



## TaroPest

A computer based information and diagnostics package for taro pests of the Pacific islands

Amy Carmichael & Tony Clarke  
School of Natural Resource Sciences  
Queensland University of Technology



## TaroPest Project

- Funding
  - ACIAR - Australian Centre for International Agricultural Research
  - January 2005 – June 2007



## TaroPest Project

- Partners
  - FIJI – Secretariat of the Pacific Community
  - PAPUA NEW GUINEA – National Agricultural Quarantine and Inspection Authority
  - AUSTRALIA – Queensland University of Technology



## Primary Objective

- Production of an information and diagnostics package for identifying the pests and diseases of taro of the Pacific islands



## What does that mean?

- Development of a website containing lots of information on pests and diseases of taro
- 'One-stop-shop'
  - Help people identify insect pests
  - Identify diseases from symptoms
  - Fact sheets and photographs
  - Single source of information



## What does it contain?

- The major pests and diseases of the Pacific islands
- Illustrated hard and soft copy fact sheets containing...
  - Diagnostic features
  - Distribution
  - Photographs
  - Control methods
  - Quarantine information



## What does it contain?

- Two interactive keys to assist in the identification of the pests and diseases
- Notes to assist users in the recognition and diagnostic features of each pest or disease
- Tutorials to help users get the most out of *TaroPest*



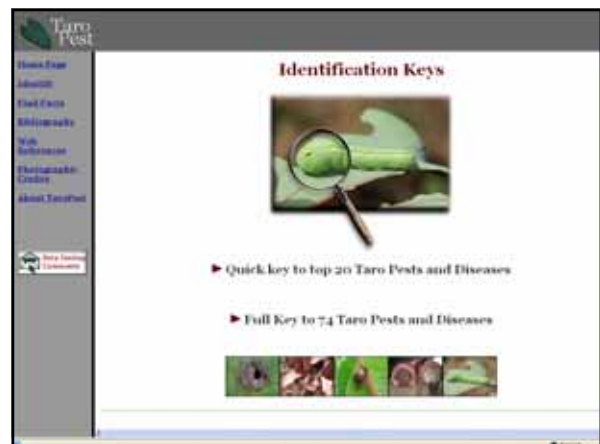
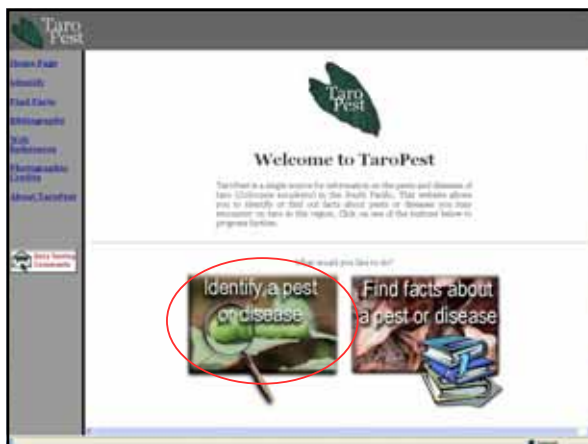
## What has been done?

