



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

End of Project Review  
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**Title:** Disease Management

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Implementing Agency



Funding Agency



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# Aim & Objectives


## Key focus

- ▶ Improving the management of Anthracnose and Bacterial blackspot diseases on mango through better chemical and management.
- ▶ Develop an understanding of the impact on fruit bagging on disease reduction.

## Research questions

- ▶ What on-farm innovations are likely to generate the most significant impacts to reduce losses, increase productivity & quality outputs that will improve returns directly related to smallholder incomes?
- ▶ What improved GAP, plant nutrition, disease & pest management models have the greatest potential to reduce the negative effects of agrochemical use for farmers, the environment, & the end consumer whilst being able to produce an affordable quality fruit?
- ▶ What innovations have the most cost-effective & positive impacts on productivity, losses, quality & harvest timing, leading to improved price & farmer income?

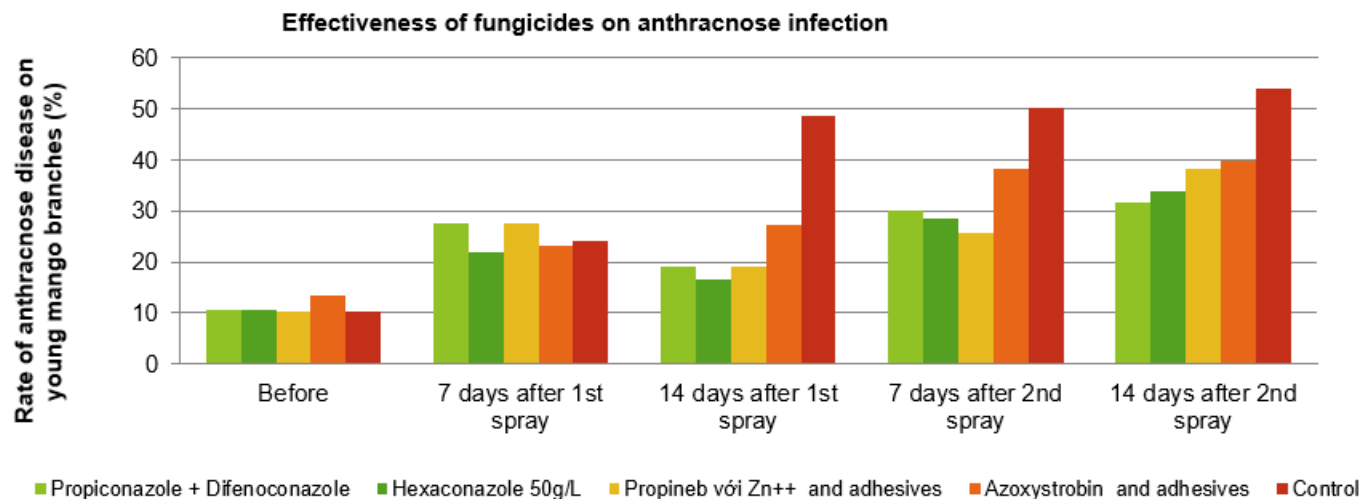
# Overview

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- ▶ Different control strategies effectiveness in suppressing disease development in bagged fruit
  - ▶ Evaluated the effectiveness of different chemicals for the control of anthracnose & black spot diseases
  - ▶ Disease is the largest single limitation for development of mango markets particularly where fruit is transported over long distances
  - ▶ Vietnam has a number of registered chemical products for control of disease
  - ▶ Fruit bagging is now common practice in the MRD, however it is not known what level of protection can provide for disease reduction and the best way a spray program can be incorporated with fruit bagging practice.

# Benefits of change

## What we learnt

- ▶ Fruit bagging combining with chemical treatments reduces disease incidence & severity
- ▶ Antibiotic oxytetracycline hydrochloride (Poner), significantly reduces bacterial black spot
- ▶ Propiconazole + Difenoconazole give the best results for control of anthracnose



# Pathways to adoption

- ▶ A holistic approach (research & training) using a combination system model for disease management with an orchard inoculum reduction program is required
- ▶ Demonstration and training to integrate post harvest disease control & cool chain management system to ensure the supply of quality fruit should be undertaken

