New hope in Liberia pest outbreak?

Medicine

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4 February 2009, Rome – Findings made during a field verification and evaluation visit by an international team of scientists led by experts from FAO and the Government of Liberia suggest that the potential threats of current and future outbreaks in the ongoing Liberian caterpillar plague could be contained more easily than previously thought.

The team, which visited seven affected areas in Liberia for three days last week, established that the insects were not Armyworms, as had been reported, but larvae of another moth species. One important difference is that these insects pupate, or spin their cocoons, on the ground under fallen leaves. That makes it relatively easier to dispose of the cocoons and limit further infestation.

Armyworms, on the other hand, bore 4-5 cm deep into the ground to pupate and are thus much harder to control. Emerging from the cocoon, an adult Armyworm moth can then fly 1 000 kilometers and lay more than 1 000 eggs after mating.

Spectre of catastrophe

This had raised the spectre of a potentially catastrophic secondary infestation following the first outbreak, which affected some 500 000 people and prompted the Liberian Government to declare a national emergency last week. But team members returning from the field reported villagers destroying cocoons by stamping on them or collecting and burning them. However, this is not enough to prevent their spread to diverse plant species including cultivated crops.

Samples of larvae, pupae and adults were collected for identification. Digital photos were emailed to specialist laboratories in the UK, Commonwealth Agricultural Bureaux International (CABI) and the International Institute of Tropical Agriculture (IITA) Biological Control/Biodiversity Centre in Benin. The latter identified the pest as Achaea catocaloides rena (f.) Berio (Noctuidae, Catocalinae).

The four-man team, which included FAO experts from Ghana and Sierra Leone, supported by two local entomologists, confirmed that the caterpillars had polluted water bodies and damaged crops such as coffee, cocoa, plantain, bananas and wild flora. Large adult moth populations had also contaminated the environment with their powdery scales, which could cause allergies.

Staple food crops

But staple food crops such as maize, rice, sorghum and millet , which are scarce during this dry season, had generally not been affected. The team said the caterpillars moved to other food sources after having eaten through the leaves of the Dahoma trees where they chiefly reside.

Although the fact of their pupating on the ground was obviously good news, the experts also noted, however, that “emergency preparedness for secondary and tertiary outbreaks are not in place as a preventive measure”.

The Liberia Ministry of Agriculture is leading in discussions with FAO and other partners on how to contain the infestation after confirmation of the true identity of the caterpillars involved. This is also the opportunity to develop a better response system against migrant pests in the sub-region based on monitoring, early warning, biocontrol, capacity building and contingency planning.