

Last week we talked about the damaging effects of Fruit flies to the agricultural commodities and how the Biosecurity Authority of Fiji (BAF) works towards ensuring exotic fruit flies do not come into the country.

In this week's feature, we take a look at some of the other exotic plant pests which are of concern to BAF and the surveillance programmes in place.

### Red Imported Fire Ants (RIFA)

RIFA (*Solenopsis invicta*) are a serious pest because they have the potential to cause major social, environmental and economic impact in Fiji.

*In terms of environmental impacts:* RIFA ants are very aggressive and voracious feeders of small ground fauna, including insects, spiders, lizards, frogs, birds and mammals. The ants' habit of eating or damaging seeds can cause major changes in an ecosystem over time. Fire ants are also predatory, attacking insects and animals that pollinate native plants.

*Damage to the agricultural industry:* mounds formed by RIFA nests can be a serious problem in lawns, sporting fields and golf courses. The ant's activities and their nesting materials can cause significant damage to sensitive electrical equipment causing considerable losses. They can also affect the tourism industry as well as export/trade of restricted items with RIFA-free countries.

Newborn or hatching animals are particularly prone to RIFA attacks that can lead to death. Fire ants attack young animals and sting in and around the eyes, which can lead to blindness; and around the mouth and nose, which can lead to swelling and suffocation. Fire ants also invade the food and water supplies of animals. The animals are unable to reach the food or water without being seriously stung, and this can lead to starvation and dehydration.

Fire ants sometimes feed on seeds, and can fatally damage some plants by tunneling through roots and stems. They protect some species of agricultural pest insects that produce 'honeydew'. This downgrades the quality of produce and assists in the spread of certain diseases. Furthermore, RIFA may also feed on important biological control agents and interfere with integrated pest management practices.

BAF's RIFA Surveillance activities consist of the following:

- Placing baits (consisting of a protein and sugar source) at strategic locations such as seaports, airports, boat building areas, flower patches near entry points and container bays to attract ants;
- Collecting the specimens and sending the samples to BAF Entomology laboratory for identification

The protein base for the bait is prepared by smearing blended (smooth) peanut butter (the size of half a pea) and soybean oil to the inner side of each bait container and a placing a small piece of sausage inside it. The sugar base composition for the bait is prepared by placing a plug of cotton wool soaked in 20% sugar solution on the inner side of the container. The bait is placed without the lid to attract ants. Collection is done at half hour intervals.



Red Imported Fire Ant (RIFA)

### Giant African Snail (GAS)

GAS (*Achatina fulica*) is a serious herbivorous agricultural pest that can feed on more than 500 different kinds of plants. Although majority of the Pacific Island Countries (PICs) that Fiji trades with have GAS, Fiji remains GAS free. This exotic pest has a high reproduction rate – one snail can lay around 1,200 eggs in a year and due to the lack of natural enemies, large portion of these survive and infest crops. If this pest establishes and spreads in Fiji it will not only affect our agriculture sector but will also impact our economy heavily.

Hence, BAF carries our stringent GAS surveillance which encompasses laying of snail bait (Blitzem) around strategic locations such as ports of entry and container yards. This activity is carried out on regular basis to ensure early detection of this exotic and troublesome snail species.



Red Imported Fire Ant (RIFA)



Blitzem bait used for GAS surveillance

### Asian Gypsy Moth (AGM)

AGM (*Lymantria dispar*) is present in China, far eastern Russia, Korea, and Japan. AGM larvae feed on the foliage of about 600 plant species including pine, fruit trees, and ornamentals. AGM egg masses are tolerant of extremes in temperature and moisture. They are commonly found on ship hulls and rigging, cargo containers, vehicles, logs, pallets and aircrafts. Females can fly long distances; about 20 miles.

BAF has in place AGM traps at strategic locations which are regularly monitored and serviced in order to ensure Fiji remains free of this pest.



AGM on a pine tree

### Awareness on exotic pests and diseases

BAF continues to conduct awareness activities at various events such as agriculture shows, government road shows, carnivals, secondary school/tertiary institution open days,

Tikina and Provincial Council meetings, church group meetings and importer/exporter dialogues amongst others. BAF requests public support and collaboration in keeping the above mentioned pests out of our country.

Whilst BAF is here to protect the flora and fauna, livelihood and the environment from exotic pests and diseases that are harmful to our country, however, it wishes to remind that it is the responsibility of all Fijians and visitors to our shores to be cautious of such pests and diseases and their harmful effects.

Note: The surveillance methods stated in this article have been simplified for public understanding

### For Further Information, Please Contact:

Biosecurity Authority of Fiji on 3312512 or Short Codes: General Enquiries - 5994, Termites - 5996, Giant Invasive Iguana (GII) - 5995, Animal Disease Surveillance - 5997 or email [info@baf.com.fj](mailto:info@baf.com.fj), visit BAF website [www.baf.com.fj](http://www.baf.com.fj)