FINAL REPORT OF AN AUDIT

CARRIED OUT IN

CHINA

FROM 20 TO 29 SEPTEMBER 2011

IN ORDER TO ASSESS THE CONTROLS OF AFLATOXIN CONTAMINATION IN PEANUTS INTENDED FOR EXPORT INTO THE EUROPEAN UNION

In response to information provided by the Competent Authority, any factual error noted in the draft report has been corrected; any clarification appears in the form of a footnote.
Executive Summary

This report describes the outcome of an audit carried out by the Food and Veterinary Office (FVO) in the People's Republic of China (hereinafter referred to as China), from 20 to 29 September 2011.

The objective was to assess the control systems in place to control aflatoxin contamination in peanuts, intended for export into the European Union (EU). The audit team followed up on action taken by the Competent Authorities (CAs) in response to the recommendations made by the FVO in report Health and Consumers Directorate-General DG(SANCO)/2006-8126.

This audit was included in the FVO 2011 inspection programme due to the high volume of exports of this commodity to the EU, the continuously high number of Rapid Alert System for Food and Feed (RASFF) notifications in recent years and the fact that some rejections were made on the basis of aflatoxin levels of up to 150 ppb for aflatoxin B1. Peanuts from China are covered by Regulation (EC) No 1152/2009 and are subject to mandatory pre-export certification by the CAs in China and additional physical checks at the EU borders (20% of all imported consignments).

There have been no major changes in the control system for the prevention of aflatoxin contamination in peanuts intended for export into the EU since the previous mission DG(SANCO)/2006-8126. Improvements in the area of Good Agricultural Practice (GAP) promotion and implementation, the training of peanut farmers and official inspectors, the laboratory performance and the export procedure have been made. There are still some shortcomings with regard to the official controls of peanut growers, the implementation of Hazard Analysis and Critical Control Points principles (HACCP), traceability to farm level and storage conditions. In addition, since the research done in the early 1990's and the proposal of some measures to improve the transport conditions, the People's Republic of China has not carried out research on the effectiveness of these measures and the most appropriate transport conditions. These might be the key reasons behind the continuously high number of rejections at EU borders.

Regarding the follow-up of the recommendations made in mission report DG(SANCO)/2006-8126, all recommendations have been addressed.

The report makes a number of recommendations to the CAs, aimed at rectifying the shortcomings identified and enhancing the implementation of control measures.
# Table of Contents

1 **INTRODUCTION** .......................................................................................................................... 1

2 **OBJECTIVES AND SCOPE** ........................................................................................................... 1

3 **LEGAL BASIS AND STANDARDS** .................................................................................................. 2
   3.1 **LEGAL BASIS** ................................................................................................................................ 2
   3.2 **STANDARDS** ................................................................................................................................ 2

4 **BACKGROUND** ............................................................................................................................. 3

5 **FINDINGS AND CONCLUSIONS** ................................................................................................... 4
   5.1 **RELEVANT NATIONAL LEGISLATION** .......................................................................................... 4
   5.2 **COMPETENT AUTHORITIES** ...................................................................................................... 6
   5.3 **OFFICIAL CONTROLS ON PRODUCTION AND PROCESSING** ....................................................... 8
   5.4 **PROCEDURE FOR EXPORTING TO THE EU** ............................................................................... 14
   5.5 **METHOD OF SAMPLING CONSIGNMENTS** .............................................................................. 15
   5.6 **LABORATORY SERVICES** ......................................................................................................... 16
   5.7 **RESPONSE TO RASFF NOTIFICATIONS** ................................................................................... 19

6 **OVERALL CONCLUSION** .............................................................................................................. 20

7 **CLOSING MEETING** ..................................................................................................................... 20

8 **RECOMMENDATIONS** ................................................................................................................ 20

** Annex 1 – European Union Acts quoted in the Report** ................................................................. 22

** Annex 2 – Standards quoted in the report** .................................................................................... 23
### Abbreviations and Special Terms Used in This Report

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>AOAC</td>
<td>Association of Analytical Communities</td>
</tr>
<tr>
<td>AQSIQ</td>
<td>General Administration of Quality Supervision, Inspection and Quarantine</td>
</tr>
<tr>
<td>ATPS</td>
<td>Agricultural Technology Promotion Station</td>
</tr>
<tr>
<td>CA(s)</td>
<td>Competent Authority(ies)</td>
</tr>
<tr>
<td>CAC/GL</td>
<td>Codex Alimentarius Commission/Guideline</td>
</tr>
<tr>
<td>CAC/RCP</td>
<td>Codex Alimentarius Commission/Recommended Code of Practice</td>
</tr>
<tr>
<td>CCA</td>
<td>Central Competent Authority</td>
</tr>
<tr>
<td>CIQ</td>
<td>Entry-Exit Inspection and Quarantine Bureau of the People’s Republic of China</td>
</tr>
<tr>
<td>CN</td>
<td>Combined Nomenclature</td>
</tr>
<tr>
<td>CNCA</td>
<td>Certification and Accreditation Administration</td>
</tr>
<tr>
<td>Control Requirements</td>
<td>Control Requirements for the Safety of Peanuts for Export</td>
</tr>
<tr>
<td>CODEX</td>
<td>Codex Alimentarius Commission of the Food and Agriculture Organization of the United Nations and World Health Organization</td>
</tr>
<tr>
<td>DG (SANCO)</td>
<td>Health and Consumers Directorate-General</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FAPAS</td>
<td>Food Analysis Performance Assessment Scheme, UK</td>
</tr>
<tr>
<td>FVO</td>
<td>Food and Veterinary Office</td>
</tr>
<tr>
<td>GAP</td>
<td>Good Agricultural Practice</td>
</tr>
<tr>
<td>GMP</td>
<td>Good Manufacturing Practice</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>HACCP</td>
<td>Hazard Analysis Critical Control Points</td>
</tr>
<tr>
<td>HPLC</td>
<td>High Performance Liquid Chromatography</td>
</tr>
<tr>
<td>HPS</td>
<td>Hand-Picked and Selected</td>
</tr>
<tr>
<td>ISO/IEC</td>
<td>International Organisation for Standardisation/International Electronical Commission</td>
</tr>
<tr>
<td>LOD</td>
<td>Limit of Detection</td>
</tr>
<tr>
<td>LOQ</td>
<td>Limit of Quantification</td>
</tr>
<tr>
<td>LC-MS</td>
<td>Liquid Chromatography-Mass Spectrometry</td>
</tr>
<tr>
<td>MoA</td>
<td>Ministry of Agriculture</td>
</tr>
<tr>
<td>MS(s)</td>
<td>Member State(s)</td>
</tr>
<tr>
<td>MT</td>
<td>Metric tonnes</td>
</tr>
<tr>
<td>MU</td>
<td>Measurement Uncertainty</td>
</tr>
<tr>
<td>NRL</td>
<td>National Reference Laboratory</td>
</tr>
<tr>
<td>PTs</td>
<td>Proficiency Tests</td>
</tr>
<tr>
<td>QC</td>
<td>Quality Control</td>
</tr>
<tr>
<td>RASFF</td>
<td>Rapid Alert System for Food and Feed</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operation Procedure</td>
</tr>
<tr>
<td>TC(s)</td>
<td>Third Country(ies)</td>
</tr>
</tbody>
</table>
1 Introduction

The audit took place in the People's Republic of China (hereinafter referred to as China), from 20 to 29 September 2011 in order to assess controls on aflatoxin contamination in peanuts, intended for export to the EU. The audit team comprised two auditors from the Food and Veterinary Office (FVO) and one Member State (MS) expert.

