

PHYTOSANITARY WORKPLAN FOR THE IMPORTATION OF STONE FRUIT (Prunus spp.) FROM ZIMBABWE TO SOUTH AFRICA

In order to safely export stone fruit (*Prunus* spp.) from Zimbabwe to the Republic of South Africa (RSA), the National Plant Protection Organisation of Zimbabwe (hereinafter referred to as the NPPO of Zimbabwe) and the Department of Agriculture, Land Reform and Rural Development of South Africa (hereinafter referred to as DALRRD), on the basis of Pest Risk Analysis (PRA), exchanged views and reached consensus as follows:

ARTICLE 1

REGISTRATION AND APPROVAL

1. The stone fruit (*Prunus* spp.) for export to South Africa shall originate from production sites, pack houses and storage facilities registered annually by the NPPO of Zimbabwe and jointly approved by DALRRD and the NPPO of Zimbabwe.

2. A list/database of the registered facilities that have been inspected and approved by the NPPO of Zimbabwe for the export of stone fruit to South Africa must contain the following details:

- 2.1. Name and registration number of each production unit
- 2.2. Name and registration number of each pack house
- 2.3. Name and registration number of each storage facility.
- 3. A list/database of the registered facilities that have been inspected and approved by the NPPO of Zimbabwe for export of stone fruit to South Africa, shall be made available to DALRRD annually for consideration at least four weeks prior to the departure of the first consignment. The DALRRD will assess the list and the approved facilities will be updated on the DALRRD website and immediately notify the NPPO of Zimbabwe.
- 4. Production sites, packing facilities and storage facilities shall comply with production and packaging standards (e.g., Integrated Production, GLOBALGAP, UNE 155000). The NPPO of Zimbabwe shall ensure that *Prunus* spp. fruit for export to South Africa originate from production sites that follow these production standards and comply with this phytosanitary workplan.

PRE-HARVEST PEST MANAGEMENT PROGRAM AND GENERAL SURVEILLANCE

1. The NPPO of Zimbabwe shall be responsible for inspection before approval of production sites, pack house and storage facilities.

2. Monitoring for pests shall be conducted by the NPPO of Zimbabwe regularly in the production sites destined for export to South Africa.

3. Should new potential guarantine pests be detected that are not listed in Addendum 1, and associated with *Prunus* spp., the NPPO of Zimbabwe shall immediately notify the DALRRD for appropriate phytosanitary action to be taken. The DALRRD shall then notify the NPPO of Zimbabwe of any phytosanitary measures to be implemented and subsequent changes shall be made to the quarantine pests list in the Phytosanitary Work Plan for Prunus spp. importation from Zimbabwe.

4. Fruit fly monitoring shall be initiated at least 3 months before harvesting OR when the crop for export to South Africa starts to flower as fruit flies are only a risk when the fruits are in season and, this shall continue through and until the completion of harvest.

5. The owner of the production site will maintain the data and submit a copy to the NPPO of Zimbabwe on quarterly basis and the NPPO of Zimbabwe will regularly monitor to ensure the data is maintained. Trapping, pest control, inspection and other relevant records shall be made available to the DALRRD for review upon request.

Culled and fallen fruits will be buried, destroyed, or removed from the 6. production site at least on seven-day cycle by producers. The removed fruit shall be placed in a durable plastic bag, sealed, and solarised or buried at least 50 cm deep. The NPPO of Zimbabwe shall be responsible for inspection before approval of production sites, pack house and storage facilities.

7. The NPPO of Zimbabwe shall ensure that the producers apply only approved preventative measures (IPM).

Pre-harvest measures for Bactrocera dorsalis shall be implemented 8. according to Addendum 2, Risk Mitigation Measures for Stone Fruit from Zimbabwe to South Africa.

POST-HARVEST MEASURES

1. Only fruit sourced from production sites that meet the export requirements set out in this phytosanitary workplan shall be delivered to the storage and packing facilities. Fruit destined for South Africa shall not be mixed with fruit destined for other markets in pack houses or storage facilities.

2. During harvest and packing of fruit, growers shall avoid bruising the fruit.

3. During the packing period for export to South Africa, no fruit for the domestic market is to be packed at the same site and time. Rejected host material must be removed from the packing area at the end of each day.

