



## Tick control in the Caribbean



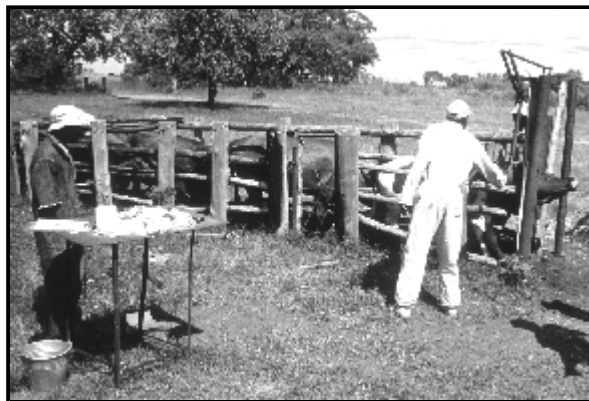
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Caribbean countries have scored a major victory in their battle against the tropical Bont tick (TBT), a parasite that has devastated cattle herds on islands across the region. In February, Anguilla and Montserrat were declared "provisionally free" of the tick and added to a growing list of island states where TBT and its associated diseases have been eliminated.

"The word 'provisionally' holds no hidden uncertainties," says Rupert Pegram, manager of a tick-eradication programme run jointly by the Caribbean Community, FAO and the Inter-American Institute for Cooperation on Agriculture. "No island can be technically declared 'totally free' because some neighboring islands are still fighting the pest. The tick must be eliminated from the entire Caribbean region before any island can breathe a final sigh of relief."

**Infested cattle.** Originally from Africa, the brightly coloured tropical Bont tick (scientific name *Amblyomma variegatum*) has posed a threat to Caribbean livestock production and food security since 1828, when the first infested cattle were imported into Guadeloupe from Senegal. During the 20th century, movement of livestock and migratory birds spread the parasite to 12 other Caribbean islands.

TBT takes a very heavy toll: it is the main vector for *Cowdria ruminantium*, a micro-organism that causes heartwater disease in domestic animals, and is also associated with increased prevalence of acute dermatophilosis, a bacterial skin disease of cattle. Both diseases can kill livestock and reduce milk and meat output. On the island of St Kitts, dermatophilosis outbreaks in the late 1980s reduced the number of cattle from 5,800 to 400, of sheep from 9,250 to less than 800, and of goats from 7,200 to 950. On neighboring Nevis, dermatophilosis killed nine out of every ten head of cattle in just 10 years. As local meat and milk production plummeted, imports increased to meet both domestic demand and the needs of the tourist industry. While cases of heartwater - which is commonly fatal within a week of onset of clinical signs - have been confined to Antigua, veterinarians agree that it represents the greatest menace: if transferred to the continental



Americas, it could be spread rapidly by two indigenous ticks that have been shown experimentally to transmit the disease. Potential economic losses have been estimated, conservatively, at more than \$760 million.

Realizing that TBT eradication offered an opportunity to revive the livestock industry, cut import spending and enhance food security, CARICOM called in FAO and IICA assistance to launch the Caribbean *Amblyomma* Programme (CAP) in 1995. "At first, many doubted that the programme would ever reach its goal," says Rupert Pegram. "Eradicating the tick depends on an intensive and rigorous schedule of chemical treatments every two weeks for at least two years. But many cattle owners are absentee, and most of their animals are allowed to roam freely. Slowly, however, the public and private sectors found ways to pull together, and a new era was born in which technicians, politicians, field workers, animal owners and private businesses worked towards a common goal."

**Treatment schedules.** CAP's strategy is based on active participation by animal owners and local communities, through intensive public information campaigns and support from government animal health teams that provide training and ensure that farmers comply with treatment schedules.

So far, national tick control/eradication projects have been implemented on Anguilla, Antigua, Barbados, Dominica, Montserrat, St Kitts and Nevis, and St Lucia, and - under the complementary Plan Poseidom - on the French-speaking islands of Guadeloupe, La Desirade, Marie Galante, St Martin and Martinique.

CAP has also set up a regional unit to provide overall coordination, bulk supplies of acaricides, advice on quarantine legislation, preparation of extension materials, applied research, and technical backstopping.

The campaign scored its first victories in St. Lucia and St. Kitts, both of which were declared "provisionally free" of TBT in the late 1990s. On St. Kitts, the cattle population has rebounded from 400 to 3,500, and local beef production is gradually replacing imports. CAP specialists expect livestock currently used on the tick-free islands to be replaced by animals with higher productivity, thus producing significant extra benefits.

The programme suffered what could have become a major setback in 2000, when fresh TBT outbreaks occurred in St. Croix and St. Vincent, but both attacks were contained and eliminated. Today, four of the original nine Caribbean TBT-infested islands covered by CAP have succeeded in eliminating the pest. FAO says Barbados and Dominica "are not far behind" - intensive field surveys indicate that "provisionally-free" status should be possible before the end of 2002. At that point, more than half of the TBT-infested islands will have won their battle.

The war on TBT is not over, Rupert Pegram cautions - on Antigua, for example, the tick has been well entrenched for more than a century.

"Systematic monitoring will continue on all islands until the entire region is free of the tropical Bont tick," he said. "The successes of St. Kitts, St. Lucia, Anguilla and Montserrat are an inspiration to sometimes weary neighboring islands. The strategy of public and private sector working hand-in-hand has proven that eradicating TBT is no longer just someone's dream, but a proven reality."

#### Ticks mean trouble...



Like flies and fleas, ticks are arthropods, but do not belong to the Insect Class - instead, they are classified as Arachnids (along with spiders and mites). Tick

species vary greatly but share a common life cycle of three stages - larval, nymph and adult - during which they feed on the blood of a variety of hosts. While attached, they cause skin irritation and infection, and sometimes anaemia. Ticks are carriers of debilitating and often fatal diseases which they transmit from host to host. The most important tick-borne diseases are East Coast Fever, heartwater, anaplasmosis, babesiosis and ehrlichiosis.

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