

## **Procedure for Monitoring and Control of Quarantine Pests in Mills / Warehouses storing Basmati Rice to be exported to China**

This document covers procedure for monitoring and control of quarantine pests such as *Trogoderma granarium* and *Prostephanus truncates* in mills & warehouses storing Basmati Rice for exports to the Peoples Republic of China.

### **I Common Storage Grain Pests of concern**

#### **(i) *Trogoderma granarium* (Everts):**

It is voracious feeder of grains. It is commonly called as Khapra Beetle and belongs to Coleoptera Order and Dermestidae Family under Class 'Insecta'.

[The most likely stage to be seen during inspection is the larval stage and the most usual evidence is castings larval skins. In warehouses which are suspect, examine cracks and crevices and look behind any paneling against walls. Larvae are most likely to be seen during the hour before dusk since they tend to be more active at such periods.]

#### **(ii) *Prostephanus truncates* (Horn):**

It is commonly called as Larger Grain Borer belongs to Coleoptera Order and Bostrichidae family and a primary pest of farm stored maize. It is indigenous in USA as a major pest and also distributed in Africa and Europe. It is not a common storage pest of Rice in India.

### **II Procedure for approval and recognition of Rice Mill / Ware House:**

#### **(i) Application for approval and recognition.**

The rice mill / ware house intending to export basmati rice to China would apply to Export Inspection Council (EIC) at 3<sup>rd</sup> Floor, NDYMCA Cultural Centre Building, 1, Jai Singh Road, New Delhi – 110 001 for approval and recognition of their unit in the prescribed application form (Form I).

#### **(ii) Procedure for Approval and Recognition.**

An Inspection Committee comprising the following would visit the unit for inspection before approval.

- a. Export Inspection Agency (field office of the EIC).
- b. Agricultural and Processed Food Products Export Development Authority (APEDA)
- c. Directorate of Plant Protection, Quarantine & Ware House (DPPQS) under the National Plant Protection Organisation (NPPO)
- d. State Department of Agriculture / State Agriculture University (SAU)

The convener of the inspection team shall be EIC/EIA and the quorum of team shall be three including the convener.

The Inspection Committee shall carry out detailed physical inspection of the units and its Quality & HACCP manual and standard operating procedures so as to meet the

requirements stipulated by the in accordance with the requirements stipulated by the Peoples Republic of China from time to time. The Inspection Committee shall furnish the inspection report with its recommendations as per format given in Form II of SOP within two days from the date of physical inspection. The details of the sanitary and control points for ware house pests have been given in Form II.

(iii) **Monitoring of approved units:**

Once a unit is approved and recognized, the same inspection committee will visit the unit once in three months for verification of continued compliance with the stipulated requirements i.e. to see whether the premises comprising of mill / ware house is free from ware house pests.

As per the advise of AQSIQ, China, the complimentary measures on monitoring quarantine pests such as *Trogoderma granarium* and *Prostephanus truncates* in mills and warehouses would be considered as per details given here below.

Sl. No.	China's suggestions	Comments
1.	The regulation of monitoring instruments and methods, including trapping methods (lighting, gyplure etc.) and types of trapping tools.	1. <i>P. truncates</i> is not a common storage pest of rice but it attracts to UV-light trap which can be placed in food grain storage godown at 1.5 meters above ground level preferably in places around warehouse corners, as insect tends to move towards these places during the evening hours. Normally two nos, of UV light trap per 60x20 meters godown can be used.  <i>Trogoderma granarium</i> does not attract to the light.
2.	The layout of watch points shall be in accordance with the area of the warehouses and ventilation (The effective range of each watch point shall be taken into consideration).	2. Sticky traps can be placed in between the stacks of rice to monitor the occurrence of larvae and adults of both the pests.  3. Broken maize in the plastic pots can be placed in the corners, near door, ventilators and centre of the warehouse to attract the pest in case of any infestation by these pests.  The above mentioned monitoring methods will work as watch points and will be placed in accordance with the area of the warehouses and ventilation.
3.	The regulation of data collection. The check periods shall be determined and lured pests shall be identified according to different tapping methods, formatted inspection reports being filled in.	The data from these check points will be collected at weekly intervals and proper record will be maintained. If any new pests will be observed in any of above mentioned three traps, it will be sent for identification.