The audit was undertaken as part of the FVO's annual audit programme in the context of a series of audits in third countries (TCs) to evaluate control systems and operational standards in this sector.

The team was accompanied during the audit by a representative of the central competent authority (CCA) General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ).

An opening meeting was held on 20 September 2011 at the premises of the AQSIQ in Beijing. Representatives of the Customs administration and the provincial Entry-Exit Inspection and Quarantine Bureaus (CIQs) in Shandong and Liaoning provinces were also present with the CCA. At this meeting, the objectives of and itinerary for the audit were confirmed.

2 Objectives and Scope

The objectives of the audit were to:

- Verify whether there are control systems in place to control aflatoxin contamination in peanuts intended for export to the EU and assess whether the systems offer adequate assurances that the produce concerned is within the specified residue limits as laid down in EU legislation, complying with or being at least equivalent to Commission Regulation (EC) No 1881/2006;
- Follow-up recommendations of report Health and Consumers Directorate-General (DG(SANCO))/SANCO 2006-8126.

In terms of scope, the audit reviewed the controls on the production and export, including the national legislation, competent authority (CA) organisation, their controls and enforcement capability.

In pursuit of this objective, the following sites were visited:

<table>
<thead>
<tr>
<th>Competent Authority/ies</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central</td>
<td>AQSIQ, Customs administration, Ministry of Agriculture</td>
</tr>
<tr>
<td>Regional/Local</td>
<td>Shandong CIQ, Liaoning CIQ, Huludao CIQ, Jinzhou CIQ, Qingdao CIQ, Dalian Port CIQ, Customs office in Dalian port</td>
</tr>
</tbody>
</table>

Laboratory/ies

1
### 3 Legal Basis and Standards

#### 3.1 Legal Basis

The audit was carried out under the general provisions of EU legislation, in particular Article 46 of Regulation (EC) No 882/2004 of the European Parliament and of the Council which stipulates that EU controls in TCs may verify compliance or equivalence of TC legislation and systems with EU feed and food law and EU animal health legislation. These controls shall have particular regard to the assurances which the TC can give regarding compliance with, or equivalence to, EU requirements.

A full list of the legal instruments referred to in this report is provided in Annex 1. EU legal acts quoted in this report refer, where applicable, to the most recently amended version. Full references to the EU acts quoted in this report are given in Annex 1.

#### 3.2 Standards

Additionally Guidelines and Codes of Practice of the Codex Alimentarius Commission of the Food and Agriculture Organization of the United Nations and World Health Organization (CODEX) were taken into account in the frame of the audit, as follows:


• Guidelines for the Assessment of the Competence of testing laboratories involved in the import and export control of food (CAC/GL 27-1997).

A full list of applicable standards referred to in this report is provided in Annex 2. Reference to specific provisions of these texts is provided at the beginning of each section.

4 BACKGROUND

The FVO has carried out audits to the main exporting countries to evaluate official control systems for preventing aflatoxin contamination in foodstuffs. The reports on these missions are available on the DG (SANCO) internet site at http://ec.europa.eu/food/fvo/ir_search_en.cfm.

The report of mission DG(SANCO)/2006-8126 contained recommendations to the CAs of China, and an action plan was received, which was considered satisfactory to address the recommendations of the report.

According to Article 15 (1) of Regulation (EC) No 882/2004 peanuts imported into the EU are regularly checked by the CAs of the MSs. Peanuts from China are covered by Regulation (EC) No 1152/2009 and are subject to mandatory pre-export certification by the CAs in China and additional physical checks at the EU borders (20% of all imported consignments).

Information of foodstuffs found to have public health implications are disseminated as alert notifications through the Rapid Alert System for Food and Feed (RASFF) to all MSs and to the exporting country. In the case of peanuts the notifications relate to the mycotoxin content of goods exceeding the EU limits of 2 ppb for aflatoxin B1 and 4 ppb for total aflatoxins in peanuts for direct human consumption. From 2008 to the time of the audit 408 notifications relating to aflatoxins in peanuts from China have been notified through the RASFF. The break down of these notifications as well as the volume of imports into the EU is shown in table 1.

According to the data submitted by the CAs the total volume of peanut exports is about 500 000 – 600 000 MT. The total export of peanuts to the EU is about 110 000 - 120 000 MT that represents 22% of the total export volume of Chinese peanuts.

Table 1

<table>
<thead>
<tr>
<th>China</th>
<th>Imports to the EU (metric tonnes)</th>
<th>Number of RASFF notifications</th>
<th>2011 (till 16 September)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2009</td>
<td>2010</td>
<td>2008</td>
</tr>
<tr>
<td>Shelled peanuts</td>
<td>72880.6</td>
<td>61439.2</td>
<td>168</td>
</tr>
<tr>
<td>(CN code 1202 20)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In shell peanuts</td>
<td>37569.4</td>
<td>34888.2</td>
<td>168</td>
</tr>
</tbody>
</table>

3
In view of the continuously high number of RASFF notifications since the previous mission DG(SANCO)/2006-8126, the FVO decided to undertake this audit.

5 FINDINGS AND CONCLUSIONS

5.1 RELEVANT NATIONAL LEGISLATION

Legal requirements

Article 46(1)(a) of Regulation (EC) No 882/2004 stipulates that EU controls shall have, inter alia particular regard to the legislation of the TC.

Regulation (EC) No 1881/2006 lays down the specific standards for the admissible levels of aflatoxins and sets maximum levels for certain contaminants (including mycotoxins) in foodstuffs.

Regulation 401/2006 lays down the methods of sampling and analysis for the official control of the levels of mycotoxins in foodstuffs.

Findings

China's national legislation has been updated as follows since mission DG(SANCO)/2006-8126:

- Food Safety Law from June 2009 and Regulations for the Implementation of Food Safety Law establishing national food standards, the setting up of the National Food Safety Commission, the food recall procedure, the requirement of food processors to keep extensive records, stipulating food safety risk surveillance and assessment and making Food Business Operators (FBOs) liable for food safety violations;

- Administrative Provisions for the Registration of Food Processing Enterprises for Export, has been adopted by Decree No 142 in July 2011, with effect from 1 October 2011 and the deadline for implementation is 2013. These provisions will replace the current Administrative Provisions on Sanitary Registration and Enrolment of Food Processing Enterprises for Export, adopted by AQSIQ Order No 20 from 2002. The audit team was informed that under these new provisions, the food processing enterprises for export shall establish and maintain food safety control systems focusing on hazard analysis and preventive control measures;

- Special Rules on Strengthening the Supervision and Management of the Safety of Food and Other Products were promulgated by the State Council and took effect on 26 July 2007. According to the Special Rules food processors/exporters must ensure that the exported foodstuffs meet the standards set by the importing countries. Furthermore, the Special Rules emphasize the enforcing powers and responsibilities of the CAs, and the sanctions they
could impose. The CAs should keep and make available to the public an “honor roll” and blacklist of the processors of exported goods. The audit team was informed that peanut processors exporting to the EU have not yet been included in the lists;

- NY/T 1286-2007 Determination of Aflatoxin B1 Content in Peanuts by High Performance Liquid Chromatography (HPLC) is an agricultural sector standard on the analytical method for aflatoxin testing of peanuts;
- DB 37/T 1059-2008 Good Agricultural Practice (GAP) on the export of peanuts is a Shandong provincial standard on the general GAP principles;

The national limit for aflatoxin in peanuts (20 ppb for total aflatoxins) has not changed since the last mission.

