



Australian Government  
Department of Agriculture,  
Water and the Environment

# Khapra measures for sea containers

Information session



23, 25 and 26 February 2021

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**&**

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# LET'S KEEP KHAPRA BEETLE OUT!



Serious agricultural pest, posing a major threat to grains industry



Second on Australia's most unwanted plant pest list



Poses a health risk, causing stomach, breathing and skin irritation issues



An outbreak could cost \$15.5 billion over 20 years



Khapra beetle adults and larva in comparison to an Australian 5 cent coin



Both the adults (1.6-3mm) and larvae (1.6-4.5mm) are very small making detection difficult



Increases in detections, with it being detected on a range of plant products and as a hitchhiker in sea containers



Can survive as a hitchhiker pest in sea containers for several years



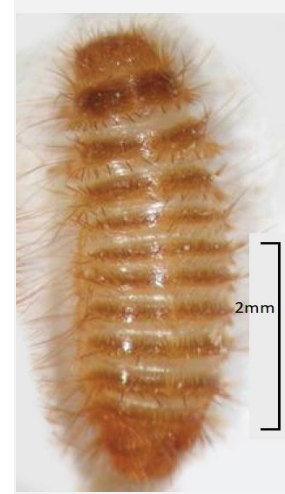
# LIFECYCLE



Adult females generally lay 50-100 eggs during their lifetime

2 mm.

Eggs hatch within 5-7 days into larvae, which are the major feeding stage



Larvae can develop into adults in as short as 30 days

2mm

Larvae can survive in a dormant state for several years

There can be up to 10 generations per year during warm, dry conditions



Damaged wheat grain caused by khapra beetle



Larval exuviae (cast skins) contaminating stored product



Khapra beetle infested canola seeds (black seed)



Totally destroyed wheat grain (dust and remains of grains)



