

Trade Notice No: APEDA/Q/2021 Date: 01/07/2021

**PROCEDURE FOR EXPORTS OF
BETEL LEAVES TO
EUROPEAN UNION**



**Agricultural and Processed Food Products
Export Development Authority**
3rd Floor, NCUI Building, 3 Siri Institutional Area,
August Kranti Marg, Hauz Khas, New Delhi 110 016
Tel: 26513204, Fax: 26519259 E-mail: headq@apeda.gov.in

Procedure for Exports of Betel Leaves to EU**Background**

In order to ensure control of *Salmonella* spp. in Betel Leave consignments exported from India to EU, Betel Leaves require adequate monitoring at every level to minimize *Salmonella* spp. and other micro organisms. It is necessary to analyze all export consignments of Betel Leaves destined to EU, the production farms implement Good Agricultural Practices (GAP) and the packhouses comply with Good Hygienic Practices (GHP). Sampling and analysis is carried out as per EU requirements stating that the product complies with and the health certificate is issued by the Competent Authority in the format prescribed vide EU Regulation 2021/608 dated 14/04/2021 amending Regulation 2019/1793 dated 22/10/2019. To comply with EU requirements and DGFT Notification No. 1/2015-20 dated 8th April 2016 for export of Betel Leaves following procedures shall be followed by all stakeholders, exporters, packhouses and laboratories:

1.	Objectives	1.1	To establish a system for control of <i>Salmonella</i> spp. and other micro organisms in exportable Betel Leaves in export value chain.
		1.2	To monitor microbial load in Betel Leaves at pack house level or prior to export exit point.
		1.3	To ensure traceability of the Betel Leaves up to final point of discharge.
		1.4	To establish a system for corrective action in the event of detection of <i>Salmonella</i> spp. and other harmful micro organism as well as in the event of Rapid Alert from the importing countries.
		1.5	To ensure that Betel Leaves exported from India to the European Union countries (Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and United Kingdom) as well as countries following EU food safety standards and other importing countries having food safety compliance norms.
		1.6	To establish a monitoring mechanism for export of Betel Leaves ensuring safety and quality of Betel Leaves as per requirement of importing countries.
2.	Scope	2.1	This document covers the APEDA registered pack houses, exporters, laboratories, Health Certificate issuing authority, DPPQS/NPPO, respective State Government Departments and other stakeholders.
3.	Procedure for Sampling and Analysis	3.1	The procedure of sampling of Betel Leaves shall be in accordance with Annexure-III, Sampling procedures and analytical reference methods referred in Article 3(e), Regulation 2019/1793 dated 22 nd October 2019.
		3.3	The laboratories shall sample Betel Leaves meant for exports from the registered Pack House.

		3.4	The laboratories shall use method of analysis as per EN/ISO 16140-2 with its latest version for detection of microbiological parameters in Betel Leaves or any other internationally accepted similar protocol.
		3.5	In case of samples drawn at the packhouse, the exporter/registered packhouses shall maintain segregation of produce in such a manner it should be tracked to the farm(s) or farm(s) following uniform pre harvest practices and the producing farms are in contiguous area.
		3.6	List of APEDA registered Pack Houses is given in Annexure-1 .
		3.7	The exporters and pack houses shall inform to the laboratories for sampling of Betel Leaves as per format given in Annexure-2 .
		3.8	List of laboratories for sampling and analysis for export of Betel Leaves is given in Annexure-3 .
		3.9	The laboratories shall analyze samples as per methods of analysis referred at para 3.4 above for <i>Salmonella</i> spp. Absent or Present in /25g.
		3.10	A consignment of Betel Leaves may comprise from optimum 20 farms, provided these farms follows uniform pre harvest practices and maintains same Pre Harvest Intervals so that the samples drawn for analysis are homogenous of the supplying farms.
		3.11	Sampler of the laboratory shall draw the sample and transfer the drawn samples (including the control samples) to the laboratory immediately but not later than 24 hours from the date and time of drawl of samples.
		3.12	The lab shall issue analysis results within 72 hours from the date and time of drawl of the sample.
		3.13	Guidelines for sampling are given in Annexure-4 .
		3.14	Each consignment of Betel Leaves shall accompany analysis results performed by laboratory verifying Absent or Present in /25g <i>Salmonella</i> spp. Format of analysis report of <i>Salmonella</i> spp. in Betel Leaves is given in Annexure-5 .
4.	Requirements of Laboratories	4.1	All the laboratories shall be ISO/IEC-17025 accredited for the scope of microbiological analysis with a specific reference to <i>Salmonella</i> spp. in Betel Leaves.
		4.2	Sampler of the laboratory shall draw sample from the APEDA registered Pack Houses.
		4.3	Responsibility of sampling, transfer of samples to the lab and issue of analytical results within 72 hours from the date and time of drawl of the sample shall be of the laboratory.

		4.4	The laboratories shall retain control sample(s) in below 8°C for a period of twelve days from the date of drawl of the samples of Betel Leaves.
5.	Responsibilities of exporter/ Pack Houses	5.1	Onus of maintaining appropriate sorting, grading, handling, processing, packing and transportation in line with the good hygienic and sanitation practices envisaged by the importing country's food safety compliance requirements shall be of exporter and packhouse. The exporters and pack houses shall also have responsibility to comply with the <i>Salmonella</i> spp. Absent in /25 g in Betel Leave consignments exported by them to EU destinations.
		5.2	The registered pack house(s) shall label Betel Leaves consignment of each box as per the format given in Annexure-6 .
		5.3	The registered Pack Houses shall ensure that each box will carry a label with a Unique Identification Code (UIC). For example AAA Exports from Kolkata/Mumbai could be AAAPHL000FFF (AAA denotes the packhouse name, PHL denotes location of packhouse and 000 denoted packhouse Certificate Number and F123 denotes farm registration number). The same UIC shall be mentioned in packages by the exporter (Annexure-5).
		5.4	Exporter and packhouse shall comply with recommended Package of Practices, GHP, declaration and farm registration instructions as given in Annexure-7 .
		5.5	The exporter shall report to APEDA about rejection of Betel Leaves by the importing countries within two working days from the date of such rejection, failing which APEDA will suspend registration of such exporter and recognition of concerned pack house in which the produce was processed.
		5.6	All APEDA registered Pack Houses shall maintain record of the sources (farmers and suppliers) of Betel Leaves in such a manner that the consignment exported can be traced back to the source. The record shall be made available to the laboratory representative at the time of sampling.
		5.7	The APEDA registered pack house(s) shall maintain a detailed log sheet of all the lots and consignments of Betel Leaves exported from its facility. This needs to be filled online to APEDA on regular basis before applying for issuance of Health Certificate.
		5.8	The sampled produce/consignment found non-compliant with importing country's requirement shall be immediately evacuated from the packhouse.
6.	Monitoring and Procedure for issue of Health Certificate	6.1	Monitoring will be carried out by APEDA for export of Betel Leaves to EU destinations.
		6.2	The competent Authority shall issue Health Certificate for export of Betel Leaves for each consignment in the format given in Annexure-8 .

