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MEDIA RELEASE FROM THE REEF AND RAINFOREST RESEARCH CENTRE

Customised Model for Fighting Weeds in the Wet Tropics

Please find below a summary of research results of a project conducted with support of funding from the Australian Government's Marine and Tropical Sciences Research Facility (MTRSF) represented in North Queensland by the Reef and Rainforest Research Centre (RRRC). This vital research will provide information to support environmental managers to make informed decisions about the current and future threat of pest weeds in the Rainforests of the Wet Tropics.

Predicting the pattern of spread is an essential tool for curbing the destructive impact of weeds in the Wet Tropics. MTRSF researchers have developed a model that simulates the growth and dispersal of the nationally-recognised weed Miconia calvenscens.

Employing data from field studies and greenhouse trials, the model predicts the population size and geographical extent of a Miconia infestation after time periods determined by the user. It takes into account aspects of the plant's life history including the number of seeds produced at different ages, dispersal patterns and survival rates of seedlings and adults under differing environmental conditions.

Miconia calvenscens is a highly-invasive species. A mature plant can produce up to 1,000,000 seeds at a time, which are distributed by birds and other animals. To determine the pattern of dispersal, researchers radio-tracked fruit-eating birds, recording their movements through the Wet Tropics landscape. Because a seed's landing site influences its chances of survival, the researchers also studied the small-scale variations that affect germination and growth. They are now using these data to refine the model to produce increasingly accurate predictions.

With appropriate data, this model can be applied to other weeds, providing a powerful, customised weapon in the fight against invasive species.

For Further information of this research or to be put in touch with the key researchers involved please contact the RRRC on 40507400 or Sheriden Morris (Managing Director) on 0408019167.

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