# ESTABLISHMENT RISK

**SUITABLE CLIMATIC  
CONDITIONS**



**AMPLE FOOD SOURCE**



**COMPETITIVE SURVIVAL &  
REPRODUCTIVE STRATEGIES**



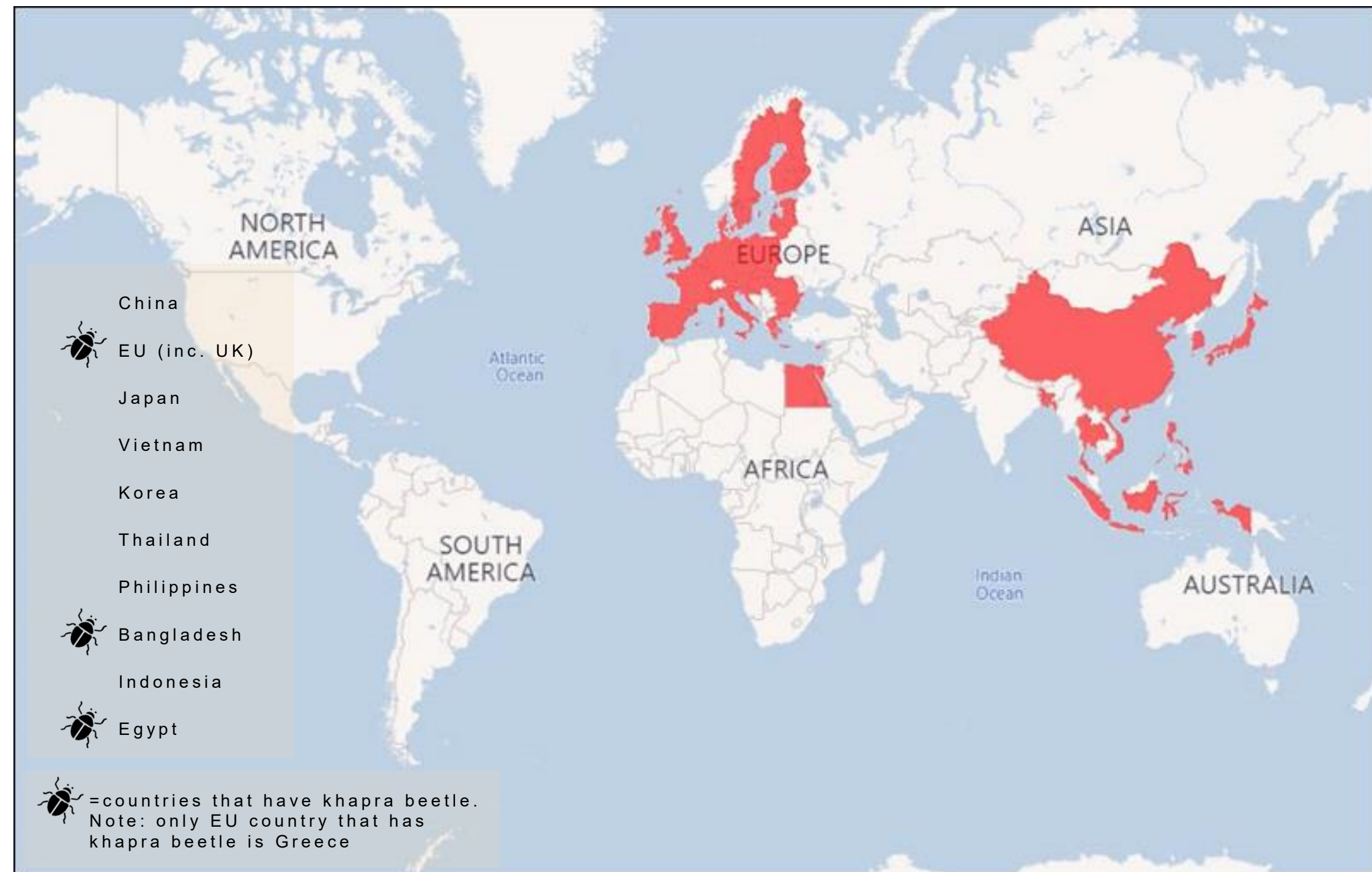


# EXPORTS

## Map of top 10 grain destinations

80% of our grain exports would be at risk if khapra established or if there was the perception that it had

If khapra established in Australia, we may lose these markets or at best would have to renegotiate current access





# KHAPRA BEETLE INTERCEPTIONS IN AUSTRALIA

2020

Interception of larvae and cast skin in personal effects (bags of rice)

11 FEBRUARY



Interception of larva in a consignment of spices and wheat flour

8 JULY



21 JULY



Interception of larval skins and live larvae in a consignment of bulk copra meal



Interception in a consignment of rice

8 OCTOBER

6 AUGUST

Interception of larval skins in an empty container



30 OCTOBER



Interception of live larva and larval skin in container of wheel rims

Interception of live larvae and beetles in an empty shipping container



24 NOVEMBER

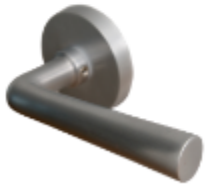
22 MAY

Interception of dead larva in a consignment of rice



3 JULY

Interception in a consignment of door parts



2 AUGUST

Interception of several larvae in the packaging of new refrigerators



14 JULY

Interception of dead larvae and skins in a consignment of rice



Interception of larval skins and live larvae in an empty container



11 SEPTEMBER

Interception of dead insects in a container of locust bean gum



26 OCTOBER

Interception of larvae and skins on a baby highchair



6 NOVEMBER

Interception of dead larva in a consignment of rice



14 DECEMBER

Interception of larval skin in a consignment of rice



## KEY

- Linked to container
- Unknown
- Linked to goods
- Risk managed offshore

# KHAPRA BEETLE INTERCEPTIONS IN AUSTRALIA

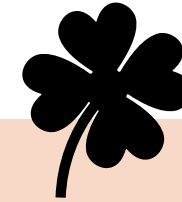
## 2020 SUMMARY



16 interceptions  
in Australia



- 5 from khapra beetle target risk countries
- 11 from other countries



- 9 detected with agricultural imports
- 4 detected with other imports
- 3 detected in empty containers



