

The Devastating Disease of Clementine “Water Spot”

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Received: July 04, 2019; **Published:** October 16, 2019

Abstract

Each crop is affected by diseases due to viruses or fungi or bacteria and diseases caused by abiotic factors with the professional grower being forced to reduce disease as much as possible in order to get the highest possible production and quality. Citrus growing, you consider from the main tree plantations in Greece along with Olive and Cotton.

Water spot is an abiotic agent disease. It is not attributed to a fungus or bacterium or virus or insect. The disease affects most of her offending her clementine. It can result from poor quality downgrading to total destruction of production. The usual season of attack is post-harvesting up to a few hours before harvest. In this work we will raise the disease and some ways to prevent and treat the disease.

Keywords: *Devastating Disease; Clementine; Water Spot*

Introduction

It is well known that mandarins consist of basic citrus fruits in Greece and generally in the Mediterranean basin. Also, first raw materials sales have reached 140.00 tns of fruit behind fruit (> 850.00 tns) according to faostat official figures for 2014. The largest share is in external markets.

Apart from the benefits to the country's economy, they are the main fruit of the Greek table for both the excellent taste and the rich vitamin source especially for vitamin C.

The water spot is the biggest problem for them. Because of the disease, tens or even thousands of tons of fruit per year are lost and lost. At the same time, it is a major cause of a reduction in price in the field, so the producer is forced to sell his produce at a much lower price than the value without this abiotic disease.

But let's see what is what we call water spot or better known moniles in the language of the producers. Before mentioning anything to clarify that brown rot (marigold) and water spot or citrus mounds are two totally different Diseases. The water spot is an abiotic agent that is not caused by insects, fungus, bacteria or virus, nor is nutrition, so it is a normal anomaly of the fruit.

Appears in mature or over-ripe fruit and the critical factor in appearance is prolonged rainfall and/or high atmospheric humidity in combination with the great temperature difference between day and night. The water spot begins when large amounts of water are absorbed from the bark of the fruit through a crack, which is usually not visible to the naked eye. When there is a great deal of water absorption in the tissues, the cells are broken, an essential oil is secreted, which is toxic to the cells by "burning" and thus rapidly spreading the destruction of cells to neighboring cells, neighboring fruits and adjacent trees.

Optically, this phenomenon occurs with a submerged spot about 1 mm in diameter around the pedicle and the wrist of the fruit. After a space the spots get a brownish color with a shiny texture. Secondary, rapid fungal diseases (*Alternaria*, *Penicillium*, *Phytophthora*, etc.) develop rapidly at the spot. The result of this is the deterioration of the fruit, the local thinning of the bark, the premature fall of the fruit and the shorter shelf life. The 'disease' occurs mainly with clementine and to a much lesser extent, in oranges usually merlin.

How to treat 'water spot'

As we have seen above, it is not due to any organism (insects, etc.), so the treatment with 'medicine' does not exist. The only way we can do is to 'build' a strong fruit with the necessary nutrients, healthy, disease-free, and the right harvest time plays an important role in preventing them from being spoiled and prone.

Below we will see some tips to reduce the sensitivity of the fruit:

- Avoid using summer pulp to deal with insects and addressing agronomists about how to deal with granules.
- Nutritional balance. That is, avoid excess nitrogenous fertilizers while at the same time depriving phosphorus and potassium, especially in the summer months.
- Gibberellic acid (5 - 20 ppm) spraying results well in October or November because moisture absorption is reduced by the wrist.
- Exceptional results also give the spraying when the fruit starts to metachromatic the color in October, but also a second spray in case of excessive moisture or prolonged precipitation with copper, calcium (phosphonate) and silicon [1,2].

Conclusion

This article has been done because of the enormous problem caused by the illness both in the production and the financial damage it can cause. Also the goal is to help the producer with some practical tips mentioned above. Understanding in various practical methods that took place in the prefecture of Argolida, Greece, whose economy is based on a very large percentage of Clementine's crop. As a conclusion, how best to treat it is based on integrated nutrition, which can be said to start from basic fertilization. For the maximum possible response, an important factor is direct recognition by the producer and the competent agronomist. As a final conclusion, we should mention how prevention and management of the problem is directly influenced by environmental conditions and this means how each year the treatment and the number of sprays can be differentiated from year to year and from land to farm.

Bibliography

1. Panagopoulos C. "Fruits and fruit juices". Publicity Stamoulis (1997): 302.
2. FAOSTAT (2019).

Volume 5 Issue 11 November 2019

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