4. *Prunus* spp. fruit must be appropriately cleaned, inspected, packed, stored and transported, so as to guard against contamination with quarantine pests of concern to South Africa.

5. Post-harvest inspections shall be conducted according to the ISPM 31: *Methodologies for sampling consignments* (FAO, 2008).

6. Should any quarantine pests of concern as listed in Annex 1 be detected during post-harvest inspection, the consignment/lot shall be rejected for export to South Africa and the production site shall be suspended for the rest of the export season.

7. Fruit shall be free from leaves and plant debris.

8. The registered pack house and storage facility shall be clean and maintained free of pests, soil, plant debris and safeguarded and equipped to avoid fruit contamination.

9. The packing materials for *Prunus* spp. fruit destined for South Africa shall be new and clean cardboard boxes/cartons/bulk bins.

10. No packing material of plant origin, including straw, shall be used.

11. Wood packaging material that are used, shall comply with the requirements of ISPM 15: *Regulation of wood packaging material in international trade* (FAO, 2009).

LABELING

1. Each carton (box) of *Prunus* spp. shall be marked in English with correct and accurate information as indicated in Annex 2.

ARTICLE 5

PHYTOSANITARY CERTIFICATION

1. An import permit is required in terms of the Agricultural Pests Act, 1983 (Act No. 36 of 1983).

2. Upon completion of fruit sampling and inspection, a phytosanitary certificate shall be issued by the NPPO of Zimbabwe within 14 days prior to shipment. A phytosanitary certificate shall only be issued for fruit that meet the requirements of this phytosanitary workplan. Entry of consignments into South Africa shall be subject to the availability of the original phytosanitary certificate.

3. The NPPO of Zimbabwe shall provide DALRRD with a model of their phytosanitary certificate for confirmation and record keeping.

4. Each consignment of *Prunus* spp. fruit to be exported to South Africa must be accompanied by a phytosanitary certificate endorsed as follows:

4.1. Additional Declarations

4.1.1. The fruit in this consignment comply with all the requirements of the Phytosanitary Workplan for the importation of Stone Fruit (Prunus spp.) agreed upon between DALRRD and the NPPO of Zimbabwe and are free from pests listed in Annex 1.

4.1.2. The fruit has been produced and packed according to the Bactrocera dorsalis risk mitigation measures as prescribed in Addendum 2.

ARTICLE 6

PHYTOSANITARY INSPECTION ON ARRIVAL

1. Once a shipment of *Prunus* spp. arrives at the designated port of entry, the DALRRD shall examine the consignment, relevant documents and markings.

Any consignment with certification that does not conform to the specifications set out in this phytosanitary workplan shall be rejected.

3. Upon arrival of the consignment at the port of entry, a representative sample shall be drawn and inspected for all quarantine pests listed in Annex 1 and suspect fruit shall be dissected to determine the status of infestation.

4. Should pests or symptoms of infection be found, the samples shall be sent for laboratory identification, and the shipment shall be detained pending the result of laboratory identification. The DALRRD shall notify the NPPO of Zimbabwe of such interception immediately.

5. Should any of the quarantine pests in Annex 1 be detected on arrival, the consignment shall be sent back or destroyed and the DALRRD shall immediately notify the NPPO of Zimbabwe in accordance with the notification procedures outlined in ISPM 13: *Guidelines for the notification of non-compliance and emergency action* (FAO, 2001). The production site shall then be suspended while an investigation is carried out by the NPPO of Zimbabwe. The DALRRD and the NPPO of Zimbabwe shall consult and implement corrective measures as deemed necessary. Fruit certified for South Africa prior to the date of suspension and which are already *en route* shall remain eligible for export. Such consignments shall be detained, inspected and a sample shall be taken and laboratory tests conducted for the quarantine pests in Annex 1.

6. Should any pest be detected on *Prunus* spp. from Zimbabwe that has not been categorized, it shall require assessment to determine its quarantine status and whether phytosanitary action is required. The detection of any pest of potential quarantine concern not already identified in the analysis may result in a review of this phytosanitary workplan to ensure that phytosanitary measures provide appropriate level of phytosanitary protection for South Africa.