### III Issue of Phytosanitary Certificate (PSC):

- (i) The units which have been approved and recognized by Export Inspection Council for export of Basmati Rice to China shall apply to the NPPO for obtaining PSC for each consignment meant for export. The inspection / treatment and phytosanitary certification procedures are described in detail in "Export Inspection & Phytosanitary Certification Manual" brought out by the Directorate of Plant Protection, Quarantine & Ware house (Ministry of Agriculture), which will include briefly the following:-
- The exporter or his agent shall submit an application for inspection / phytosanitary certification in prescribed format along with the attached documents such as copies of invoice, packing list, shipping/air way bill, letter of credit/trade contract to the officer-in-charge of concerned plant quarantine station. After necessary verification of documents and payment of inspection fee, the application will be registered with the concerned Plant Quarantine Station.
  - The inspection of consignments would be carried out by the Plant Quarantine (PQ) officer at the premises of exporter/packing house by drawing appropriate samples as per procedures and testing to ensure free from any pests of concern to China. The particulars of inspection would be recorded in the inspection register maintained by the concerned PQ stations. If any infestation is noticed, the consignment would not be allowed for export unless proper treatment is made to make it free from infestation.
  - In this regard rice millers may take help of general pest control operators or pest control operators accredited / authorized by NPPO of India to carry out fumigation with Methyl Bromide as per guidelines mentioned in the National Standard for Phytosanitary Measures (NSPM – 12) for Methyl Bromide.
- (ii) The control measures for the quarantine pests such as *Trogoderma granarium* (Everts) and *Prostephanus truncates* (Horn) in Indian Basmati Rice has been suggested by fumigating / sweltering with Methyl bromide @ 80 Grams/ cubic meter for a period of 24 hours at or above 21° C. The density / concentration of fumigant would be maintained and monitored throughout the exposure period as per the Methyl Bromide Fumigation Ready Reckoner.
- Fumigation is performed in a gas tight enclosure (Stack / Container) for the specified exposure period. On completion of the fumigation process, the stack / container would be aerated to bring down the density / concentration of the fumigant up to safety level. In addition, any specific suggestion/concern received from China in this regard would be addressed.
- (iii) Phytosanitary certificates are issued as per model format prescribed under the IPPC with additional declarations for freedom from quarantine pests and the treatment endorsed on the certificate with distinguishing marks/seals.

#### **IV Accreditation of Fumigation Agencies:**

Fumigation is an approved treatment method extensively used for controlling pest infestation in agricultural products in many countries of the world. The Phytosanitary regulations of many countries require certain commodities to be fumigated just prior to export and require the fumigation treatment to be endorsed on the Phytosanitary certificate or the fumigation certificate issued by an approved fumigation agencies to accompany the consignment clearly detailing the treatment that has been undertaken. The NPPO is authorized for granting accreditation of fumigation agencies. The registered fumigation agencies with the NPPO should have accredited fumigator operator. The use of Methyl Bromide is restricted under the Insecticide act, 1968 and Plant Protection Adviser is authorized to approve the commercial pest control operators for stock and use of these fumigants and to recognize expertise for undertaking fumigation. The details fumigation procedure is available on NPPO website [www.plantquarantineindia.org](http://www.plantquarantineindia.org) under the icon standard – NSPM-11. The guidelines for assessment, audit and accreditation of fumigation agencies for undertaking Methyl Bromide fumigation is given in NSPM-12.

**FORM - I**

**FORM OF APPLICATION FOR RECOGNITION OF  
RICE MILLS/WARE HOUSE BY EXPORT INSPECTION COUNCIL.**

**1. GENERAL INFORMATION**

**1.1 Name and address of the applicant (owner) along with complete contact details .**

Name

Address

Tel with STD Code:

Fax with STD Code:

Email ID :

Mobile :

**1.2 Name and address of the registered office of the applicant along with complete contact details**

Name

Address

Tel with STD Code:

Fax with STD Code:

Email ID :

Mobile :

**1.3 Name of unit with name of Manager and his contact details**

Address :

Name of Manager :

Contact Tele/Mobile No

**1.4 License no. and date (enclose self-attested copy)**

License No

Issued for

Issued by

Issue Date

Valid Up to

1.5 **If the unit is hired / leased, full address of the owner**

Date of Issue

Valid up to

Leased to:

Name:

Address:

Tel No:

Mobile No.:

1.6 **Production capacity per month/Storage capacity**

(a) Quantity

(b) Value

1.7 Whether the surrounding kept clean. Whether the unit is maintained in good hygienic condition to prevent rodent harborage and infestation?

