IPPC HIGH-LEVEL SYMPOSIUM ON COOPERATION FOR PHYTOSANITARY MEASURES AMONG THE CHINESE INITIATIVE "ONE BELT" COUNTRIES

PRESENTATION OF COUNTRY REPORT FOR NIGERIA

BY

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LAND AREA AND POPULATION

- Nigeria Land area is 923,768 square kilometers (356,376 square miles) with about 77 percent arable land (United Nations estimate)
- The current population of Nigeria is about 199,673,010
- In spite of the oil, Agriculture remains the base of the Nigerian economy In Nigeria,
- Agriculture is on the concurrent list among the three tiers of government namely: Federal, State and Local governments of Nigeria.
- This contributes 40 percent of the Gross Domestic Product (GDP) and employs about 70 percent of the working population in Nigeria

MAIN PLANT IMPORTATION AND EXPORTATION

- Agricultural productions covers four major agroecological zones namely; rainforest, derived forest, savannah and sahel.
- Major crops grown span from the annuals such as. Maize (*Zea mays*) sorghum (*Sorghum bicolor*), millet (Pennisetum glaucum)), cassava (Manihot esculenta) beans (Vigna unguiculata), sesame seeds (*Sesamum indicum*) groundnut (*Arachis hypogea*), melon (*Cucumis melo*), rice (*Oryza sativa*),soybeans (*Glycine max*) and yam (*Discorea spp*)
- To the perennial crops as Cocoa (Theobroma cacao), Cashew (*Anacardium occidentale*), Oil palm (*Elaeis guineense*), Gum Arabic (*Acacia senegal*), Kolanut (*Cola nitida and Cola acuminata*), Palm kernels etc.

MAIN PLANT IMPORTATION AND EXPORTATION

- Main crops for export are Cocoa beans, (*Theobroma cacao*), Cashew nuts (*Anacardium occidentale*), Roselle leaves (*Hibiscus sabdariffa*) Palm kernel Shell, (*Elaeis guineense*) Sesame seeds (*Sesamus indicum*), Kolanut *(Cola nitida and Cola acuminata*) Ginger (*Zingiber officinale*) Various Vegetable leaves (*Amaranthus viridis, Celosia argentea, Telfaria occidentalis Occimum gratissium and Vernonia amygdalina*)
- Major imported crops include Wheat (*Triticum sp)*, Rice (*Oryza sativa*), Apple/Fruits (*Malus sp* etc) and Malt