7. The DALRRD shall inspect up to 100% of the shipments and suspend any production site at any time should pests of quarantine concern be detected or should other phytosanitary import requirements not be met. The DALRRD will immediately advise the NPPO of Zimbabwe of any pest interceptions and other instances of non-compliance with any condition stipulated in this phytosanitary workplan.

8. In case of non-compliance with this phytosanitary workplan the importer shall be responsible for all costs relating to disposal, removal or rerouting, including costs incurred by the DALRRD to monitor the action taken.

VISIT BY DALRRD

1. After program initiation, when necessary and agreed by both sides (i.e., in light of any significant changes in pest status and/or detections of quarantine pests on arrival), the DALRRD may send quarantine experts to Zimbabwe to conduct on-site inspections.

2. Based on the official documents and technical information provided by the NPPO of Zimbabwe and the report of the South African experts, the DALRRD may approve resumption of this program.

ARTICLE 8

RE-INSTATEMENT OF PRODUCTION SITES PREVIOUSLY REJECTED OR SUSPENDED FOR EXPORT TO SOUTH AFRICA

1. A production site previously rejected or suspended for export to South Africa shall only be re-instated if detailed corrective measures that comply with the requirements set out in this phytosanitary workplan are provided to the DALRRD.

2. The NPPO of Zimbabwe shall monitor and approve the reinstatement of the rejected or suspended production site and provide the list and recommendations to the DALRRD.

3. The DALRRD shall assess and approve the list of the reinstated production sites provided, update it on the DALRRD website and notify the NPPO of Zimbabwe as soon as possible.

ARTICLE 9

IMPLEMENTATION AND DISPUTE SETTLEMENT

1. The NPPO of Zimbabwe and the DALRRD agree to make every effort to settle any dispute arising from the interpretation or implementation of this phytosanitary workplan through bilateral consultation or negotiation.

2. This agreement is subject to review, revision and amendment as necessary.

ANNEX 1: QUARANTINE PEST OF CONCERN TO SOUTH AFRICA OCCURRING ON STONE FRUIT (PRUNUS SPP.) IN ZIMBABWE

Insects: Bactrocera dorsalis

ANNEX 2: THE PACKING MARK

Country of origin Production site name or its registered unique code Packing facility name or its registered unique code

For the Republic of South Africa

ADDENDUM 1: NATIONAL QUARANTINE PESTS LIST OF STONE FRUIT (PRUNUS SPP.) FOR SOUTH AFRICA

Bacteria

Erwinia amylovora Pseudomonas syringae pv. Persicae Xanthomonas prunicola

Virus

Plum pox virus

Fungi

Alternaria cerasidanica Apiognomonia erythrostoma Aspergillus chevalieri Aspergillus japonicus Asteromella mali Cladosporium xylophilum Colletotrichum aenigma Colletotrichum fioriniae Diplodina persicae Diaporthe perniciosa Fusarium roseum Gilbertella persicaria Lambertella pruni Microcyclosporella mali Microstroma tonellianum Monilinia fructicola Monilinia fructigena Monilinia mumeicola Monilinia padi Monilinia polystroma Monilinia seaveri Monilinia yunnanensis Mucor piriformis Mycosphaerella pruni-persicae Neonectria ditissima Neoscytalidium dimidiatum Phytophthora syringae Phytophthora rosacearum Podosphaera clandestina var. clandestina Ramularia mali Taphrina armeniacae

Taphrina communis Taphrina pruni-subcordatae Taphrina wiesneri Thekopsora areolata Tranzschelia japonica Ulocladium atrum Valsaria insitiva Venturia cerasi

Mites

Acalitus phloeocoptes Amphitetranychus viennensis Cenopalpus lanceolatisetae Cenopalpus pulcher Diptacus gigantorhynchus Eotetranychus carpini Eotetranychus rubiphilus Eotetranychus pruni Eotetranychus sexmaculatus Eotetranychus uncatus Phyllocoptes abaenus Tarsonemus parawaitei Tarsonemus smithi Tetranychus canadensis Tetranychus fijiensis Tetranychus mcdanieli Tetranychus pacificus Tetranychus schoenei

Insects

Acanthocephala femorata Acrobasis tricolorella Adelphocoris lineolatus Adoxophyes orana Aleurodicus dispersus Anarsia lineatella Anastrepha chiclayae Anastrepha fraterculus Anastrepha ludens Anastrepha obliqua Anastrepha serpentina Anastrepha striata Anastrepha suspensa Anthonomus consors

