

ANZAGC 2009

Integrated Pest Management in Avocados

by

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Growing Greener Growers

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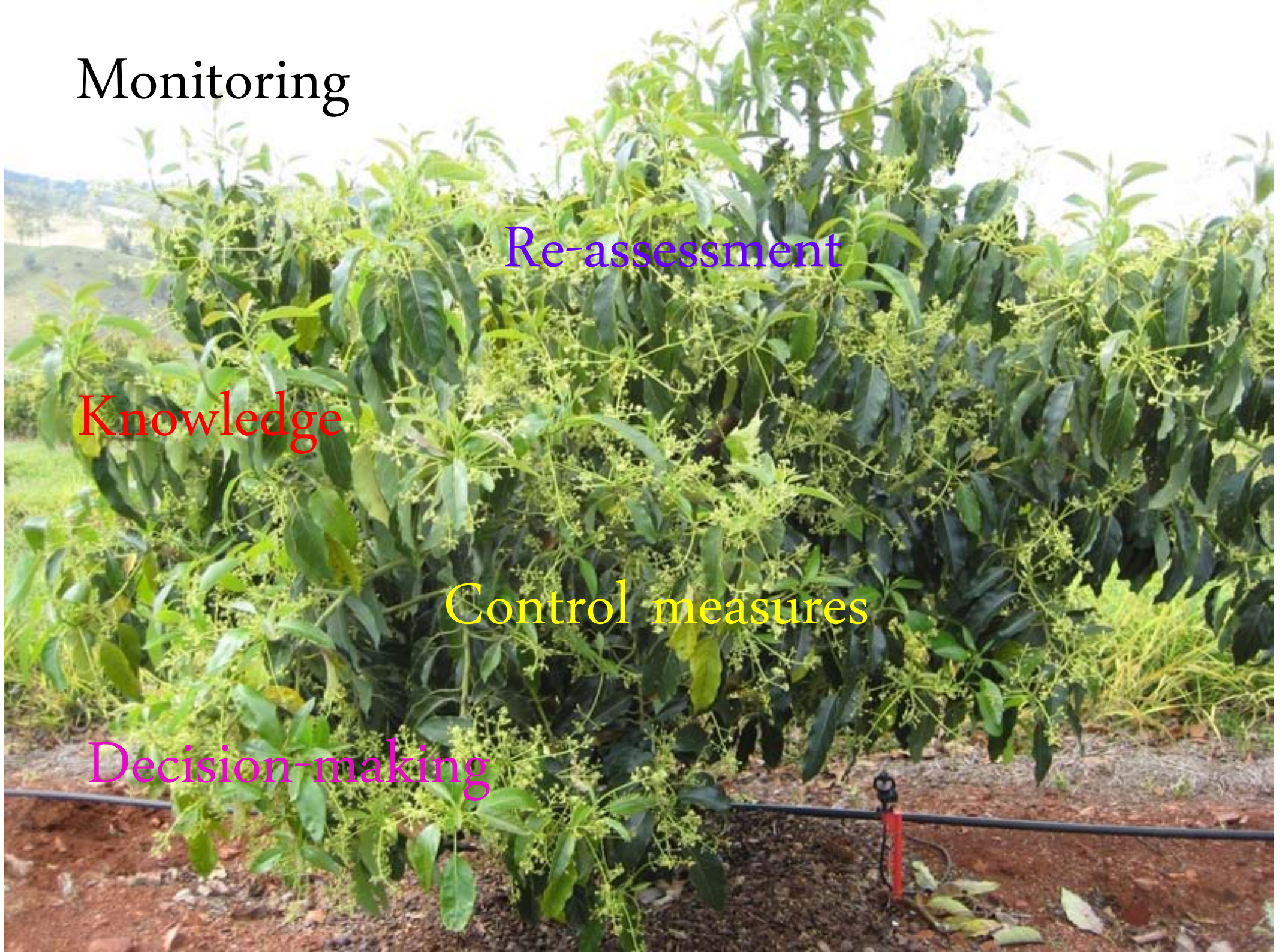
Monitoring

Re-assessment

Knowledge

Control measures

Decision-making



High intensity orchards can be monitored effectively for pests





What is it?

Is it a problem?

A PEST ...

Tea red spidermite

What can I do about it?

A close-up photograph of a green leaf showing significant damage from red-banded thrips. The leaf is covered in numerous small, dark brown spots and streaks, particularly along the veins. The damage is most prominent in the lower-left quadrant, where the leaf tissue has become necrotic and brown. The leaf is set against a dark, textured background, possibly wood.

A PEST ...

Red-banded thrips

FRIEND ...

Striped ladybird



FRIEND ...

Cryptolaemus

larvae



Mummy!





What is it? TEA RED SPIDERMITE

Is it a problem? YES

What can I do about it?

Do nothing and rely on natural biocontrols
or on the weather

Spray with “hard” chemical

Spray with “soft” chemical

Introduce a biocontrol agent

Accept the expected level of damage



The toxicity of sprays to
some beneficials



TOXICITY	Predatory mites	Cryptolaemus ladybirds	Chilocorus ladybirds	Parasitic wasps	Lacewings
Carbaryl	Low-Medium	High	High	High	Medium-High
Pyrethroids	High	High	High	High	High
Tebufenozide*	Low	Low	Low	Low	Low
Bt	Low	Low	Low	Low	Low
Chlorpyrifos	Medium	High	High	High	High
Fenthion	High	High	High	High	High
Methidathion	High	High	High	High	High
Methomyl	Medium-High	High	High	High	High
Dimethoate	High	High	High	High	High
Endosulfan	Low-Medium	Medium	Medium	Medium-High	Medium
Petroleum oils	Low-Medium	Low	Low	Low-Medium	Low
Fenbutatin oxide	Low	Low	Low	Low	Low
Propargite	Low-Medium	Low	Low	Low	Low









Pests are not evenly distributed ...

Look for hotspots





A warning ...



The start of a problem

...







A close-up photograph of an assassin bug nymph perched on the tip of a human finger. The nymph has a yellowish-orange body with dark, patterned legs and antennae. The background is a blurred green, suggesting a natural outdoor setting. The text "FRIEND ..." is overlaid in purple on the lower left of the image.

FRIEND ...

Assassin bug nymph

Mummy!











Spotting bug ...

Deep, variable
and initially
greasy





Fruit fly ...

Shallow
and small



IPM – Intelligent Pest Management

It's a systematic process.

In summary ...

Start looking in your crop.

Things may not be what they seem!

Record and use what you find to help make decisions.

Consider non-chemical alternatives.

Don't wait for magic bullet solutions.

Assess if your actions work.

It's a merry-go-round.