MAP OF NIGERIA SHOWING THE AREA WHERE AGRICULTURAL CROPS ARE CULTIVATED

TONNES OF FOOD CROPS PRODUCED AT DIFFERENT YEARS

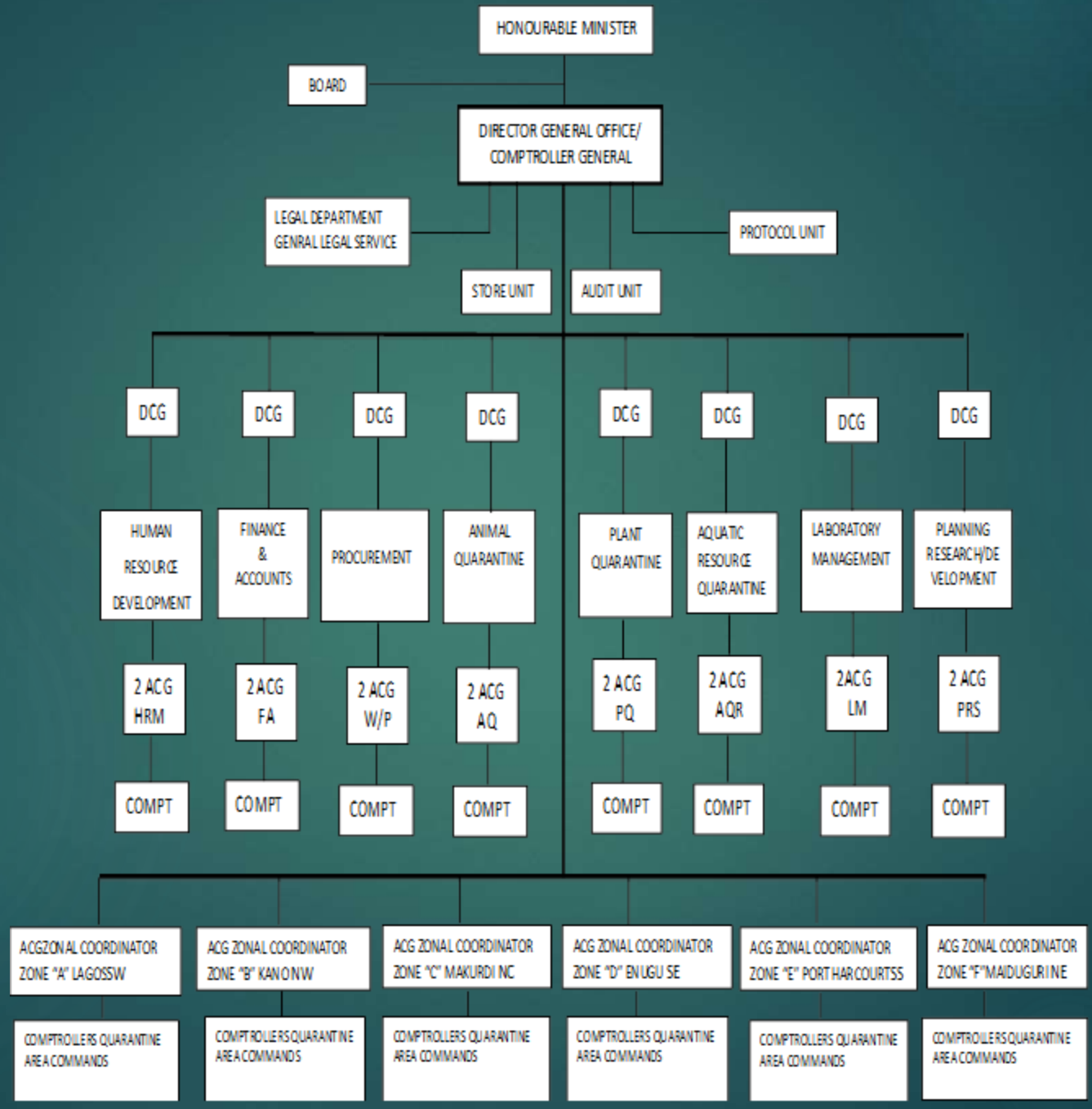
Tonnes produced in	1980	2000	2016
Maize	612,000[7]	4,107,000[7]	764,678[8]
Millet	2,824,000[9]	5,814,000[9]	1,468,668[8]
Guinea Corn	3,690,000[10]	7,711,000[10]	6,939,335[8]
Yam	5,250,000[6]	26,210,000[6]	44,109,615[8]
Cassava	11,500,000[11]	32,697,000[11]	57,134,478[8]
Rice, paddy	1,090,000[12]	3,298,000	6,070,813[8]
Melon seed	94,000[13]	345,000[13]	569,398[8]
Cocoyam	208,000[14]	3,886,000[14]	3,175,842[8]
Sesame seed	15,000[15]	72,000	460,98

TONNES OF CASH CROPS PRODUCED AT DIFFERENT YEARS

CASH CROPS

Tonnes produced in	1980	2000	2016
Oil Palm fruit	5,750,000	8,220,000	7,817,207
Cocoa	153,000	338,000	236,521
Groundnut	471,000	2,901,000	3,028,571
Kola nut	135,000	82,000	143,829
Ginger	200	98,000	522,96

ORGANOGRAM NIGERIA AGRICULTURAL QUARANTINE



PORTS OF ENTRY IN NIGERIA

- Nigerian Agricultural Quarantine Service (NAQS) is the NPPO for Nigeria.
- For the purpose of protecting the countries agriculture, Nigeria is divided into 6 operational zones or regions with
- Regional administrative headquarters and overseeing 48 entry/exit points.
- The major entry/exit are Lagos Warri ,Port Harcourt and Calabar seaports and Land borders (eg Seme, Idiroko, Ilela, Jibiya, Mfum and Gamboru) as well as the Lagos General Post Office. In Lagos Port Harcourt Kano and Ibadan
- These stations constitute the pre-entry inspectorate arm of NAQS. Nigeria has a strong post- entry quarantine (PEQ) system with the technical headquarters located in Ibadan Oyo state Nigeria.
- The Ibadan PEQ at one time served as the Regional training center for phytosanitary inspection and training center for members state of African Union.

Phytosanitary framework and list of regulated pests.

- Formerly, the phytosanitary regulation in Nigeria is governed by The Agriculture (Control of Importation) Act No. 28 of 1959 or Plants etc
- (Control of Importation) Regulations 1970.
- But presently the revised ,NAQS Establishment Act of 2017 which include the plant quarantine regulation on both import and export as well as issues concerning genetically-modified crops and pesticide regulations for agricultural crops is in use The new PQ regulation also include the list of regulated pests.
- NAQS issues phytosanitary certificate/plant passport after the inspection of the plant material for presence or absence of pests. This may take place in the laboratory, in the field and warehouse.
- The consignment maybe disinfected /treated if found necessary.;

Phytosanitary framework and list of regulated pests.cotd

Additional declaration maybe provided to vouch that special condition was observed or treatment was applied. Plant quarantine regulations are in three categories namely: Unrestricted, restricted or prohibited. NAQS/ DPQ regulate the under-listed pests in compliance to IPPC ISPM 19.