7.	Penal Provision and appeal for restoration of approval	7.1	In the event of breach of these procedures by any of the stakeholders, APEDA may initiate action as per the provision of APEDA Act, 1985 subject to jurisdiction of New Delhi, in addition to the followings.
		7.2	Action against exporter, pack house and laboratory shall be taken as per SoP dated 04/04/2018 for handling rapid alerts, rejections and complaints for APEDA products.

Place: New Delhi
Date: 01/07/2021

Signed/-
Dr. M Angamuthu
Chairman-APEDA

Annexure-1

List of APEDA registered packhouses for exports of Betel Leaves

Sl. No.	Name of Packhouse	State	Address	Certificate valid upto
List of APEDA registered Packhouses as updated in APEDA website				

Sample slip for Betel Leaves

Unique identification code _____ Sample slip No. _____

No.	Contents	Details
1.	Name and address of exporter	
2.	Name & address of the packhouse	
3.	Packhouses Recognition No. & its validity	
4.	Betel Leave variety	
5.	Total quantity (in number of boxes, net weight and gross weight declared by exporter/packhouse) covered in this sample slip	
6.	Pests and diseases condition of Betel Leaves	
7.	Weight of total sample	
8.	Weight of the laboratory sample (including control sample)	
9.	Date and time of drawl of sample at Packhouse	
10.	Number of farms from whose produce sample drawn (farms monitored by exporter/packhouse and the farms following uniform practices)	

Signature of Exporter
Name of exporter

Signature of packhouse representative
Name of representative of packhouse

Certificate

This is to certify that:

1. I, _____ (Name of the sampler of the lab) has drawn the Betel Leave sample from the above Packhouse.
2. This sample is taken from the above Packhouse is intended to be exported by _____ (name of the exporter).
3. I have also obtained a copy of the packhouse registration Certificate and Farm registration.
4. That, as on date, ISO-17025 accreditation of this laboratory is valid.

Date:
Place:

Signature :
Name of sampler of
Laboratory
Official address :

Laboratories for sampling and analysis of Betel Leaves

No.	Name and contact details of the laboratory	Scope
1	Export Inspection Agency Kolkata Lab Space 101 (First Floor), Southend Conclave, 1582, Rajdanga Main Road Kolkata Tel: 033-24410603, 09831768737 eia-kolkatalab@eicindia.gov.in;	ISO-17025 accredited
2	Vimta Labs Limited Merlin Infinite 11th Floor DN-51, Sector-V, Salt Lake Kolkata 700 091 Tel : +91-040 67404040, 9100499910 prasad.avsp@vimta.com;	-do-
3	Edward Food Research & Analysis Centre Ltd. (EFRAC) Subhas Nagar PO Nilgunj Bazar, Barasat Kolkata 700 121 Tel: 033-71122800 Fax: 71122801 efraclab@efrac.org; balwinderbajwa@efrac.org; ashmitasarkar@efrac.org;	-do-
4	Geo Chem Laboratories Pvt. Ltd. Pragati, Adjacent to Crompton Greaves Kanjur Marg (E) Mumbai 400 042 Tel: 022-61915100 Fax: 022-61915101 sureshabu.p@geochem.net.in; laboratory@geochem.net.in;	-do-
5	Envirocare Labs Pvt. Ltd., A-7 MIDC Wagle Industrial Estate Main Road Thane 400 604 Tel: 022-25838286-88 Fax: 25838289 info@envirocare.co.in; meenal.s@envirocare.co.in; priti.a@envirocare.co.in;omkar.m@envirocare.co.in; Nilesh.a@envirocare.co.in	-do-
6	First Source Laboratory Solutions LLP (Analytical services) 1 st Floor Plot No. A1/B, IDA Nacharam Cross Road Hyderabad 500 076 Tel: 040-27177036 Fax: 040-27174037 crm@firstsourcels.com; sudhakar@firstsourcels.com;	-do-
7	Shriram Institute for Industrial Research 19 University Road, Delhi 110007 Tel: 011-27667267, 27667860, 27667436 Fax: 27667676, 27667207 doff@shriramstitute.org; kmchacko@shriramstitute.org;	-do-
8	Arbro Pharmaceuticals Private Limited Analytical Division 4/9 Kirti Nagar Industrial Area New Delhi 110015 Tel : 011-45754575, 9871700488 Fax: 45754545 arbrolab@arbropharma.com; saurabharora@arbropharma.com;	-do-
9	SGS India Pvt. Ltd. Opposite to State Bank of India 28 B/1 (SP), 28 B/2 (SP) 2 nd Main Road Ambattur Industrial Estate Chennai 600 058 Tel: 044-66693109 Fax: 24963075 av.abraham@sgs.com; dipjyoti.banerjee@sgs.com;	-do-
10	Mats India Private Limited 1A, 1B, Perumal Koil Street Nerkundram, Chennai 600 107 Tel: 044-42051415, 9840024009 chennai@matsgroup.com; lab.enquiry@matsgroup.com;	-do-
11	TUV India Pvt Ltd. Survey No: 423/1 & 3/2 Near Pashankar Auto (Baner) Sus-Pashan Road Pune 411 021 Tel: 020-67900000 foodlab@tuv-nord.com; mumbai@tuv-nord.com;	-do-
12	Interfield Laboratories XIII/1208, Interprint House Kochi 682 005 Tel: 0484-2217865, 2210915, 221838 mail@interfieldlaboratories.com;qm@ifl.in;gm@ifl.in; jp@ifl.in;	-do-
13	Delhi Test House, A-62/3, G.T. Karnal Road, Industrial Area, Opp. Hans Cinema, Azadpur, Delhi-110033 Tel. 011-47075555 (30 Lines) +91-9310360377, 9810442016 Fax 011-47075550 info@delhitesthouse.com; dg@delhitesthouse.com; sonia@delhitesthouse.com;	-do-

Guidelines for Method of sampling for determination of *Salmonella* spp. for exports of Betel Leaves

Sampling and analysis of Betel Leaves to be carried out in accordance with Annexure-III, Sampling procedures and analytical reference as referred in Article 3(e), Regulation 2019/1793 dated 22nd October 2019. In addition, the laboratories may also refer sampling procedures in accordance with the relevant standards of the ISO (International Organisation for Standardization) and the guidelines of the Codex Alimentarius Commission. The laboratories to analysis *Salmonella* spp. in Betel Leaves in accordance with the protocol set out in EN/ISO 16140-2 or any other internationally accepted similar protocols.