The audit team noted that there is still no national legislation governing the registration of primary producers of peanuts intended for export to the EU.

The audit team was informed that since 2008, there is a requirement for obligatory HACCP implementation at provincial level in Shandong province.

In Liaoning, the province visited, the audit team was informed that since the previous mission a Manual on growing peanuts has been developed by the local Agricultural Technology Promotion Station (ATPS) of the Ministry of Agriculture (MoA) and has been made available to the stakeholders. The farmers visited were aware of the existence of the Manual and a hard copy of the guide was shown to be available. They also stated that they have received instructions and have participated in training sessions organised by the ATPS.

The audit team noted that peanut exporters (brokers) who do not own processing facilities, are not covered by the requirements of Order No 20 from 2002. The Certification and Accreditation Administration (CNCA) representative explained that exporters are registered in an inspection application sub-programme that is part of the overall CIQ registration system. Exporters could be filed (listed) in that system only if they have already gone through a proper industry and commerce registration. According to the CAs the exporters are required to purchase peanuts intended for EU export only from processors registered and approved for EU export.

All legislation and guidelines are available on the internet web sites of the AQSIQ and MoA.

Conclusions

Good progress has been made regarding the development of GAP standards and drafting GAP guidelines for controlling aflatoxin contamination in peanuts.

There is still no national legislation governing the registration and the official control of the primary producers of peanuts for export to the EU. That is not equivalent to the requirements of Article 6 of Regulation (EC) No 852/2004 in conjunction with Article 10 of the same Regulation.
National legislation has been adopted governing the implementation of procedures based on HACCP principles in processing companies exporting peanuts to the EU. That is equivalent to the requirements of Article 5 of Regulation (EC) No 852/2004 in conjunction with Article 10 of the same Regulation.

5.2 Competent Authorities

Legal requirements

Article 46(1)(b) and (c) of Regulation (EC) No 882/2004 stipulate that EU controls shall have, inter alia, particular regard to the organisation of the TC's CAs, their powers and independence, the authority they have to enforce the applicable legislation effectively, and the training of staff in the performance of official controls.

Findings

Competent authorities

Since the last mission there has been a change in the organisation of the CAs. Under the Food Safety Law of 2009, the State Council established the National Food Safety Commission (in February 2010) that co-ordinates and supervises the CAs responsible for food safety.

There have been no significant changes related to the responsibilities and structure at A QSIQ since the last audit. A QSIQ is still the main CA for this audit. The food safety control of peanuts destined for export to the EU lies within the Import and Export Food Safety Bureau, Food Safety Division 3. The CIQs and their branches in each province are responsible for the inspection of peanuts intended for export in the regions under their jurisdiction.

The MoA is responsible for the formulation of standards, guides, Standard Operating Procedures (SOPs), instructions on GAP, management and supervision on the peanut plantation and harvest processes, monitoring of water for irrigation and atmospheric conditions in the plantation areas. The MoA has its governmental branches in every province, city, county and town.

The Ministry of Health is in charge of implementing the Food Safety Law. It primarily administers food safety monitoring and the investigation of violations and is responsible for the formulation of national standards for maximum levels for contaminants in foodstuffs including aflatoxins in peanuts.

The CNCA is in charge of the administration of the sanitary registration (filing) of processing companies, formulating rules on sanitation, providing guidance for the certification. The CNCA authorises the CIQs to carry out the day-to-day work on the registration of food processors. Provincial CIQs provide the registration data to the CNCA.

The audit team visited two provincial CIQs. The Liaoning CIQ has 22 in-house functional divisions and 18 sub-bureaus (local CIQs). It has more than 1800 staff. The Shandong CIQ has 23 local CIQs, with about 80 staff involved in the inspection of peanuts and 30 staff in testing exported peanuts.

The provincial CIQs visited in co-operation with the provincial agricultural sectors undertake measures for the prevention of aflatoxin contamination in peanuts. They jointly provide technical guidance and training for growers and carry out annual monitoring of the aflatoxin contamination in peanuts.
cultivating areas. The audit team saw evidence that since the previous mission DG(SANCO)/2006-8126, training has been organised for farmers in the visited cultivating areas on good practices in peanuts cultivation.

The audit team was informed by the CAs that an annual monitoring of aflatoxins in peanuts intended for export, as required by AQSIQ, is carried out by the CIQs. Since 2009, AQSIQ no longer requires Liaoning CIQ to carry out that monitoring, as there were no non-compliant results over the years. However, Liaoning CIQ still conducts field survey on aflatoxin contamination of peanuts each year.

Training courses provided for AQSIQ and CIQ staff included EU food safety legislation, Codex Code of Practice for the Prevention and Reduction of Aflatoxin Contamination in peanuts (CAC/RCP 55-2004), the implementation of GAP and Good Manufacturing Practice (GMP), auditing HACCP-based procedures, and sampling of peanuts for aflatoxin analysis. Evidence was provided that the training sessions had in fact taken place. The audit team examined the training files of some of the inspectors they met and saw evidence of participation at the training sessions.

The audit team was provided with a Memorandum of Understanding signed between the provincial CIQs visited and the Customs authorities, as well as with a Memorandum of Understanding signed between the Shandong CIQ and the provincial government for co-operation in cases of counterfeiting during peanut exports.

**Customs authorities**

There have been no changes in the structure and responsibilities since the last mission.

**Other authorities/bodies**

Scientific and testing institutions, like the Shandong Peanut Research Institute, the Quality Inspection and Testing Center for Oilseeds and Products of the MoA and the Oil Crops Research Institute of the Chinese Academy of Agricultural Science, have conducted a series of monitoring programs on aflatoxin contamination in peanuts, including aflatoxin rapid testing technique and development of rapid detector.

Since the previous mission several research projects focusing on GAP, breeding and extending aflatoxin-resistant peanut varieties have been initiated and completed. A range of peanut varieties with resistance to aflatoxin infection and formation has been promoted in the Yangtze valley and South China, such as “Zhonghua 6” with resistance to aflatoxin formation and “Yueyou 20” with resistance to aflatoxin infection. According to the CAs, programmes and research projects have been carried out on:

- technologies for the prevention of aflatoxin contamination in peanuts like the selection of peanut varieties resistant either to aflatoxins, or *Aspergillus*, or draught, timely treatment of underground harmful organisms, irrigation when the soil is dry 3 – 5 weeks before harvest and cold storage;

- key detoxication techniques and toxigenesis theory of aflatoxin in peanuts;

- the development of analytical methods, on techniques for source control of aflatoxin contamination in peanuts for export;
• biological control of aflatoxin contamination in peanuts;
• the distribution of the aflatoxin contamination in the peanut cultivation areas;
• the risk assessment of aflatoxin content in peanuts.

