**Tecia solanivora** has caused important damages to potato crops in the North of Tenerife and recently in potato crops of Gran Canaria and La Palma. Its importance is based as much on the damage it causes to potatoes in fields, as well as the damage later produced in warehouses, where the conditions are ideal for its fast reproduction.

It is native to Guatemala, where it was described for the first time. Since then, it has spread throughout Central America (Costa Rica, Panama, Honduras, Nicaragua, El Salvador) and later to South America. Venezuela, Colombia and Ecuador are the only countries to have suffered from potato crop damage. In The Canary Islands it was detected in 1999, specifically in Tenerife and later in Gran Canaria and La Palma in 2002.

**BIOLOGY**

It only grows over *Solanum tuberosum* potatoes. As with all moths, they are nocturnal and begin their cycle by laying their eggs above the potatoes or near them. They lay between 200 to 500 eggs. The fertility of the eggs reaches 95% and the incubation period can last between 5 and 15 days, depending on the temperature.

Once hatching has taken place, the larva, which measures 1.5 mm and is a creamy white colour, enters inside the potato where it grows. It is responsible for the damage of the potato, characterised by loss of weight and quality. At the end of the larval phase, that lasts between 15 and 29 days, the larva abandons the potato measuring 16 mm and a greenish colour to later turn a pinkish colour.

Once outside the potato, the larva stops feeding on it and creates a cocoon of silk together with bits of different materials. Inside it, stays the chrysalis (pupa). This phase can occur in the ground, sacks, fissures and cracks on the floors and walls. It can also pupate inside the potato. At the beginning, the chrysalis (pupa) is light brown but when the adult emerges, it turns a darker colour. This phase lasts between 10 and 20 days.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Duration at 15°C (days)</th>
<th>Duration at 20°C (days)</th>
<th>Duration at 25°C (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egg</td>
<td>15</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>Larva</td>
<td>29</td>
<td>17</td>
<td>15</td>
</tr>
<tr>
<td>Chrysalis (pupa)</td>
<td>31</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Adult</td>
<td>20</td>
<td>18</td>
<td>10</td>
</tr>
</tbody>
</table>

According to the previous table, the moth can finish its biological cycle between 42 and 95 days, depending on the temperature.

Important facts of its biology:
- In high temperatures, there are more generations but a higher percentage of mortality.
- The minimum temperature for its growth is from 7 to 9 °C.
- Temperatures below 10 °C and rain are a limiting factor for its growth.

**SOURCE:** Consejería de Agricultura, Ganadería, Pesca y Alimentación de la Comunidad Autónoma de Canarias.
Natural rubber diffuser with capsule shape, individually packed in an aluminium envelope with specification label. Once removed from the packaging, the diffuser does not need any activation operation, just place it properly in the trap.

**NECESSARY MATERIAL**

A trap ECONEX POLILLERO, EOSTRAP® or ECONEX WHITE TRIANGULAR without sheets, and an ECONEX TECIA SOLANIVORA 2 MG 60 DAYS attractant diffuser.

For mass trapping, the ECONEX POLILLERO and the EOSTRAP® are more appropriate than the ECONEX TRIANGULAR. In the ECONEX POLILLERO and the EOSTRAP®, it is recommendable to place any substance capable of killing or retarding the captured insects inside the trap, such as olive oil.

The ECONEX WHITE TRIANGULAR without sheets trap is activated by placing an ECONEX SHEET FOR TRIANGULAR 1 UNIT on its base and the ECONEX TECIA SOLANIVORA 2 MG 60 DAYS diffuser on the centre of the sheet, where it will be fixed by the adhesive.

The ECONEX WHITE TRIANGULAR without sheets trap stands out especially because of its simplicity of use. It will work until the pheromone runs out or the adhesive sheet is saturated. It is less recommendable in areas with lots of dust.

**DETECTION AND MONITORING**

1 to 2 traps per hectare should be placed at the same height as the crops or on an ECONEX TRAP SUPPORT.

The traps should be placed as soon as the Teca solanivora populations increase during the crop cycle. This usually happens during the process of tuberisation, so it is recommended to place the traps when the flowers bloom until harvest time.

The traps should be placed approximately 30 to 60 cm high from the ground and the maximum height will be determined by the growth of the plants (if the traps are placed lower than usual, once the crops have grown, it will be difficult to find them).

The traps should be placed in the field paying attention to the plot’s borders, where the populations increase much faster. In addition, if the traps are placed inside the plots it makes access to them very difficult due to the high density of the potato crops.

**RESULTS**

If specialists or farmers use traps and pheromones correctly, as previously described, especially during the early stages when adults of the first generation appear, this monitoring system is very effective. A very low level of damage, mainly on organic land, has been demonstrated. A level of control of more than 95% is very common, especially in large areas of crops. A limiting factor of this system could be when there are small plots distributed all around and the neighbours have a high level of infestation of this pest.

Despite important basic rules for an effective control of Teca solanivora, every farmer or specialist has to find their own system of control to achieve it. They can experiment with this system, even establishing their own tolerance thresholds.