The sampling to be carried out at APEDA registered pack-houses/establishments. A representative sample of produce to be drawn from a lot traceable with unique identification code. Sampling guidelines are given as follows for reference purpose:

Definition of lot and consignment

A quantity of material at one time and known, or presumed, by the sampling officer to have uniform characteristics such as origin, producer, variety, packer, type of packing, markings, consignor, etc.

Each lot to have a unique identification code which is to be clearly mentioned on the outside (external part) of the corrugated box.

A consignment may consist of one or more lots. In case where a consignment is comprised of lots which can be identified as originating from different growers (following different practices), etc., each lot to be sampled and analyzed separately. Similarly, one lot can also have more than one consignment. Even in such cases, one sampling and analysis for that lot.

To establish traceability of the produce, the sampling to be carried out at APEDA registered pack-houses. In case, a consignment is created by mixing produce from more than one farm (following different practices) or different lots, then each individual farm produce or lot to be given a unique identification code, sampled separately and analyzed individually. Thus, e.g. if a consignment contains produces from 20 different farms (following different practices) or lots, then the consignment to carry 20x5 separate analysis. If any of the analysis indicates non-compliance to the microbial load of *Salmonella* spp. then that particular lot not to be included in the consignment.

In case the farm(s)/group of farm(s) are monitored by exporter(s) and the farm(s) following uniform production practices, the exporter may opt for sampling and analysis of produce either as mentioned above or consignment wise.

A consignment of Betel Leaves may comprise produce of optimum 20 farms, provided these farms have adopted uniform pre harvest practices and are maintaining same PHI so that the samples drawn for analysis are homogenous and representative of the supplying farms.

Materials required for sampling (sterilized)

- Large Polythene bags, hand gloves, hand sanitizer
- Knife, cutter, seizer, cleaning solution, tags seals

Paperwork

- Sample slip (as given in Annexure-2)

- Stand Operation Procedures (SOP) of Sampling procedures in local language or in English

Contamination and deterioration of samples must be prevented at all stages, because they may affect the analytical results. Each lot to be checked for compliance must be sampled separately.

Avoid sampling from wet boxes, if the weather is bad to avoid cross-contaminating other boxes.

The minimum of primary samples to be drawn from a lot is as given below:

Table-1

Commodity classification	Nature of primary sample to be taken	Minimum size of each laboratory Sample
Betel Leaves		
(Units generally < 5g)	Whole units	200 g (around 5 g from 40 primary sampling locations)

Following guide for sampling procedures and analytical reference methods to be applied:

Analytical reference method*	Weight of consignment	Number of sample units (n)	Sampling procedures	Analytical result required for each sample unit of the same consignment
EN ISO 6579-1	Any weight	5	n sample units are collected of a minimum of 100 g each. If batches are identified in the CHED, the sample units to be collected from the different batches randomly chosen from the consignment. If batches cannot be identified, the sample units are collected randomly from the consignment. Pooling of sample units is not allowed. Each sample unit to be tested separately.	No detection of <i>Salmonella</i> in 25 g

*The most recent version of the analytical reference method to be used or a method validated against it in accordance with the protocol set out in EN ISO 16140-2.

The selected lot of Betel Leaves to be divided into 40 primary sampling locations covering two locations of each farm's produce. Draw samples of 5 gram from each location as described above. Irrespective of number of optimum supplying farms in one consignment, primary sampling to be carried out from minimum 40 locations as described above.

The laboratory sample to be thoroughly mixed up by quartering technique and divided into two parts:

- (i) Sample for direct analysis by the laboratory (half quantity of produce)
- (ii) Control sample for further analysis in future, (half quantity of produce). The laboratories to retain control sample(s) in controlled conditions in Cold Store at appropriate temperature for a period of twelve days from the date of issue of analysis certificate.

Packing and transport of sample

The samples to be packed separately in clean and virgin polythene bags designed for transport of Betel Leaves. Sample slip given at Annexure-2 to be kept in a polyethylene cover and the same to be inserted in the bags. The bags to be labeled from outside with the following information:

- Sample for *Salmonella* spp. analysis of Betel Leaves
- Sample slip number
- Date of sampling
- Time of sampling
- Unique identification code of the lot
- Farmer identification code
- Name of the sampler of the laboratory with signature

Sealed samples to reach the laboratory within twenty four hours of sampling from the packhouse/ establishments. Enough care to be taken to prevent any spoilage of the samples during transit.

Format of Laboratory Analysis Certificate for exports of Betel Leaves from India to EU

<u>GENERAL</u>	
Analysis report issued to: M/s. _____(Name and address of exporter):	Report No.:
APEDA RCMC No. & IE Code of the exporter :	Issue date:
Name and address of APEDA approved Packhouse : (if sampled at packhouse with seal no.)	Exporter's ref:
Packhouse registration No. & validity :	Page no. ___ of ___

<u>SAMPLE DETAILS</u>	
Sample Slip No :	Sample Quantity Received :
Sample Receipt Date :	Sample drawn by :
Sample Registration Date :	Mode of transport and
Sample Registration No. :	condition of sample on receipt :
Sample Type : Betel Leaves	at lab for analysis
Batch No. :	
UIC No.(refer annexure-6):	
Destination of exports :	
<u>SAMPLE ANALYSIS DETAILS</u>	
Analysis Starting Date :	Analysis Completion Date :

Analytical Result for each sample unit of the same consignment

Test Parameter	Unit of Measurement	Method used	Instrument used	Limit of quantitation	Requirements	Results
<i>Salmonella</i> spp.	Absent /25gm				Absent	Absent/Present

This is to certify that the above sample has been drawn and analyzed by this laboratory as per the EU Regulation 2019/1793 dated 22nd October 2019 requirements. The sample pass/fail and the consignment qualify/not qualify for shipment.

Authorized signatory of laboratory

Name (in capital letters):
Date & Place:
Laboratory Stamp:

Qualification and title:
Signature:

Label to be affixed in each box meant for exports of Betel Leaves
(To be affixed by the exporter/registered packhouse)

Name of Produce	Betel Leaves
Unique Identification Code	AAAPHL000F123

- AAA: Three alphabet code name of exporter
- PHL: Three alphabet packhouse location code
- 000: Three numeric packhouse approval number codes
- F123: Four Alphanumeric Farmer registration code

1. Package of Practices (PoP) as given in Appendix 1.
2. Good Hygiene Practices (GHP) as given in Appendix 2.
3. Declaration to be given by the exporter in Appendix-3 to the pack houses that Package of Practices and Good Hygiene Practices for betel leaves have been followed.
4. Pack house have to register the farms as per Appendix-4, confirming that the raw material is sourced from the registered farm only. It has to also verify soil and water test reports of laboratory and declaration from the exporter before allowing betel leaves for exports.
5. Soil and water is primary source of contamination of Salmonella, it is important to do soil and water testing, which may be done from APEDA an accredited laboratory.
6. Betel Leaves to be packed only in APEDA registered pack houses.