The audit team noted that as a result of the investigation of RASFF notifications (e.g. 2010.ARF) the CAs concluded that peanut consignments could be contaminated during the long transport to the EU. However, no research had been undertaken to date to investigate possible peanut contamination during transport from China to Europe.

**Conclusions**

The responsibilities of the CAs for peanut export controls are designated. Communication within the CAs is adequate and staff are properly trained.

There is no CA with responsibility to carry out official control on peanut growers. Therefore, no CA is in a position to guarantee that peanut primary producers comply with the GAP principles and hygiene requirements as laid down in national legislation.

AQSIQ and CIQ provided evidence of detailed training programmes. Staff that met the audit team showed a good knowledge of the relevant legislation and requirements.

A good amount of research is being carried out into the prevention of aflatoxin contamination. However, no research has been undertaken to date to investigate possible contamination during transport from China since the research done in the early 1990's and the proposal of some measures to improve the transport conditions, China has not carried out research on the effectiveness of these measures and the most appropriate transport conditions. These might be the key reasons behind the continuously high number of rejections at EU borders1.

**5.3 Official Controls on Production and Processing**

**Legal Requirements**

Article 46 (1) (e) and (b) of Regulation (EC) No 882/2004 stipulate that EU controls shall have, inter alia, particular regard to the existence and operation of documented control procedures and control systems based on priorities, and the CA's capability to enforce applicable legislation;

Article 10 of Regulation (EC) No 852/2004, in conjunction with its Article 3, requires FBOs to ensure that all stages in the production, processing and distribution of food under their control comply with the relevant hygiene requirements as laid down in this Regulation.

Article 10 of Regulation (EC) No 852/2004, in conjunction with its Article 4(1), requires that FBOs carrying out primary production and associated operations as listed in Annex I comply with the general hygiene provisions laid down in part A of Annex I.

---

1 In their response to the draft report the Chinese Authority noted that in the early 1990's, China conducted research regarding the impact of transport conditions on aflatoxin contamination in peanuts during the transport to Europe. As a result some control measures have been suggested as that containers must be stored under the waterline during sea transport, cardboard and damp-proofing agent should be placed inside the transport containers to improve temperature and humidity conditions and that most peanuts exported to Europe are in vacuum package which has good effect on the control of aflatoxin contamination of peanuts during transport and storage.
Article 10 of Regulation (EC) No 852/2004, in conjunction with its Article 4(2), requires that FBOs engaged in any stage in the production, processing and distribution of food after those stages to which Article 4(1) applies comply with the general hygiene requirements as laid down in Annex II.

Article 10 of Regulation (EC) No 852/2004, in conjunction with its Article 5, requires FBOs to put in place, implement and maintain a permanent procedure or procedures based on HACCP principles.

Article 10 of Regulation (EC) No 852/2004 in conjunction with its Article 6, requires that every FBO shall notify the appropriate CA of each establishment under its control that carries out any of the stages of production, processing and distribution of food, with a view to the registration of each such establishment.


The CODEX Recommended International Code of Hygienic Practice for groundnuts (CAC/RCP 22-1979) contains recommended minimum requirements of hygiene for farm handling, transportation, storage, in-shell operations and commercial shelling for all types and forms of raw, dried peanuts in-shell and shelled.


Findings

Cultivation (GAP)

According to the information provided by the CAs in the pre-audit questionnaire, peanuts are currently cultivated on approximately 4 500 000 ha. Approximately 9 000 000 farmers are involved, most of whom maintain small fields of a size less than 1 ha. In Liaoning province there are 200000 farmers most of whom maintain small fields of 0.3 ha. In Shandong province the peanut farm area per household is 0.4 – 0.5 ha.

In Liaoning province peanuts intended for export to the EU are mainly cultivated in Jinzhou and Huludao counties. Both were visited by the audit team. According to the CAs and farmers met, the geographical, agricultural and climatic conditions of these counties are not only suitable for the peanut growth but also make the incidents of aflatoxin contamination significantly lower than in other regions in China.

Since 2009, the peanut export from Liaoning province to the EU is about 4000 MT per year. According to the Shandong CIQ, Shandong province provides 500000 MT peanuts per year for export and that is 80% of the total Chinese peanuts export.

The audit team noted that there is no official control (registration and inspections) on peanut growers. The CAs explained that they control peanut growers indirectly through the official control on peanut processors exporting to the EU. Shandong CIQ informed the audit team that since 2011 they have started a trial to carry out official controls on primary producers. The first steps were to file the plantation bases producing peanuts for export to the EU and to carry out surveys during harvest on the aflatoxin contamination of the peanuts that will be exported to the EU. Also, during
the growing season, random inspections were made by CIQ inspectors to check the quality of the peanuts, pest control management, incidents of plant diseases and climate conditions.

The audit team was informed that GAP implementation is not mandatory. The CAs make efforts to encourage peanut farmers to follow GAP principles. The audit team was informed that since 2007, at county level, some export-oriented demonstration zones have been established in the main peanut producing provinces. These zones are constructed under the provincial government guidance and all relevant CAs take part and co-ordinate their activities with others. According to the CAs, in these zones quality assurance and food safety management systems as GAP, GMP, HACCP, control on chemical inputs, traceability and alert systems should be applied. In Shandong province the provincial government has issued a document "Opinion on the Promotion of Demonstration Zone" that states that all CAs should make an effort to ensure peanut safety through the whole peanut supply chain and clarifies the responsibilities of each CA involved. As a result 24 approved export-oriented peanut demonstration zones were established.

In recent years there has been active support by the government for the development of farmers' specialised co-operatives. These are private non-governmental organisations of small scale farmers with their own self control systems.

Technicians of the local ATPS visit the villages or farmers fields to instruct and train the farmers and explain to them the good practice of seed selection, fertilization, the use of pesticides, irrigation, harvest and drying according to the requirements of GAP. They also provide GAP guides to the farmers. The audit team was provided with such a guide. All farmers visited stated that they regularly (before planting, in the middle of peanut growing and at harvest) receive training and advice on GAP, from ATPS technicians by means of workshops and meetings. Technicians from peanut processing plants are also responsible for providing instruction and supervision to the contracted farmers for the implementation of GAP.

The audit team met four peanut farmers and technicians of the local ATPS and of the processors visited. The farmers stated that some recommended practices based on GAP are followed during the growing season, as soil tests before planting, crop rotation (with wheat, maize and soybeans), choice of peanut variety and certified seeds, use of fertilisers and pesticides. This information is provided by the technicians of ATPS or processing companies. According to the farmers met, irrigation is not applied.