- 10 linked to container
- 5 linked to goods
- 1 unknown

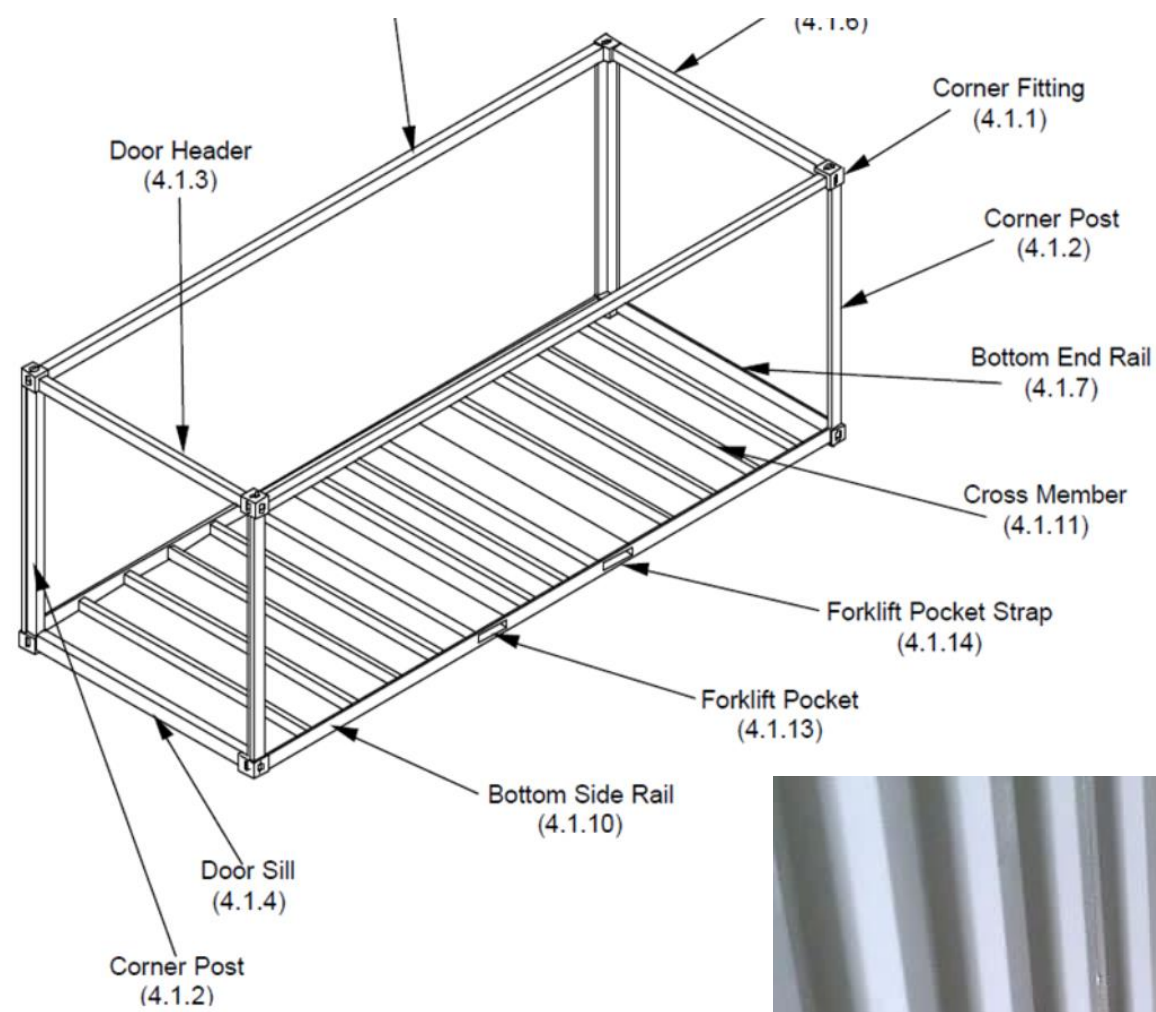




# URGENT ACTIONS TO PROTECT AGAINST KHAPRA BEETLE

|         |   |                     |
|---------|---|---------------------|
| PHASE 1 | Ban on high-risk plant products within unaccompanied personal effects and low value freight                 | 3<br>SEPTEMBER 2020 |
| PHASE 2 | Ban on high-risk plant products within accompanied baggage or via international travellers or mail articles | 15<br>OCTOBER 2020  |
| PHASE 3 | Revised phytosanitary certification and new offshore treatment requirements for high-risk plant products    | ON HOLD             |
| PHASE 4 | Revised phytosanitary certification and new offshore treatment requirements for other risk plant products   | ON HOLD             |
| PHASE 5 | Introduction of phytosanitary certification for all seeds for sowing  | ON HOLD             |
| PHASE 6 | New measures for sea containers   | 12<br>APRIL 2021    |

# SEA CONTAINERS: THE RISK



Larvae and larval skins in the corner of the container after the floor was removed

