

**PROTOCOL ON PHYTOSANITARY REQUIREMENTS FOR THE
EXPORT OF APPLE FRUIT FROM SOUTH AFRICA TO CHINA**

BETWEEN

**THE GENERAL ADMINISTRATION OF QUALITY
SUPERVISION, INSPECTION AND QUARANTINE OF THE
PEOPLE'S REPUBLIC OF CHINA**

AND

**THE DEPARTMENT OF AGRICULTURE, FORESTRY AND
FISHERIES OF THE REPUBLIC OF SOUTH AFRICA**

In order to safely export apples from the Republic of South Africa to the People's Republic of China, the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China (hereinafter referred to as AQSIQ) and the Department of Agriculture, Forestry and Fisheries of the Republic of South Africa (hereinafter referred to as DAFF) on the basis of pest risk analysis, had friendly consultation and reached consensus as follows:

Paragraph 1 General provision

South Africa fresh apples (*Malus domestica*, hereinafter referred to as “apples”) to be exported to the People’s Republic of China should comply with Chinese related laws and regulations and sanitary safety standards, and meet the phytosanitary requirements of the provisions of this Protocol, should not carry quarantine pests concerned by China. (see Annex 1).

Paragraph 2 Registration

Production units, orchards, packing houses, cold storage houses and cold treatment facilities shall be registered with DAFF and approved both by AQSIQ and DAFF. Before the export season of every year, a list of apple production unit and packing houses should be submitted to AQSIQ by DAFF. All the orchards involved in the apple export should possess registration numbers, which make it possible to trace back in the case of non-compliance.

Paragraph 3 Orchard management

All export orchards must implement good agricultural practices (GAP) including maintaining sanitary condition of orchard, clean-up of fallen fruit and pruning at the end of season, implementing integrated pest control including pest monitoring, chemical or biological control and routine farming operations.

Under the direction of DAFF, effective monitoring, precaution and Integrated Pest Management (IPM) will be undertaken in the orchards from where apples will be exported to China in order to avoid and control the occurrence of pests that are concern to China (see annex 1).

Upon request by AQSIQ, DAFF will provide AQSIQ the information about the procedures and results of the above mentioned pest monitoring and IPM programmes.

Once the new pests of quarantine concern to China (excluding Annex 1) are found during monitoring surveys for pests, AQSIQ must be notified immediately and appropriate action should be taken.

Paragraph 4 Measures for field control of specific pests

4.1 Mediterranean fruit fly (*Ceratitidis capitata*) and Natal fruit fly (*Ceratitidis rosa*).

The integrated management measures of the two *Ceratitidis* species will be conducted, including the use of fly traps, chemical control, biological control, mating disruption or other control measures. All the management records of the two *Ceratitidis* species should be kept by the producers, and submitted during the field survey upon the request of inspectors from DAFF or AQSIQ.

4.2 Monitoring of codling moth (*Cydia pomonella*)

The monitoring of codling moth (*Cydia pomonella*) should be implemented in the apple producing regions and the relevant regions (registered orchards, packinghouses and surrounding producing regions).

The monitoring period begins at the full bloom stage and ends upon the finishing of apple packaging. Traps for codling moth (*Cydia pomonella*) will be set at a density of one trap per hectare, with a minimum of 3 traps per place of production. The traps must be inspected at least every two weeks during the monitoring period. If 3 or more codling moth (*Cydia pomonella*) is found in one monitoring trap, the control measures should be conducted immediately. The orchard executing no effective control will be suspended for the duration of the export season to China. Upon the request of AQSIQ, the survey report or management records should be submitted by DAFF.

If the host plants of codling moth (*Cydia pomonella*) are grown within 500 meters away from the orchards for apple export, the monitoring traps should be installed according to the requirements above.

4.3 Mites, coccids and other pests

Mites, coccids and other pests should be inspected every two weeks in the field from the blooming period to the harvesting period. If the pests or related symptoms are found, the biological or chemical control measures should be applied immediately.

4.4 If the pests in Annex 1 are found in the orchard two weeks or less before harvesting, the fruit from the corresponding orchard will be prohibited from exporting to China.

Paragraph 5 Processing and packaging

Ensure that only apples from registered orchards are brought to the packing facility for sorting. Select a specific area to examine fruit prior to export for any evidence of pest presence or damage and to remove

suspect fruit. The area must provide an appropriate level of hygiene and sufficient space and light to allow sorters the maximum advantage to find pests.

DAFF or DAFF authorized personnel will verify that apples will meet processing, packaging, storage and transportation requirements as outlined here. The packing line will be cleaned prior to packing fruit for export to China. Apples to be exported to China must be packed and stored separately from fruit that is not for export to China.

Apples with pests such as mites or coccid will be washed, blown and brushed. In the packaging process, apples must be screened, picked and sorted to ensure that there are no insects, mites, spiders, ants, invasive pests, rotten fruits, branches, leaves, roots and soil etc.

Packaging material for apples should be new, clean and sanitary, and comply with Chinese related phytosanitary requirements.

