

# Looming danger on a popular fodder tree in eastern Kenya: Research solving farmers problem on Calliandra

BY ERASTUS KIRUIRU

The world Agroforestry Centre (ICRAF), Kenya Agroforestry Research Institute (KARI) and Kenya Forestry Research Institute (KEFRI) have been actively promoting *Calliandra calothyrsus*, has a fodder shrub that increases milk production.

The performance of calliandra on-farm, since its introduction in the late 1980's has been good until recently (2001) when an attack by scale-like insects was observed on some farms in Embu and Murang'a Districts (Kenya).

The observation has caused considerable worry to farmers and researchers, given the importance of the fodder tree. The damage to the trees varies but in severe cases trees have been found to dry up. There could, however, be looming danger if the pests are not investigated.

The National Agroforestry Research Project at Embu has had a lot



Picture: Ecomedia

of interest in investigating what these insects are, their spread on the farms and potential dangers they might cause to the livestock production in terms of reducing feed availability. A field survey involving its scientists and the those from Kenya Agroforestry Research Institute (KARI) Muguga, was carried out within the farms in Embu, Meru and Murang'a Districts to assess how the pests have affected calliandra, particularly the extent of damage and how the problem has spread but more importantly to isolate the insect(s) causing the damage for identification.

The pests collected from the affected calliandra plants underwent tests at the National Museum, Nairobi. It was found that several types of insects were attacking calliandra but the majority were scale insects. The main scale insects found included those scientifically called *Parasaissetia nigra*, *Planococcus citri* and *Icerya purchasi*. Scientists in Zambia and Uganda, through the assistance by The Insect Information Service at the National History Museum, London, have also identified another form of the scale insect, referred to as *Pulvinaria jacksoni* (Newstead).

Apart from scale insects, weevils such as *Oreorhinus* and *Nematocercus* also appeared to cause some damage to the calliandra. Based on the results obtained so far, our local scientists are now planning to develop a most practical method for the control of these insects by smallholder farmers to avoid further damage to the calliandra. It was noted that farmers have developed their own methods to "control" the pests through the application of detergents, which to some extent have helped to clear off the suspected pests in affected plants. The attack mainly occurs during the dry season.

Another solution to the problem is to introduce other species of fodder shrubs, says ICRAF scientist, Steve Franzel. "KARI, KEFRI and ICRAF have been active in this area and the recent introductions include *Leucaena trichandra* and mulberry (*Morus alba*) and more are expected in the near future, adds Franzel.

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Picture: Erastus Kiruiru



Whitish spots on the trees infested by the insects