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Department:
Agriculture and Rural Development
PROVINCE OF KWAZULU-NATAL

REPORT ON SOUTHERN AFRICA PHYTOSANITARY INSPECTION WORKSHOP HELD AT SHERATON HOTEL, PRETORIA 28 AUGUST TO 2 SEPTEMBER 2016

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1. Background

The five-day workshop aimed at creating awareness about the importance of phytosanitary issues in Africa was organized by USDA APHIS, the Food and Agriculture Organization (FAO) and the Department of Agriculture, Forestry and Fisheries (DAFF). It is the first workshop of this nature and was attended by two representatives from each of the Southern African countries Botswana, Lesotho, Namibia, Swaziland and Zimbabwe. Representatives from South Africa included those from DAFF (Plant Health and Inspection Services directorates) and two representatives from Provincial Departments of Agriculture (Eastern Cape, Gauteng, KwaZulu-Natal, Limpopo, Mpumalanga, and Western Cape). The theme of the workshop was “Risk-based inspection and Phytosanitary Certification”. Phytosanitary issues are those issues relating to plant health, especially with respect to the requirements of international trade of plants and plant products. A phytosanitary certificate is a formal document that is issued by an exporting country's agricultural authorities (NPPO) to verify that a shipment has been inspected and is free from harmful regulated plant pests and diseases.

Participants at the Southern Africa Phytosanitary Inspection Workshop

2. The role of DAFF in phytosanitary issues

The Department of Agriculture, Forestry and Fisheries (DAFF) through relevant directorates is the legally authorized National Plant Protection Organization for South Africa, known as NPPOZA. The participating directorates are Plant Health, Inspection Services and Food Import and Export Standards. South Africa is relatively advanced in dealing with phytosanitary issues. Other countries such as Namibia, Lesotho and Swaziland benefit immensely from inspection services provided by South Africa in major ports. NPPOZA deals with inspection, diagnostics and quarantine, surveillance, policy development and implementation, awareness and promotion as well as issuing import permits. The NPPO has inspectors stationed in all major sea ports, land borders and airports. There is a DAFF office situated at OR Tambo International Airport which provides inspection services.

3. Major Phytosanitary risks facing South Africa

The major phytosanitary risks were presented by various experts from DAFF, University of Stellenbosch, the Agricultural Research Council and Crop Watch Africa. South Africa is on high alert and has acted successfully against some of the risks.

3.1 Exotic fruit flies

***Bactrocera dorsalis* on citrus**

These include species such as *Bactrocera dorsalis* (oriental fruit fly), *Zeugodacus cucurbitae* (melon fly) and *Ceratitis fasciventris* (one of the tephritid fruit flies) to mention a few. South Africa launched a National exotic fruit fly surveillance programme in 2006, especially to manage *Bactrocera dorsalis*. *B. dorsalis* was first detected in South Africa in Northern Limpopo in 2010. Its primary host is mango. *B. dorsalis* traps are installed in KwaZulu-Natal, Mpumalanga, Western Cape, Eastern Cape, Gauteng, Northern Cape, North West and Limpopo. As at October 2015, the pest was reported as absent in the Western Cape, Eastern Cape, Northern Cape and Free State. Permanent surveillance is in place in South Africa against *B. dorsalis*.

3.2. *Tuta absoluta* (tomato leaf miner)

***Tuta absoluta* moth**

Tuta absoluta is an exotic leaf miner moth. It was recently reported in South Africa (2016). The country is on high alert. It is very similar to the common potato tuber moth. Tomato plantations are in a huge risk of attack. Potatoes are affected to a lesser extent. Crop losses of 50-100% have been reported due to *Tuta absoluta*. Emergency registrations of pesticides to control *Tuta absoluta* have been implemented in South Africa. The country is therefore adequately prepared to deal with the pest. Strategies in place include traps, insecticides, natural enemies and crop rotation. *Tuta absoluta* has a limited crop host range, mostly tomato and to a lesser extent other solanaceous crops.