Anthonomus quadrigibbus Anthonomus rectirostris Aonidiella citrina Apolygus lucorum Archips argyrospilus Archips podanus Archips rosana Argyrotaenia citrana Argyresthia conjugella Argyrotaenia ljungiana Argyrotaenia velutinana Bactrocera aquilonis Bactrocera correcta Bactrocera cucurbitae Bactrocera dorsalis Bactrocera facialis Bactrocera jarvisi Bactrocera kirki Bactrocera neohumeralis Bactrocera psidii Bactrocera pyrifoliae Bactrocera tau Bactrocera trivialis Bactrocera tryoni Bactrocera tuberculata Bactrocera zonata Calocoris norvegicus Carpophilus freeman Carpophilus mutilatus Carposina sasakii Ceroplastes japonicus Chinavia hilaris Chionaspis furfura Chlidaspis asiatica Chymomyza amoena Choristoneura rosaceana Conogethes punctiferalis Conotrachelus anaglypticus Conotrachelus nenuphar Cotinis mutabilis Cotinis nitida Ctenopseustis obliquana Cydia janthinana Cydia latiferreana

Diabrotica speciosa Diaspidiotus ancylus Diaspidiotus juglansregiae Diaspidiotus ostreaeformis Diaspidiotus osborni Diaspidiotus prunorum Drosophila suzukii Epidiaspis leperii Epiphyas postvittana Erthesina fullo Eupoecilia ambiguella Eurytoma amygdali Eurytoma schreineri Euschistus conspersus Euschistus servus Euschistus tristigmus Euschistus variolarius Euzophera bigella Ferrisia gilli Frankliniella australis Frankliniella gardeniae Frankliniella intonsa Frankliniella tenuicornis Frankliniella tritici Grapholita funebrana Grapholita lobarzewskii Grapholita packardi Grapholita prunivora Gymnandrosoma aurantianum Halyomorpha halys Haptoncus luteolus Homalodisca vitripennis Hoplocampa flava Hoplocampa minuta Lacanobia oleracea Leucoptera malifoliella Lepidosaphes malicola Lepidosaphes pistaciae Leptocoris rubrolineatus Lobesia botrana Lygus elisus Lygus hesperus Lygus lineolaris Lygus pratensis

Maconellicoccus hirsutus Mamestra brassicae Mercetaspis halli Monosteira unicostata Naupactus xanthographus Ostrinia nubilalis Pammene rhediella Pandemis cerasana Pandemis heparana Pandemis pyrusana Parabemisia myricae Parlatoria oleae Phenacoccus aceris Pinnaspis aspidistrae Pinnaspis strachani Platynota flavedana Platynota idaeusalis Platynota stultana Planotortrix excessana Popillia japonica Proeulia auraria Proeulia chrysopteris Pseudaulacaspis prunicola Pseudococcus comstocki Pseudococcus maritimus Rhagoletis cerasi Rhagoletis cingulata Rhagoletis completa Rhagoletis fausta Rhagoletis indifferens Rhagoletis pomonella Rhagoletis tabellaria Rhopalosiphum nymphaeae Rhynchites auratus Rhynchites bacchus Scirtothrips dorsalis Spodoptera frugiperda Taeniothrips inconsequens Taeniothrips meridionalis Thrips angusticeps Thrips flavus Thrips imaginis Thrips major Thrips obscuratus

Thrips palmi Thyanta custator

ADDENDUM 2: RISK MITIGATION MEASURES FOR STONE FRUIT FROM ZIMBABWE TO SOUTH AFRICA

The following pre- and post-harvest practices reflects the current system for risk management overseen by the NPPO of Zimbabwe, employed by producers of stone fruit to be imported into South Africa:

