practices, USDA announced the reopening of the Douglas, Arizona, cattle port with Agua Prieta, Sonora, in late August for renewed importation of livestock. In late September, cattle imports also resumed at the Santa Teresa Cattle Crossing in New Mexico, the nation's busiest port for livestock inspections that has inspected nearly half of all Mexican cattle imported in the last five years.

Federal screwworm response agencies

United States Department of Agriculture (USDA) is the federal department composed of 29 agencies that provides leadership on food, nutrition, agriculture, and rural development to ensure a safe food supply and support American farmers and ranchers. The department has led federal screwworm management efforts by providing funding and leadership, developing response plans, and coordinating multilateral solutions with domestic and international partners.

Animal and Plant Health Inspection Service (APHIS) is the agency within USDA that specializes in protecting American agriculture and natural resources against invasive pests and diseases and administering programs that safeguard animal welfare and agriculture exports. It has led federal screwworm response by overseeing incident management teams and strike teams, placing fly traps, conducting animal surveillance, and managing the logistics of sterile fly releases.

Agricultural Research Service (ARS) is the chief research agency within USDA that helps solve national and global agricultural challenges with scientific solutions. The agency aided early NWS prevention efforts by monitoring sterile fly strains released in Panama and providing training to field inspectors and staff.

Food and Drug Administration (FDA) is the federal agency within the U.S. Department of Health and Human Services (HHS) that regulates the safety of food and medicine as well as animal food and veterinary drugs. FDA oversees related interstate commerce, helped to develop inspection protocols for imported livestock and other products, and issued 12 EUAs for animal drugs to prevent and treat NWS.

International screwworm response agencies

COPEG is the Panama-United States Commission for the Eradication and Prevention of NWS that mass-produces sterile male screwworm flies and releases them in infested zones. The commission also conducts field surveillance to detect NWS movement to help sustain the permanent biological prevention barrier at the Darien Gap, a narrow land bridge at the Colombia-Panama border that connects North and South America, to prevent reinvasion from screwworm-endemic areas of South America.

SENASICA is Mexico's National Service for Agrifood Health, Safety and Quality, the federal agency within the Ministry of Agriculture and Rural Development that oversees agrifood safety and animal health and has partnered with USDA over the years in various coordinated efforts to manage NWS.

SINIIGA is Mexico's national livestock identification system responsible for tracking all cattle births, imports, deaths, and exports. It is overseen by Mexico's National Confederation of Livestock Organizations (CNOG).

The wild game industry also faces a significant economic threat from NWS, with some projections estimating a negative economic impact of more than $9 billion on Texas hunting and wildlife industries. The state's large populations of feral hogs and white-tailed deer, for example, are at a heightened risk of being infected by screwworm as they are not routinely monitored like domestic livestock. According to the AgriLife Extension Service, undetected screwworm infestations in free-ranging wildlife could decimate herds, as occurred in the Florida Keys when 15 percent of the endangered key deer population succumbed to NWS in 2016. While state animal health officials have not detected NWS in Texas wildlife during the state's fawning season, they continue to place sterile fly ground release chambers in fly dispersal areas and surveil wildlife populations with the approach of hunting season.

Proposals to Texas Lawmakers

As legislative committees in both houses address interim charges on state preparedness and response to NWS and other invasive species, lawmakers have discussed proposals to strengthen screwworm prevention, detection, and eradication efforts by combining certain approaches.

Approved treatments. In the House Agriculture and Livestock Committee hearing this June, animal health agencies and livestock industry leaders updated lawmakers on FDA-approved products to treat NWS, as well as strategies to accelerate FDA approval for strong anti-parasitic medicines like ivermectin and doramectin to introduce into cattle and wild deer feed in screwworm-infested zones. On August 19, 2025, the United States Department of Health and Human Services (HHS) authorized the Food and Drug Administration (FDA) to issue emergency use authorizations (EUAs) for animal drugs to treat or prevent screwworm infestations, and the FDA has since approved over 12 EUAs to market.

