science webinar series

Understanding the impact of climate change on the Northern Territory mango industry

Tuesday 16 June 2020, 11.30am–12.30pm (AEST)
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The Northern Territory is the country's largest grower of mangoes. Flowering of commercially produced mango cultivars are sensitive to the changing climate, specifically to minimum and maximum temperature. The effective application of climate change information to the Northern Territory mango industry is therefore important to determine the effects of future temperatures and to allow the industry to consider appropriate management responses.

Over the past 12 months, the Earth Systems and Climate Change Hub has been working with the Northern Territory Department of Primary Industry and Resources to understand the impact of climate change on the local mango industry.

Specifically, the project looked at the crossing of temperature thresholds for triggering mango flowering. Mango flowering leads to fruit development and determines the timing of fruit harvest. Flowering also has broader market implications – with the earliest flowering of all mango production regions in Australia, mangoes from the Darwin region are the first to reach the Australian market each season.

In the Northern Territory, flowering is triggered by the arrival of cooler dry season temperatures around April each year. Flowering can occur any time between April and August and is promoted by low night time (minimum) temperatures and can be inhibited by high day time (maximum) temperatures.

In this webinar, project team members Mandy Hopkins (ESCC Hub/CSIRO) and Maddison Clonan (NT DPIR) will talk about how the assessment was carried out, what they found and how it can inform the industry. They'll also discuss the assessment process and how it can be applied to other commodities and sectors.

Mandy Hopkins is a Knowledge Broker and the Indigenous Engagement Coordinator of the Earth Systems and Climate Change Hub. She is working to build climate change literacy and use of climate change information to inform climate change adaptation planning and strategies. Mandy is also working with Traditional Owners from around Australia to continue a discussion about how First Nations People and the ESCC Hub can bring together traditional knowledge and western science to provide some answers to how the changing climate is impacting country.

Maddison Clonan is a Research Scientist with the Northern Territory Department of Primary Industry and Resources. She currently studies the phenology of new and existing commercial mango varieties grown in the Northern Territory. Maddison is also working to develop best practice for quality control in mango supply chains with harvest maturity technology and post-harvest treatments.

Mandy and Maddison contribute to the ESCC Hub Case Study 5.1: Understanding the impact of climate change on the Northern Territory mango industry.

The Earth Systems and Climate Change Hub science webinars are open to anyone interested in finding out more about the Hub's research (noting that some understanding of climate change science and the fields being discussed will be assumed).