

Mini data sheet on brittle leaf disease

Added in 2003 - Deleted in 2006

Reasons for deletion:

The brittle leaf disease of date palm has been included in EPPO Alert List for more than 3 years and during this period no particular international action was requested by the EPPO member countries. In 2006, it was agreed that it could be deleted, considering that sufficient alert has been given.

Brittle leaf disease (Maladie des feuilles cassantes - a lethal disease of date palm)

Why	A new lethal disease called brittle leaf disease (maladie des feuilles cassantes) has been reported from Tunisia since the 1960s, but is now taking alarming proportions. 36,000 trees are now affected by this disease of unknown aetiology and many other trees have already been killed and removed.
Where	Algeria (its presence was confirmed in 2006), Tunisia (in the south where date palm trees are growing). It has been found in Nefta, Tozeur, Al-Hamma, Tamarza, Gafsa, Kebili and Gabes.
On which plants	Date palm (<i>Phoenix dactylifera</i>). The disease has been observed on most Tunisian varieties including Deglet Nour, Tozer Zaid, Akhouat Alig, Ammaria, Besser, Kinta, as well as seedling trees and pollinator trees. Kintichi seems to be relatively tolerant. No data is available on other possible hosts, for example on ornamental palms.
Damage	At the beginning, a few fronds are chlorotic with a dull, olive green colour. Leaflets become brittle, twisted, frizzled and shrivelled with a scorched appearance. The most characteristic symptom is the ease with which leaflets can be broken. Necrotic streaks develop on the pinnae. These symptoms gradually extend to the nearby fronds until the whole tree is affected, and die. 4 to 6 years may elapse between first symptoms and death of the tree. Symptoms occur on trees of all ages, including offshoots and small seedlings.
Possible cause	Symptoms resemble those of manganese deficiency, but sprays or injections of manganese do not solve the problem (at least there is a delay in symptom expression), and mineral soil analysis could not reveal differences between diseased and healthy plots. Patterns of diseased trees observed in the field suggest a biotic origin, as affected trees seem to cluster into foci. A small dsRNA has been found associated with symptomatic trees but could not be related to a known pathogen.
Dissemination Pathway	Unknown. However, if pathogens (such as viroids or phytoplasmas) are involved, there may be a risk associated with planting material.
Possible risks	Date palms are important crops around the Mediterranean basin, especially in Maghreb countries. The disease has apparently the ability to kill a large number of trees, and if a pathogen is involved efforts should be made to prevent any further introductions and spread.
Source(s)	Personal communication with Dr K. Alrouechdi (FAO/SNEA - Tunis), 2003-05. Boletín Informativo de la Sociedad Española de Fitopatología, no. 35, September 2001. http://www.sef.es/notisef_fr.htm Saadi I, Namsi A, Ben Mahamoud O, Takrouni ML, Zouba A, Bové JM, Duran-Vila N (2006) First report of 'Maladie des feuilles cassantes' (brittle leaf disease) of date palm in Algeria. New Disease Reports, Volume 13: February 2006 - July 2006. http://www.bspp.org.uk/ndr/july2006/2006-14.asp

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