Supporters of existing FDA-approved treatments say the agency took urgent steps to accelerate the authorizations for various treatments and make them accessible to ranchers, livestock producers, and pet owners. Some also suggest that lawmakers should create repayment programs to assist Texas cattle raisers in bearing the costs of treating infected livestock. However, critics say that the approved topical and injectable antiparasitic medicines could prove difficult to administer for producers with large herds and in wildlife scenarios. They also raised concerns that the time it took for a treatment to be effective was incompatible with market slaughter timelines for certain animals.

Supporters of introducing medicated feed say the state has implemented other medicated-feed programs for cattle fever tick in rural Texas. They requested data on the impact of ivermectin consumption in deer to inform evaluations of the drug's potential efficacy against NWS. Lawmakers considered whether the Office of the State Chemist, on the governor's order and under statutory authority, could write guidance for ivermectin use in feed within the state. Some discussed whether the passage of HB 25 by the 89th Legislature, which authorized over-the-counter purchase of ivermectin for human use, could improve access to the drug for use in livestock.

Others suggested, however, that the regulatory challenges of sourcing ivermectin from China could hinder access to the drug. Some witnesses also raised concerns about food safety, resistance issues, and animal health risks that could arise from using unapproved products.

Sterile flies. Lawmakers heard proposals to increase sterile fly production and dispersal to the levels historically needed to overwhelm native fly populations. While successful eradication programs of the past involved weekly releases of 500 million sterile male flies, animal health officials have reported significantly lower quantities of sterile flies being produced and released since the latest incursion.

Supporters of increasing sterile fly production say that repurposing infrastructure and constructing more fly-rearing facilities within the state could ensure a greater domestic supply of sterile flies and decrease dependency on imported flies from facilities in Panama and Mexico. Some proposed partnering with Mexican universities to source sterile NWS flies. Proposals also included pursuing X-ray sterilization to complement current gamma irradiation techniques. Others suggested that the state should seek permanent federal funding for state fly-rearing facilities to promote a hemispheric approach to screwworm response by continuing to export flies to endemic countries after eradicating NWS domestically.

However, some critics said that increasing sterile fly releases without addressing cattle trafficking and improving animal movement controls in the state would not be enough to contain NWS. Others questioned the sterilization effectiveness of X-ray equipment, and some favored prioritizing the development of technology to genetically produce a novel strand of only male flies.

FDA authorization timeline

October 24, 2025 – issued EUA for NWS drug for dogs

February 18, 2026 – issued EUA for drugs to treat NWS in dogs and cats

March 10, 2026 – issued EUA for topical spray for multiple species

April 24, 2026 – issued EUA for ointment for multiple species

April 27, 2026 – issued EUA for topical powder for multiple species

May 19, 2026 – issued EUA for OTC injectable drug for dairy cattle, horses, swine, sheep, and deer

June 11, 2026 – issued EUA for generic OTC drug to treat dogs and cats

August 13, 2026 – issued EUA for chewable tablets to treat dogs and puppies

Source: USDA NWS Response Playbook

Regulating animal movement. Lawmakers heard reports in various committee hearings that cartel operators within the Mexican livestock trade have contributed to the pest's northward spread by trafficking cattle infected with screwworm. After screwworm's arrival in Texas in June, legislators discussed different approaches to regulating domestic animal movements, including instituting livestock checkpoints and requiring certificates of veterinary inspection before moving livestock. To localize outbreaks within Texas, TAHC has designated infested zones surrounding premises with confirmed screwworm cases and established enhanced surveillance, movement controls, and roadside inspections in such areas and within relevant counties.

