

BEFTA Protocol

Rat sampling

04/10/2013

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Background

Methods follow those already developed as part of existing SMARTRI research.

Methods

Following the usual SMARTRI procedure, the team places three traps at each tree (within the surrounding vegetation, not the bare area near the tree) within each 50m x 50m block (c.25 trees). Traps are baited with palm fruit.

Each trap is checked daily and any rat caught, marked with one of three specific marks by shaving to show which of the plots (control, bare or enhanced) it was captured in.

This procedure is continued for a further three days.

On the fourth sampling day, the number of marked and unmarked rats is recorded, enabling an

estimate of the population size (N), following
$$N = \frac{M(n+1)}{(m+1)}$$
, where M = Total individual marked in the first 3 nights, n = total number of individuals captured on the 4th night and m = number of marked individuals captured on the fourth night.

Two sets of triplet plots (i.e. six plots in total) will be sampled each week. Plots will be resampled at regular intervals throughout the project:

May 2013

Jan 2014

July 2014

Feb 2015

July 2015

Jan 2016

No rats will be killed in the plots over the course of the study. During harvesting, the number of trees with fruit bunches showing rat damage is also recorded.

Status

The first round of sampling has already been completed, and will be repeated following the schedule above.