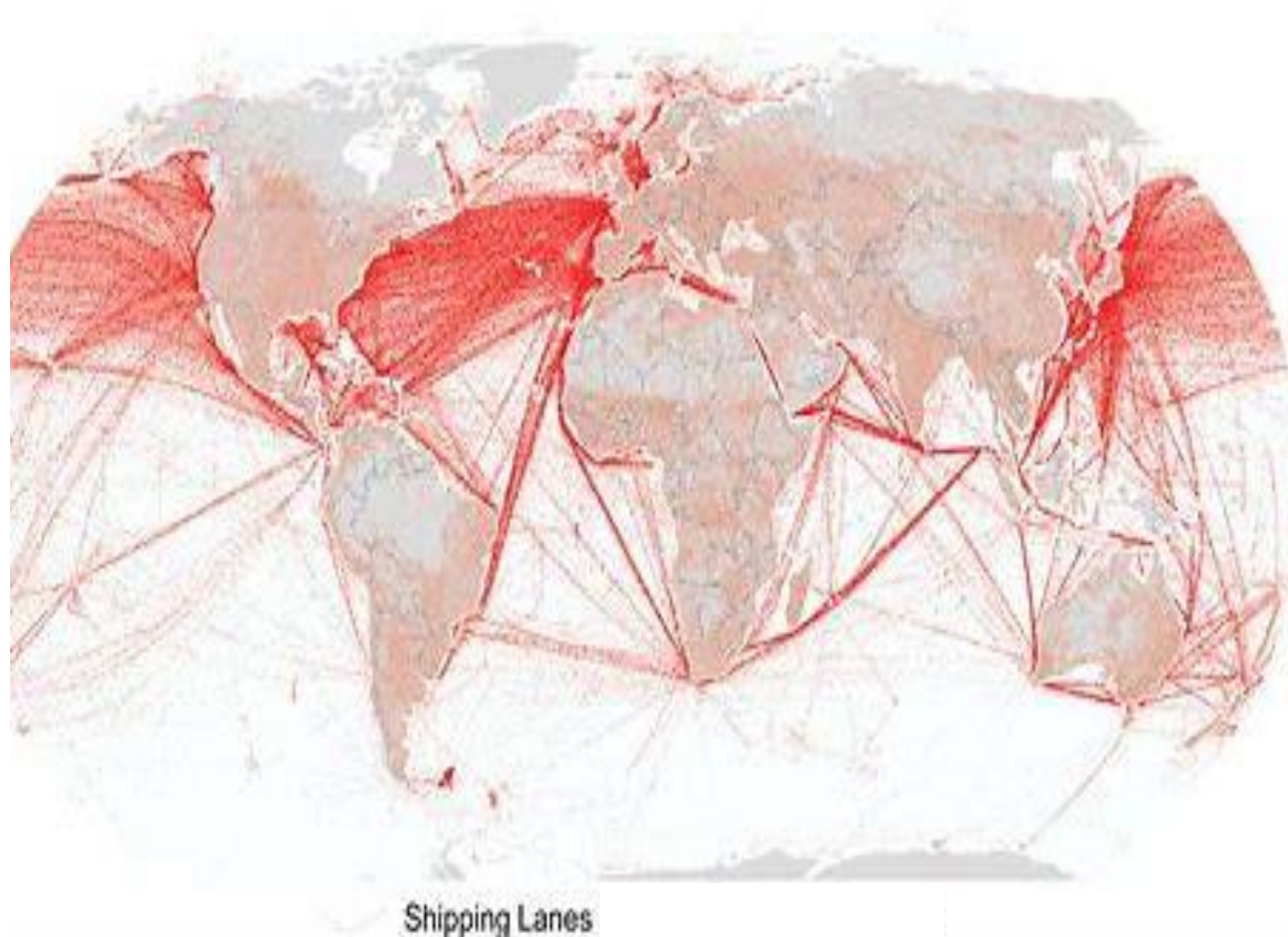


# SEA CONTAINERS: THE RISK



Khapra beetle larvae inside the corrugations of cardboard packaging

# CONTAMINATED CONTAINER TRACING



- **1** container carried high risk plant products from a khapra country in 2015, 2016 and 2019
- **2** containers carried high risk plant products from a khapra country in 2019
- **1** container carried high risk plant products from khapra countries in 2016, 2018, 2019 and 2020.
- **1** container carried high risk plant products from a khapra country in 2015.
- **1** container is not known to have carried high risk plant products or travelled through a khapra country.