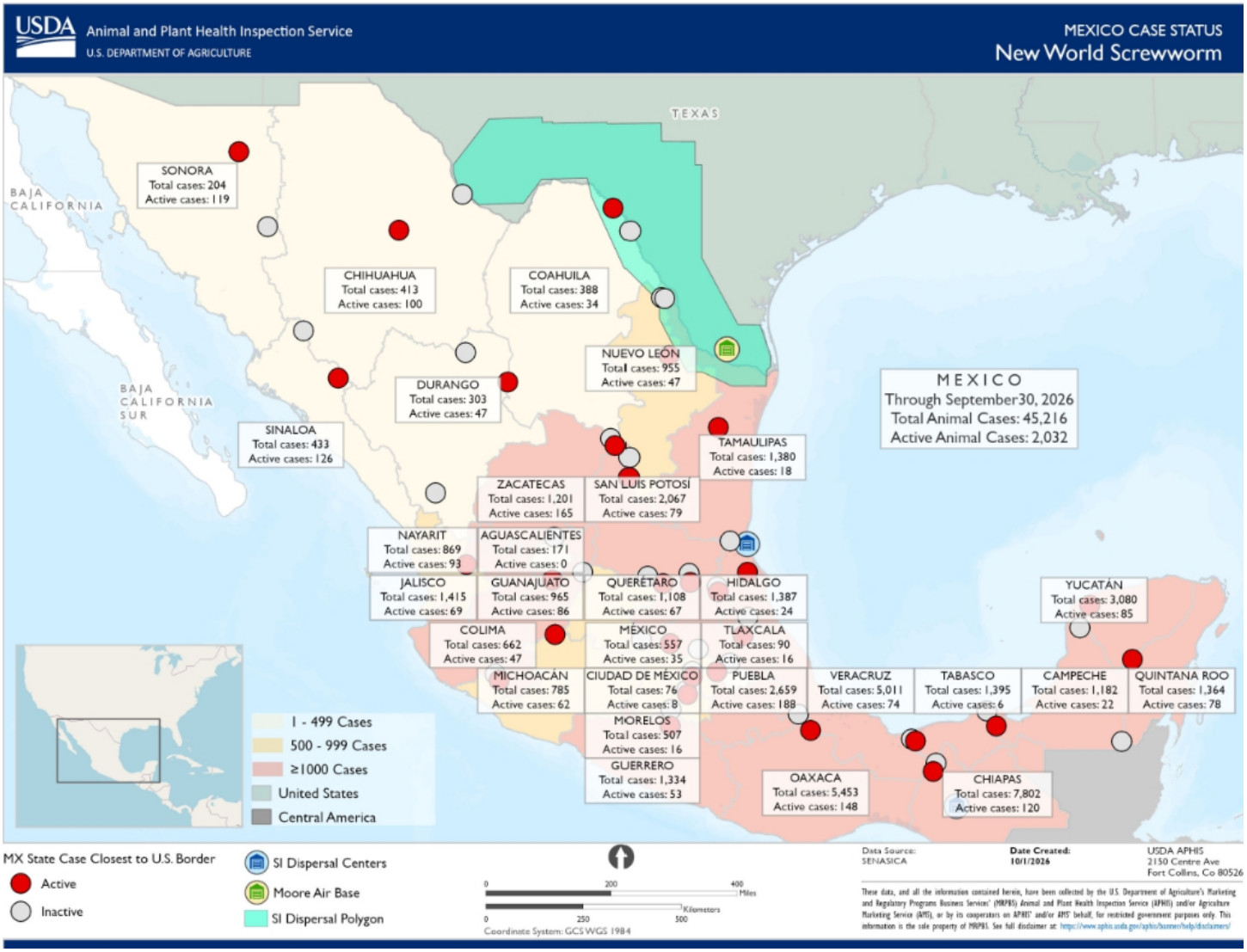
Supporters of current animal movement regulations say that restricting animal movements by region protects commerce by allowing for continued livestock movement through infested zones without implementing statewide restrictions. Some say that transparancy about establishing and releasing infested zones gives producers confidence and protects the livestock industry. Others say that stronger binational efforts are needed to address cartel influences that have disrupted transnational cattle supply chains and jeopardized public safety.

Critics of animal movement controls say that livestock holding restrictions have harmed interstate trade and caused economic losses for certain producers. Some have raised concerns that halting cattle imports has strengthened Mexican cattle feeders and meatpackers at the expense of Texas industries because the livestock that they used to process has remained in Mexico. Others have questioned the efficacy of movement restrictions and argue that trade should resume with animal inspections and treatments conducted at ports of entry.

