



Improving smallholder farmer incomes through strategic market development in mango supply chains in southern Vietnam

End of Project Review
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Title: Sustainability for Off-Season Flowering

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Implementing Agency



Funding Agency



Australian Government
Australian Centre for
International Agricultural Research

Aim & Objectives

Aims

- ▶ Evaluate alternatives to Paclobutrazol (PBZ)
- ▶ Study the ability to maintain high yields in mango production should PBZ no longer be available

Research questions

- ▶ What on-farm innovations are likely to generate the most significant impacts to reduce losses, increase productivity and quality outputs that will improve returns directly related to smallholder incomes?
- ▶ What innovations have the most cost-effective and positive impacts on productivity, losses, quality and harvest timing, leading to improved price and farmer incomes?

Implementing Agency



SIAEP



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Overview

- ▶ Paclobutrazol (PBZ), is an essential component of off season flowering that enables farmers to distribute their crop over a longer period of time an access higher prices
- ▶ Evaluated an alternative to PBZ - due to risk of product being withdrawn from use
- ▶ Explored if chemical inputs could be reduced using alternative gibberellin synthesis inhibitors
- ▶ Built capacity to manipulate flowering & fruit production to help farmers to reliably access off-season markets

PGRs applications

- ▶ Prohexadione calcium 10% - using 120g/10 litre water spray on leaves
- ▶ Uniconazol 5% - using 140g/15 litre water spray on leaves for 2 times weekly internally
- ▶ Paclobutrazol 20% - using 250g/10 litre water drench in the soil

Benefits of change

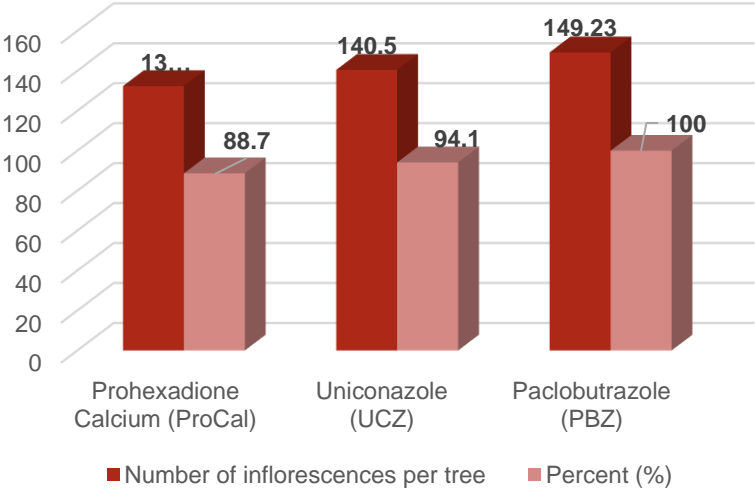
What we learnt:

Prohexadione calcium & Uniconazol are suitable alternatives to PBZ without effecting

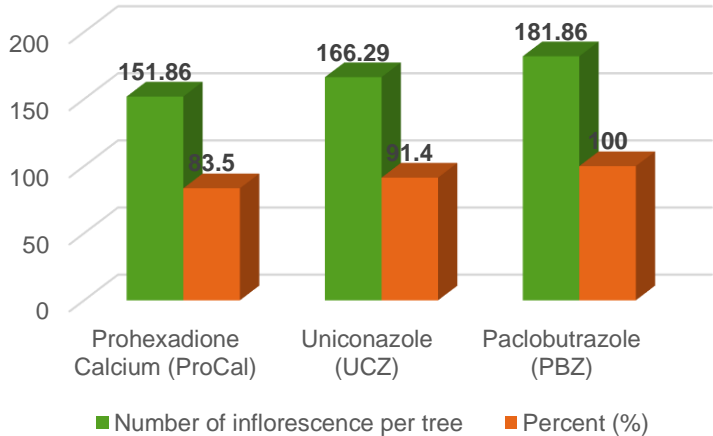
- ▶ number of inflorescences & size, total fruit/tree, yield, weight & quality
- Industry certainty – should PBZ registration be withdrawn

What could be changed or improved

- ▶ Greater time between treatment application and induction, allowing build up of reserves
- ▶ Basic economic training to empower farmers with skills to self evaluate benefits of change to flowering programs



Effect of PGRs on flowering of Cat Chu



Effect of PGRs on flowering of Cat Hoa Loc



Pathways to adoption

Vietnamese provincial actions

- ▶ Registration of Prohexadione calcium & Uniconazol as replacements for PBZ
- ▶ Further data collection to inform official application for registration

Training for development

- ▶ Technical training of extension staff & farmers on application & use
- ▶ Further studies to improve the reliability of off-season production – including refinement of rates & application timing