LIST OF SOME REGULATED PEST ON CROPS OF ECONOMIC IMPORTANCE

Cashew weevil (*Mecicorynusloripes)* Yellow striped armyworm (*Spodoptera ornithogalli*) Lethal Yellowing Diseases (Lethal Yellowing Diseases) South American leaf blight of rubber (*Microcyclus ulei*) Rubber leaf drop (*Phytophthora meadii*) Hevea phytophthora leaf fall (*Phytophthora botryosa*) Cassava Brown Streak Virus disease (*Cassava Brown Streak Virus* (CBSV))

LIST OF SOME REGULATED PEST ON CROPS OF ECONOMIC IMPORTANCE cotd

Cassava Frog skin disease (Cassava Frog skin disease (CFSD)) Cocoa pod borer (*Conopomorpha cramerella*) Cocoa vascular streak dieback (*Oncobasidium theobromae*) Witches' broom (*Crinipellis perniciosa*) Chestnut downy mildew (*Phytophtora katsurae*) Damping off (*Pythium aphanidermatum*). Maize lethal Necrosis disease (MLND) Fusarium oxysporium (Tropical race 4)

Xylela fastidiosa

Surveillance, non-compliance and management of regulated pests.

Nigeria conducts both detection and delimiting crop pest survey on major crops produced in the country. Pest survey on rice, sesame, yam, sorghum, oil palm, leafy vegetables and cashew and the recent collaboration on the Survey of Pest of Cocoa in Nigeria by Cocoa Research Institute and Nigeria Agricultural Quarantine Service .With more and more pest survey of crops of greater economic importance the pest list of all the crops will be compiled and stored in the data base for easy accessibility

The Plant Quarantine Department also monitors and records pests intercepted at the entry/exit points and plant protection department of universities and research institutes publishes research journal of trials and survey conducted by crop pest specialists.

Surveillance, non-compliance and management of regulated pests cotd.

- Nigeria regularly receives non-compliance notices for the detection or interception of pests on export
- Verification of phytosanitary certificate which has enable the agency to put all the necessary non compliance issues at check

EMERGING PEST IN NIGERIA

- There are many emerging plant pests of concern that have capture headlines in Africa which include : *Bactrocera dorsalis* (Friut fly*), Paracoccus marginatus* (Papaya mealybug), Banana bunchy top disease (BBTD) caused by Banana bunchy top virus (BBTV), Cassava Brown Streak Diseease caused by Cassava Brown Streak Virus , Maize Lethal Necrotic disease and *Tuta absoluta* (South america leaf miner)

- However, MLND, (Fusarium oxysporium TR4 cassava Brown streak disease…. BBTD is confined to small enclave close to Nigeria-Benin Republic border. It is under intensive eradication programme in a joint collaboration with NAQS and International Institute of tropical Agriculture. These four (pests are of great concern because of their threat to trade and food security issues.

EMERGING PEST IN NIGERIA cotd

- The fall army worm was found in 2016, but it is presently under control but not eradicated. It is under survey, to determine the limits of its spread and the production of other related species of Spodoptera frugiperda. (FAW)
- Nigeria is one of the countries in Africa to undergo intensive sensitization programme of maize farmers in order to minimize its damage and to monitor its spread.
- Nigeria and other African countries need more assistance in carrying out more surveillance on these emerging pests and eradicate them to support food security in Africa for the increasing
- food security in Africa for the increasing population

Fruit fly (*Bactrocera dorsalis*)

Eggs hatches into larvae that feed on the pulp for several days causing premature fruit dropping of ripe fruits.

Bactrocera dorsalis (fruit fly

Papaya mealy bug (*Paracoccus marginatus*)
Papaya mealybug cotton-like structures on leaves and fruits




Papaya mealybug (*Paracoccus marginatus*)

- Spread in Benin Republic showed a progression of more than 300 km within 16 months from Ouidah to Cotonou up to Port Novo.
- In Ghana it is estimated that 85% of all papaya farms of about 2,500 ha have been devastated.
- Yield loss of 65% recorded with shrinking of the papaya orchard to 380 ha.
- Export earnings for the papaya industry dropped significantly, with unemployment of 1,700 people in the sector.
- Economic and ecological implications of an imminent pest outbreak in Nigeria is likely to be more dramatic with 94% of papaya produced in West Africa are grown in Nigeria (FAO STAT 2006&2007).