Harvesting takes place in mid September or beginning of October. After the harvest, peanuts are collected and dried on the fields for a period of 7 - 15 days. They are then transferred to the farmer's home for further drying on the roof of the house for 3 - 5 days. The farmers met stated that the sun-drying process finishes when the farmer considers that the peanuts are dry enough after breaking the kernels with his teeth.

The audit team noted that the moisture content checks, recommended in points 25, 37 and 39 of the Code of Practice for the Prevention and Reduction of Aflatoxin Contamination in peanuts (CAC/RCP 55-2004), are subjective based only on the farmers practical experience and no other methods are used.

The farmers visited have interim stores at their houses which were empty at the time of the visits. The storage time could vary from a few days to up to 8 months or 1 year before being sold. This depends on market prices. The audit team observed that the facilities were built with adequate materials but there was no possibility to maintain proper temperature and humidity for a long
storage period as recommended in point 39 of the abovementioned Code of Practice.

Compliance with the GAP and the implementation of hygiene requirements at primary production level is mandatory under the Control Requirements for the Safety of Peanuts for Export ("Control Requirements") issued by AQSIQ. No evidence was found of official controls for compliance with these requirements.

The CAs estimated that the level of GAP implementation is about 80% in the major plantation areas producing peanuts for export to the EU.

The farmers stated and evidence was provided that the head of the township keeps records on their activities regarding peanut production.

Processing (GMP, HACCP, GSP etc.) and storage

Peanut processing begins with the delivery and shelling of peanuts at either independent shellers or the processor's shelling facilities. The audit team visited two shelling facilities each in one of the two provinces visited.

- The independent sheller had the capacity to shell 40 tonnes per day. There was a warehouse (600 m²) available for intermediate storage of approximately 500 tonnes. The incoming in-shell peanuts were checked only for moisture (< 10%) and visible moulds, no aflatoxin checks or other quality criteria were performed. No documents were required by the individual farmers. Information was required from the sheller's collecting agents only for the township from where the peanuts were collected. The owner stated that he gathers one lot of 50 tonnes from one township and stored it separately. The facility was generally in good condition.

- The second sheller belonged to a peanut processor. There was a storage facility for 50 tonnes for temporary storage (1 – 2 days). It was in good condition and clean. The incoming peanuts were checked only for moisture (< 10%). The sheller reported to have received information on GMP from the peanut processor. He also stated to have been inspected by the local CIQ as being part of the peanut processor plant.

The audit team was informed by the CAs that the current national registration system does not include the shelling facilities. However, from July 2011, via a Circular Note sent to all its sub-branches, Shandong CIQ has introduced a requirement for obligatory filing (registration) of the shelling facilities. The rule states that processors who export to the EU should have their own or contracted shelling facilities that are filed by the local CIQ. The implementation of that rule has started with the 2011 crop year. The independent sheller visited in Shandong province was registered by the local CIQ on 1 September 2011.

Order No 20 of 2002, issued by AQSIQ, requires food establishments to have sanitary registration with the provincial CIQ when exporting foodstuffs. In order to be registered, processors have to fulfil requirements in relation to GMP and HACCP as laid down in the Control Requirements. Annex 3 of Order No 20 contains a list of products requiring HACCP audit for registration. However, peanuts are not included in the list and peanut processors are required to have only a sanitary control system to be registered.

According to national legislation, the CAs should encourage food processors to implement HACCP
principles. The audit team was informed that in Shandong province, since 2008, it is required for peanut processors exporting to the EU to have the HACCP system in place. According to the Shandong CIQ all 57 processors exporting peanuts to the EU fulfil that HACCP requirement. In Liaoning province 3 out of the 4 establishments approved for EU export have the HACCP system in place.

Peanut processors are inspected by the provincial and local CIQs. There are three types of official inspections:

- a registration inspection performed by a team of provincial and local CIQ staff to approve and register the processing establishment;
- an overall inspection by local CIQ once a year to verify compliance with the requirements of Order No 20;
- a routine inspection every month by the local CIQ to check compliance with certain hygiene requirements and/or to take samples from consignments intended for EU export.

The registration certificate is renewed every three years. The renewal is carried out through overall re-examination of the processing establishment. The audit team noted that CIQ inspectors from the two provinces visited used a checklist based on the Control Requirements.

According to the information provided by the CAs (pre-audit questionnaire), in China there are 694 processors in total, registered and approved for EU export. In Shandong province visited, there are in total 269 registered peanut processors and 57 out of them are approved for EU export. In Liaoning province visited, there are 4 peanut processors and all of them are approved for EU export.

All processing companies visited had the required sanitary registration code number.

The processing companies have either their own plantation bases or contracted farmers or the company's agents purchase peanuts from individual farmers.

All processors visited were generally well aware of potential aflatoxin contamination. They had implemented GMPs, such as receiving peanuts with known origin (township code); visual, moisture and aflatoxin checks on incoming materials, sorting and aflatoxin checks on final products. On arrival, each truck load is checked for moisture (< 9% for kernels and < 10% for in shell nuts). Incoming peanuts for export to the EU are accepted if the level of aflatoxins in the product is below 1 ppb for total aflatoxins. However, implementation of these measures differed, as in one of the processors incoming raw material was not checked for aflatoxin content.

Samples were taken by CIQ officials for aflatoxin analysis prior to export to the EU. The audit team was informed that the period between sampling and obtaining the analytical result takes around 10 days.

All companies visited produced Hand-Picked and Selected (HPS) peanuts. Peanut kernels are subjected to a sorting and grading process where peanuts are handpicked to remove broken, insect or otherwise damaged and defective (mouldy, discoloured, rancid, decayed, shrivelled) kernels.

---

2 In their response to the draft report the Chinese Authority pointed out that they would like to make some corrections on the information provided with the pre-audit questionnaire. The 694 enterprises include processors and exporters and 337 of them are the processors.
Only one of the 4 companies visited had an electronic colour sorting machine. Finally HPS peanuts are passed through metal detectors prior to bagging. Peanut kernels rejected during the selection and sorting process were clearly marked. The audit team noted that the companies did not check the effectiveness of the sorting techniques, that were used as main control measures regarding aflatoxin contamination. Such verification is recommended in point 53 of the Code of Practice for the Prevention and Reduction of Aflatoxin contamination in Peanuts (CAC/RCP 55-2004).

In all the companies visited, the final products were stored at ambient temperature. It was stated that there was a possibility for a longer storage period of up to 7 months. In those cases there was no capacity to control the required temperature (below 10°C) and relative humidity (below 70%). The audit team was informed that after April and during the summer, the final products were moved to cool stores.

All 4 companies visited had implemented general hygiene requirements. Three of them had the HACCP system in place and were certified by external certification bodies. The audit team noted that one of these companies did not consider aflatoxins as a hazard in its HACCP system.

All processors visited had traceability systems to enable tracing back the origin of the raw materials to a township (group of farmers). More detailed traceability was not possible, as the peanuts were collected in batches of up to 50 or 100 tonnes, with the origin from one plantation base that was determined by the postal code of the township.

Processors keep all information relating to the products received on file, including the seller of the product, analytical data at reception and for final product, and other commercial information.