# HIGH RISK SEA CONTAINERS

**HIGH RISK**



Sea containers used to ship high risk plant products from khapra beetle target countries over a five-year period.



# PHASE 6: NEW MEASURES FOR SEA CONTAINERS



Due to the increasing hitchhiker risk of khapra beetle in sea containers, changes to the management of containers is now an immediate priority.



Mandatory treatment requirements will be introduced.



Implementation will be staggered. Firstly, we will target certain containers (target-risk containers) where products are packed into the sea container in a target risk country (6A).



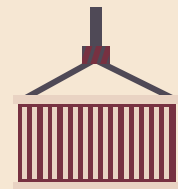
Information will be published on our website: [awe.gov.au/khapra-urgent-actions](http://awe.gov.au/khapra-urgent-actions).





# PHASE 6A: TARGETING HIGHEST RISK CONTAINERS (TARGET RISK CONTAINERS)

## WHAT ARE TARGET RISK CONTAINERS?



FCL/FCX containers  
where high-risk plant  
products are packed into  
the sea container in a  
khapra beetle target risk  
country

12 April 2021

FCL/FCX containers  
where other goods are packed  
into the sea container in a  
khapra beetle target risk  
country and destined to a  
rural grain growing area of  
Australia

TBA

## WHAT ARE THE MEASURES?



Target risk containers  
must undergo mandatory  
offshore treatment prior  
to arrival in Australia



*ISO Tanks, reefers, flat racks, LCL/FAK and empty containers are excluded.*



# KHAPRA BEETLE TARGET RISK COUNTRIES

- Afghanistan
- Albania
- Algeria
- Bangladesh
- Benin
- Burkina Faso
- Côte d'Ivoire (Ivory Coast)
- Cyprus
- Egypt
- Ghana

- Greece
- India
- Iran
- Iraq
- Israel
- Kuwait
- Lebanon
- Libya
- Mali
- Mauritania

- Morocco
- Myanmar
- Nepal
- Niger
- Nigeria
- Oman
- Pakistan
- Qatar
- Saudi Arabia
- Senegal

- Somalia
- Sri Lanka
- Sudan
- South Sudan
- Syria
- Timor-Leste
- Tunisia
- Turkey
- United Arab Emirates
- Yemen



# HIGH-RISK PLANT PRODUCTS



Rice (*Oryza sativa*)

Chickpeas (*Cicer arietinum*)

Cucurbit seed (*Cucurbita* spp; *Cucumis* spp; *Citrullus* spp.)

Cumin seed (*Cuminum cyminum*)

Safflower seed (*Carthamus tinctorius*)

Bean seed (*Phaseolus* spp.)

Pigeon Pea (*Cajanus cajan*)

Pea seed (*Pisum sativum*)

Faba bean (*Vicia faba*)

Mung beans, cowpeas (*Vigna* spp.)

Lentils (*Lens culinaris*)

Wheat (*Triticum aestivum*)

Soybean (*Glycine max*)

Peanuts (*Arachis hypogaea*)

Celery seed (*Apium graveolens*)

Fennel seed (*Foeniculum* spp.)

Dried chillies/capsicum (*Capsicum* spp.)

Coriander seed (*Coriandrum sativum*)

**Note:** Some exclusions apply see website



# TARGET RURAL POSTCODES

- All other FCL/FCX containers where goods are packed into the sea container in khapra beetle target risk countries and destined to rural grain growing areas.
- The list of postcodes will be made available on our website.



# PHASE 6A: OFFSHORE TREATMENT OPTIONS

1

**HEAT  
TREATMENT**



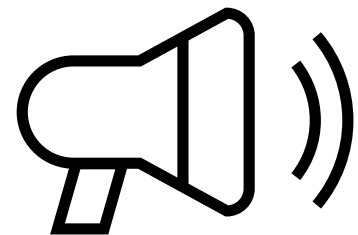
2

**METHYL  
BROMIDE  
FUMIGATION**



3

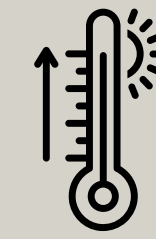
**INSECTICIDE**



Containers must be treated within 21 days prior to export. Failure to comply with these requirements will result in export of the container upon arrival in Australia.



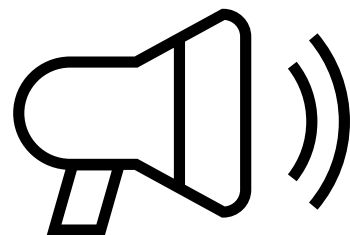
# PHASE 6A: HEAT TREATMENT



Heat treated to at least 60°C for a minimum of three hours.