Containment efforts and policy proposals in Mexico

Screwworm response has been a binational effort since the 1970s, when authorities and producers from the United States and Mexico implemented a policy of joint screwworm eradication to ensure regional biosecurity. According to APHIS, more than 45,000 cases of NWS have been detected in Mexico since November 2024. Although the Mexican government had invested more than $121 million in screwworm response and sterile fly releases as of November 2025, the parasite reached the border state of Nuevo Leon by September 2025 and Tamaulipas in January. Mexican health authorities have reported 705 screwworm cases in humans nationwide, with 131 human cases reported in late spring in Chiapas, the most affected state. Mexico's containment strategies have centered on surveilling animals, monitoring livestock imports from Central America, and expanding binational cooperation with the United States, including signing the APHIS-SENASICA Action Plan on August 15, 2025. This agreement formalized a joint funding effort to renovate infrastructure and build new NWS facilities with enhanced biosecurity.

The binational agreement included dedicated funds for the sterile fly production facility in Metapa de Domínguez, Chiapas, that is expected to produce up to 100 million sterile flies per week to complement ongoing sterile fly production and dispersal efforts. However, some Mexican news outlets have reported that Mexico's capacity to combat NWS has been affected by certain fiscal and security challenges, including the closure of sterile fly facilities and illegal practices and cartel involvement in the cattle trade. The Mexican government sought to address cattle trafficking concerns by signing a memorandum of understanding with Guatemala in 2019 to strengthen sanitary control mechanisms and regulations for the legal entry of Central American cattle. However, further action was needed to address cattle smuggled beyond the Guatemala-Mexico border and corruption in SINIIGA, whose officials were found to have perpetuated cattle trafficking by selling livestock ear tags on the black market to members of local livestock associations



Source: APHIS Mexico case status map

involved in organized crime. This has resulted in contraband cattle with forged health certificates appearing in national registries as legally identified livestock presumed to be disease-free. Subsequent measures to address the scope of cattle trafficking in Mexico have included statutory changes adopted in July 2021 requiring that the federal government exclusively regulate the distribution of ear tags assigned to livestock and the introduction of authorized sanitary corrals on Mexico's southern border in 2025 to strengthen inspection and traceability of animals moving into the country's interior.

Some researchers who have connected screwworm spread to unregulated cattle movements argue that response strategies should target livestock trafficking across Mexico, where transnational criminal organizations control primary contraband routes. Some Mexican legislators say that enhancing criminal penalties for public servants who participate in the illicit livestock trade could help curb cattle trafficking and prevent the spread of transmissible animal diseases that harm legal beef production. Other international crime analysts have suggested that dismantling known smuggling routes, investigating corruption within government bodies and market concentration in the meatpacking industry, and encouraging responsible meat sourcing processes and improved cattle traceability systems are essential to addressing the contraband cattle component that facilitated screwworm's reemergence.

Addressing illegal practices in livestock and beef sectors

U.S. federal and state authorities have recently acted to address potentially illegal practices in beef and livestock industries. Last November, President Trump ordered the Department of Justice to launch an antitrust probe into the nation's largest meatpackers, four of which are foreign-dominated and control more than 85 percent of the U.S. beef processing market, to protect the national beef supply chain. In May, the Texas attorney general joined the investigation to protect Texas cattle ranchers and consumers from potential anticompetitive conduct like collusion and price fixing. In a recently announced MOU between USDA and the U.S. Department of Homeland Security, the departments acknowledged the prevalence and profit margins of cattle smuggling from Central America into Mexico and agreed to combat illegal cattle trafficking related to NWS by expanding information sharing and technology to improve NWS detection at ports of entry.

In light of these actions, the 90th Texas Legislature could consider further measures to protect livestock and wildlife and strengthen animal movement surveillance as Texas prepares for what could be a years-long fight against the screwworm.

— Michelle Kuroda De La Cruz

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