Packaged apples for storage should be immediately put into warehouse and stored to avoid being infected by pests again.

The grower lot number, packinghouse identification number and name and address of the packing facility should be noted in English on each carton. Each pallet tag should be marked with the following Chinese words: “输往中华人民共和国”. If pallet is not used, such as air cargo, each package should have the following Chinese words displayed: "输往中华人民共和国".

Paragraph 6 Inspection and quarantine before exit

6.1 Inspection

Inspect 100% of fruit in a sample consisting of 2% of the total cartons in shipment intended for export to China (unless otherwise amended by an Addendum to this protocol). The minimum inspection sample will be 1,200 fruits regardless of the size of shipment. In small shipments where the number of samples by ratio sampling is less than 1200 fruits, it still needs to take 1200 fruits. Cartons selected will be representative of each of the grower lots in the shipment. At the same time, at least 40 fruits or suspected fruits during inspection should be cut for inspection, which should not carry quarantine pests of concerns to China.

6.2 Mediterranean fruit fly (*Ceratitis capitata*) and Natal fruit fly (*Ceratitis rosa*)

The apples for export to China will be subjected cold treatment to eliminate the two *Ceratitis* species. The cold treatment should be conducted before shipping and during transit and its parameters are as follows:

The pulp temperature should be kept at 1°C or below for no less than 16 consecutive days, or at 2.1°C or below for no less than 21 consecutive days as specified in Annex 2.

Pre-cooling storage of 0.0 degrees or below extending 72 hours is needed before the cold treatment is started. If the temperature exceeds +1.3

degrees on any day or part of a day, the treatment will be extended by 8 hours for each day.

If the temperature exceeds + 1.5 degrees at any time, the treatment will be nullified which would necessitate it being started again from the beginning. The specification for cold treatment is shown in Annex 2.

Once *Ceratitis capitata* or *Ceratitis rosa* is found in the apples to be exported, the whole consignment shall not be exported to China and the export qualification of the corresponding orchards will be revoked in the current exporting season.

6.3 Codling moth (*Cydia pomonella*)

Effective monitoring, preventing and trapping measures targeting at *Cydia pomonella* should be taken in the apple production areas for export. Once *Cydia pomonella* is found in the apples to be exported, the export qualification of the corresponding orchards will be revoked in the current exporting season.

6.4 Other quarantine pests

If other quarantine pests listed on Annex 1 are found during supervision and inspection, apples from the corresponding orchard cannot be exported to China. DAFF or the authorized staff from DAFF will investigate the reason and adopt improvement measures. The inspection records should be kept and submitted to AQSIQ upon request.

6.5 Phytosanitary certification

For shipment being cold treated prior to export, information of temperature, duration, name or number of treatment facility or container number should be noted on the Phytosanitary Certificate. For apples that

pass the quarantine inspection, DAFF should issue the phytosanitary certificate, in which the container number and the following additional statement are included: "This consignment of fruits accords with the *Protocol of Phytosanitary Requirements for the Export of Apple Fruit from South Africa to China*, and does not carry quarantine pests of concern to China ". The production unit code, packinghouse code and container code should be included in the phytosanitary certificate.

Paragraph 7 Inspection and quarantine after arrival

When apples arrive at the port of entry in China, an application should be submitted for inspection to the entry and exit inspection and quarantine bodies (hereafter known as CIQ). Inspection and quarantine officer will check Phytosanitary Certificate, Import Permit for Quarantine of Entry Animals and Plants and related documents and signs and implement inspection and quarantine.

If found coming from unauthorized orchards and packinghouses, this shipment of apples will not be allowed entry.

If shipment being cold treated and being identify as invalid cold treatment, this shipment will be treated at port of entry (e.g. could be treated in the same container), returned, destroyed or re-export, etc.

If living *Cydia pomonella* \ *Ceratitis capitata* or *Ceratitis rosa* is detected, the consignment will be returned or destroyed, and AQSIQ will immediately notify DAFF that the export programme will be temporarily suspended.

If any other quarantine pests concerned by China listed in Annex 1 is found, the consignment will be treated, returned or destroyed. AQSIQ will notify DAFF to carry out an investigation immediately. AQSIQ and DAFF will consult and implement corrective measures as deemed necessary including temporary suspension of orchard or production unit or packing house.

If other quarantine pests are found, the apples will be treated in accordance with the relevant paragraph of the *Law of the People's Republic of China on the Entry and Exit Animal and Plant Quarantine* and its regulations for implementation.

A registered orchard which has one rejection for these quarantine pests will be permitted to continue export activities for the remainder of the season. However, if a second rejection occurs during the same season, then that orchard will be withdrawn from the export program for this season. AQSIQ will take further measures based on the relevant situation and notify DAFF.

Paragraph 8 Examination and Pre-inspection

Before the start of the exports under this protocol, with the assistance of DAFF, AQSIQ will send two inspectors to South Africa for a site visit to inspect pest monitoring and control in the apple orchards, packing and cold storage management and phytosanitary inspection and quarantine prior to departure.