Must be treated prior to loading the goods and under a sheeted enclosure, with one door open and one door closed.

Must be conducted in accordance with the Heat Treatment Methodology and BICON conditions



Failure to comply with these requirements will result in export of the container upon arrival in Australia.

# PHASE 6A: METHYL BROMIDE

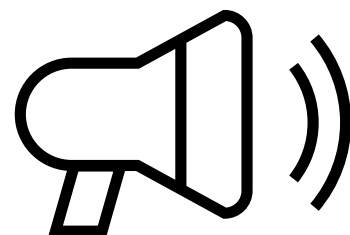


Fumigated with a dose of 80 g/m<sup>3</sup> or above, at 21°C or above for a minimum of 48 hours, with an end point reading of 20 g/m<sup>3</sup> or above.

Must be conducted in accordance with the Methyl Bromide Fumigation Methodology.

Must be conducted in a sheeted enclosure, with both container doors fully open and an additional concentration sampling line placed under the container.

Container and goods can be fumigated at the same time.



Failure to comply with these requirements will result in export of the container upon arrival in Australia.



# PHASE 6A: INSECTICIDE SPRAY



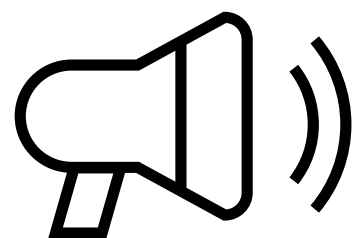
Prior to loading goods, sprayed with contact insecticide.

The target of the treatment will be the interior and exterior of the floor, the lower portion of the walls and the door seals.

A plastic liner must be inserted into the container prior to packing the goods.

Food and animal feed products must be bagged.

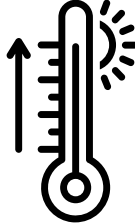


More information on insecticides to come.



Failure to comply with these requirements will result in export of the container upon arrival in Australia.

# PHASE 6A: PERMITTED TREATMENT PROVIDERS

## CONTAINER TREATMENT OPTIONS

- 1 **HEAT TREATMENT** 
- 2 **METHYL BROMIDE FUMIGATION** 
- 3 **INSECTICIDE** 

**Details:** Treatments conducted by treatment providers that are not registered with the department will be accepted.

However, we strongly encourage the use of providers approved under the Offshore Brown Marmorated Stink Bug Treatment Providers Scheme. Companies registered under this scheme will be listed as approved on our website.

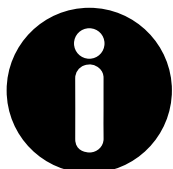
**AFAS country:** Must be conducted by a treatment provider approved under the Australian Fumigation Accreditation Scheme (AFAS).

**Non AFAS country:** Treatments conducted by treatment providers that are not registered will be accepted. However, we strongly encourage the use of treatment providers approved under the Offshore Brown Marmorated Stink Bug Treatment Providers Scheme. Companies registered under this scheme will be listed as approved on our website.

**Details:** Treatments conducted by treatment providers that are not registered will be accepted.

Further details on arrangements for treatment providers will be published on our webpage soon.

If you are interested in conducting insecticide treatments, please register your interest:  
[offshoretreatments@agriculture.gov.au](mailto:offshoretreatments@agriculture.gov.au)

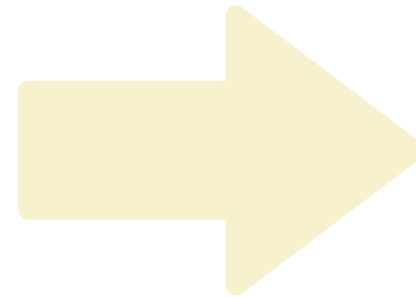


Treatment providers can register at: [agriculture.gov.au/import/before/brown-marmorated-stink-bugs/offshore-bmsb-treatment-providers-scheme](https://agriculture.gov.au/import/before/brown-marmorated-stink-bugs/offshore-bmsb-treatment-providers-scheme)

# PHASE 6A: ONSHORE TREATMENT



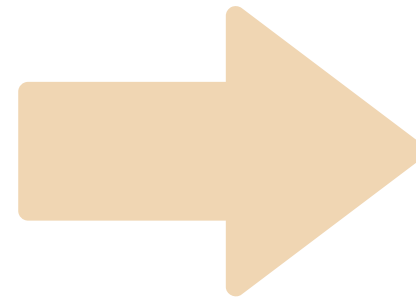
## Onshore treatment



Movement of untreated containers poses an unacceptable risk because khapra beetle could dislodge when moving the container from the port to a treatment facility.

