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First Report of Incidence of *Botryis cinerea* the agent Gray Mold Disease on *Rosa damascene* Mill

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Abstract: The study was conducted to survey incidence of gray mold disease on *Rosa damascene* Mill caused by *Botryis cinerea*, in different nurseries. The gray mold disease was prevalent in all examined nurseries, the highest infection rate in Al-Tur nursery 43% and the in the Al-Hauraa nursery 12%. Seventeen isolates of the fungus were diagnosed *Botryis cinerea* from the leaves *Rosa damascene* showed symptoms of gray mold disease and were diagnosed through its phenotypic characteristics on the PDA and microscopic characteristics. The isolates ability to cause infection was tested on rose leaves showed variation, isolate T1 recorded the highest percentage of the infection 21.2% and the lowest percentage was in Z3 10.2% compared with the control.

Keywords: Rose, *Botrytis cinerea*, Gray mold, *Rosa damascene* Mill

Rosa damascene Mill, belongs to the Rosacea family of more than 200 species (Gudin 2000) and is cultivated mainly for the production of aromatic oils and rosewater from its flowers. Therapeutic properties of the *Rosa damascene* Mill plant and concluded that extracts have many beneficial health effects and have anti-bacterial, anti-oxidant and anti-inflammatory activity (Aridogan et al 2002, Boskabady et al 2006, Rusanov et al 2009). There are several studies of its chemical composition, containing 275 compounds (citronellol, geraniol, nerol phenethylalchol, linalool, farnesol, eugenol, methyl ether) essential components B-damascenon and B-ionone (Baydar et al 2004, Babaei et al 2007, Kiani et al 2008 and Rusanov et al 2009). Gray mold caused by *Botrytis cinerea* is an important disease affecting a number of plant families, including vegetable crops, fruit trees and ornamental plants (Brian 2007, Zitter 2011). The fungi is spread through the formation of abundant conidia and air and when it falls on the sensitive plant surfaces germinate the presence of water and penetrate the plant. The aim of this study is to uncover gray mold disease that affects *Rosa damascene* Mill in several nurseries and the reasons that led to the spread of this disease.

MATERIAL AND METHODS

Field survey: A field survey was carried out in randomly selected nurseries in Misan governorate, which were namely, Al-Tur, Al-Salam, Al-Zuhoor, Al-Hauraa, and Al-Rabee. *Rosa damascene* was carefully examined for symptoms of the disease and determine the extent of infection.

Isolating the pathogen *Botrytis cinerea:* The samples were brought to the laboratory, cut the infected plant parts with a length of 0.5-1cm and sterilized with sodium hypochlorite solution (Naocl 10%) for 2-3 minutes. The pieces of leaves were transferred to a sterile 9 cm diameter Petri dish containing PDA (200 g) potato (20 g) dextrose (20 g) agar, and added chloramphenicol (250 mg l^{-1}). The dishes were placed in the incubator at a temperature (27 C) for seven days.

Purification and diagnosis of *Botrytis cinerea*: Transferred the fungi tip to a petri dish containing the sterile PDA using a sterile needle then incubated for seven days, fungi were diagnosed depending on (Ellis 1971, Barnett and Hunter 1998).

Pathogenicity of *B. cinerea* isolates: The pathogenicity of *Botryis cinerea* isolates was studied on some leaves of *Rosa damascene* Baranski and Klocke (2006). A collection of free from infection plant leaves were collected with distilled water and then dried. The leaves were placed in Petri dishes containing sterile filter paper and one to leaf in each dish, and sprayed with water to ensure humidification. Transfer a disk with a diameter of 5 mm from the colony at the age of 7 days and place it in the areas of dissection of the plant-based leaf in a sterile petri dish and then incubate the dishes at a temperature of 25 m for a period of ten days, then the amount of fungi spinning growth was measured, and left a treatment compared to spraying the paper with sterile distilled water Only, the percentage of the infection zone was calculated according to the following formula: Percentage of injury area = length of injury area / total length of leaves x 100.

Field experiment: The pathogenicity of fungi isolates was tested by preparing infection-free seedlings of *R. damascene* plants, The seedlings were contaminated by spraying with spore suspension for each fungus Prepare the spore