

WHITEFLY DECISION MAKING TREE

START HERE

Step 1: Select pest resistant varieties

Order seedlings and inform nursery that you intend to use biological controls
Contact your biological control agent supplier and plan your IPM programme



Step 2: Plant and begin to introduce *Encarsia formosa* at a rate of 1/m²/week
Also space out *Engyptus nicotinae* banker plants at a rate of 1/100m²

Scout weekly



Step 3: Add *Encarsia formosa* at a rate of 1/m² x the average number of whitefly per head every week
Move banker plant flowers loaded with *Engyptus nicotinae* to any hotspots

1-5

Whitefly per plant head



Keep doing the same

5-20

Whitefly per plant head



Determine the percentage of *Encarsia formosa* parasitism

80% or more

You're OK, The *Encarsia formosa* are winning, keep doing the same thing

Less than **80%**

Adults only

"Fly in" infestation, 2 physical mode of action sprays at a 4 day interval to knock them down

Complete lifecycle?

Apply a physical mode of action spray 3 times with a 4 day interval to break the lifecycle

20+

Whitefly per plant head



Determine the percentage of *Encarsia formosa* parasitism

80% or more

You're OK, The *Encarsia formosa* are winning, keep doing the same thing

Less than **80%**

Spray with a physical mode of action at 3-4 day intervals for 4-6 weeks to break the life cycle. Continue to add *Encarsia formosa*

Repeat Step 3 with a double *Encarsia formosa* rate for the first 2 weeks



NOTE 1: If you notice other pests, refer to the action cards



NOTE 2: If you see signs of Psyllid hang yellow sticky traps, spot spray, and release *Buchananiella whitei* to eat the survivors



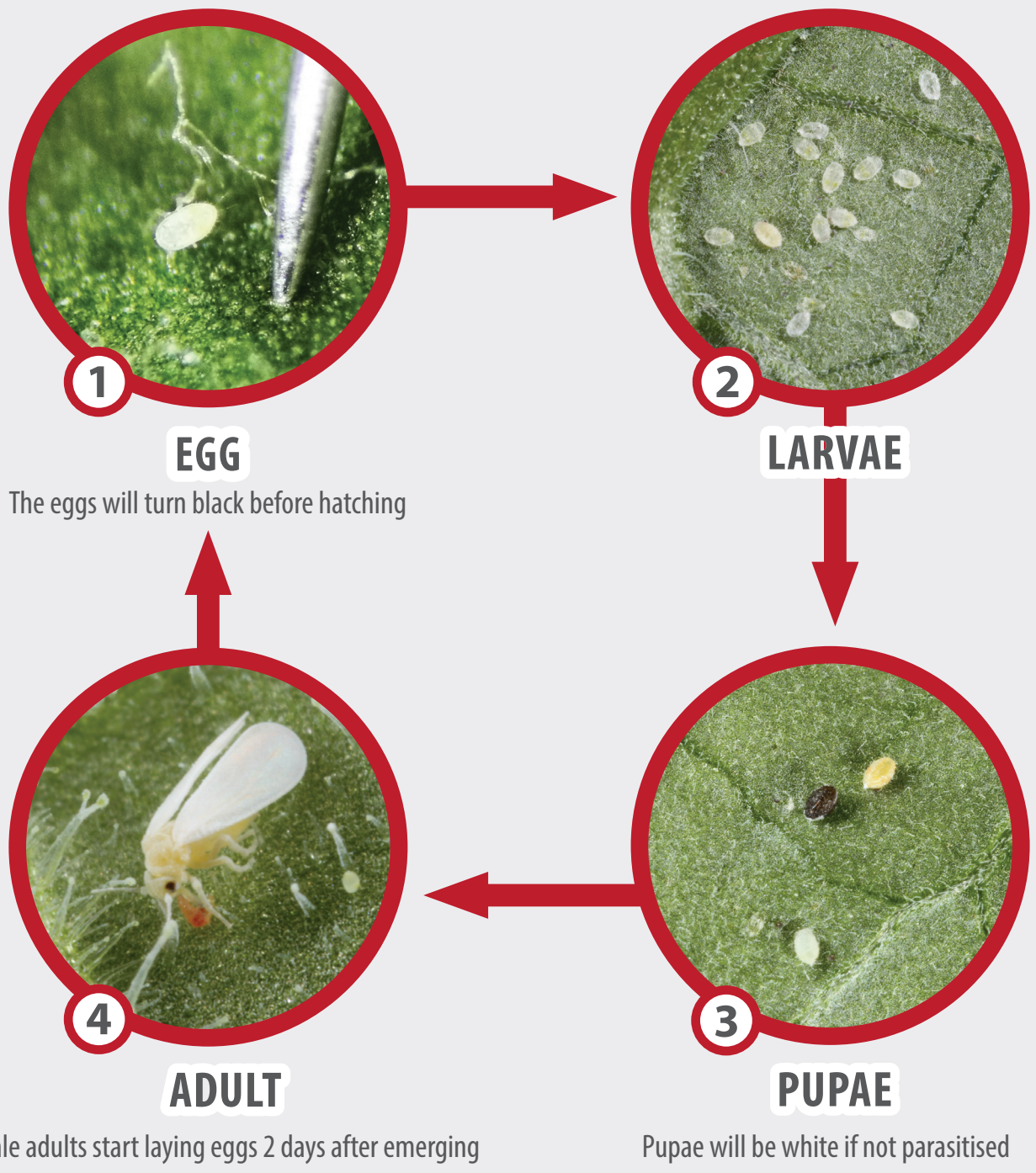
NOTE 3: If you are running at a 24 hour average temperature below 12°C the *Encarsia formosa* will not work. Instead try a physical mode of action spray every two weeks until its warmer



A LIGHTER TOUCH



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Average time from 1 Egg to 4 Adult

Temperature	Days (approx)
15°C	46.4 days
20°C	25 days
25°C	19 days

Approx Life cycle length at 20°C*

Life Stage	Days (approx)
Egg to Larva	9 days
Larva to Pupa	11 days
Pupa to Adult	5 days

*as per 'A temperature-dependent phenology model for the greenhouse whitefly *Trialeurodes vaporariorum* (Hemiptera: Aleyrodidae)'