Package of Practices of Betel Leaves (*Piper betle*)

Introduction: The Betel is the leaf of vine. In India, it is known as “Paan”. Betel vine is a perennial, evergreen climber which grows in tropics and subtropics. Betel leaf is mostly consumed in Asia and elsewhere in the world by some Asian emigrants. Today betel is grown for local consumption and exports. Major betel leaves growing countries are Sri Lanka, India, Thailand and Bangladesh. Pakistan is the major importer of Sri Lankan betel.

Betel Leaves growing States in India: Betel leaves are also cultivated in the states of Assam, Andhra Pradesh, Bihar, Gujarat, Odisha, Karnataka, Madhya Pradesh, Rajasthan, West Bengal and Maharashtra.

India Exports Betel Leaves to: Afghanistan, Australia, Bangladesh, Canada, France, Germany, Hongkong, Kenya, Nepal, United Kingdom, UAE, Saudi Arabia, Oman, Pakistan, Qatar, USA, Yeman and United Kingdom. In 2013-14, India earned nearly \$ 40 lakh through export of Betel Leaves (Source: Times of India, Jun 25, 2014)

Climatic Requirements: Tropical climate, high rainfall and a shady place are best for its vigorous growth. Betel is a sun loving plant but produces better quality leaves in the wet zone and intermediate zones rather than in the dry zone. Appropriate shade levels and irrigation are essential for successful cultivation of the crop. Hot dry winds are harmful and retard the growth of the vine.

Season: Planting season in different Betel Leaves growing states are as follows -

- ❖ Assam - April-May and August-September
- ❖ Andhra Pradesh – September-October
- ❖ Bihar – June-July, September and May-June
- ❖ Karnataka- July-August
- ❖ Maharashtra- July-August and October-November
- ❖ Madhya Pradesh- January-March and September-November
- ❖ Odisha- May-June and September-November
- ❖ West Bengal- June-July and September-October

Soil Requirements: Soil with good organic matter (i.e. C: N ratio) and drainage system is best suited for betel vine growth. However, it can be grown on different types of soils such as heavy clayey loam, and sandy loam soils.

Soil preparation: Soil should be prepared well by 4–5 ploughings and land should be raised by 5–10cm from the adjacent areas, providing proper gradient on both sides for quick drainage. Afterwards, field beds of suitable size (15cm high and 30cm broad) are prepared. Before planting the cuttings, soil should be sterilized thoroughly.

Soil Sterilization: During hot summer months (March–May), when the soil temperature rises sufficiently, soil is covered using polyethylene sheet in order to destroy inoculum of soil-borne pathogens. For new plantations, application of Carbofuran 3G @ 1.5 kg/ha or neem cake (0.5 tonnes/ha) + Carbofuran (0.75kg/ha) is also recommended to minimize initial soil nematode population. However, Carbofuran should not be recommended in established gardens at any stage because a time gap of 65–70 days as safe waiting period is required between application and harvesting of leaves.

Important Varieties: Based on shape, size, brittleness and taste of leaf blade, betel vine is classified into pungent and non-pungent varieties.

States	Popular varieties
Andhra Pradesh	Karapaku, Chennor, Tellaku, Bangla and Kalli Patti
Assam	Assam Patti, Awani pan, Bangla and Khasi pan.
Bihar	Desi pan, Calcutta, Paton, Maghai and Bangla
Karnataka	Kariyale, Mysoreale and Ambadiale
Odisha	Godi Bangla, Nova Cuttak, Sanchi and Birkoli
Mahdy Pradesh	Desi Bangl, Calcutta and Deswari
Maharashtra	Kallipatti, Kapoori and Bangla (Ramtek)
West Bengal	Bangla, Sanchi, Mitha, Kali Bangla and Simurali Bangla.

Propagation: Stem cuttings having 3-5 nodes are used for propagation and these are planted in such a manner that 2-3 nodes are buried in the soil. A single node cutting with a mother leaf is also planted. Cuttings of the apical and middle portions of the vine are used for planting. Betel vine are to be planted 4-5 months earlier.

Cultivation Practices: Two types of cultivation are practiced in India: Open system of cultivation using support plants and closed system of cultivation using artificial rectangular structures called barejas.

Irrigation: Since betel vine requires high soil moisture, frequent light irrigation depending upon the season is to be given. Irrigation should be need-based and proper drainage is essential for draining of excess water. Water should be clean and free from microbial contamination.

Standard quality specifications: There are no specific quality parameters for betel leaves. However, for export of quality betel leaves the following criteria may be considered:-

Size of the leaf – At least 20cm in length and 15cm width

Stem of the leaf must be 2.5-3 cm

Colour - well matured dark green colour leaves

Freshness of the leaves

Insect Pests and diseases – Insect pests - Scale insect (*Lepidosaphes cornutus*)

Identifying characters - Sometime attains pest status in betel vine. They are mostly noticed on the base portion of stems/leaves. The scale insects are either light brown or dark brown in colour.

Damage symptoms - Both the nymphs (crawlers) and adults suck the sap and the infested leaves lose their colour, vigour and exhibit waxy appearance. In case of severe damage the infected leaves become crinkle and dry up ultimately and affected leaves lose their market value.

Management

- Spraying of NSKE 5% at the infested portion is beneficial. Before spraying matured/marketable leaves should be harvested (*Source: Tamil Nadu Agricultural University Agritech portal-Horticulture*).

Mealy bugs (*Ferrisia virgata*)

Identifying characters – Immature stages or crawlers are yellowish to pale white in colour whereas adult females are apterous, long, slender covered with white waxy secretion.

Symptoms of damage: Presence of white, cottony mealy bugs on the leaves and twigs. They suck the sap from the leaves and growing pints resulting devitalization of the leaves and stunted growth of the plants.

Management:

- Collection and destruction of the damaged plant parts.
- Conservation of the predators viz., *Chrysoperla zastrowi sillemi*, *Coccinella septempunctata*, *Menochilus sexmaculatus*, *Cryptolaemus montrouzieri*
- Spray Fish oil resin soap (FORS) @ 25g/lit or neem oil 0.5% along with teepol 1 ml/lit of water. Before spraying matured/marketable leaves should be harvested (Source: *As recommended by IIVR, Varanasi*).

