



Honduran Armed Forces Battle Pine Beetle Infestation in Effort to Save Forests

Soldiers have applied a powerful organic insecticide to halt the beetle infestation that has damaged approximately 400,000 hectares of forest in the Central American nation.

Julieta Pelcastre | 21 January 2016



Honduran Soldiers from the C-9 Ecosystems and Environment Support Command combated an infestation of pine beetles in the basin of the Hombre River on December 3rd. [Photo: Courtesy of the Secretariat of National Defense]

Honduran Army Soldiers have applied a powerful organic insecticide to halt an infestation of pine beetles that have damaged about 400,000 hectares of forest and harmed the Central American nation's ecosystem and air quality. The work is being carried out by the First Artillery Battalion assigned to the Zambrano region, 30 kilometers north of the capital, where the pine beetle outbreak has caused what scientists define as an “ecological catastrophe,” according to the C-9 Command of the National Secretariat of Defense (SEDENA).

As part of the commitment to protect and care for the country's forests and natural resources, “350 soldiers from the Honduran Armed Forces, operating under the C-9 Ecosystems and Environment Support Command, joined forces with the Forest Conservation Institute (ICF, for its Spanish acronym) in the fight

against this harmful beetle infestation in the country,” the C-9 Command told *Diálogo* (Officials at the C-9 Command asked that no Command officials be identified by name).

In early December, the C-9 Command sprayed organic mineral products into the infested trees, as well as those that were not affected, to halt the spread of the beetles in the Hombre River Basin, near the Second Tactical Airborne Infantry Battalion in the valley of Támara in the department of Francisco Morazán. “This organic product will not only reduce economic losses but will also help to reduce pollution, considerably diminish tons of fuel per hectare, prevent the need to alter land use, and lead to greater carbon sequestration, as well as increased biodiversity among both the flora and fauna,” the C-9 Command explained.

Trees attacked by the pest secrete resin as a defense mechanism and have small exit holes in the bark. The Armed Forces' sprayed the organic material on trees as an experiment to determine whether the substance acts as a repellent or insecticide capable of eradicating the pine beetle. The pesticide applied to the infected trees could reduce the excessive logging or overcutting methods that workers were using as a method of direct control, thereby reducing the damage to the forest, according to the C-9 Command.

“We are awaiting the results of the application of this chemical,” Angel Zepeda, head of ICF's Forestry Department, told *Diálogo*. “The Armed Forces will possibly provide the results at the Fourth Technical Meeting of the 2016 International Country Branding Forum, which will be held in late January in western Honduras.”

Maximizing human, logistical resources

In addition to conducting the experiment with the organic product, the Armed Forces, in conjunction with the ICF, are using other human and logistical resources to fight the problem. The C-9 Command installed five surveillance cameras for the early detection of beetle infestation and forest fires in Cerro de Hula, Cerro Triquilapa, Valle del Zamorano, Ciudad España, and Amaratéca.

“It's a pioneer project in the country and in Central America,” explained Engineering Lieutenant Sammy Ramírez of the C-9 Command. “Only the Armed Forces of Honduras have this detection method and technology. Even better results are expected in the summer of 2016, with the deployment of 20 additional cameras.”

Missions carried out by Honduran Air Force (FAH) aircraft allowed Military authorities to detect the impact of pine beetles on different municipalities. The FAH's information was “used by the authorities to take appropriate measures to combat the outbreak of pine beetles,” the C-9 Command explained.

Authorities put the Pine Beetle Control Action Plan, which came about as an emergency decree by the government, into effect in the municipality of La Unión in the department of Olancho on August 5th in response to a national emergency that began in 2013 in the municipality of Gualaco, also in Olancho. In September 2015, the ICF trained 100 members of the Armed Forces in various measures, including how to use chainsaws to control outbreaks. This training is part of a “relentless” effort against the insect, an initiative that includes providing containment areas between healthy and infested forestland, Angel Zepeda explained.

Environmental impact

In addition to causing economic harm, the insects are also damaging the country's environment and ecosystems. The pine beetles are “affecting watersheds and polluting the pure air that Hondurans breathe, causing serious damage to the ecosystem,” according to a December 3rd Armed Forces press release. “Moreover, climate change has resulted in manifestations such as the El Niño weather phenomenon, whose

high temperatures and prolonged drought in recent years are causing water stress in trees, which has favored the spread of the Dendroctonus pine beetle outbreak, in a way never before seen in the country's history," the C-9 Command added.

Honduras has 5.4 million hectares of forest, covering more than half the country. Of that total, 3 million hectares are suitable for pine trees, according to the report "Bark beetle outbreaks and fire: a devastating combination for Central America's pine forests" issued by the United Nations Food and Agriculture Organization (FAO). In 1964, infestation was spreading through Honduras at a rate of 150,000 hectares a month – the most devastating epidemic ever recorded of the southern pine beetle – according to the FAO.

International support

Honduras has been joined in its struggle against beetle infestation by various international bodies such as the United States Forest Service, Mexico's National Forestry Commission, and Chile's National Forestry Corporation, which have provided technical assistance, Angel Zepeda said.

With support from the international community including the United States, Germany, and the European Union, Honduras created the Interagency Commission in August 2015 to eradicate pine beetle infestation. The Commission, which the C-9 Command supports and is led by Honduran President Juan Orlando Hernández, is responsible for cutting down affected trees and using the wood to raise funds to combat infestation, as well as the reforestation of the affected areas. "However, despite the significant national efforts, the infestation continues to affect our forests, having so far affected 57 municipalities in eight departments," the C-9 Command explained.

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