New Study Measures Pesticide Mixtures In Water Systems that Run to Great Barrier Reefs

A new study done by the University of Queensland shows how bad the pesticide mixture problem is, in the first comprehensive analysis of the pesticide mixtures in rivers and creeks that discharge into the Great Barrier Reef.

Image credit: *Force Change*

Professor Michael Warne, a researcher at UQ's School of Environmental Sciences, analyzed 2,600 water samples from 15 different waterways that discharge into the Great Barrier Reefs, over a four-year time span.

The data showed pesticide mixtures in 99.8% of the samples collected, with as many as 20 different pesticides in one sample. The more individual pesticides in a sample, the more detrimental the pesticide mixture is to the aquatic ecosystem. The results of the study further encourage the Reef 2050 Water Quality Improvement Plan.

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> *Dr. Warne said the best way to address the problem of pesticides and pesticide mixtures in run-off was to work with land managers, share information and help them to improve their pesticide management practices.*
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> *"We are doing just that with other partners including Farmacist, James Cook University and the Department of Environment and Science through Project Bluewater which is funded by the Great Barrier Reef Foundation," he said.*

Pesticide mixtures a bigger problem than previously thought

The study found that pesticide runoff was generally the worst in areas where sugar cane was being grown. As a result of these findings, the researchers are working with sugar cane farmers to improve pesticide management and application through upgraded equipment as well as reduce overall pesticide usage while switching to lower risk pesticides.