Note – No insecticide is mentioned against betel vine insect pests as per CIB&RC as on 31/10/2014

Diseases: Foot rot or Leaf rot or wilt

Causal organism: *Phytophthora parasitica* var. *piperina*

Symptoms: Vines are infected at all the stages of crop growth. Initially symptoms are associated with sudden wilting. Yellowing and drooping of the leaves from tip downwards are observed on the affected vines. The leaves become dull due to loss of lustre. The affected plants dry up within 2 or 3 days completely. Stems become brown, brittle and dry as stick. The lower portion of the stem near the soil level displays irregular black lesions. Later diseased internodes become soft and undergo ‘wet rot’, slimy emitting fishy odour. The roots of the infected plants also show rotting. In the young crop, the fungus produces ‘Leaf rot’ symptoms. The leaves within 2-3 feet height of the vine show the leaf rot symptom.

Management:

- Soak the seed vines in Streptocycline* 500 mg/L + Bordeaux mixture* 0.05 %t solution for 30 minutes.
- Collect and destroy the infected vines and leaves.
- Regulate irrigation during the cold weather period.
- Drench the soil with 0.5 per cent Bordeaux mixture at 500 ml/hill during the cool weather period (October-January) at monthly intervals.

(Source: *Tamil Nadu Agricultural University Agritech portal-Horticulture*)

*Note: No label claim as per CIBRC

Sclerotium foot rot and wilt

Causal organism: *Sclerotium rolfsii*

Symptoms- All stages of vine are susceptible to the disease. Infection starts at the collar region associated with whitish cottony mycelium on the stem and roots. The stem portion shows rotting tissues at the point of attack and the plants show dropping of leaves and dies.

Management

- Removal and destruction of the affected vines along with the roots and should be burnt.
- Apply mustard cake or farmyard manure to soil.
- Drench the soil with Carbendazim.0.1%

(Source: *Tamil Nadu Agricultural University Agritech portal-Horticulture*)

*Note: No label claim as per CIBRC

Powdery mildew- Causal organism: *Oidium piperis*

Symptoms - The disease affects the crop at all stages of its growth and infection is mainly noticed on tender shoots and leaves. Whitish powdery growth is seen on both the surface of leaves which later enlarges and cover the major portion of the leaves finally ends up in defoliation.

Management

- Collect and burn the infected leaves.

- Spray 0.2 per cent Wettable Sulphur or dust Sulphur at 25 kg/ha after plucking the leaves (*Source: Tamil Nadu Agricultural University Agritech portal-Horticulture*).

*Note: No label claim as per CIBRC

Anthracnose-Causal organism: *Colletotrichum piperis*

Symptoms: Leaves show small circular black spots initially which later develops, enlarge with concentric nature and covered with a yellow halo to a size of 2 cm. The affected leaves turn pale yellow and dry up with large black dots in the centre of the spots. Similar spots were seen on the stem portion and as the disease progress leads to girdling of stem finally resulting in withering and drying of entire plant.

Management

- Collect and destroy the infected vines and leaves.
- Spray Ziram* 0.2 % or Bordeaux mixture* 0.5% after plucking the leaves (*Source: Tamil Nadu Agricultural University Agritech portal-Horticulture*).

*Note: No label claim as per CIBRC

Bacterial leaf spot or stem rot –Causal organism: *Xanthomonas campestris pv. betlicola*

Symptoms: The disease initiates as tiny, brown water soaked specks on the leaves surrounded by a yellow halo, which enlarge later and become necrotic and angular, mostly confined to interveinal areas. Under favourable condition, infection spreads to stem causing blackening of nodes and intermodal region ultimately leads to withering and drying of plants. The infected leaves lose their lustre, turn yellow, show withering and fall off.

Management

- Remove and burn the infected vines and stubbles in the field.
- Regulate irrigation during cold weather season.
- Spray Streptomycin* 400g/L +Bordeaux mixture* 0.25 % at 20 days intervals, after plucking the leaves (*Source: Tamil Nadu Agricultural University Agritech portal-Horticulture*).

*Note: No label claim as per CIBRC

Harvesting and Post Harvest practices: Generally betel vine is ready for harvest after 2-3 months of planting and thereafter for every 15-25 days. However, harvesting is started when the betel vine is grown up to 1.2-1.8 mt. in length. Leaves are harvested from the lower portion of the stem. Initially matured leaves are removed in lower parts of the main stem 2-3 times. After that betel leaves are harvested both from main stem and lateral stems. For export market betel is harvested from three weeks intervals and for local market in two weeks intervals.

Harvested leaves to be washed cleaned and graded according to their size and quality. Then they are packed after cutting a portion of the petiole and rejecting the damaged leaves.

For cleaning and washing clean & microbial free water is to be used. Handling workers to sanitize their hands follow proper personnel hygiene.

Post harvest operation to be carried out in APEDA registered pack house to meet the international standards in terms of quality of produce with quarantine safety.

Table A. List of recommended insecticides against different insect pests of betel leaf (without label claim)

Name of the insect pest	Common name of pest	Dosage	Recommended by
Malathion 50 EC	Scale insect	1 ml/lit	TNAU*, Coimbatore
Chlorpyrifos 20 EC	Scale insect Mealy bugs	2 ml/lit	TNAU*, Coimbatore
Dimethoate 30 EC	Mealy bugs	2ml/lit	TNAU*, Coimbatore

**http://agritech.tnau.ac.in/horticulture/horti_plantation%20crops_betelvine.html visited on 17/07/2015*

Table B. List of recommended fungicides against different diseases of betel leaf (with label claim) Registered under the Insecticides Act, 1968 AS ON 31.08.2015

Name of the fungicide	Disease	Dosage /ha		
		a.i. (g/ml)	Formulation g/ml	Dilution in water (L)
Copper Oxy chloride (COC) 50% WP	Foot Rot Leaf Rot	1.25	2.5	750-1000

Note: It is important to note that above recommendation with regard to use of Agrochemicals are recommendatory in nature, based on the secondary literature quoted above. The recommendation of the State Government with respect to use of agrochemicals may be followed, as they are fine tuned to the local requirements.

Good Hygiene Practices for Betel Leaves

INTRODUCTION:- Regular rapid alerts in Betel Leaves has raised concerns. The following good hygiene practices (GHP) has to be followed:

1. OBJECTIVES OF THE CODE:- This code addresses Good Agricultural Practices (GAPs) and Good Hygiene Practices (GHPs) that will help control microbial, chemical and physical hazards associated with betel leaves from primary production to packing. Particular attention is given to minimizing microbial hazards. The code provides a general framework of recommendations to allow uniform adoption by this sector rather than providing detailed recommendations for specific agricultural practices, operations or commodities.

2. SCOPE, USE AND DEFINITIONS:-

2.1 SCOPE This code of practice covers general hygienic practices for the primary production and packing of betel leaves cultivated for human consumption in order to produce a safe and wholesome product: particularly for those intended to be consumed raw. It concentrates on microbial hazards and addresses physical and chemical hazards only in so far as these relate to GAPs and GHPs.

