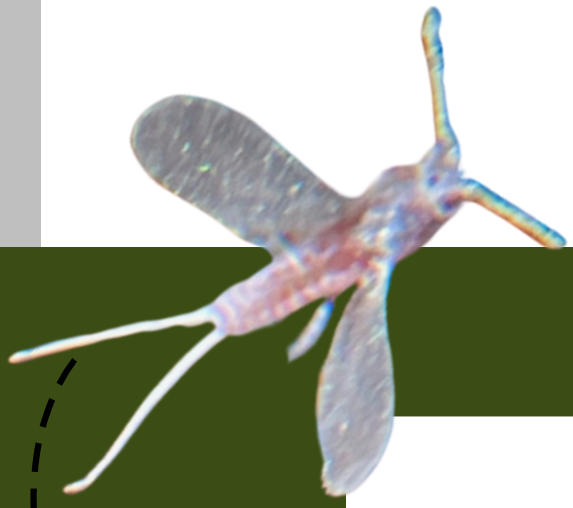




# MEALYBUGS(HEMIPTERA:PSEUDOCOCCIDAE)- MAJOR PESTS OF INDOOR BELGIAN MUMS

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## WHAT IS A MEALYBUG?

The citrus mealybug (*Planococcus citri*) is a major pest of indoor plants globally, especially in greenhouses where it thrives year-round. It damages plants by extracting sap, leading to leaf wilting, yellowing, stunted growth, and, in severe cases, plant death. On Belgian mums (*Chrysanthemum indicum*), *P. citri* also secretes honeydew, promoting fungal growth. The presence of *Planococcus citri* on Belgian mums (*Chrysanthemum indicum*) in Romania is reported for the first time. Due to the optimal conditions for citrus mealybugs in greenhouses, they can overwinter at all stages of development, causing particular problems for growers



## INTRODUCTION

Global trade has transformed the ornamental horticulture industry, with popular plants like roses and chrysanthemums widely cultivated. As ornamental plants are highly valued for their visual appearance, every effort is made to obtain a quality product. One of the main problems associated with loss of quality during cultivation is pests such as mealybugs.

In Romania the mealybug fauna is poorly known, the literature mentions the presence of 15 species of invasive mealybugs in Romania between 1859 and 2018. 3 new species have been reported from Western Romania, accidentally introduced in greenhouses due to the trade of ornamental trees, shrubs and flowers. Of these, *Planococcus citri* has been reported on over 200 host plant species belonging to 191 genera and 82 botanical families. New shoots and leaves of a wide range of indoor plants are attacked. Considering the destructive nature of citrus mealybugs, the aim of this study was to identify the most prevalent mealybug species in Western Romanian greenhouses on the basis of morphological characteristics and to obtain new biological information on their impact on Belgian mum.