1.8 Value of export during preceding three years?

1.9 A list of machinery and equipment available to be attached.

2. **LABORATORY FACILITY, EQUIPMENT & METROLOGICAL CONTROL**

2.1 Is there any in house testing facility available?

2.2 Is the quality control chief aware of phytosanitary requirements for export of Basmati Rice of China i.e. control of storage pests like *Prostephanus truncates*, *Trogoderma granarium*

2.2 A What kind of monitoring, instruments and methods including trapping methods are being used to monitor *Prostephanus truncates*, *Trogoderma granarium* in mills and warehouses (details may be given)

2.2 B What is the system of the layout of the watch points with the area of the warehouses and ventilation.

2.3 Is there a documented procedure for control of storage pests like *Prostephanus truncates*, *Trogoderma granarium*

2.4 Whether test conducted and proper records thereof maintained?

2.5 List of testing equipment.

2.6 Check a few instruments in relation to their history cards and state whether-

(a) They are accurate

(b) They were calibrated as per laid down frequency

3. **FACILITIES IN THE RICE MILL / WAREHOUSE.**

- 3.1 Is there adequate space for free movement in all the sections units for workers?
- 3.2 Whether workers provided with clean working cloth Apron and to prevent contamination of consignment with sweat and dust/dirt.
- 3.3 Is there arrangement in all the sections for preventing entry of rodents, birds and pigeons?
- 3.4 Are the doors of all sections fitted with fly proofing and self closing device?
- 3.5 Is there adequate protection in the unit for loading and unloading of consignment during rainy season?
- 3.6 Facilities of toilets / washing for workers with liquid soap, disinfectant and towel.
- 3.7 Are the toilets having self closing doors and kept in clean?
- 3.8 Whether the walls and floors of the premises are free from pits, crevices, peeling off and white washed.
- 3.9 Whether there is an adequate facility of fumigation.
- 3.10 Is there Separate ware house arrangement for finished product?
- 3.11 Separate arrangement for ware house of packaging material.
- 3.12 Separate ware house arrangement of export rejections.

4. **SANITARY FACILITIES**

- 4.1 Does Mill / Ware house have cleaning schedule with disinfectants used?
- 4.2 Frequency of cleaning

5. **INFORMATION ABOUT PERSONNEL**

- 5.1 The name/qualification/designation and experience of quality control chief.
- 5.2 Number of workers
- 5.3 Number of supervisors.
- 5.4 Number of technical personnel
  - (a) Production
  - (b) Inspection
  - (c) Testing and analysis

6. **QUALIFICATION**

6.1 The name/qualification/designation and experience of quality control chief.

6. **Material Control**

6.1 Is there specification laid down for paddy / basmati rice?

6.2 Are inspection and test on paddy / basmati rice conducted based on laid down sampling plan and procedure?

6. Is there effective method systematically adopted in segregated the rejected items?

7. **PROCESS CONTROL**

7.1 Are detailed process specifications laid down at different stages of processing /

7.2 Are production samples / guides available?

7.3 Is there any stage inspection and / or patrol inspection give (details)

8. **PRODUCT CONTROL**

8.1 Are instruments serially numbered and calibrated at laid down frequency?

8.2 Are final inspection and test conducted on finished rice based on laid down sampling plan (give details)?

9. **METROLOGICAL CONTROL**

9.1 Are instruments serially numbered and calibrated at laid down frequency?

10. **PRESERVATION AND PACKING CONTROL**

10.1 Are Products well preserved during storage and transit?

10.2 Are there specification laid down for packing and packing material and relevant test carried out on packages?



11. **DOCUMENTATION**

11.1 Are essential records systematically maintained at all the above stage including the following

- (a) Staff training schedule
- (b) Quality system records, I (e.g., in-house, HACCP, etc)
- (c) Medical record / history sheet for each individual staff member
- (d) Record of Inspection visits
- (f) Record of raw rice material arrival
- (g) Mill material record maintenance
- (h) Dispatch records
- (i) Mill /Ware house cleaning records
- (j) Equipment / temperature control devices calibration records
- (k) Fumigation related records
- (l) Trace back /product recall
- (m) Complaint handling records
- (n) Implementation of Good Agricultural Practices by formers
- (o) Legal status and compliance to statutory requirements of Government of India

12. **OTHER PARTICULAR / REMARKS, IF ANY.**

13. **Details of the Bank draft towards payment of Fee**

DD No:

Date of issue

Drawn on (bank)

Amount (Rs)

**DECLARATION**

(a) I/We declare that I/we possess authority and right to Process/store rice in the above premises and to effect any structural and/or other modifications required conforming to the instructions issued from time to time.

(b) I/We also declare that I/we have read and understood the procedure for grant of approval/recognition for basmati rice export I/we understand that non-compliance at any stage will entail cancellation of the approval/recognition certificate issued to me.