2.2 USE This code focuses upon hygienic issues that are specific to the primary production and packing of betel leaves.

2.3 DEFINITIONS General expressions are included in the General Principles of Food Hygiene. For the purpose of this code, the following terms have the definition stated:

Agricultural inputs - any incoming material (e.g. seeds, fertilizers, water, agricultural chemicals, plant support, etc.) used for the primary production of betel leaves.

Worker - any person that undertakes one or more of the following: cultivation, harvesting and packing of betel leaves.

Antimicrobial agents - any substance of natural, synthetic or semi-synthetic origin which at low concentrations kills or inhibits the growth of microorganisms but causes little or no host damage.

Biological control - the use of competing biological (such as insects, microorganisms and/or microbial metabolites) for the control of mites, pests, plant pathogens and spoilage organisms.

Composting - a managed process in which organic materials are digested aerobically or anaerobically by microbial action.

Cultivation- any agricultural action or practice used by growers to allow and improve the growing conditions of betel leaves grown in the field (with or without cover) or in protected facilities (shed net, greenhouses and poly houses etc.).

Farm - any premise in which betel leaves are grown and harvested and the surroundings under the control of the same management.

Grower - the person responsible for the management of the primary production of betel leaves.

Harvester - the person responsible for the management of the harvesting of betel leaves.

Hazard – a biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

Hazardous material - any compound which, at specific levels, has the potential to cause adverse health effects.

Manure - Animal excrement which may be mixed with litter or other material, and which may be fermented or otherwise treated.

Microorganisms -include yeasts, moulds, bacteria, viruses and parasites. When used as an adjective, the term "microbial" is used.

Packer - the person responsible for the management of post-harvest processing and packing of betel leaves.

Packing -the action of putting betel leaves in a package. This may take place in APEDA registered pack houses.

Primary production - those steps involved in the growing and harvesting of betel leaves such as planting, irrigation, application of fertilizers, application of agricultural chemicals, etc.

Clean water - water that does not compromise food safety in the circumstances of its use.

Potable water - water which meets the quality standards of drinking water such as described in the WHO Guidelines for Drinking Water Quality.

3. PRIMARY PRODUCTION Betel leaves are grown and harvested under sub tropical climatic conditions, using various agricultural inputs like organic fertilizer, farm yard manure etc., Biological, chemical and physical hazards may therefore vary significantly from one type of production to another.

3.2 HYGIENIC PRIMARY PRODUCTION OF BETEL LEAVES

3.2.1 Agricultural input requirements Agricultural inputs should not contain microbial or chemical contaminants to avoid the further multiplication of micro organism like *Salmonella* spp. *E. Coli* etc.

3.2.1.1 Water for primary production

- Growers should identify the sources of water used on the farm (municipality, re-used irrigation water, well, open canal, reservoir, rivers, lakes, farm ponds etc.). They should assess its microbial and chemical quality, and its suitability for intended use, and identify corrective actions to prevent or minimize contamination (e.g. from livestock, sewage treatment, human habitation).
- Where necessary, growers should have the water they use tested for microbial and chemical contaminants. The frequency of testing will depend on the water source and the risks of environmental contamination including intermittent or temporary contamination (e.g. heavy rain, flooding, etc.).

3.2.1.1.1 Water for irrigation and harvesting Water used for agricultural purposes should be of suitable quality for its intended use.

3.2.1.1.2 Water for fertilizers, pest control and other agricultural chemicals Water used for the application of water-soluble fertilizers and agricultural chemicals in the field should not contain microbial contaminants at levels that may adversely affect the safety of fresh fruits and vegetables.

3.2.1.2 Manure and other natural fertilizers The use of manure and other natural fertilizers in the production of betel leaves should be managed to limit the potential for microbial, chemical and physical contamination.

3.2.1.3 Soil Soils should be evaluated for hazards. If the evaluation concludes that such hazards are at levels that may compromise the safety of crops, control measures should be implemented to reduce hazards to acceptable levels. If this cannot be achieved by available control measures, growers should not use these soils for primary production.

3.2.2 Facilities associated with growing and harvesting under control condition

For operations where betel leaves are grown under controlled conditions (greenhouses, shed net and poly houses etc.) suitable premises should be used.

3.2.2.1 Location, design and layout

- Premises and structures should be located, designed and constructed to avoid contaminating betel leaves and harboring pests such as insects, rodents and birds.
- Where appropriate, the internal design and layout should permit compliance with good hygienic practices for the primary production of fresh betel leaves, including protection against cross-contamination between and during operations. Each establishment should be evaluated individually in order to identify specific hygienic requirements for each product.

3.2.2.2 Water supply Where appropriate, an adequate supply of potable or clean water with appropriate facilities for its storage and distribution should be available in primary production facilities. Non-potable water should have a separate system. Non-potable water systems should be identified and should not connect with, or allow reflux into potable water systems.

- Avoid contaminating potable and clean water supplies by exposure to agricultural inputs used for growing fresh produce.
- Clean and disinfect potable and clean water storage facilities on a regular basis.
- Control the quality of the water supply.

3.2.2.3 Drainage and waste disposal Adequate drainage and waste disposal systems and facilities should be provided. These systems should be designed and constructed so that the potential for contamination of betel leaves or the potable water supply is avoided.

3.2.3 Personnel health, hygiene and sanitary facilities Hygiene and health requirements should be followed to ensure that personnel who come directly into contact with betel leaves during or after harvesting are not likely to contaminate them. Visitors should, where appropriate, wear protective clothing and adhere to the other personal hygiene provisions in this section.

3.2.3.1 Personnel hygiene and sanitary facilities

Hygienic and sanitary facilities should be available to ensure that an appropriate degree of personal hygiene can be maintained. As far as possible, such facilities should:

- Be located in close proximity to the fields and pack houses, and in sufficient number to accommodate personnel.
- Be of appropriate design to ensure hygienic removal of wastes and avoid contamination.
- Have adequate means of hygienically washing and drying hands.
- Be maintained under sanitary conditions and good repair.

3.2.3.2 Health status People known, or suspected, to be suffering from, or to be a carrier of a disease or illness likely to be transmitted should not be allowed to enter the handling area if there is a likelihood of their contaminating. Any person so affected should immediately report illness or symptoms of illness to the management.

3.2.3.3 Personal cleanliness Workers who have direct contact should maintain a high degree of personal cleanliness and, where appropriate, wear suitable protective clothing and footwear. Cuts and wounds should be covered by suitable waterproof dressings when personnel are permitted to continue working. Personnel should wash their hands when handling betel leaves or other material that comes in contact with them. Personnel should wash their hands before starting work involving the handling, each time they return to handling areas after a break, immediately after using the toilet or after handling any contaminated material where this could result in contamination.