**Non-conforming products**

Non-compliant products for export to the EU are still defined as containing more than 1 ppb total aflatoxins. The relevant CIQ issues a report, not allowing the lot to be exported to the EU. The procedure for the re-direction of those consignments has not changed since the previous mission. The companies have to provide the local CIQ with detailed records and documentation about the final destination of the product.

For 2010, Shandong CIQ reported that 4 920 consignments intended for EU export were analysed for aflatoxin content and 67 samples were found to exceed EU limits, representing a rejection rate of 1.4%. For 2009, the rejection rate was reported as 1.8% and for 2011 (up until the time of this audit) as 0.4%. The rejection rate at EU borders for 2009 and 2010 was 5% and 7 – 8% respectively.

Rejected from the EU border consignments, on arrival back in China, are treated as a common import. Customs procedures apply, requiring also CIQ approval to return the consignment to the exporter. Then the relevant local CIQ inspectors carry out an investigation at the company involved at the source of the problem. They report the results to the Food Division of the provincial CIQ.

**Conclusions**

Since the last mission progress has been made with regard to the promotion and implementation of GAP in peanut cultivation. In general, the farmers visited followed the recommended practices based on GAP established in the Codex Code of practice for the prevention and reduction of aflatoxin contamination in peanuts (CAC/RCP 55-2004).
In the processing facilities visited, GMP principles established in the Codex Standard CAC/RCP-1995 on Hygiene Practice for Peanuts were generally implemented. In terms of aflatoxin controls, adequate in-house checks were undertaken with one exception where determination of aflatoxin levels was not carried out as recommended in point 49 of the abovementioned Code of Practice (CAC/RCP 55-2004).

The storage conditions in some of the processing plants visited did not fully comply with the recommendation requirements as set out in point 39 of the abovementioned Code of Practice (CAC/RCP 55-2004).

All the peanut processors visited were subject to official controls. Not all peanut processors exporting peanuts to the EU had an established system of control based on HACCP principles as required by Article 5 of Regulation (EC) No 852/2004 in conjunction with Article 10 of the same Regulation.

The effectiveness of the sorting techniques, used as main control measures, was not checked with regard to aflatoxin controls as recommended in point 53 of the abovementioned Code of Practice (CAC/RCP 55-2004).

The small field production of peanuts in China does not allow full traceability to the farmers' stock as recommended in point 47 of the abovementioned Code of Practice (CAC/RCP 55-2004).

There is an adequate procedure in place for dealing with non-compliant consignments.

5.4 Procedure for exporting to the EU

Legal requirements

Article 46(1)(h) of Regulation (EC) No 882/2004 stipulates that EU controls shall have, inter alia, particular regard to the assurances which the TC can give regarding compliance with, or equivalent to, EU legislation.

Article 3 of Regulation (EC) No 1152/2009 requires that consignments of foodstuffs as referred to in Article 1 of the Regulation may only be imported into the EU in accordance with the procedures laid down in this Regulation.

Findings

Under Order No 20 from 2002 only establishments with valid sanitary registration are allowed to process foods for export. Provincial CIQs do not accept applications for export from processing establishments without sanitary registration.

The export procedure for peanuts intended for export to the EU has not changed since the last mission. Before export, the local CIQ upon reception of all the necessary documentation will carry out an on-site inspection, sampling and aflatoxin laboratory analysis of the consignment intended for export. On the condition that the result of the official aflatoxin analysis is below the Limit of Detection (LOD) of the laboratory (0.5 ppb for aflatoxin B1 and 1 ppb for total aflatoxin), the local CIQ will permit export to the EU. It issues a health certificate as required by Regulation (EC) No 1152/2009 and a phytosanitary certificate. The timescale between sampling and certificate issuing is
about 10 working days.

The containers are loaded and sealed at the processors site, during which a local CIQ inspector is occasionally, but not routinely present. The audit team was provided with evidence (reports) for supervised container loading. One of the processors visited provided reports for CIQ supervision at 50% of the loadings of consignments intended for export to the EU.

The peanut exporters submit an export declaration for customs clearance via the customs electronic system (H-2000). The Combined Nomenclature (CN) code entered defines the necessary export documentation that has to be submitted. The application will pass if all documents have been provided. Customs officers cross check the electronic and paper version of the export documentation. When the bar code on the paper document is screened the list of necessary documents for export pops up on the computer monitor. On the basis of risk assessment it is decided whether Customs will carry out checks on the consignment. Generally, Customs carry out checks on 3% of exported consignments.

The audit team was informed that the Customs H-2000 system and the CIQ electronic system have an on-line connection since 1 January 2008. Customs officers will release the peanuts for export after checking the inspection clearance sheet issued by the CIQ. Furthermore, the system is able to compare consignment quantities. Evidence of the operating Customs system was seen.

The audit team was informed that in the case of a peanut processor not being registered by CIQ, the electronic system of CIQ would not accept the application for inspection of the consignment intended for export to the EU.

The audit team examined health certificates along with additional information attached to the file such as the results of aflatoxin analysis, details of sampling and method of analysis issued by the local CIQ visited. The results of the aflatoxin analysis in these examples were expressed as “n.d.” (not detectable) with an indication of the actual LOD.

During the visit to Liaoning CIQ the audit team received a health certificate for the export of peanuts to the EU that had the lot identification number and the container number indicated. However, in Shandong province CIQ staff stated that there were no instructions provided from AQSIQ regarding the indication of container numbers in the health certificates and that it is included in the document in case it is required by the exporter.

Conclusions

There is a procedure in place for the control of peanut exports to the EU by CIQ at the point of export. There is a link between CIQ and customs controls at the point of export, so it is ensured that products can be exported to the EU only with the health certificate as required by Article 4(1)(a) of Regulation (EC) No 1152/2009.

5.5 Method of Sampling Consignments

Legal requirements

Article 1 of Regulation (EC) No 401/2006 requires that sampling for the official control of mycotoxin levels in foodstuffs be carried out in accordance with the methods set out in its Annex I.
Findings

All peanut consignments submitted for export are sampled for aflatoxin analysis. Sampling of peanuts consignments to be exported to the EU is undertaken by CIQ inspectors.

Most peanut exports are via sea containers and the typical consignment size is 18 – 20 MT. Each sea container is defined as a separate consignment, and requires an individual aflatoxin certificate for export.

The audit team observed one sampling procedure and an explanation of the sampling procedure in one of the processing plants, as there were no available consignments at the time of the visit. The sampling and explanations were completed by local CIQ inspectors from the two provinces visited. Before sampling the CIQ inspectors checked the volume of the lot, the delivery country, the lot number and the packaging of the lot. In both cases spears were used.

In the case of the sample explanation, the audit team was informed that 100 incremental samples of 200 g each will be taken by a spear from a lot of 17 MT (20 bags of 850 kg each). The inspector will take 5 incremental samples from different points of the bag. However, because of the lack of real peanut consignments this could not be confirmed in practice.

