NAME OF THE ORGANISM: Ustilago avenae (USTIAV)

GENERAL INFORMATION ON THE PEST

Name as submitted in the project specification (if different to the preferred name):

Pest category:

Fungi **1- Identity of the pest/Level of taxonomic listing:**
Is the organism clearly a single taxonomic entity and can it be adequately distinguished from other entities of the same rank?

Yes
Is the pest defined at the species level or lower?:

Yes
Can listing of the pest at a taxonomic level higher than species be supported by scientific reasons or can species be identified within the taxonomic rank which are the (main) pests of concern?

* Not relevant: Cereals (including rice) sector

Is it justified that the pest is listed at a taxonomic rank below species level?

Not relevant
Conclusion:

* Candidate: Cereals (including rice) sector

**2 – Status in the EU:**

Is this pest already a quarantine pest for the whole EU?

No
Presence in the EU:

Yes
Conclusion:

candidate
Justification (if necessary):

This pest is present worldwide, including Europe (CABI 2016).

HOST PLANT N°1: Avena strigosa (AVESG) for the Cereals (including rice) sector.

Origin of the listing:

RNQP Questionnaire
Plants for planting:

Seeds **3 - Is the pest already listed in a PM4 standard on the concerned host plant?**

No
Conclusion:

Evaluation continues **4 - Are the listed plants for planting the main\* pathway for the "pest/host/intended use" combination? (\*: significant compared to others):**

Yes
Conclusion:

Candidate

Justification:

Avena strigosa (Black oat or Bristle oat) is not listed as a host by CABI (CABI, 2016), however Avena strigosa was listed as a species 'most resistant' to Ustilago, though it was unclear if infection had actually occurred (Bogachkov et al., 1990). No other references to U. avenae on this host species since then have been found. Experts concluded that A. strigosa is host to either U. avenae or U. hordei, but it is hard to distinguish spores, so records may not be correctly attributed.
Ustilago avenae is therefore considered to cause loose smut on Avena strigosa oats and seed is a pathway. On emergence, the ears of infected plants are totally transformed into a black powdery spore mass of teliospores which are released in great number during flowering, spread by the wind to infect new grains, or during threshing. During germination seedlings are systemically infected by spores carried on the outside of the seeds (It is not inside the embryo of the seed). To avoid the disease it is important to use disease-free certified seed or fungicide-treated seed (EPPO, 2002).
The directive 66/402 has a requirement for the seed producing crop that Ustilaginaceae shall be at the lowest possible level, but no seed-testing requirements are given and no seed test is described by ISTA. Volunteer plants grown from spilt contaminated seed from the previous year could in theory act as a disease source but this appears to be very rare because no references to this could be found. It is concluded seed can be considered as a significant pathway for the pest. **5 - Economic impact:**
Are there documented reports of any economic impact on the host?

Yes
Justification:

The only reference found describes an evaluation of 11 varieties for resistance to Ustilago [segetum var.] avenae with the oat species most resistant to Ustilago being Avena byzantina, A. abyssinica, A. barbata and A. strigosa (Bogachkov et al., 1990). No further details were given and it is unclear if infection actually occurred. The SEWG considered that this plant is definitively a host of either U. avenae or U. hordei but it is hard to distinguish the spores of these two species, and their respective economic impact.
What is the likely economic impact of the pest irrespective of its infestation source in the absence of phytosanitary measures? (= official measures)

Medium
Is the economic impact due to the presence of the pest on the named host plant for planting, acceptable to the propagation and end user sectors concerned?

Yes
Is there unacceptable economic impact caused to other hosts (or the same host with a different intended use) produced at the same place of production due to the transfer of the pest from the named host plant for planting?

Conclusion:

Not candidate
Justification:

After a last consultation, experts of the coreHEWGplus commented that Avena strigosa is mainly used in the EU for green manure. Therefore they concluded that impact should be considered as acceptable. **CONCLUSION ON THE STATUS:**

Disqualified: Avena strigosa is mainly used in the EU for green manure. Remark: A. strigosa is host to either U. avenae or U. hordei, but it is hard to distinguish spores, so records may not be correctly attributed. **8 - Tolerance level:**
Is there a need to change the Tolerance level:

No
Proposed Tolerance levels:

 **9 - Risk management measures:**
Is there a need to change the Risk management measure:

No
Proposed Risk management measure:

 **REFERENCES:**

* Bogachkov VI, Smishchuk NG, Miroshnichenko AI, Shirokov AI & Maslenkova LI (1990) Source material and the breeding of midseason varieties of oats resistant to diseases in western Siberia. Selektsiya i semenovodstvo zernofurazhnykh kul'tur v Sibiri i na Dal'nem Vostoke 4, 21-33;
* CABI (Centre for Agricultural Bioscience International), online, 2016. Datasheets Ustilago avenae (loose smut of oats). Invasive species compendium. CABI, Wallingford, UK. Available from <http://www.cabi.org/isc/datasheet/55931>;
* EPPO (2002) Good plant protection practice PP 2/24 (1) Oat. Bulletin OEPP/EPPO Bulletin 32, 367–369;