Based on the official documents and technical information provided by DAFF and the report of the Chinese experts, AQSIQ will approve initiation of this program.

The expenses for the above-mentioned examination and preview, including travel, food and accommodation and allowance, will be covered by South Africa.

Paragraph 9 Programme review

During the process of trade, AQSIQ will conduct further risk analysis based on the situation of pest occurrence in South Africa and interceptions of such pests. In consultation with DAFF, the list of quarantine pests and the relevant quarantine measures may be adjusted.

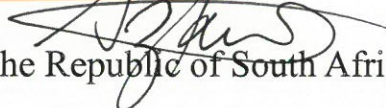
December 4, 2014

This protocol is signed on (month, date, and year) in XX and will take effect on the date of signing in Chinese and English languages, in duplicated copies. Both texts are equally authentic. This protocol is valid for two years from the date of signature. If neither participant requests revision nor termination of the protocol within two months before the expiration date, the period of validity of the agreement will be extended automatically for another year.



The General Administration of
Quality Supervision, Inspection and
Quarantine of the People's Republic
of China

Representative



The Republic of South Africa
The Department of Agriculture,
Forestry and Fisheries

Representative

Annex 1:

Pests of quarantine concern to China

1. *Ceratitis capitata* (Weidemann)
2. *Ceratitis rosa* (Karsch)
3. *Thaumatotibia leucotreta*
4. *Cydia pomonella* (L.)
5. *Diaspidiotus africanus* (Marlatt)
6. *Epichoristodes acerbella* Walk.
7. *Eriosoma lanigerum* (Hausm.)
8. *Pseudococcus longispinus*
9. *Brevipalpus californicus* (Banks)

Annex 2:

Requirements on cold treatment for the apples export from South Africa to China

1 Container type

Containers must be self--refrigerated (integral) shipping containers and have refrigeration equipment capable of achieving and maintaining the required temperatures.

2 Recorder type

Official quarantine organization of the export country must ensure that the combination of temperature probes and temperature recorders satisfies the following requirements:

2.1 Sensor temperature should be accurate to ± 0.1 °C in the range of -3.0 °C to +3.0 °C,

2.2 Able to accommodate the required number of probes,

2.3 Capable of recording and storing the data of treatment process,

2.4 Capable of recording the readings of all temperature sensors at least hourly to the same degree of accuracy as is required of the sensors,

2.5 Capable of printing out the temperature records that correspond to the time and temperature of each sensor, as well as the identification number of the recorder and the container.

3 Temperature calibration

3.1 Calibration must be conducted in the mixture of crushed ice and distilled water, using a certified thermometer approved by official quarantine organization of the export country.

3.2 Any sensor producing the reads not in the range of $0^{\circ}\text{C} \pm 0.3^{\circ}\text{C}$ must be replaced.

3.3 A "Record of calibration of fruit temperature sensors" must be prepared for each container and signed and stamped by the quarantine

officer. The original must be attached to the phytosanitary certification that accompanies the consignment.

3.4 When apples arrive at the port of entry in China, AQSIQ or CIQ will check the calibration of the fruit temperature sensors.

4 Arrangement of temperature sensors

4.1 Packaged apples must be loaded into the shipping containers under the supervision of official quarantine organization of the export country. The packaging boxes should be stacked loosely to ensure that there is enough airflow under and around these boxes.

4.2 At least three fruit temperature sensors and two air temperature sensors are necessary for each container. The installation locations of the sensors are as follows:

(a) Sensor 1: On the first row of fruits in the container, in the middle of top layer.

(b) Sensor 2 : Approximately 1.5 meters (for 40 feet container) from door or 1 meter (for 20 feet container) from the center, halfway between top and bottom of load.

(c) Sensor 3 : Approximately 1.5 meters from door on the left, halfway between top and bottom of load.

(d) The other two air temperature sensors should be placed in the air inlet and return air inlet of the container, respectively.

4.3 All sensors must be placed under the guidance and supervision of an authorized inspector.

5 Sealing of containers

5.1 A numbered seal must be placed on the loaded container door by an authorized officer.

5.2 The seal must only be removed by a CIQ officer at the port of entry in China.

6. Temperature records and confirmation

6.1 The cold treatment in transit should be performed during the voyage between the port of export country and the first port of call in China.

6.2 Records may commence at any time. However, the treatment time will be deemed to begin only after all fruit temperature sensors have reached the designated temperature.

6.3 The shipping company should download the records of the cold treatment and submit them to the CIQ of first port of call in China.

6.4 In some sea voyages, the cold treatment might have already been accomplished before the vessel arrives at the port of China. The treatment records are permitted to be downloaded on the voyage and submitted to CIQ for verification. However, it is specified that the treatment is not deemed to be effected until CIQ has completed the re-calibration of temperature probes. Therefore, it is a commercial decision whether the cold treatment of fruits (e.g. Gradually raising the transportation temperature) should be terminated before arriving in China.

6.5 CIQ will verify whether the records meet China's cold treatment requirements. According to the calibration of sensors, CIQ will judge of the effectiveness of the treatment.