Australian Government
Department of Agriculture, Fisheries and Forestry

RISK BACKGROUND

Hibiscus cannabinus (Kenaf) seed for sowing

Last updated: 1 November 2023

Overview

(Image: *Hibiscus cannabinus* seeds[1])

Hibiscus cannabinus (Kenaf) is a herbaceous annual or biennial plant growing up to 3m tall that is grown as a fibre, food crop and as an ornamental. *Hibiscus cannabinus* seeds that are imported for sowing require a valid import permit and consignments must be:

- free of biosecurity risk material
- labelled with the full botanical name
- in new, clean packaging
- inspected on arrival
- pre-sowing fungicide treatment and growth in a department approved quarantine facility for disease screening
- only seeds from plants screened and found to be free of disease may be released from biosecurity control.

Importers and department staff must ensure that all BICON conditions are met and that goods are free from biosecurity risks, as well as the key risks described below.

Key risks

Seeds of *Hibiscus cannabinus* can harbour seed-borne pathogens of biosecurity concern, as well as a range of biosecurity risk material.

Vascular cotton wilt

Fusarium oxysporum f. sp. *vasinfectum* (exotic strains and genotypes) has been reported as seed borne on *H. cannabinus*[2] causing Fusarium wilt and necrosis. It is also an economically important pathogen of cotton (*Gossypium* sp.).

The biosecurity risk of this pathogen in imported seed is mitigated with the application of a fungicide treatment prior to growth and disease screening in Post Entry Quarantine (PEQ).

Anthracnose

Colletotrichum hibisci is a seed-borne fungus of *H. cannabinus* that causes anthracnose and dieback[2,3]. This fungus has not been recorded in Australia but has established in areas with a wide range of climatic conditions, including Java, America and China[4,5] and has been identified as an economically important plant pest of *H. cannabinus*. The biosecurity risk of this pathogen in imported seed is mitigated with the application of a fungicide treatment prior to growth and disease screening in Post Entry Quarantine (PEQ).

Other pathway risks

Imported seeds may harbour a range of other biosecurity risk material, including live insects, disease symptoms, and contaminants such as soil, weed seeds, hitchhiker pests (e.g., Khapra beetle) and trash. These biosecurity risks are managed through standard seed import conditions, including inspection of all consignments on-arrival.

[1] T. C. Kujoana, W. J. Weeks, M. M. Van der Westhuizen, M. Mabelebele & N. A. Sebola (2023) Potential significance of kenaf (*Hibiscus cannabinus* L.) to global food and feed industries, Cogent Food & Agriculture, 9:1, DOI: 10.1080/23311932.2023.2184014. Licence for the image https://creativecommons.org/licenses/by/4.0/

[2]Chen YS, Qi JM, Fang SM and Tao AF, 2003, 'Relationship between kenaf seed borne fungi and the seedling diseases', Journal of Fujian Agriculture and Forestry University, vol. 32, no. 4, pp. 438-442

[3]Presley, JT, Summers, TE & Crandall, BS 1964, '*The anthracnose disease of kenaf and its control*', Second International Kenaf Conference. United States, Department of State, Agency for International Development, pp. 119-133.

[4]Follin, JC and Schwendiman, J, 1974, 'La résistance du kénaf (*Hibiscus cannabinus* L.) à l'anthracnose (*Colletotrichum hibisci* Poll.)'. Déterminisme génétique et influence sur le développement des épidémies.

[5]Farr, DF & Rossman, AY 2022 Fungal Databases, U.S. National Fungus Collections, ARS, USDA. Accessed October 2022, from https://nt.ars-grin.gov/fungaldatabases/