3.3 Banana fusarium wilt

Fusarium wilt on bananas

Banana fusarium wilt is also known as Panama disease. It occurs in China, Philippines, India, Pakistan and parts of Africa. The new strain of the fungus known as Foc TR4 is responsible for the current global banana crisis. There is currently an epidemic in Mozambique, the largest African supplier of bananas to South Africa. The occurrence of Foc TR4 in Africa is limited to Metocheria Farms in northern Mozambique. The African Consortium on Foc TR4 was established to control the current disease outbreak of banana Fusarium wilt (Foc TR4) in Mozambique and to empower other African countries that rely on bananas for food security and income generation to deal with the disease.

3.4 Maize lethal necrosis disease (MLN)

Crop losses due to MLN

This is a viral disease caused by double infection from maize chlorotic mottle virus (MCMV) and maize dwarf mosaic virus (MDMV). The disease shows symptoms on leaves, tassel and ears. Symptoms include chlorosis and necrosis of leaves, lack of pollen production, dead heart, poor grain filling and premature drying of ears. The disease is present in areas such as Peru, China, Tanzania, Uganda, Kenya, South Sudan and Taiwan. The disease is predicted to spread to the rest of Africa. Yield losses between 30 and 100% have been reported in Kenya. The disease is spread by seed transmission and insect vectors (e.g. maize thrips, maize root worm). It has varied hosts such as maize, finger millet, sugar cane, Napier grass and sorghum. Since South Africa has been made aware of this threat, DAFF and ARC grain institute have embarked on strategies such as awareness, strict control of grain and seed imports from infected countries, resistance breeding and screening germplasm in different areas of the country.

4. International standards for phytosanitary measures (ISPM's)

South Africa and all other countries subscribe to inspection guidelines according to the International Plant Protection Convention (IPCC). The following standards among others were covered in the workshop.

4.1 ISPM 23 (Adopted in 2005) – Guidelines for Inspection

The standard deals with procedures for inspecting plant products and other regulated products for quarantine pests and documentary compliance. This is done for consignments destined for import and export.

4.2 ISPM 31 (Adopted in 2008) – Methodologies for sampling of consignments

This standard provides guidance for applying appropriate sampling methods during inspection of consignments. Guidelines for determining sample size for each consignment are provided in this standard. Sampling methods may either be statistically based (e.g. simple random sampling, stratified sampling, sequential sampling etc.), or non-statistically based (e.g. selective sampling, targeted sampling etc.).

4.3 ISPM 32 (Adopted in 2009) – Categorization of Commodities according to their pest risk

The products are categorized into 4 according to the amount of phytosanitary risk they pose as follows:

Category 1 – Fully processed products with no risk of being infested with quarantine pests e.g. cloth, frozen foods, cardboard, ground coffee etc. In most cases these products do not require a pest risk analysis or phytosanitary certification unless specified by the importing country.

Category 2 – Partially processed products which are still capable of being infested with quarantine pests e.g. peeled fruit, polished rice, dehydrated fruit, toothpicks etc.

Category 3 – These are unprocessed products intended for consumption or processing e.g. fresh fruit, fresh flowers, fresh vegetables. These require a pest risk analysis to be conducted.

Category 4 – Unprocessed products with the intended use of propagation e.g. flower bulbs, sweet potato vines, potato seed, grain seed etc.

4.4 ISPM 7 (Revised version adopted in 2011) - Phytosanitary Certification System

The standard outlines components and requirements for phytosanitary certification. The first version was developed in 1997 and the current standard is the revised version which was adopted in 2011. Phytosanitary certificates are issued by National Plant Protection Organizations (NPPO) of importing and exporting countries. The NPPO's should have the sole mandate and legal authority of developing and maintain the phytosanitary certification system. The system needs to be reviewed and revised as required.

5. Field visits

Two field visits were undertaken by the group during the course of the workshop.