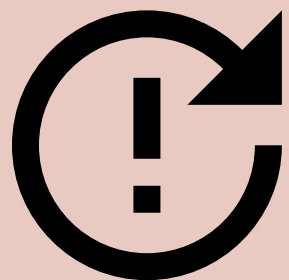


## In-transit policy

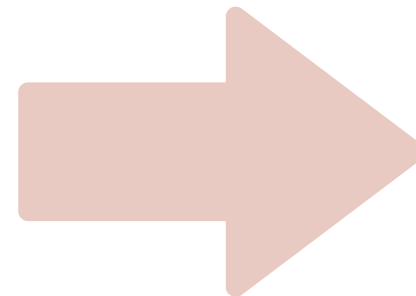


If a treatment provider is suspended, all treatment certification issued by them is considered unacceptable from the date of suspension.

In this situation, onshore treatment will be permitted for affected in-transit sea containers.



## Exceptional circumstances



In exceptional circumstances, you can submit an application to us requesting an onshore risk management option.



# PHASE 6B: HIGH-RISK CONTAINERS

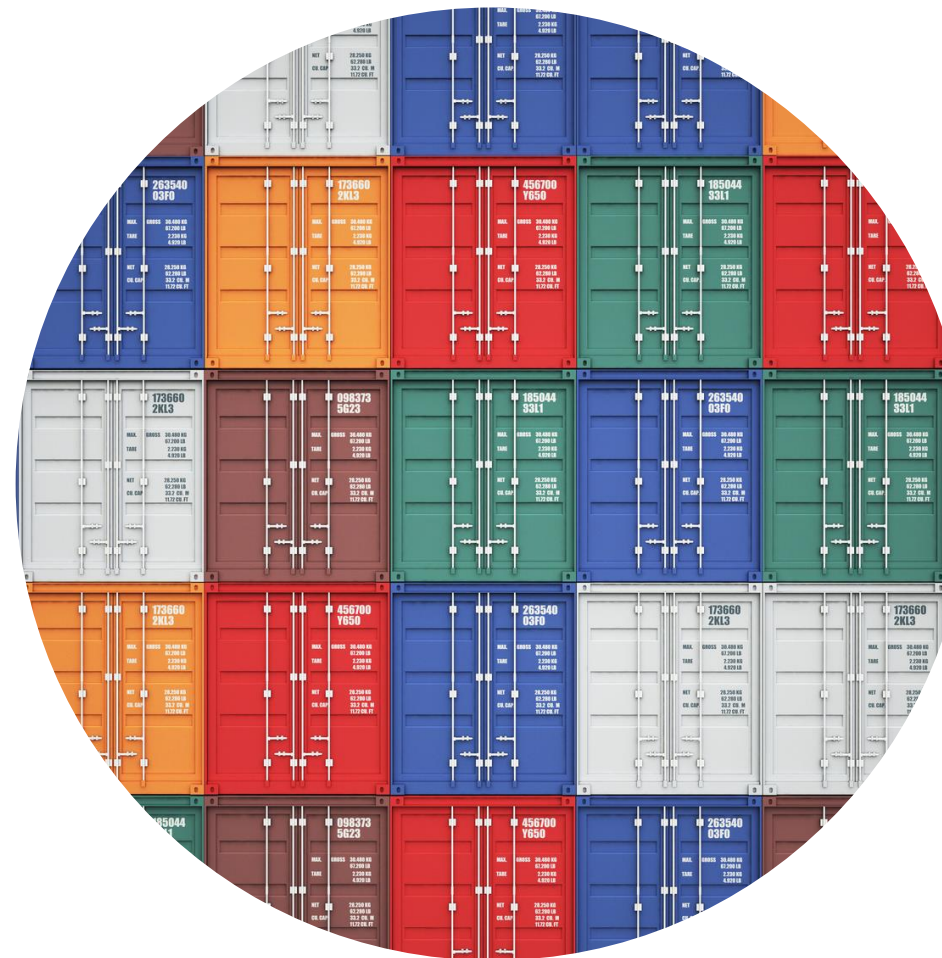
## Phase 6B

Under Phase 6B:

- The intent is to implement khapra measures for all high-risk containers, including empty and LCL/FAK containers.
- The department's IT systems will be enhanced to assist with facilitating this expansion.