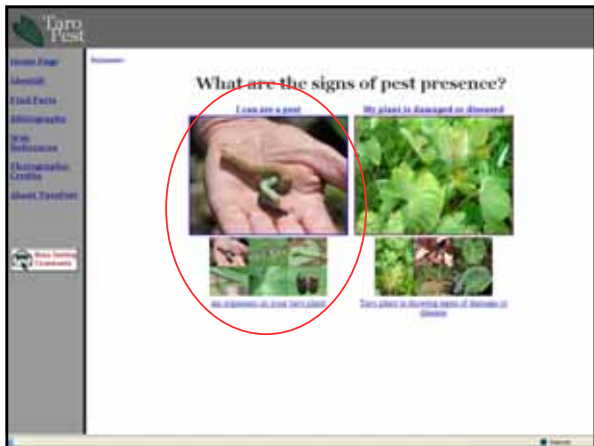
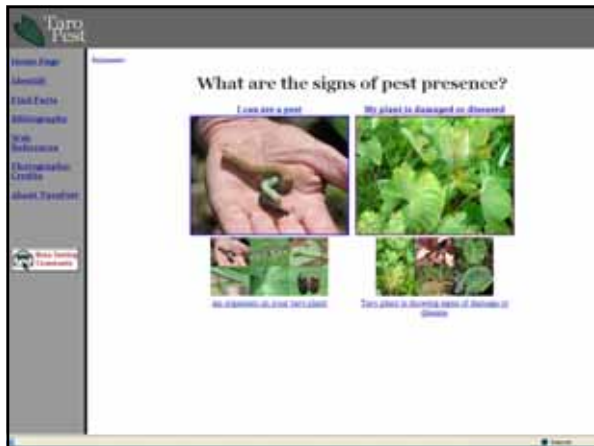
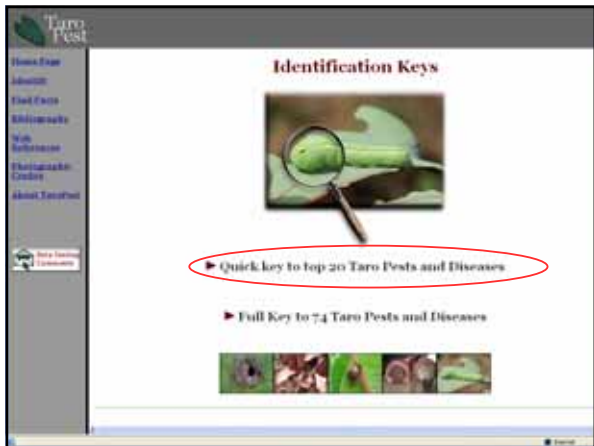
- The website is in Beta testing phase
  - We are asking people to trial the website to ensure it is..
    - User friendly
    - Accurate
    - Contains the information required

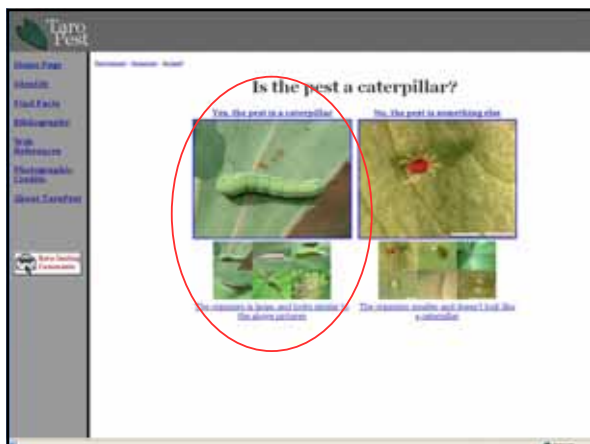
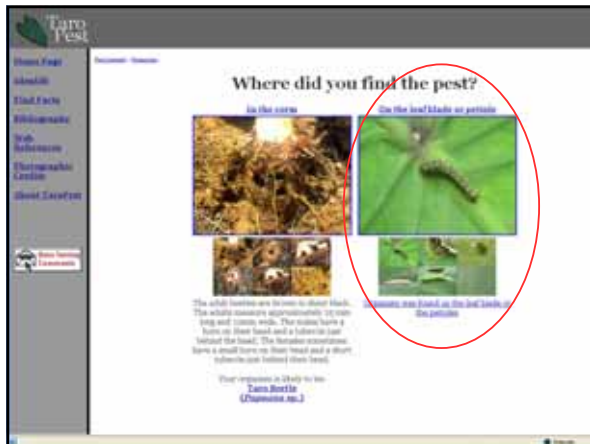


Where is it?

<http://taropest.sci.qut.edu.au>








**Taro Pest**

Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest


Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest

**Armyworm or Hornworm?**

**Armyworm**



**Hornworm**



Armyworms are dark green caterpillars with dark markings, without a horn on its tail. Young armyworms are pale green, older larvae are dark green to brown, although coloration is variable, the long yellow stripe along the dorsal surface is characteristic.

Hornworms are bright green (occasionally reddish brown) caterpillars, with a 'horn' on its tail. Two spots resembling eyes appear behind the head. Larvae become darker and larger as they get older.

For updates to this page, click on the **Armyworm** link.

For updates to this page, click on the **Hornworm** link.