3.2.3.4 Personal behaviour Workers should refrain from behaviour which could result in the contamination of food, for example: smoking, spitting, chewing gum or eating, or sneezing or coughing over unprotected betel leaves.

3.2.4 Equipment associated with growing and harvesting

As required, growers and harvesters should follow the technical specifications recommended by the equipment manufacturers for their proper usage and maintenance. Growers and harvesters should adopt the following sanitary practices:

- Equipment and containers coming into contact betel leaves should be made of materials that are non-toxic.
- Containers that can no longer be kept in a hygienic condition should be discarded.

3.3 Handling, Storage and Transport

3.3.1 Prevention of cross-contamination During the primary production and post-harvest activities, effective measures should be taken to prevent cross-contamination of betel leaves from agricultural inputs or personnel who come directly or indirectly into contact with betel leaves.

- Equipment and containers previously used for potentially hazardous materials (e.g. garbage, manure, etc.) should not be used for holding betel leaves or have contact with packaging material that is used for betel leaves without adequate cleaning and disinfecting.
- Care must be taken when packing betel leaves in the field to avoid contaminating containers or bins by exposure to, manure or animal/human faces.

3.3.2 Storage and transport from the field to the packing facility Betel leaves should be stored and transported under conditions which will minimize the potential for microbial, chemical or physical contamination. The following practices should be adopted:

- Storage facilities and vehicles for transporting the harvested crops should be built in a manner to minimize damage to betel leaves and to avoid access by pests. They should be made of non-toxic materials that permit easy and thorough cleaning.

3.4 CLEANING, MAINTENANCE AND SANITATION Premises and harvesting equipment should be kept in an appropriate state of repair and condition to facilitate cleaning and disinfection. Equipment should function as intended to prevent contamination of betel leaves.

DECLARATION

I, Mr./Ms. (Designation) of M/s. (Name of the company/firm) Registered with APEDA with RCMC No....., declare that I have procured the raw material from the registered farm where Package of practices for Betel Leaves as given in Appendix-1 and Good Hygiene Practices as given in Appendix 2 of Procedure for Export of Betel Leaves have been followed in the field and during transit, sorting, grading and storage.

Place:
Date:

Signature of
Director/Managing partner/Proprietor

Format of Farm Registration

1	Name and address of the Farmer/Grower	First Name & Address of the farmer
	Taluka	
	District	
	State	
	Phone. No. with STD code	
	E-mail address	
2	Plot Registration No.	
3	Address of the Plot.	
	Survey no. / Gat no.	
	Taluka	
	District	
	State	
4	Total area of the plot, Map of the Plot (please indicate all sides of farm crop grown) Landmark, if any.	
5	Whether Plot is certified for Good Agriculture Practices (GAP) if so attach copy of valid certificate.	
	GAP Certificate No.	
	Date of issue and validity for GAP certificate	
6	Whether any Rapid Alert Notice issued by EU	
7	Date of Planting	
8	Condition of the crop relating to the pest, diseases and overall sanitation of farm	
9	Any advice given to the farmer by State Govt./Exporter/Packhouse	
10	Recommendation of the Inspecting Authority (Whether plot is fit for registration /renewal of registration)	
11	Date of Inspection	

It is certified that the above information is correct and true to the best of my knowledge.

Signature of Farmer/Grower

Authorized Signatory

Deptt. of Horticulture/Agriculture

Name of Farmer/Grower

Name:

Place:

Date:

Annexure-8

Format of Health Certificate for exports of Betel Leaves from India to EU

		COUNTRY		Official certificate to the EU				
Part 1: Details of dispatched consignment	I.1. Consignor/Exporter Name Address Tel. No			I.2. Certificate reference No		I.2.a IMSOC reference No		
				I.3. Central Competent Authority				
				I.4. Local Competent Authority				
	I.5. Consignee/Importer Name Address Postal code Tel. No			I.6. Operator responsible for the consignment Name Address Postal code				
	I.7. Country of origin		ISO	I.8. Region of origin		I.9. Country of destination		ISO
	I.11 Place of dispatch Name Address			I.12. Place of destination Name Address		I.10.		
	I.13. Place of loading			I.14. Date and time of departure				
	I.15. Means of transport Aeroplane <input type="checkbox"/> Vessel <input type="checkbox"/> Other <input type="checkbox"/> Road vehicle <input type="checkbox"/> Railway <input type="checkbox"/> Identification:			I.16. Entry BCP				
	I.18. Transport conditions Ambient <input type="checkbox"/> Chilled <input type="checkbox"/> Frozen <input type="checkbox"/>			I.17. Accompanying documents <input type="checkbox"/> Laboratory report No. Date of issuance: <input type="checkbox"/> Other Type No				
	I.19. Container No/Seal No							
I.20. Goods certified as Human consumption <input type="checkbox"/> Feedingstuff <input type="checkbox"/>								
I.21.			I.22. For internal market: <input type="checkbox"/>					
I.23 Total number of packages		I.24. Quantity Total number		Total net weight (Kg)		Total gross weight (Kg)		
I.25. Description of goods No Code and CN title								
Species (Scientific name)								
Final consumer <input type="checkbox"/>		Number of packages		Net weight		Batch No		
						Type of packaging		

