

The Director General

Maisons-Alfort, 07 February 2017

OPINION
**of the French Agency for Food, Environmental
and Occupational Health & Safety**
on "a request for an express risk assessment (ERA)
on *Xylosandrus compactus* (Eichhoff) identified in metropolitan France"

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ANSES's public health mission involves ensuring environmental, occupational and food safety as well as assessing the potential health risks they may entail.
It also contributes to the protection of the health and welfare of animals, the protection of plant health and the evaluation of the nutritional characteristics of food.
It provides the competent authorities with the necessary information concerning these risks as well as the requisite expertise and technical support for drafting legislative and statutory provisions and implementing risk management strategies (Article L.1313-1 of the French Public Health Code).
Its opinions are made public.
This opinion is a translation of the original French version. In the event of any discrepancy or ambiguity the French language text dated 07 February 2017 shall prevail.*

On 1 August 2016, ANSES received a formal request from the Directorate General for Food (DGAL) to undertake the following expert appraisal: Request for an express risk assessment (ERA) on *Xylosandrus compactus* (Eichhoff) identified in metropolitan France.

1. BACKGROUND AND PURPOSE OF THE REQUEST

1.1 Background

In July 2016, the beetle *Xylosandrus compactus* was officially identified in the Provence-Alpes-Côte d'Azur region.

This highly polyphagous organism, whose presence has been reported in Italy in the regions of Campania, Lazio and Tuscany, originates from Asia. It was only detected in France in one private garden in the municipality of Saint-Jean-Cap-Ferrat.

1.2 Purpose of the request

ANSES was asked to draft a preliminary pest risk assessment (PRA) for the organism and any other organisms it could be a vector for, as well as any interim risk management measures.

2. ORGANISATION OF THE EXPERT APPRAISAL

2.1. Procedure: means implemented (ANSES, CES, rapporteur) and organisation

ANSES entrusted examination of this request to the Expert Committee (CES) on "Biological risks for plant health".

The rapporteur's appraisal was regularly submitted to the CES. The report issued by the rapporteur takes into account the comments and additional information provided by the members of the CES.

The final version of the report, including both its methodological and scientific aspects, was presented to the CES for discussion on 17 January 2017.

The expert appraisal was carried out in compliance with French standard NF X 50-110 "Quality in Expert Appraisal Activities – General Requirements of Competence for Expert Appraisals" (May 2003) with the aim of respecting the following points: competence, independence and transparency.

2.2. Prevention of risks of conflicts of interest

ANSES analyses the links of interest declared by the experts prior to their appointment and throughout the work, in order to avoid potential conflicts of interest with regard to the matters dealt with as part of the expert appraisal.

The experts' declarations of interests are made public via the ANSES website (www.anses.fr).

3. ANALYSIS AND CONCLUSIONS OF THE CES

The area taken into account for the pest risk assessment (PRA area) covers only metropolitan France.

3.1. Overall risk assessment

3.1.1. Probability of entry

The insect is already found in France near the Italian border. It is also present in Italy. It could be reintroduced by the same pathway(s) that allowed its first introduction. Pathways of entry related to the commercial movements of plants have been identified. The overall probability of entry is therefore considered to be high, with a low uncertainty.

3.1.2. Probability of establishment

The probability of establishment is considered to be high, with a low uncertainty, given that the insect has already managed to become established in areas that are cooler than its areas of origin, with characteristics equivalent to certain areas of France. The probability of establishment outside the Mediterranean coastal region is probably low, given the known biology of *X. compactus*.

3.1.3. Probability of spread

The probability of spread along the Mediterranean coastal region of France is considered to be high, with a low uncertainty. In just a few years, the insect has spread along a large part of the Tyrrhenian coast and is currently found in several adjacent Italian regions (Campania, Lazio and Tuscany).

3.1.4. Probability of possible impact if plant health measures are not taken

It is difficult to assess the potential consequences if plant health measures are not taken, firstly, because of the still limited information on the host plants targeted by *X. compactus* in the PRA area, and secondly, given the lack of available data on the climatic tolerance of the insect and its ability to extend beyond coastal regions with a Csa climate, according to the Köppen-Geiger classification.

3.2. Plant health measures

In the absence of chemical insecticides and fungicides authorised for use on living trees in a forest environment, it seems difficult to consider the plant health measures that could be taken in view of the biological cycle of *X. compactus*. Prophylactic control measures may be the most effective (rapid identification and removal of infested plants or parts of plants). These actions are destructive and labour-intensive.