**Taro Pest**

Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest

**Armyworm**

*Spodoptera litura*

**What is it?**

What is it? What does it do? Where is it?

Identification and Control information  
Detailed Biological Information - Control and Insects

What is it?



**Taro Pest**

Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest

Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest

**Larvae of Spodoptera litura**

**Life stages**

**Eggs**

Laid in **clusters** and covered with hair scales from the tip of the abdomen of the female moth. Egg masses or hatches usually measure 4 mm in diameter and appear round to golden brown to yellow, like **Fig. 1**.

**Larvae**

Larvae are variable in color (**Fig. 1**). Young larvae are pale green and older **larvae** are dark green to brown, although coloration is variable, the long yellow stripe along the dorsal surface is characteristic of Spodoptera litura larvae.

**Adult**

Moth, with grey-brown body, 30-40 mm long, wingspan 30-40 mm. The forewings are grey to reddish-brown with a slightly wavy pattern and pale lines along the veins, the hindwings are greyish-white with grey markings.

[Click here to go to the Morphological Photos Page](#)  
[Click here to go to the Field Photos Page](#)

**Taro Pest**

Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest

Home Page  
Identify  
Field Facts  
Biology/Control  
What  
References  
Photos/Videos  
Contact  
About TaroPest

**Larvae of Spodoptera litura**

**Life stages**

**Eggs**

Laid in **clusters** and covered with hair scales from the tip of the abdomen of the female moth. Egg masses or hatches usually measure 4 mm in diameter and appear round to golden brown to yellow, like **Fig. 1**.

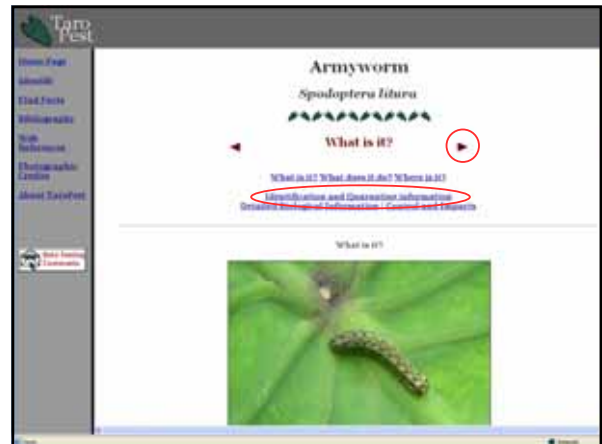
**Larvae**

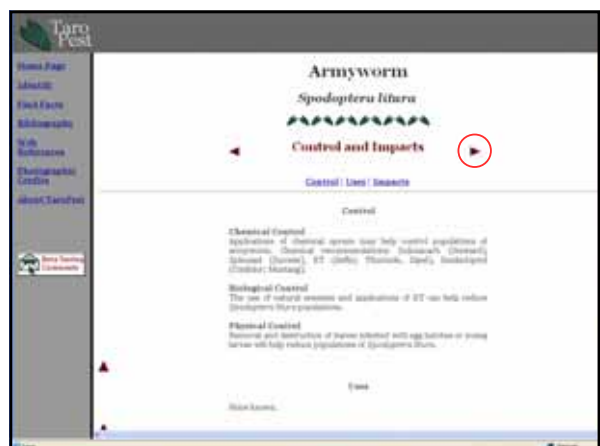
Larvae are variable in color (**Fig. 1**). Young larvae are pale green and older **larvae** are dark green to brown, although coloration is variable, the long yellow stripe along the dorsal surface is characteristic of Spodoptera litura larvae.

**Adult**

Moth, with grey-brown body, 30-40 mm long, wingspan 30-40 mm. The forewings are grey to reddish-brown with a slightly wavy pattern and pale lines along the veins, the hindwings are greyish-white with grey markings.

[Click here to go to the Morphological Photos Page](#)  
[Click here to go to the Field Photos Page](#)









## What's left to be done?

- Addition of more species
- More photographs to be added
- Addition of extra tutorials

## Beta testing...

- Please visit the site...  
<http://taropest.sci.qut.edu.au>
- Email Amy  
[ae.carmichael@qut.edu.au](mailto:ae.carmichael@qut.edu.au)