COUNTRY		Certificate for the entry into the Union of food or feed	
Part II: Certification	II. Health information	II.a Certificate reference No	II.b IMSOC reference No
	<p>II.1. I, the undersigned, declare that I am aware of the relevant provisions of Regulation (EC) No 178/2002 of the and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (OJ L 31, 1.2.2002, p. 1), Regulation (EC) No 852/2004 of the European Parliament and of the Council of 29 April 2004 on the hygiene of foodstuffs (OJ L 139, 30.4.2004, p. 1), Regulation (EC) No 183/2005 of the European Parliament and of the Council of 12 January 2005 laying down requirements for feed hygiene (OJ L 35, 8.2.2005, p. 1) and Regulation (EU) 2017/625 of the European Parliament and of the Council of 15 March 2017 on official controls and other official activities performed to ensure the application of food and feed law, rules on animal health and welfare, plant health and plant protection products, amending Regulations (EC) No 999/2001, (EC) No 396/2005, (EC) No 1069/2009, (EC) No 1107/2009, (EU) No 1151/2012, (EU) No 852/2014, (EU) 2016/429 and (EU) 2016/2031 of the European Parliament and of the Council, Council Regulations (EC) No 1/2005 and (EC) No 1099/2009 and Council Directives 98/58/EC, 1999/74/EC, 2007/43/EC, 2008/119/EC and 2008/120/EC and repealing Regulations (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council, Council Directives 89/608/EEC, 89/662/EEC, 90/425/EEC, 91/496/EEC, 96/23/EC, 96/93/EC and 97/78/EC and Council Decision 92/438/EEC (Official Controls Regulation) (OJ L 95, 7.4.2017, p. 1), and I certify that:</p> <p>(¹) Either</p> <p>II.1.1. <input type="checkbox"/> the food of the consignment described above with the identification code ... (indicate the identification code for the consignment referred to in Article 9(1) of Implementing Regulation (EU) 2019/1793) was produced in accordance with the requirements of Regulations (EC) No 178/2002 and (EC) No 852/2004 and in particular:</p> <ul style="list-style-type: none"> — primary production of such food and associated operations listed in Annex I to Regulation (EC) No 852/2004 comply with the general hygiene provisions laid down in part A of Annex I to Regulation (EC) No 852/2004; — (¹) (²) and, in the case of any stage of production, processing and distribution after primary production and related operations: — it has been handled and, where appropriate, prepared, packaged and stored in a hygienic manner in accordance with the requirements of Annex II to Regulation (EC) No 852/2004 and, — it comes from (an) establishment(s) implementing a programme based on the hazard analysis and critical control points (HACCP) principles in accordance with Regulation (EC) No 852/2004;] <p>(¹) Or</p> <p>II.1.2. <input type="checkbox"/> the feed of the consignment described above with the identification code ... (indicate the identification code for the consignment referred to in Article 9(1) of Implementing Regulation (EU) 2019/1793) was produced in accordance with the requirements of Regulations (EC) No 178/2002 and (EC) No 183/2005 and in particular:</p> <ul style="list-style-type: none"> — primary production of such feed and associated operations listed in Article 5(1) of Regulation (EC) No 183/2005 comply with the provisions of Annex I to Regulation (EC) No 183/2005; — (¹) (²) and, in the case of any stage of production, processing and distribution after primary production and related operations: — it has been handled and, where appropriate, prepared, packaged and stored in a hygienic manner in accordance with the requirements of Annex II to Regulation (EC) No 183/2005 and, — it comes from (an) establishment(s) implementing a programme based on the hazard analysis and critical control points (HACCP) principles in accordance with Regulation (EC) No 183/2005.] <p>and</p>		

COUNTRY		Certificate for the entry into the Union of food or feed	
Part II: Certification	II. Health information	II.a Certificate reference No	II.b IMSOC reference No
	<p>II.2 I, the undersigned, according to the provisions of Implementing Regulation (EU) 2019/1793 on the temporary increase of official controls and emergency measures governing the entry into the Union of certain goods from certain third countries implementing Regulations (EU) 2017/625 and (EC) No 178/2002 of the European Parliament and repealing Commission Regulations (EC) No 669/2009, (EU) No 884/2014, (EU) No 2015/175, (EU) No 2017/186 and (EU) 2018/1660, certify that:</p> <p>(²) Either</p> <p>II.2.1. <input type="checkbox"/> Certification for food and feed of non-animal origin listed in Annex II to Implementing Regulation (EU) 2019/1793, as well as for compound food listed in that Annex, due to contamination risk by mycotoxins</p> <p>— from the consignment described above, samples were taken in accordance with:</p> <p><input type="checkbox"/> Commission Regulation (EC) No 401/2006 to determine the level of aflatoxin B1 and level of total aflatoxin contamination for food</p> <p><input type="checkbox"/> Commission Regulation (EC) No 152/2009 to determine the level of aflatoxin B1 for feed</p> <p>on (date), subject to laboratory analyses on (date)</p> <p>in the (name of the laboratory) with methods covering at least the hazards identified in Annex II to Commission Implementing Regulation (EU) 2019/1793</p> <p>— The details of the methods of laboratory analyses and all results are attached and show compliance with Union legislation on maximum levels of aflatoxins.]</p> <p>(²) Or</p> <p>II.2.2. <input type="checkbox"/> Certification for food and feed of non-animal origin listed in Annex II to Commission Implementing Regulation (EU) 2019/1793, as well as for compound food listed in that Annex, due to contamination risk by pesticide residues</p> <p>— from the consignment described above, samples were taken in accordance with Commission Directive 2002/63/EC on (date), subject to laboratory analyses on (date) in the (name of the laboratory) with methods covering at least the hazards identified in Annex II to Implementing Regulation (EU) 2019/1793</p> <p>— The details of the methods of laboratory analyses and all results are attached and show compliance with Union legislation on maximum residue levels of pesticides.]</p> <p>(²) Or</p> <p>II.2.3. <input type="checkbox"/> Certification for guar gum listed in Annex II to Implementing Regulation (EU) 2019/1793, including for compound food listed in that Annex, due to contamination risk by pentachlorophenol and dioxins</p> <p>— from the consignment described above, samples were taken in accordance with Commission Directive 2002/63/EC on (date), subject to laboratory analyses on (date) in the (name of the laboratory) with methods covering at least the hazards identified in Annex II to Implementing Regulation (EU) 2019/1793</p> <p>— The details of the methods of laboratory analyses and all results are attached and show that the goods do not contain more than 0.01 mg/kg pentachlorophenol (PCP).]</p> <p>(²) Or</p>		

	COUNTRY	Certificate for the entry into the Union of food or feed	
Part II: Certification	II. Health information	II.a Certificate reference No	II.b IMSOC reference No
	<p><input type="checkbox"/> II.2.4. Certification for food of non-animal origin listed in Annex II to Commission Implementing Regulation (EU) 2019/1793, as well as for compound food listed in that Annex due to risk of microbiological contamination</p> <p>— from the consignment described above, samples were taken in accordance with Annex III to Commission Implementing Regulation (EU) 2019/1793</p> <p>on (date), subject to laboratory analyses on (date)</p> <p>in the (name of the laboratory) with methods covering at least the hazards identified in Annex II to Implementing Regulation (EU) 2019/1793</p> <p>— The details of the methods of laboratory analyses and all results are attached and show the absence of Salmonella in 25 g.</p> <p>II.3 This certificate has been issued before the consignment to which it relates has left the control of the competent authority issuing it.</p> <p>II.4 This certificate is valid during four months from the date of issue, but in any case no longer than six months from the date of the results of the last laboratory analyses.</p> <p>Notes</p> <p>See notes for completion in this Annex.</p> <p>Part II:</p> <p>(1) Delete or cross out as appropriate (e.g. if food or feed)</p> <p>(2) It applies only in the case of any stage of production, processing and distribution after primary production and related operations.</p> <p>(3) Delete or cross out as appropriate in the case where you do not select this point for providing the certification.</p> <p>— The colour of the signature shall be different to that of the printing. The same rule applies to stamps other than those that are embossed or are a watermark.</p>		
<p>Certifying officer:</p> <p>Name (in capital letters):</p> <p>Date:</p> <p>Stamp</p> <p>Qualification and title:</p> <p>Signature:</p>			

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