TABLE 1. OVERVIEW OF THE SYSTEM FOR THE COMMERCIAL PRODUCTION AND EXPORT OF STONE FRUIT FROM ZIMBABWE TO SOUTH AFRICA

ACTIVITIES	OUTCOMES
Pre-harvest	
 In-field pest control activities Good Agricultural Practice (GAP) e.g. cultural controls such as removal of weeds acting as pest reservoirs; pesticide application records; fruit traceability avatem 	 Reduced pre-harvest pest prevalence. Reduced pre-harvest pest prevalence.
 system. Bactrocera dorsalis control program including a) seven day cycle field/orchard sanitation b) application of insecticidal protein bait throughout the production cycle or bait application technique (BAT) c) male annihilation throughout the production season with the placement of Bactrocera dorsalis respondent insecticidal male lures or the male annihilation technique (MAT). 	• Reduced pest prevalence which is confirmed by continuous monitoring of <i>Bactrocera dorsalis</i> . Male trap catch (flies per trap per day) with a value that is greater than 1 at any time during the production cycle may result in the suspension of the export program and the implementation of corrective measures.
Post-harvest	
Phytosanitary inspection	 Inspection of fruit and removal of external arthropod pests or infested/infected fruit or punctured/cracked fruit.
Regulatory/Official	
 Phytosanitary inspection and certification of consignments 	 Certification by the NPPO of Zimbabwe that consignments are free from regulated pests.

 Post-inspection product security 	 Prevention of post-treatment infestation of consignments by regulated pests e.g. pest- proof packaging.
 DALRRD inspection of documentation and consignment on arrival in South Africa 	 Verification that the phytosanitary import requirements has been met.
Non-conformance contingencies	 Treat/re-ship/destroy non- conforming consignment.
Pathway monitoring	 Assurance that phytosanitary import requirements are being
 Packing, labelling and storage compliance 	met.Traceability and pest contamination

PRE-HARVEST ACTIVITIES

a) In-field pest control practices

- Zimbabwean stone fruit growers shall utilize pest control measures to reduce pre-harvest pest prevalence in commercially produced stone fruit for export to other countries.
- These measures include a Bactrocera dorsalis control program, and • compliance with Good Agricultural Practice (GAP) as outlined below.

b) Good Agricultural Practice (GAP)

- The GlobalGAP standard for stone fruit production requires training programmes for farmers and provincial government representative's safe use of agrichemicals, on-farm recording of fertilizer applications and crop protection products, inventory, sales, keeping receipts of input purchases and sales record-keeping, and safe fruit handling.
- The cultural control practices to be undertaken such as removal/suppression of weeds and fallen fruit which act as reservoirs for pests.
- GAP is advantageous for record keeping, particularly with respect to crop protection practices. GAP is also important for defining harvesting and post-harvest handling activities, traceability and recall throughout the

export chain.

c) Bactrocera dorsalis control program

- A specific programme shall be in place for Bactrocera dorsalis in Zimbabwe and should include surveillance to detect and determine species composition, and infestation rates.
- The programme shall be maintained by the NPPO of Zimbabwe throughout the year in stone fruit production sites.
- The surveillance programme shall incorporate trapping using cue lure and methyl eugenol, stone fruit orchard surveys, periodic random and targeted cutting of fruit collected from orchards and local markets.
- A protein bait spray and insecticide shall be applied in the orchard for Bactrocera dorsalis control (Table 1).

POST-HARVEST ACTIVITIES

a) Pre-treatment procedures

Harvested stone fruit shall be:

- Covered with insect proof material to prevent re-infestation by arthropods during transit to primary pack houses or directly to packing facilities;
- Leaves and stems (but not bracts) are removed from the fruit;
- Damaged/infested/infected fruit is removed;

The above activities provide opportunity for operator inspection of fruit. Removal of damaged fruit can reduce the incidence of storage rots in fruit.

1. RISK MANAGEMENT MEASURES AND PHYTOSANITARY PROCEDURES (Table 1)

1.1. Management of damaged fruits/infested fruit by external feeders

• Fruit with punctures/cracks or fruit damaged by external or surfacefeeding arthropods shall not be packed for export to South Africa.

1.2. Management of Bactrocera dorsalis:

• The production site control program for *B. dorsalis* shall include an Integrated Pest Management (IPM) program using appropriate, effective and compatible measures at critical stages of development of the pest and crop.

- Population monitoring shall be based on production site inspections and forecasts of infestations.
- Information pertaining to production site control program for *B. dorsalis* shall be made available to the DALRRD on request (Table 1).

