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**ریخت‌شناسی و بافت‌شناختی شاخه پرتقال و النسیا
[Citrus sinensis (L.) osb.] مبتلا به عارضه سبز
خشک شدگی سرشاخه‌ها (گرسوم) در برخی از مناطق استان فارس**

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[*Citrus sinensis* (L.) osb.]

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**Morphological and Histological Studies on Sweet
Orang [*Citrus sinensis* (L.) osb.] Branches Affected by
Sudden Wilt (Garsoom) in Some Regions of Fars
Province**

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Abstract

“Garsoom” is a kind of branch wilt which occurs in different Citrus species in Fars province. It appears usually in autumn and progresses within 10-14 days. Morphological and histological studies

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were performed on healthy and wilting branches of sweet orange [*Citrus sinensis* (L.) osb.]. Affected branches showed visual and successive symptoms such as: rolling of green leaves, leaf fall, cracking of branches accompanied with gum extrusion, gradual browning and wilting of branches. Branch wilt was a reflection of changes in the xylem tissue. Filamentous or/and amorphous plugs occluded the vessel member, partially or completely. A relation was also found between the gradual symptom development and histological changes: Occlusions were mostly filamentous in the primary xylem during early stages of the disorder. Xylem plugs increased significantly in number, as the disorder progressed. They were mostly of amorphous type, and were found in the secondary xylem. Occlusions were also observed in different parenchyma and fiber cells of the xylem tissue. Morphological and structural aspects of “Garsoom” are compared to other Citrus decline diseases.

Keywords: Xylem occlusions, Citrus, Disorder, Wilt

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Citrus Blight

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•Young Tree Decline (YTD) •Citrus Blight (CB)

Blight-like Decline •Sand Hill Decline (SHD)

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() Sudden Decline () (Declinamiento)

CB () Decline

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[*Citrus sinensis* (L.) osb.]

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Reichert

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[*Citrus sinensis* (L.) osb.]

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(Vascular obstruction, plug)

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(Amorphous plug)

(Filamentous plug)

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Citrus Blight

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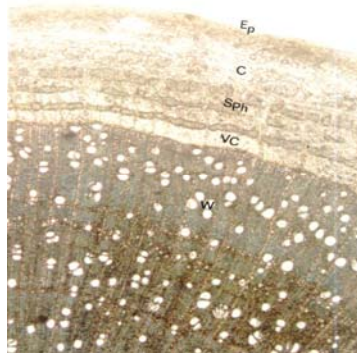
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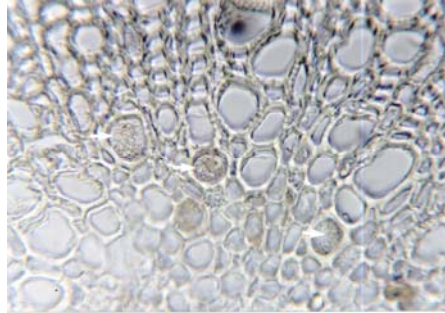
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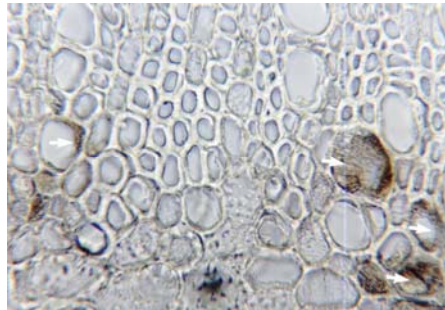
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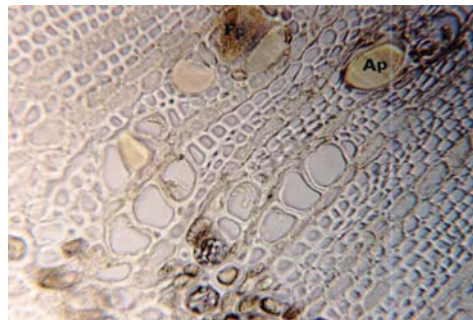
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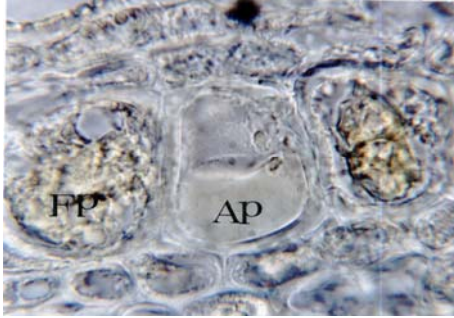
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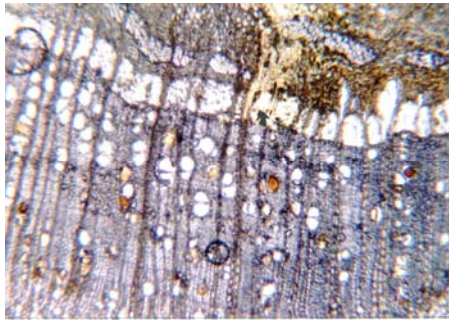
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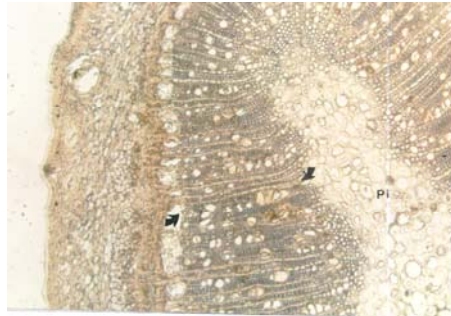
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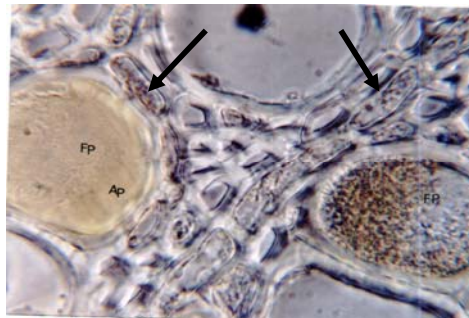
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