Cassava Brown Streak Virus (CBSD)

Cassava Brown Streak Disease (CBSD)

- Cassava Brown Streak Disease is caused by Cassava Brown Streak Virus CBSV)
- It has emerged as a serious threat to cassava production in East and Southern Africa.
- CBSV infection results on mosaic symptoms on leaves, brown streak on stems and corky necrosis in tuberous roots.
- It is a devastating disease that causes loss of root production and quality as it renders the roots unsellable.
- It spreads through propagation of infected stem cuttings and white fly vector(*Bemisia tabaci*).

FALL ARMY WORM DAMAGE ON MAIZE PLANT

FALL ARMYWORM (*Spodoptera frugiperda*

detected and reported by IITA at Ikenne and Ibadan farms in January, 2016.

- Confirmed to be native to the Americans.

- FAW consume many different crops with many alternate hosts

- FAW spreads quickly across large geographic areas.

- FAW can persist throughout the year.

- In the year 2018 economic yield of maize in the country was better than that of the year 2017. This was observed through response from farmers at the meeting with stakeholders and NAQS management.

EFFECT OF SOUTH AMERICA LEAF MINER *(Tuta absoluta) ON TOMATOE FRUITS*




SOUTH AMERICAN LEAF MINER*(Tuta absoluta)*

- First noticed in Northern part Nigeria (suspected to have been introduced through Northern Africa sub-region) which produces 90% of Nigeria's tomato
- The pest has destroyed the country's staple foods causing tomato shortage resulting in the price going up astronomically up from N1500 to N42,000/basket.
- Risk to potato production and other alternate host plant is as serious as that of tomato

Identification of opportunities and Challenges in Phytosanitary measures

Opportunities

- The need for the establishment of regional pest surveillance and control for FAW will open great opportunity for the maintenance ,increased and sustainable production of maize and other cereals

- Creation of pest free area for the production of mangos (*Magni fera ind ica*)., Oranges (*Citrus sp*) etc free from Bactrocera dorsalis to meet up with International standards

- Nigeria and China has established the protocol for the export of forage sorghum from Nigeria to China. This initiative offers great opportunity for the establishment of pest monitoring and control for the production and safe export of sorghum

Opportunities contd

high quality sorghum forage.

- The same pest monitoring, and control could be applied to the control of White fly(*Bemisia tabaci*)to sustain the production and export of leafy vegetables to Nigeria in Diaspora living in USA, UK and China and other countries this will improve the agricultural produce and prevent the introduction of quarantine pest into the importing countries
- The need for the conduct of phytosanitary capacity evaluation (PCE) for Nigeria under "one belt" initiative.

CHALLENGES

- Dwindling and inadequate funding and budgetary allocation for phytosanitary measures in comparison to growing importance of agriculture in the country.

- Need for the recruitment of new skilled personnel to replace the retired experienced phytosanitary inspectors and technical management.

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- Inadequate training and capacity building for Phytosanitary Inspectors

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- Inconsistencies of government policies on phytosanitary activities in Nigeria and other African countries

- Problems of implementing the International Standard for

International, Regional and Bilateral cooperation in phytosanitary measures among the Chinese initiative. “the Belt and the Road” countries

IPPC Secretariat:

- Assist member countries to structure and domesticate the IPPC strategic framework for 2020-2030.
- Provide guidelines for contracting parties especially from developing countries to update their PQ regulations in conformity to IPPC recommendations and improve on National pest reporting.
- Assist countries to hook up to the e-phyto platform by providing training and capacity building.
- Provide necessary and important tools in the implementation of most ISPMs in Africa and other continents to prevent gaps and improve their understanding.

cotd

- **“Belt and Road” countries:**

Provision of seed health testing facilities and training as effective tool in plant health regulation to ensure safe exchange of germplasm and trade in plants and plant products.

Provision of standard laboratories and scientific equipments for the identification of pest in Nigeria and other African countries.

Assist to rehabilitate the post-entry Quarantine station at Ibadan, Nigeria for it to regain its status as centre for phytosanitary training for Africa especially plant quarantine inspector from West Africa.

Chinese Ministry of Agriculture

- Train plant quarantine inspectors in the area of pest identification

- Participate in the rehabilitation of the post-entry Quarantine station at Ibadan, Nigeria to regain its status as centre for phytosanitary training for Africa especially plant quarantine inspector from West Africa.

- Develop pest surveillance capacity for emerging pests in Africa and build its plants Quarantine regulation to combat and contain the spread of these emerging pests in Africa.

- Capacity building for the Senior Plant Quarantine Officers for proper monitoring of Phytosanitary activities in Nigeria and other African countries.

Chinese Ministry of Agriculture cotd

- Development of documentation data sheet for the identification of the emerging pest in Nigeria and Africa continent

THANK YOU FOR LISTENING