1.3. Supporting operational maintenance systems and verification of phytosanitary status

- A system of operational procedures shall be in place to ensure that the phytosanitary status of stone fruit from Zimbabwe is maintained and verified during the process of production and export to South Africa.
- The proposed system of operational maintenance for the production and export of stone fruit from Zimbabwe to South Africa consists of:
- ✓ pre-export inspection by the NPPO of Zimbabwe;
- \checkmark packaging and labelling compliance;
- ✓ phytosanitary certification by the NPPO of Zimbabwe;
- ✓ specific conditions for storage and movement; and
- ✓ on-arrival guarantine inspection by the DALRRD in South Africa.

A. Pre-export inspection and remedial action by the NPPO of Zimbabwe

- ✓ The NPPO of Zimbabwe shall inspect all consignments in accordance with official procedures for all quarantine pests using sampling procedures developed by the DALRRD as outlined.
- \checkmark If actionable pests as listed are found during these inspections, then remedial action shall be taken.
- ✓ Records of the interceptions made during these inspections (live or dead quarantine pests) shall be maintained by the NPPO of Zimbabwe and made available to the DALRRD if requested.
- ✓ If *Bactrocera dorsalis* is detected, the consignment shall be rejected for export to South Africa.

B. Packaging and labelling

- ✓ All packages of stone fruit for export shall be free from contaminated plant materials including soil, splinters, twigs, leaves and other plant materials.
- ✓ Inspected and treated stone fruit shall be packed in new boxes.
- \checkmark No unprocessed packing material of plant origin, such as straw, shall be allowed.
- ✓ All wood material used in packaging of stone fruit shall comply with ISPM 15.
- \checkmark All boxes shall be labelled with the name of production site and name of

pack house for the purposes of trace back if necessary.

C. Phytosanitary certification by the NPPO of Zimbabwe

- ✓ Before a phytosanitary certificate is issued, the NPPO of Zimbabwe shall conduct phytosanitary inspection to ensure that the number of packaged fruit is consistent with the number of disinfested fruits, traceability labelling is complete, packaging is insect-proof, the fruit is free from regulated pests and that all other importing country requirements have been met.
- ✓ The NPPO of Zimbabwe shall issue a Phytosanitary Certificate for each consignment upon completion of pre-export phytosanitary inspection.
- ✓ Each Phytosanitary Certificate is to contain the following information:

Additional declarations

The stone fruit in this consignment:

Have been visually inspected in accordance with appropriate official procedures and found free from regulated pests specified by the DALRRD.

AND

Have been produced in accordance with, and treated as per ADDENDUM 2.

Distinguishing marks

 \checkmark The names of production site and pack house, together with the number of boxes per consignment. This is to ensure trace back to the production site in the event that this is necessary.

D. Specific conditions for storage and movement

- ✓ Packed product and packaging shall be protected from pest contamination during and after packing, during storage and during movement between locations (e.g. pack house to cool storage/depot, to inspection point, to export point).
- \checkmark Stone fruit for export to South Africa shall be inspected and certified by the NPPO of Zimbabwe, and shall be maintained in secure conditions to prevent mixing with stone fruit for export to other destinations or the domestic market and kept in secure storage until export.

E. On-arrival quarantine inspection and remedial action, and clearance by DALRRD in South Africa

- ✓ On arrival in South Africa, each consignment shall be inspected by the DALRRD.
- ✓ Stone fruit from each consignment shall be randomly sampled for inspection. Such sampling methodology will provide for a 95% confidence level of detecting packing units with infested stone fruit if the infestation rate is 2% or higher.
- ✓ If actionable quarantine pests are found during these inspections, then remedial action shall be taken.
- ✓ Where consignments are found to be non-compliant with requirements onarrival, the importer shall be given the option to treat (if suitable treatments for the pests detected can be applied), re-export or destroy the consignment.

AUTHORIZATION

1. The workplan will remain in effect unless rescinded or due to any of the circumstances given above as a cause of such action. Either DALRRD or NPPO of Zimbabwe may suggest changes in this workplan for discussion at any time.

2. DALRRD reserves the right to suspend or change (in this workplan with NPPO of Zimbabwe) the requirements for the importation of stone fruit from Zimbabwe to South Africa in the event that South Africa's phytosanitary requirements are not met.