Place : Signature -----

Date : Name -----

Designation -----

**UNDERTAKING**

I/We, ----- undertake to always maintain the mill / ware house as per the standards prescribed in this document, to abide by any instructions that may be issued by EIC/EIA from time to time and to get the above mentioned rice mills/ware house inspected whenever called upon to do so by EIC/EIA.

Place : Signature -----

Date : Name -----

Designation -----

**VERIFICATION**

I/We -----, hereby, declare that to the best of my knowledge and belief, the above information is complete and correct and that no facts have been concealed. I/We also agree to abide by the conditions laid down in this behalf.

Place : Signature -----

Date : Name -----

Designation -----

**MILL / WARE HOUSE INSPECTION REPORT BY A PANEL OF EXPERTS**

1. Name and address of the unit
2. Date and time of visit
3. Composition of Inspection Committee

Sl. No.	Name of Expert	Designation	Organization
I.			
II.			
III.			
IV.			
V.			

4. Persons met with designation, of the Unit

1. **General Information**

- 1.1 **Name and address of the applicant (owner) along with complete contact details**

Name

Address

Tel with STD Code:

Fax with STD Code:

Email ID :

Mobile :

- 1.2 **Name and address of the registered office along with complete contact details**

Name

Address

Tel with STD Code:

Fax with STD Code:

Email ID :

Mobile :

- 1.3 **License no. and date (enclose self-attested copy)**  
License No  
Issued for  
Issued by  
Issue Date  
Valid Up to
- 1.4 **If the unit is hired / leased, full address of the owner**  
Date of Issue  
Valid up to  
Leased to:  
Name:  
Address:  
Tel No:  
Mobile No.:
- 1.5 **Production capacity per month/Storage capacity**  
(a) Quantity  
(b) Value
- 1.6 Value of export during preceding three years?
- 1.7 A list of machinery and equipment available to be attached.
- 1.8 Is the Rice Mill HACCP / ISO Certified ; if so attach copy of the certificate.
2. **FACILITIES IN THE RICE MILL / WAREHOUSE**
- 2.1 Is there adequate space for free movement in all the sections units for workers?
- 2.2 Whether workers provided with clean working cloth Apron and to prevent contamination of consignment with sweat and dust/dirt.
- 2.3 Is there arrangement in all the sections for preventing entry of rodents, birds and pigeons?

- 2.4 Are the doors of all sections fitted with fly proofing and self closing device?
- 2.5 Is there adequate protection in the unit for loading and unloading of consignment during rainy season?
- 2.6 Facilities of toilets / washing for workers with liquid soap, disinfectant and towel.
- 2.7 Are the toilets having self closing doors and kept in clean?
- 2.8 Whether the walls and floors of the premises are free from pits, crevices, peeling off and white washed.
- 2.9 Whether there is an adequate facility of fumigation. If outsourced, the name and address of the fumigation agency.
- 2.10 Is there Separate ware house arrangement for finished product?
- 2.11 Separate arrangement for ware house of packaging material.
- 2.12 Separate ware house arrangement of export rejections.
- 2.13 Type of store houses, whether temporary or RCC

### **3. SANITARY FACILITIES**

- 3.1 Whether the surrounding kept clean. Whether the unit is maintained in good hygienic condition to prevent rodent harborage and infestation?
- 3.2 Does Mill / Ware house have cleaning schedule with disinfectants used?
- 3.3 Frequency of cleaning

4. **INFORMATION ABOUT PERSONNEL**

4.1 The name/qualification/designation and experience of quality control chief.

4.2 Number of workers

4.3 Number of supervisors.

4.4 Number of technical personnel

(a) Production

(d) Inspection

(e) Testing and analysis

5. **INCOMING MATERIALS CONTROL**

5.1 Were all the incoming materials inspected and tested as per laid down specifications, sampling plan and procedure? (give details and furnish counter-check results)

5.2 Whether any material was accepted permitting deviation from the laid down specifications? If so, give details and the level of accepting such deviations.