5.1 Visit to OR Tambo International Airport (Perishable cargo triangle)

The sniffer dog being prepared to detect regulated products

Vegetables ready for export

The perishable cargo triangle of the OR Tambo International Airport was visited on 30 August 2016. The objective was to demonstrate actual inspection services to the group. There was a demonstration of how sniffer dogs are used to detect regulated products in baggage such as fresh fruit and meat. The dogs were 100% able to detect suspect baggage. The breed used for this purpose is the Beagle. The regulated products are then destroyed by incineration. A DAFF Inspection Services office was visited on site. It has 27 personnel. Both primary and secondary inspections are conducted. The pest and disease samples for further identification are sent to the diagnostics laboratories based in Pretoria and Stellenbosch. There are several freight forwarding companies who work with the DAFF office to ensure documentary and phytosanitary compliance. There is a PPECB (Perishable Products Export Control Board) facility located on site which does quality inspections on produce. PPECB is an independent service provider which delivers services of quality certification and cold chain management for producers and exporters of perishable food products.

5.2 Visit to Transnet freight rail terminal (City Deep)

This particular visit was conducted on 1 September 2016 to the terminal situated in City Deep, Johannesburg. It is the largest of its kind in Africa. The major objective was to show the group how containers are handled and inspected before being handed over to the client. A list of approved container operators is provided by SARS for clearing of consignments. Special documents are completed for operators not in the approved list. Compliance documents include the container terminal order and the freight terminal order. Document compliance is checked thoroughly and freight is monitored using the live system called NAVIS. All customers are validated. Inspections of all regulated products are conducted by DAFF officials before being released to the customer.

6. Lessons on quarantine activities from other countries

6.1 Botswana

Botswana has 17 registered points of entry. The country does not have its own inspection protocols, but relies on International Standards (ISPM's) for inspection. Phytosanitary activities including training of officers are currently not adequately funded. Major food commodities such as maize, fresh fruit and fresh vegetables are imported into Botswana. Major exports are maize bran, wheat bran and sunflower grain.

6.2 Lesotho

Quarantine services in Lesotho are still in infant stages. The country's plant protection policy is still under development. The services are centralized in Maseru. There are six points of entry and they are not adequately staffed. Major exports are rosehip, pelargonium, cherries and hominy chop. Lesotho imports grain seed (maize, wheat, sunflower and beans), fruit trees, fresh fruit and vegetables.

6.3 Namibia

The Namibian NPPO provides services in phytosanitary inspections, quarantine, issuance of import and export permits and plant health diagnostics. All ports of entry are staffed. The NPPO is in the process of finalizing protocols. Namibia imports fresh fruit, vegetables, maize, wheat, and other grains. Significant exports include grapes, asparagus, beef, potatoes, onion, devil's claw water melons, sweet melons, butternut and tomatoes.

6.4 Swaziland

There are 13 points of entry. Each port has 3 plant inspection officers and 3 animal product inspection officers. Swaziland is divided into 4 regions to facilitate provision of quarantine services. Swaziland currently has no phytosanitary protocols. It relies mostly on ISPMs to provide the service. Major exports are bananas, avocados, citrus, baby vegetables, timber and seed cane. Imports include stone fruits, maize grain, wheat and beans.

6.5 Zimbabwe

The country depends largely on acts of parliament and International Standards to execute quarantine activities. There are 21 entry points. There are quarantine stations in each of the 8 provinces in Zimbabwe. Important crops for which quarantine legislation is enforced are paprika, cotton and tobacco. Major exports include tobacco, timber, fresh fruit and vegetables, cut flowers and cotton lint. Imported commodities are maize grain, wheat grain, rice and soy meal.

7. Role of Provinces in phytosanitary issues

Although DAFF has a legislative mandate to enforce phytosanitary measures in the country, there is also a meaningful role that the provinces can play to protect our country against quarantine pests and diseases. These include surveillance, creating awareness in communities and other role players, conduct farm inspections, managing early warning systems and timely reporting to DAFF about potential threats.

8. Future plans of action

DAFF will visit provinces in the near future to create awareness about phytosanitary issues, provide training and prepare officials from provincial Departments of Agriculture to play a meaningful role in enforcing phytosanitary matters. It is recommended that KZNDARD engages the Crop Protection Section for dissemination of vital information to all districts. A lesson was learnt that Mpumalanga Province has established a functional working group to address plant protection issues across the province.