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NEW LOW PRESSURE TRUNK INJECTION SYSTEM OF BAYER AND FERTINJECT

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RÉSUMÉ

Confidor®- Ynject® consiste en un connecteur en plastique à insérer dans un trou préalablement réalisé dans le stipe du palmier, un réservoir sous pression disposant d'un clapet anti-retour et contenant une solution nutritive (injectable une fois connectée au connecteur) et un pistolet doseur utilisé pour introduire le produit phytosanitaire, après l'avoir dilué à la dose recommandée.

- Il permet le dosage *in situ* de substances.
- Il réduit les risques potentiels pour la santé et l'environnement. Il s'agit d'un système totalement hermétique. Le cycle de vie du produit phytosanitaire est totalement fermé, sans contact avec l'extérieur : de l'usine directement à l'intérieur du tronc de l'arbre.
- Il confère un meilleur rendement lors de l'application, ce qui permet de réduire le coût de la main d'œuvre et par conséquent de traiter un plus grand nombre de palmiers par jour.

SUMMARY

Confidor®- Ynject® consists of a plastic connector that is inserted in the perforation practised in the trunk, of a pressurized can with non comeback valve, which contains an injectable nutritional complex that is meant to fit into the connector, and a device dispenser that is used to introduce Bayer's insecticide, once diluted, at the recommended dose.

- It allows the dosage "in situ" of substances.
- It minimizes the potential risks for the health and the environment. It is a completely airtight system. Life cycle of the completely closed product, without contact with the outside. From the factory straight to the interior of the trunk of the tree.
- It provides a better yield in the application and, therefore, a minor labor cost, allowing the user to apply it to a higher number of palm trees per day.

Bayer Green Areas and the Cordoba-based company Fertinyect have developed a new application system to combat the Red Palm Weevil in palm trees, which completely avoids contact by the applicator with the product. The system is based on the injection of the product directly to the stipe of the palms. The main advantage of this new system is that at no time does the product come in contact with the professional applying it or with users of parks and gardens. Also, the palm gets the necessary dose of product enabling it to reach those red palm weevil specimens located deeper. In addition, positioning the product directly into the plant we are giving it a high persistence, allowing a significant reduction in external sprays.

The new Ynject applicator, patented by Fertinyect, is the basis for the new Confidor-Ynject application system, which allows product dosage to be calculated accurately, minimising toxicological and environmental impact, while maximising the safety of the professional applying it. The product is injected directly into the trunk of the tree, without coming into contact with the professional.

From the point of view of the person applying the product, the system is much quicker, as the product is absorbed immediately by the sap. The product is applied from a distance of 1.5-2 metres from the crown of the tree, rendering elevation devices such as cranes or cherry-pickers unnecessary. No special clothing is required, as the product is completely closed off from the outside. According to Fertinyect, application time is reduced some 35% with regard to previous systems.

The product used to combat the Red Palm Weevil is Confidor-20LS (imadaclorprid 20%), a product which has been widely tested and proven to be effective. It is not listed for toxicity and is used regularly in domestic gardening and to control pests in parks and gardens.

Injection into the trunk: a cutting-edge concept.

The modern concept of spraying for pests involves using only products and methods that are safe for people and the environment. Trunk injection offers:

- greater safety for the operator and others
- greater safety for the environment
- better control of pests and diseases

The new EU Directive on the sustainable use of pesticides and the new regulations for its implementation will significantly limit conventional plant health treatments in public areas. Direct trunk injection is a viable alternative and constitutes sustainable use.

The advantages of the Bayer-Fertinyect system

The Bayer-Fertinyect system respects the vascular system of the tree, as the substance is absorbed naturally by means of transpiration. The pressure is adjusted so that the substance used is absorbed directly by the tree's vascular system, to avoid possible damage caused by excess pressure.

This new system allows trees to be dosed regularly via each perforation point. The substance is absorbed at a low rate, avoiding variations in pH and ensuring homogenous distribution.

The system is eminently simple, based on the use of consumable elements, and requires no investment in machinery or maintenance costs.

The non comeback connector valve injects the subject directly to the trunk, preventing possible leakages caused by vandalism or by the actions of children and animals.

- Minimises potential health and environmental risks.
- No direct contact between user and substance when fitting or removing the device.
- Completely airtight - no risk for persons or animals.

Dosage can be diluted and adjusted on site, ensuring compliance with plant health regulations and making for better commercial distribution.

The system is extremely versatile and compatible with all plant health products that can be injected into the trunk. It can be used on trees in forests, parks, gardens, etc., anywhere.



The advantages of the Bayer-Fertinyect system

Programs developed for the integral control of the Red Palm Weevil (*Rhynchophorus ferrugineus*) recommend preventive or curative treatment using duly registered health plant products.

In this regard, CONFIDOR® 20LS is the insecticide most widely accepted by the scientific and technical communities, due to its efficacy against the Red Palm Weevil, and forms the basis for all professional recommendations and strategies against the pest issued by the Health Plant Services of the Spanish Autonomous Regions.

At present, preventive treatment plans applied in certain Autonomous Regions for preventive leaf-spraying of ornamental palm trees recommend application between June and September, drenching the bud with 1 ml per litre, at a rate of 20-30 litres for palm trees over 1.5 metres in height.

Curative treatments, performed from October to May, include low pressure trunk injection with CONFIDOR® 20LS.

Trunk injection treatment courses consist of applying 4-10 ml per tree, in 4-5 injections performed 1.5 metres from the crown, along with a further two drenches with CONFIDOR® 20LS, in the doses specified above for leaf spraying, to be performed between June and September, and trunk injection, as outlined above.

In all cases, Bayer recommends that CONFIDOR® 20LS be applied by specialist companies, supervised by the Plant Health Services of the Autonomous Regions.

Registration details for CONFIDOR® 20LS in Spain.

- ❖ Area of use: Agricultural plantations, including palm tree nurseries, and Parks and Gardens, covering use by professionals in public places, and Outside Domestic Gardening, covering non-professional use.
- ❖ Authorised use: Ornamental palm trees. Does not include date palms. Against *Rhynchophorus*, *Paysandisia* and *Diocalandra*.
- ❖ Restrictions on users:
 - "For use by farmers and pest control professionals only"
 - "For non-professional users, only the package types authorised for outside domestic gardening (2cc) may be used."
- ❖ Classification and labelling: Not listed for toxicity. Category A for mammals, birds and fish. Very dangerous for bees.
- ❖ Dosage and use: Spray normally to the bud and stipe of the plant, at doses of 0.05-0.075% or, in the case of palms in nurseries, apply by means of drip irrigation at doses of 8-10 litres per hectare, maximum two applications, 30-40 days apart. Trunk injection, depending on the diameter and height of the tree, at doses of 4-10 cc per application, at 1.5 to 2 metres from the crown, every 45-55 days from March to November. Application should be performed by specialist companies, supervised by the Health Plant Services of the Autonomous Regions.

More information: www.areasverdes.bayercropscience.es
and www.press.bayercropscience.com.