5.3 Whether any incoming material was rejected on inspection / testing? (give details) If yes, how such were disposed?

5.4 What actions were taken by the unit to improve quality of incoming materials?

5.5 Are the records of inspection / testing of materials up to date and systematic?

5.6 Suggestions for improvement.

6. **PROCESS CONTROL**

6.1 Are the processing operations controlled with the help of production guides?

6.2 Is the unit adopting stage inspection or patrol inspection or both?

6.3 Are the inspections effective? (Counter-check the on-going production at the time of visit and the records in respect of a few earlier lots and furnish details)

6.4 Whether instruments were added or replaced?  
Are the available ones adequate for effective control

6.5 Suggestions for improvement

## 7. **PRODUCT CONTROL**

7.1 Counter-check the availability of the product specifications and give your observations.

7.2 What sampling is adopted for tests? Give details

7.3 Whether inspection / tests are effective?  
(Counter-check the samples of current and earlier products and compare with the test records and furnish details.)

7.4 What are the percentage of rejection as per records and what were the reasons? How the rejections were disposed? State whether –  
(i) Rectified and exported?  
(ii) Locally sold?  
(iii) Exported under special permission

7.5 Is there a quality audit on goods; accepted after final inspection? If so, were there rejections by the quality audit (give details)

7.6 Suggestions for improvement

## 8. **LABORATORY FACILITY, EQUIPMENT & METROLOGICAL CONTROL**

8.1 Is there any in house testing facility available?

8.2 Is the quality control chief aware of phyto sanitary requirements for export of Basmati Rice of China i.e. control of storage pests like *Prostephanus truncates*, *Trogoderma granarium*

8.3 Is there a documented procedure for control of storage pests like *Prostephanus truncates*, *Trogoderma granarium*

8.4 Whether test conducted and proper records thereof maintained?

8.5 List of testing equipment.

- 8.6 Check a few instruments in relation to their history cards and state whether-
- (c) They are accurate
  - (d) They were calibrated as per laid down frequency

8.7 Suggestions for improvement

## 9. PERSONNEL HYGIENE

9.1 Has any person been made responsible for maintenance of personnel hygiene of employees?

9.2 Are the workers apparently free from any form of communicable diseases, open sores and wounds or any other source of contamination?

9.3 Are the workers medically examined periodically?

9.4 Are workers medically examined after each illness from any contagious diseases?

9.5 Are the workers provided with sufficient sets of clean work dress?

9.6 Suggestions for improvement

## 10. RODENT / VERMIN CONTROL

10.1 Is there any documented procedure for vermin control?

10.2 Whether responsibility has been fixed for this work?

10.3 Whether Vermin / rodent control carried out by own arrangement or through outside agency?

10.4 Whether bait map showing serially numbered bait stations has been provided?



10.5 Whether chemical / rodenticides are approved?

10.6 Suggestions for improvement

## 11. PACKING CONTROL

11.1 Are the packing materials accepted conforming to specifications? (IIP packaging standards or equivalent)

11.2 Are tests on packages carried out as laid down? (Counter check a few packages and furnish results)

11.3 Suggestions for improvement

## 12. MAINTENANCE RECORDS

12.1 Whether there is any documented maintenance procedures for different sections / equipments / machinery, laboratory items etc.

12.2 Whether maintenance records are kept?

12.3 Whether all the equipments are marked with identification numbers?

12.4 Suggestions for improvement

## 13. TRANSPORTATION

13.1 Is the unit having adequate transportation?

13.2 Are the constructed in such a way to facilitate easy cleaning and sanitation?

13.3 Is there separate arrangement for cleaning of transport vehicles?

13.4 Are the records of the above maintained?

13.5 Whether such arrangement creates environmental problems?

13.6 Are the vehicles cleaned periodically?

13.7 Whether there is a documented procedure for cleaning the vehicles?

13.8 Suggestions for improvement

14. **DOCUMENTATION**

14.1 Are essential records systematically maintained at all the above stage including the following

- (a) Staff training schedule
- (b) Quality system records, I (e.g., in-house, HACCP, etc)
- (c) Medical record / history sheet for each individual staff member
- (d) Record of Inspection visits
- (f) Record of raw rice material arrival
- (g) Mill material record maintenance
- (h) Dispatch records
- (i) Mill /Ware house cleaning records
- (j) Equipment / temperature control devices calibration records
- (k) Fumigation related records
- (l) Trace back / product recall
- (m) Complaint handling records
- (n) Implementation of Good Agricultural Practices by formers
- (o) Legal status and compliance to statutory requirements of Government of India

15. **ANY OTHER RELEVANT INFORMATION**

16. **CONCLUSION**

The unit may be / may not be considered for approval and recognition for export of Basmati Rice to China.

Sl.No.	Name and Designation of the Panel member	Organization represented	Signature
I.			
II.			
III.			
IV.			
V.			

13. SIGNATURE OF THE AUTHORIZED REPRESENTATIVE OF THE UNIT

Name

Designation

Date

Seal of the Firm