The department is working with peak industry bodies on implementation options.

Phase 6B measures are expected to be implemented in late 2021.





# MORE INFORMATION

**LET'S KEEP KHAPRA BEETLE OUT!**

Khapra is a serious agricultural pest that poses a major threat to our grains industry. This exotic pest comes in second on Australia's most unwanted plant pest list, and we need your help to keep it out.

**What to look for**

- Adults beetles (1.6–3mm long) are reddish dark brown, oval-shaped with faint dark lines and do not fly.
- Larvae (1.6–4.5mm long) typically appear very hairy and are golden brown.
- Cast larval skins are the most obvious indicator of infestation (pictured right).

**Where to look**

Khapra can enter Australia:

- In grains and food stuffs
- As a hitchhiker in a wide range of cargo including machinery, nuts and bolts, timber doors and fridges
- As a hitchhiker on imported shipping containers
- In personal effects

Think you've seen khapra beetle?  
Call the See. Secure. Report Hotline on 1800 798 636.

**BICON**  
Australian Biosecurity Import Conditions

Welcome to BICON

BICON houses the Australian Government's Biosecurity import conditions database for more than 20,000 plants, animals, minerals and biological products. It will help you to determine what import conditions exist and if an import permit is required. Please refer to the Department of Agriculture, Water and the Environment [Importing to Australia](#) page for more information about BICON.

**Search for Import Item**

Search for the commodity you want to import. You can also search for your import by scientific name or tariff code. Refer to the [BICON Help](#) page for tips on searching.

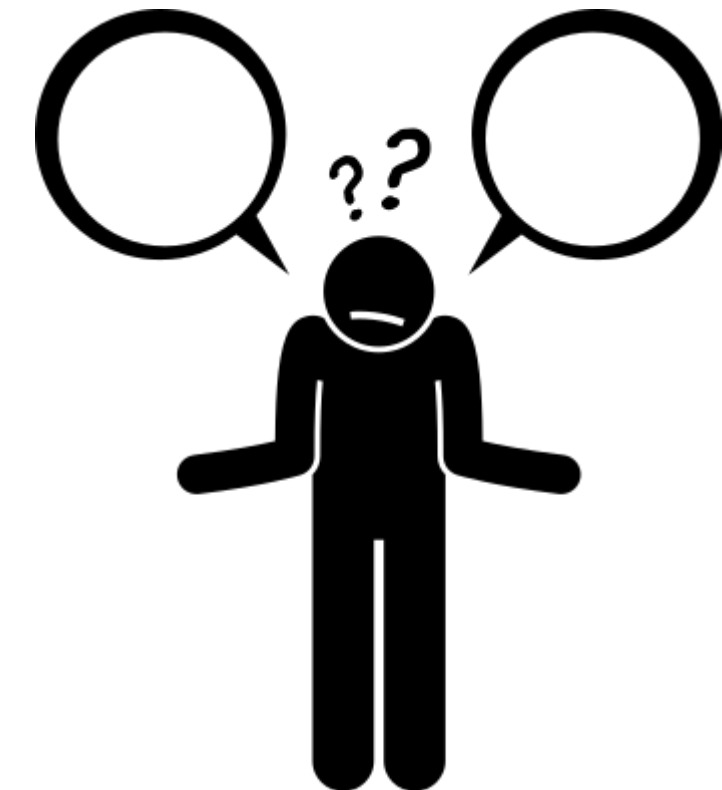
**Quick Search** | Scientific Name | Tariff Code

What are you importing?

Search parameters | Import into: Australia | Effective On: 22 October 2020 | [Advanced Search](#)

**0** Alerts issued in the last 7 days.

**2** Change notices issued in the last 7 days.



Further information on the urgent actions can be found on our website:

 [AWE.GOV.AU/KHAPRA-URGENT-ACTIONS](http://awe.gov.au/khapra-urgent-actions)

Register to receive Industry Advice  
Notices and BICON alerts

**1800 900 090** or via email  
**[imports@agriculture.gov.au](mailto:imports@agriculture.gov.au)**  
(please title the subject line of the email with 'Plant Tier 2 – Khapra urgent actions').