

SOSPALM: LOW COST TREATMENT OF THE RED PALM WEEVIL

Sospalm is the system used by the majority of professionals in Spain for the control of the red palm weevil. This is easy to understand if we analyze the comparative advantages with other systems. While traditional endotherapy requires repeated

perforations, the Sospalm peg is fixed to the palm, thus avoiding repeated perforations and unnecessary damage whilst also increasing labour efficiency.

With the Sospalm System we administer a small dose of insecticide via the peg into the stem which is then carried directly to the growing point.

The Sospalm system is installed in the lower part of the stem thus protecting the entire area where the insecticide circulates, which is vital to control lateral and base attacks in *Phoenix dactylifera* and reduces the cost of treatment, above all in tall palms.

The Sospalm system is safe for the user and environmentally friendly. It protects the palm against the red weevil without affecting the quality of the fruit, as with the Sospalm Protocol we avoid insecticide residues in dates making them fit for consumption even just a few days after treatment.

Technical days at Universidad Miguel Hernandez in Elche, Spain.

With the participation of 250 experts and after 4 years of tests the following conclusions were presented.

- Sospalm peg is an efficient method for injecting insecticides into palm trees.

- As the same point of injection is re-used, further perforations are not required.

- After monthly injections via the Sospalm peg of Tiametoxan, acetamiprid,

abamectine or Imidacloprid, these last two dissolved in Sospalm Liquid, over the two years of trials all the *Phoenix Canariensis* and *Phoenix Dactylifera* survived the attacks.

Other notable results. The high incidence of infestation in the principal areas of production in Spain, added to a high number of tall palms, led us to centre our efforts on the creation of a protocol which guarantees the absence of insecticide residues in dates, a primary factor of quality and the protection of the growing points in taller palms. Before these results were obtained farmers had to interrupt treatment which left the palms unprotected.

Trials to detect residues in dates.

Metjoul and Confitera dates harvested from trees which had been injected using Sospalm Endotherapy with Tiametoxan, Abamectine and Imidacloprid 30 days earlier, did not show traces of residues above the minimum detectable limit.

Results of the trials to detect the presence of insecticide in the growing point of tall palms.

The complete results of all of the trials can be seen at <http://palmeralelx.umh.es/trabajos-catedra-2/lucha-activa-contra-el-picudo-iii-tratamientos-con-endoterapia/>

Sospalm was tested in elche, the largest palm grove in europe, demonstrating that it is the most efficient system to control the red palm weevil.

www.sospalm.com



In palms up to 13m high injected monthly with Imidacloprid dissolved in Sospalm Liquid, the insecticide was detected at the growing point in several of the trials performed.

Case of success

Integral plan to control the red palm weevil in the municipality of Alicante.

Preamble

Alicante has a census of about 18000 palm trees spread through the whole municipality distributed by variety in the following way:

9135 *Phoenix dactylifera*.

6500 *Washingtonia Robusta*.

2071 *Phoenix Canariensis*

525 *Trechycarpus Fortunei*

The existence of Red Palm Weevil (*Rynchophorus Ferrugineus*) in the municipality of Alicante is a sad fact, computing a total of 42 palms affected from 2008 until today, all of them on private properties.

In 2008 the integral plan to control the red palm weevil in the city of Alicante was designed as a matter of urgency.

Goals

The aim is clear, obvious and concrete:

1º.- To protect the population of palms, mainly the Date Palm (*Phoenix Dactylifera*) and the Canary Palm (*Phoenix Canariensis*), from red weevil attacks as the only way to preserve our local landscape in the municipality of Alicante.

2º. To protect the historic Palm grove of Alicante.

Elements of the plan

a) Control measures

- Surveillance, detection and information.
- Preventive treatments.
- Curative treatments.
- Trapping network
- Pruning
- Advice to individuals
- Training for operators

Currently, due the recent legislation in Spain which sets out new guidelines for the reduction and sustainable use of plant protection products, we are increasing the use of endotherapy, already in use with satisfactory results since early 2009 with the SOSPALM system, consisting of the insertion in the stem of the palm of a plastic peg that serves as a means of introduction for the insecticide into the palm.

The reasons that lead us to use this system are various, but the most important are the following:

- No impact on the public of the plant protection product.
- Ease of application
- It is not necessary to make a new hole for every treatment
- Low cost when compared to other methods.

In *Phoenix Canariensis* palms we are using 3 Sospalm pegs of 25 cm per palm and in *Phoenix Dactylifera* palms we are using 2 Sospalm pegs of 15 cm per palm, using Imidacloprid with the dissolvent Sospalm Liquid as insecticide.

Parallel to endotherapy, in times of high level of adult activity, the action is complemented with sprays to the growing point of the palm with 25 litres of solution with the actives Clorpirifos and Imidacloprid.

b) Advisory service for private owners

To provide information to the private owner in order to encourage the fight against the plague on all fronts.

After inspection the palm is labeled as:

1. Very severe attack / death of the palm. Palm tree felling is recommended.



Sospalm improves labour efficiency since it is not necessary to carry complicated and heavy equipment.

2. Severe attack / Palm can be saved. When inspecting a palm tree, if the attack of red weevil is confirmed but it is considered that the palm can be saved, the following recommendations are offered:

- To perform endotherapy treatments with the Sospalm system using authorized chemicals.
- To perform shower treatments with the chemicals recommended by the regional government.

3. Light attack. It is recommended:

- To perform Sospalm endotherapy.
- To perform shower treatment.

In all cases, after 15 days the technical personnel of the

town hall will carry out an inspection and check that the palm tree has been treated. They will also check periodically that the treatments continue in the affected specimen (endotherapy and showers).

c) **Monitoring, mass trap.**

Since the presence is known a priori of large outbreaks of infestation in rural districts of the municipality, a large trap network has been designed in order to capture en mass the largest number of adults in flight during the months from March to November in order to avoid the spread of all these adults.

The aim is to drive the flight gradients of existing outbreaks outwards and the

concentration of current focal points, instead of inward towards the urban environment.

Conclusions

- There are 434 affected palm trees on private property in the municipality of Alicante.
- There have been no fatalities due to attacks from the red palm weevil on palms of municipal ownership.
- After the performance of endotherapy treatments with the Sospalm peg there have been no attacks from the red palm weevil.
- The experimental palms that were dissected do not show any damage produced by Sospalm endotherapy after 4 years of use.