The audit team observed sampling from a 18.5 MT lot (20 bags of 925 kg each), where one incremental sample of 1.2 kg was taken from the middle of each bag by a spear with three compartments. When asked by the audit team to explain the sampling procedure in the case of an 18 MT lot of 25 kg bags, the CIQ inspector stated that 100 bags would be selected (according to CIQ instructions) and left by the company's staff before the arrival of the CIQ inspector. Then within 1 - 2 days samples were taken by the CIQ inspector from the open top of the bag by spears (200 g incremental sample). According to the inspector, the necessary time for collecting all incremental samples and forming the aggregate sample was 20 minutes. As there was no supervision by the CIQ inspector during the selection of the bags the audit team concluded that the representativeness of the aggregate sample could not be ensured. At the closing meeting the CAs argued that they had taken measures for ensuring the sample representativeness, such as the company's commitment to follow CIQ instructions and random checks by CIQ inspectors to supervise the selection of the bags. The CAs stated that the sampling procedure is monitored by in-house video cameras (if available) and recordings are randomly verified by CIQ inspectors.

Samples were packed into non-transparent bags, then sealed, labelled and delivered to the laboratory by the inspectors.

Conclusions

The sampling procedure observed in peanuts intended for export to the EU was in line with the requirements of Regulation (EC) No 178/2010.

The recommendation made in the previous mission report DG(SANCO)/2006-8126 regarding the use of spears for official sampling has been addressed.

5.6 Laboratory Services

Legal requirements
Article 46(1)(d) and (c) of Regulation (EC) No 882/2004 stipulate that EU controls shall have, inter alia, particular regard to the resources including diagnostic facilities available to CAs, and the training of staff in the performance of official controls.

Article 2 of Regulation (EC) No 401/2006 requires that sample preparation and methods of analysis used for the official control of mycotoxin levels in foodstuffs comply with the criteria set out in its Annex II.

Points 41 and 42 of CODEX Guidelines CAC/GL 26-1997 on the Design, Operation, Assessment and Accreditation of Food Import and Export Inspection and Certification Systems lays down that inspection services should utilise laboratories that are evaluated and/or accredited under officially recognized programmes to ensure that adequate quality controls are in place to provide for the reliability of test results. In accordance with Guidelines of CODEX CAC/GL 27-1997, point 3, the laboratories should comply with ISO/IEC Guide 17025.

Findings

There are 37 CIQ laboratories designated to perform official aflatoxin analysis for peanuts and peanut products destined for export into the EU. It is an increase of 25 laboratories since the previous mission in 2006. All these laboratories are accredited to International Standard ISO/IEC 17025 by the Chinese National Accreditation Body with the method for aflatoxin analysis in the scope of the accreditation.

The audit team visited two of these CIQ laboratories in Liaoning and Shandong provinces.

CIQ Laboratory in Dalian

Regarding the number of peanut aflatoxin analysis performed as part of the export control, the audit team was given the following figures for 2009, 2010 and 2011 as shown in table 2.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of samples analysed</th>
<th>Non-compliant samples</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>[&gt; 2 ppb B&lt;sub&gt;1&lt;/sub&gt; or &gt; 4 ppb total]</td>
</tr>
<tr>
<td>2009</td>
<td>129</td>
<td>-</td>
</tr>
<tr>
<td>2010</td>
<td>123</td>
<td>-</td>
</tr>
<tr>
<td>2011 (at the time of the audit)</td>
<td>55</td>
<td>-</td>
</tr>
</tbody>
</table>

The 20 kg sample was quartered twice. Two 5 kg parts were combined into the 2 x 10 kg sub-samples. Each 10 kg sub-sample was milled as a whole in a mixer. Thereafter 8 portions of 100 g were taken, mixed, and divided into 2 analytical samples of 400 g. One portion was sent for analysis, the other was stored in the refrigerator for defense purposes. The 400 g analytical sample was spread out and 8 increments were taken with a spatula to collect 25 g for extraction according to the analytical procedure (GB/T 18979-2003, which was based on published Association of Analytical Communities (AOAC) method 991.31 (2000)). After immuno assay cleanup, an aliquot was injected into a HPLC with photochemically enhanced fluorescence detection. LOD was 0.5 ppb and Limit of Quantification (LOQ) was 1.0 ppb.
The laboratory participated in the proficiency test scheme of CNCA (CNCA-08-A05). The latest scores (report 2008-A05-046) were: $z = -0.57$ and $z = -0.29$ for aflatoxin $B_1$ and total aflatoxin at levels of 11.2 ppb and 15.2 ppb respectively. The laboratory had never experienced non-compliant samples (only one non-compliant result in 2008), so a homogeneity test on the milling procedure could not be performed. Results were reported including recovery and Measurement Uncertainty (MU).

The laboratory was well organised, laid out and capable of analysing large numbers of peanut samples. There was an adequate number of skilled staff. The method descriptions, Quality Control (QC) charts, logbooks and training records were in place.

**CIQ Laboratory in Qingdao**

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of samples analysed</th>
<th>Non-compliant samples [$&gt; 2 \text{ ppb } B_1 \text{ or } &gt; 4 \text{ ppb total}$]</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>5481</td>
<td>100 (1.8%)</td>
</tr>
<tr>
<td>2010</td>
<td>4920</td>
<td>67 (1.4%)</td>
</tr>
<tr>
<td>2011</td>
<td>3609</td>
<td>16 (0.4%)</td>
</tr>
<tr>
<td>(at the time of the audit)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The laboratory has been nominated as the National Biotoxin Reference Laboratory of AQSIQ. Three members of the staff were trained in one EU MS. The 20 kg sample was quartered twice. Two 5 kg parts were combined into the 2 x 10 kg subsamples. Each 10 kg subsample was milled as a whole in a mixer. Thereafter two times 4 portions of 300 g were taken, mixed, which results in 2 analytical samples of 1.2 kg. One portion was sent for analysis, and the other was stored at minus 18°C for defense purposes. In the laboratory, a 25 g portion was extracted according to the analytical procedure (GB/T 18979-2003, which was based on AOAC method 991.31/999.07 and 2005.08). After immuno assay cleanup, the determination of the toxin was made by HPLC with fluorescence detection, enhanced by derivatisation in a Kobra cell (photochemically enhanced fluorescence detection was also available). The LOD was 0.3 ppb and the LOQ was 1.0 ppb. Spiked blank samples and test materials were used for QC. Results were reported including recovery and expanded MU. A LC-MS method could be applied to confirm aflatoxin analysis. The laboratory had assessed the homogeneity of the sample preparation procedure. The staff were aware of the conditions under which a reserve sample for reference or defense purposes had to be taken. The laboratory participated in Food Analysis Performance Assessment Scheme, UK (FAPAS) since 2006 (FAPAS PT 0488), always with z-scores below 1 for aflatoxins in peanut, in 4 rounds. The latest result was $z = 0.7$ (PT 04144, September 2009). Since 2006 the laboratory had organized six PTs for in-house processors' laboratories. In order to prepare the test sample a slurry milling machine was used. The number of the participants varied from 33 to 102. The latest test (FATA PT 2011-0004, September 2011) was performed with a sample containing 5.3 ppb $B_1$. There were 33 participating laboratories all of them involved in aflatoxin analysis of peanuts intended for EU export. Three of the laboratories failed the PT. The necessary follow up measures are currently undertaken.

