Australian Government
Department of Agriculture, Fisheries and Forestry

RISK BACKGROUND

Cannabis spp. seed for sowing

Overview

Cannabis spp. seeds imported for sowing require an import permit, and consignments must be:

- labelled with the full botanical name
- packed in clean and new packaging
- be free from biosecurity risk material
- inspected on arrival
- treated and/or certified according to Australian requirements

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

Figure 1: Seed from different *Cannabis* spp.
Note: 1 Euro coin (23.25mm) is similar size to 1 AU dollar coin (25mm).

In addition to biosecurity import conditions, importers must comply with the requirements of other regulatory agencies, such as the Department of Health, Department of Home Affairs, Therapeutic Goods Administration, state/territory governments.

Key risks

Imported seeds may harbour a range of 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 on-arrival inspection of all consignments and purity testing as required under import conditions.

Seeds of *Cannabis* spp. can also harbour pests of biosecurity concern, as described below:

Leaf spot/ulcer stripe

The bacterium *Pseudomonas cannabina* pv. *cannabina* causes leaf spot or ulcer stripe of *Cannabis*[2]. *P. cannabina* pv. *cannabina* is seed-borne and thus, the importation of infected seed may provide a pathway for introduction[3]. *Cannabis* seed must be sourced from a country or pest free area which is free from *P. cannabina* pv. *cannabina*, or the seed must be subject to hot water treatment at 50°C for no less than 20 minutes.

Fusarium wilt

Fusarium oxysporum is a soil-borne pathogenic fungus that causes fusarium wilt in many plant species. *F. oxysporum* f. sp. *cannabis* specifically infects *Cannabis* spp. and restricts water within the xylem vessels of the plant causing external symptoms of wilt[1,4]. Symptoms start with small dark irregular spots on lower leaves on plants, followed by sudden chlorosis/discolouring, wilting and upward curling of upper leaves on the infected plant[4]. Some *F. oxysporum* species can be seed transmitted. *Cannabis* seed must be sourced from a country which is free from *F. oxysporum* f. sp. *cannabis* or has been treated with an appropriate fungicide or hot water treatment at 50°C for no less than 20 minutes.

Figure 2: Symptoms of Fusarium wilt of cannabis caused by *Fusarium oxysporum* f.sp. *cannabis*[4].

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Parasitic weeds

Figure 3: *Cuscuta* spp. contaminant seed[5].

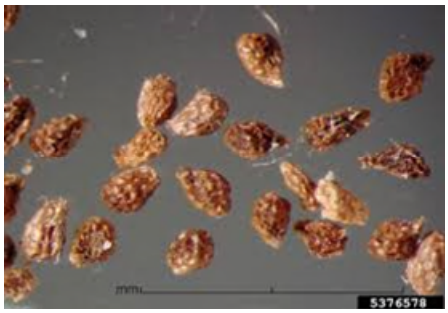

Figure 4: *Orobanche* spp. contaminant seed[6].

These are obligate parasitic plants as they send modified roots into the roots or stems of their plant hosts and leech nutrients, thus reducing crop yields[3]. Dodder and broomrape plants produce large numbers of seed, which may be spread as a contaminant and survive in soil for long periods. Seeds of *Cuscuta* spp. (dodder) including *C. epilinum, C. europaea, C. pentagona* and *Orobanche* spp. (broomrape) including *O. aegyptiaca, O. cernua, O. ramose* are two key biosecurity risks which may be present as contaminants within imported *Cannabis* seed. Dodder and broomrape seeds are small so visual inspections is not considered to be an effective risk management measure to detect these contaminants. Seed lots of *Cannabis* spp., regardless of the size of the consignment, must be subject to purity testing to confirm that the goods are free from parasitic weeds.

References

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