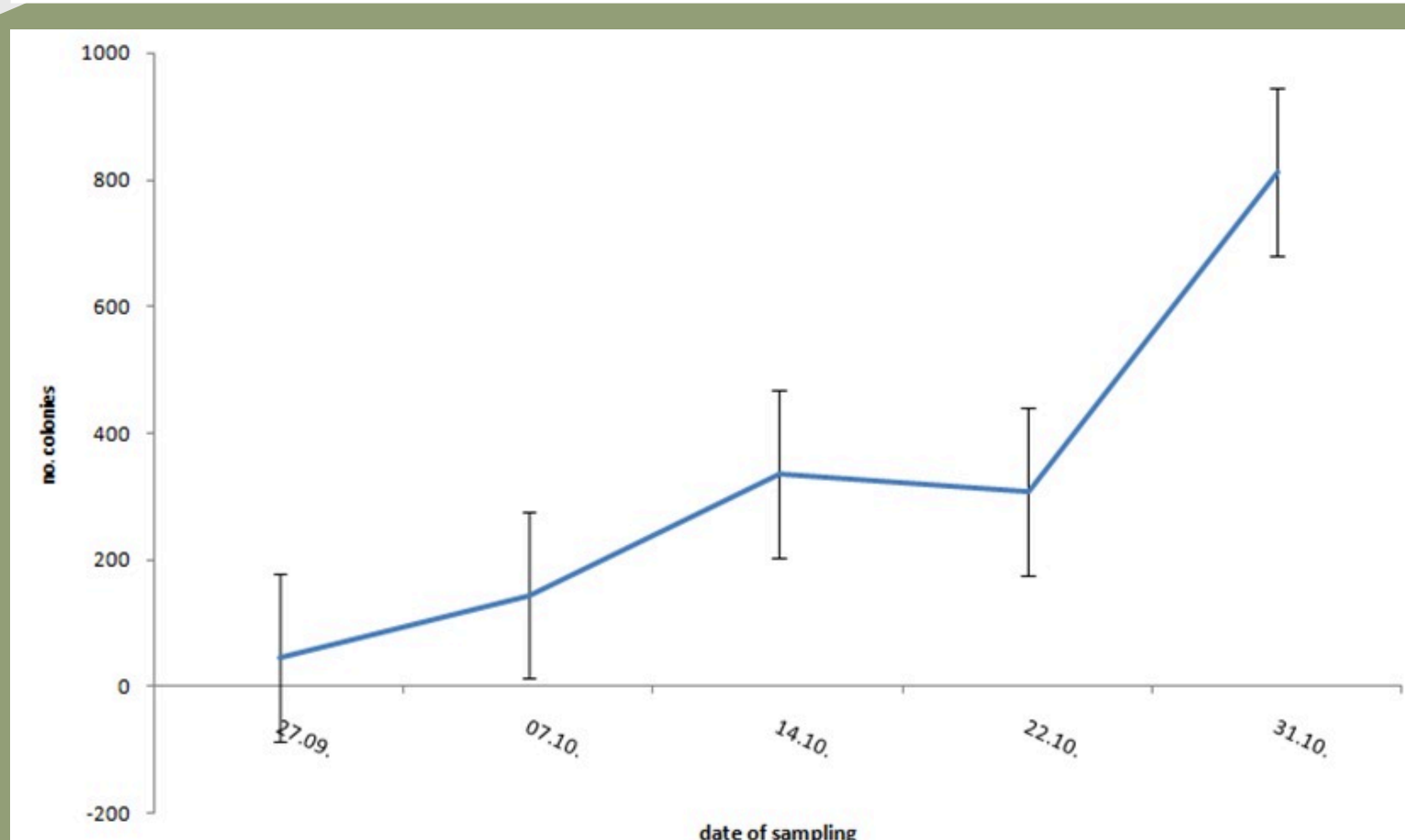


## MATERIAL AND METHOD

The research was carried out in a 1600 m<sup>2</sup> greenhouse located in Sânmihaiu Roman, in the western part of Romania (latitude: 45°43'12"N; longitude: 21°06'48"E), where Belgian mums were grown in hanging pots. Within this area, 320 m<sup>2</sup> exhibited signs of pest infestation.

In the greenhouse of Sânmihaiu Român, samples of citrus mealybugs were collected throughout the season compress between September and October 2024 (over a period of 35 days), by visual sampling on three plants/20 branches with leaves and flowers. Three sampling areas have been set up. While the attack was localized in the first module of the greenhouse, which consisted of 3 rows and was therefore represented by the 3 sampling areas, from each row were randomly selected, each time other Belgian mum plants. Specimens and parts of infested plants were collected in labeled plastic bags. A quantification survey method was adopted following literature: we considered a four class scale: I - extremely high (>75 colonies), II - high (50-75 colonies), III - medium (25-50 colonies) and level IV, low (< 25 colonies). In addition, male/female adults and nymphs were measured separately for number of specimens/colonies. A total of ten colonies were the subject of each analysis.

## RESULTS



Mealybug populations per leaf were lower at the beginning of the trial (first ten days of September) than during the rest of the trial. There was a gradual increase in the mealybug population, which peaked in the second decade of September and continued into October in the first decade. The moderately hot and humid climate in the greenhouse during the collecting period was favourable for the pest to develop.



During this study, a total of 1645 *Planococcus citri* colonies were collected from Belgian mums. Of these colonies, only ten were analysed and a total of 196 adults (male and female) (sex ratio ♂ : ♀ = 1: 0.87) and 252 nymphs were counted and identified.

### DESCRIPTIVE NOTES

The adult female of the citrus mealybug is about 3 mm long and 1.5 mm wide, white, pinkish in colour, wingless, covered with white cottony wax and has a fringe of elongated wax filaments running around the periphery of the body; the male is slightly larger, has long wax filaments on the posterior end of the body and has functional wings. The nymph resembles the female, but is smaller.