**Processor laboratories visited**
During the four visits to the peanut processors, the audit team visited their in-house laboratories.

Two of these laboratories carried out visible checks on the quality of incoming raw materials and moisture measurement, for which there had been equipment and personnel in place. The criteria for the peanuts moisture content were < 9% for peanut kernels and < 10% for peanuts in their shells.

The other two laboratories had staff and equipment for aflatoxins analysis. These laboratories were not accredited according to ISO/IEC 17025, but they followed its requirements. Both laboratories had sample dividers, milling devices and HPLC equipment similar to that of the CIQ laboratories. One of these in-house laboratories applied fluorescence detection with Kobra cell, and the other - photochemical detection. Both laboratories participated in the FATA PT 2011-0004 in September 2011, with z–scores below 1. As these laboratories did not apply immuno assay clean-up, they reported as compliant results of < 0.5 ppb for aflatoxin B1 and < 1.0 ppb for total aflatoxins.

**Conclusions**

The grinding equipment for sample preparation was suitable.

A NRL has been nominated. That is equivalent to the requirement laid down in Article 33 of Regulation (EC) No 882/2004.

Both public laboratories visited were accredited by the Chinese National Accreditation Body according to the requirements of ISO/IEC 17025, which is in line with point 41 of CAC/GL 26-1997 and point 3 of CAC/GL 27-1997.

The procedures in place for peanut analysis as observed by the audit team are generally in accordance with the criteria established in Regulation (EC) No 401/2006.

**5.7 Response to RASFF Notifications**

**Legal requirements**

Point 6 of CODEX Guidelines CAC/GL 25-1997 requires exchange of information between countries on rejections of imported food. In particular the food control authorities in the exporting country should undertake the necessary investigation to determine the cause of any problem that has led to the rejection of the consignment. The food control authority in the exporting country, if requested, should provide the authorities in the importing country with information on the outcome of the necessary investigation, if available. Bilateral discussions should take place as necessary.

**Findings**

There is a documented procedure in place for Rapid Alert Systaem for Food and Feed (RASFF) follow up by the CAs. AQSIQ is responsible for receiving RASFF notifications and forwards all RASFF notifications concerning China's exported peanuts to provincial CIQs, which are responsible for follow up. Local CIQ requires the processor to prepare an investigation report and after that inspects the processor. Meanwhile any export activities are suspended. The local CIQ provides the investigation report to the provincial CIQ and after reviewing it the CIQ sends information for the follow up activities to AQSIQ.

In general, companies who are involved in a RASFF notification are suspended from EU export
during the investigation and until such time that corrective measures are taken and the local CIQ have verified their implementation. The CAs stated that when a company is involved in three consecutive RASFF notifications, EU exports will be suspended by withdrawing the sanitary registration and can only be resumed during the next crop season and successful passing of another full sanitary registration audit. Evidence of such cases was not provided.

Provincial and local CIQs provided evidence of follow up to RASFF notifications.

In response to the high volume of RASFF notifications, there was evidence for measures applied by the CIQ visited: registration of peanut processors, strict pre-export inspection, aflatoxin laboratory analysis and health certification of each consignment intended for export to the EU, surveys on the aflatoxin contamination in peanuts in the major producing province, regular supervision of peanut processors, strict measures to deal with non-compliant peanut consignments and imposing enforcement measures on RASFF notified products.

Conclusions

There are administrative structures and clear procedures in place for the follow up of RASFF notifications within AQSIQ. Adequate investigations had been carried out in the companies notified via the RASFF. However, no evidence for imposed sanctions was submitted.

6 Overall Conclusion

There have been no major changes in the control system for the prevention of aflatoxin contamination in peanuts intended for export into the EU since the previous mission DG(SANCO)/2006-8126. Improvements in the area of Good Agricultural Practice (GAP) promotion and implementation, the training of peanut farmers and official inspectors, the laboratory performance and the export procedure have been made. There are still some shortcomings with regard to the official controls of peanut growers, the implementation of Hazard Analysis and Critical Control Points principles (HACCP), traceability to farm level and storage conditions. In addition, China has not carried out any research regarding the most appropriate transport conditions. These might be the key reasons behind the high number of rejections at EU borders.

Regarding the follow-up of the recommendations made in mission report DG(SANCO)/2006-8126, all recommendations have been addressed.

7 Closing Meeting

A closing meeting was held on 29 September 2011 with representatives of the AQSIQ, MoA and CIQs in Shandong and Liaoning provinces. At this meeting, the FVO team presented the main findings and preliminary conclusions of the audit. The CAs made initial comments and provided additional information on the official control procedures.

8 Recommendations

The CAs are invited to provide details of the actions taken and planned, including for deadlines for their completion ("action plan"), aimed at addressing the recommendations set out below, within 25 working days of receipt of this report.

The CA should:
<table>
<thead>
<tr>
<th>Nº.</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ensure that official controls of peanuts are carried out at all stages of production, processing and export in line with the requirement set out in point 21 of Codex Alimentarius Guidelines for the Design, Operation, Assessment and Accreditation of Food Import and Export Inspection and Certification Systems (CAC/GL 26-1997).</td>
</tr>
<tr>
<td>2.</td>
<td>Ensure that processors exporting peanuts to the EU implement standards at least equivalent to Article 5 of Regulation (EC) No 852/2004 in conjunction with Article 10 of the same Regulation on food safety procedures based on HACCP principles.</td>
</tr>
<tr>
<td>3.</td>
<td>Ensure that storage conditions in peanut processing and storage facilities comply with the requirements set out in Codex Alimentarius Code of Practice for the Prevention and Reduction of Aflatoxin contamination in Peanuts (CAC/RCP 55-2004).</td>
</tr>
<tr>
<td>4.</td>
<td>Consider undertaking research into the possible contamination of peanuts during the transport of peanuts from China to Europe.</td>
</tr>
</tbody>
</table>

The competent authority's response to the recommendations can be found at:

### ANNEX 1 – EUROPEAN UNION ACTS QUOTED IN THE REPORT

<table>
<thead>
<tr>
<th>Legal Reference</th>
<th>Official Journal</th>
<th>Title</th>
</tr>
</thead>
</table>
## Annex 2 – Standards Quoted in the Report

<table>
<thead>
<tr>
<th>Reference number</th>
<th>Full title</th>
<th>Publication details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAC/RCP 55-2004</td>
<td>In the case of peanuts: Code of Practice for the Prevention and Reduction of Aflatoxin Contamination in peanuts (CAC/RCP 55-2004)</td>
<td><a href="http://www.codexalimentarius.net/web/standard_list.jsp">http://www.codexalimentarius.net/web/standard_list.jsp</a></td>
</tr>
<tr>
<td>CAC/RCP 42-1995</td>
<td>In the case of spices: Code of hygiene practice for spices and dried aromatic plants (CAC/RCP 42-1995)</td>
<td><a href="http://www.codexalimentarius.net/web/standard_list.jsp">http://www.codexalimentarius.net/web/standard_list.jsp</a></td>
</tr>
</tbody>
</table>