3.2.1. Potential measures for the relevant pathways and their effectiveness at reducing introduction (entry and establishment)

It seems difficult to consider the plant health measures that could be taken in view of the biological cycle of *X. compactus*, particularly for the import channels related to the trade in plants or plant products (accidental pathway of entry). Most of the life cycle of *X. compactus* takes place in the terminal shoots or thin stems of the host plants, and the entry holes into the tunnels are very small. In addition, the endogamous nature of the species, and the fact that females are fertilised before leaving the tunnel in which they metamorphosed, allows each of them to establish a new colony alone.

3.2.2. Surveillance of the territory

Surveillance trapping is easy to carry out. It is recommended that surveillance by trapping be maintained, at least in the area where *X. compactus* was found, but preferably all along the Mediterranean coastal region with a Csa climate type¹, according to the Köppen-Geiger classification.

Prevention of new introductions

Prevention of natural spread

The presence of a large reservoir in the vicinity of Lucca in Italy, some 300 km from the French border, makes it fairly unlikely that new entries by natural spread can be prevented. Surveillance by trapping in the already contaminated area is recommended.

¹ Csa climate type: temperate, with hot and dry summers (Mediterranean)

Prevention of natural spread assisted by human activities

This also appears impractical, especially given the many pathways of entry.

Outbreak eradication and/or containment

Eradication of the insect could have been considered since it had only been observed in one garden in France. The rapid elimination of infested plants and parts of plants is feasible, especially since necrosis of the affected stems appears a few weeks after the attack and therefore enables early detection. It might therefore be possible to eliminate the immature stages of the insect by intervening quickly.

3.3. Uncertainties

The main source of uncertainty is related to the climatic requirements of *X. compactus*. If the insect proves able to settle in the part of the PRA area characterised by a Cfb² type climate, according to Köppen-Geiger, the entire PRA area is threatened.

Moreover, the insect's ability to carry pathogenic organisms on its cuticle makes it liable to cause unpredictable damage when associated with new pathogens.

4. AGENCY CONCLUSIONS AND RECOMMENDATIONS

The French Agency for Food, Environmental and Occupational Health & Safety considers that the introduction (entry + establishment) of *X. compactus* in France is highly likely, given its settlement in Italy in close proximity to the French border and the first report of its presence in France near the Italian border.

ANSES also considers that *X. compactus* could be reintroduced by the same pathway(s) as those by which it was first introduced. The insect has shown that it is able to establish in areas cooler than its tropical area of origin, in particular in some parts of Italy, with climatic characteristics equivalent to certain areas of metropolitan France. The wide range of host plants of *X. compactus* found in France provides it with the opportunity to settle anywhere when climate allows. The endogamous nature of the species and its concealed development (tunnelling, by the mated females, inside the branches or stems of the host plant) facilitates its spread.

ANSES considers that it is difficult to assess the potential consequences if plant health measures are not taken, because of a lack of information on the host plants targeted by *X. compactus* in the PRA area, and a lack of available data on the climatic tolerance of the insect and its ability to extend beyond coastal regions with a Mediterranean type climate.

The economic impact on the many host species identified is potentially high in the PRA area, but with a high uncertainty related to the fact that the probability of the establishment of the beetles and the susceptibility of these host species are not yet known.

The environmental impact should not be overlooked, in view of recent observations made in a national park in the region of Lazio in Italy, which revealed massive damage to the vegetation (holm oak, mastic tree, butcher's broom).

² Cfb climate type: temperate, with warm summers but no dry season

To conclude, the Agency stresses that no effective curative plant health measure can be proposed at the present time. Accordingly, ANSES recommends prophylactic control measures based on the destruction of infested plants.

Surveillance by trapping could be established, at least in the part of the French Riviera where *X. compactus* was reported, and more widely all along the Mediterranean coastal region. Indeed, the speed of onset of symptoms and the option of surveillance by trapping could enable the eradication or containment of the insect.

Roger Genet

KEYWORDS

Evaluation du risque phytosanitaire simplifiée, *Xylosandrus compactus*, scolyte, xylo-mycétophage, France métropolitaine.

Express Pest Risk Analysis, *Xylosandrus compactus*, shot-hole borer, black twig borer, xylo-mycetophagous, metropolitan France.