

Fertilizer study reveals opportunities for increased profitability for mango farmers in Southern Vietnam

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Credit: Griffith University

Researchers from the Griffith Asia Institute (GAI) have proven that lower application rates of fertilizers do not affect the yield or quality of two mango varieties in Southern Vietnam.

An investigation into the current fertilizer practices of smallholder mango farmers in Dong Thap and Tien Giang provinces found that the desire to maximize yield was leading to a widespread overuse of fertilizer, resulting in higher [production costs](#), an exacerbated

susceptibility to pests and disease, and significant environmental impacts.

Trials conducted in collaboration with in-country researchers from the Southern Horticultural Research Institute (SOFRI) demonstrated that mango yield and quality can be maintained with lower application rates. Further testing was then undertaken to ascertain the optimum application rates.

Peter Johnson, an adjunct industry fellow with GAI, was the lead horticulturalist on the study.

"We tested the effects of four NPK (nitrogen, phosphorous, potassium) fertilizer treatments on the Cat Chu and Cat Hoa Loc varieties of mango," Johnson said.

"While the different treatments had varying effects on components such as weight, length, or edible portion, our results indicated that overall yield and quality could be maintained with a lower dosage than the current industry standard."

"The next step is to upskill farmers in fertilizer management and increase their ability to make informed scientific and economic decisions about their fertilizer program."

Fertilizer management is just one of the many interventions which the research identified and tested to provide evidence-based proofs of concept within the project.

"Mangoes are one of the most significant contributors to Vietnam's economy, with nearly sixty percent of the farming occurring in the Mekong Delta region," Associate Professor Roberts said.

"Despite the industry's rapid growth, farmers are still facing challenges such as fluctuating market pricing, higher production costs, and changing seasonal conditions.

"Small modifications to on-farm practices will not only decrease production costs, but they'll also improve [mango](#) quality and competitiveness in critical points along the [supply chain](#), which will ultimately improve the farmers' net incomes."

Provided by Griffith University

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