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**CHALLENGES TO MEETING BEST PRACTICE  
PROCEDURES IN QUARANTINE SERVICE DELIVERY**

**Introduction**

What is Best Practice or Available Practice? It is the most current or modern technique employed in carrying out a function using what is considered as the state-of-art method or methodology available at that point in time. In the food supply chain are issues of Manufacturers Best Practices (GMP), Good Hygienic Practices (GHP) and the development of a Hazard Analysis Critical Control Post (HACCP) along the production and supply chain. HACCP is the modern food safety measure for quality assurance. It is a deviation from the traditional system that only puts into place measures to control after it has failed. HACCP on the other hand is a preventive system that is based on identifying areas where hazards are likely to occur in the entire process, with built-in safety caps and opportunities in place and measures to prevent those hazards from occurring. The integration of GMPs and GHPs in HACCP system is the

assimilation of their basic and general principle into a new overall strategy.

What therefore is Quality and Quality Control? The word Quality embraces meanings such as safety, gastronomic delights, purity, nutrition, consistency, honesty (e.g. in labeling), value and product excellence while Quality Control on the other hand are techniques and activities that are used to fulfill the requirements for quality.

The need for best practice is primarily due to

- (a) increase in number of food borne diseases due to poor handling and methods of production; and
- (b) changes in disease causing microorganisms; increase in microbial population can and has led to the evolution of new pathogens; development of new vigilant strains in old pathogens, development of antibiotic resistant strains that can make diseases more difficult to treat.

Quarantine on the other hand is the totality of measures taken to prevent the entry of foreign exotic pests, pathogens, and diseases of plants, animal and aquatic resources through international boundaries/travelers and at the same time prevent the dissemination across international boundaries of these organisms through export trade. All countries require that domestically produced agricultural, food and health products and imported goods satisfy certain minimum levels of quality, health and safety standards. These standards are the Sanitary and Phytosanitary

Measures (SPS) measures. SPS measures refer to policies designed by consuming countries to protect human and animal life from risks arising from additives, contaminants, toxins or disease – causing organisms in food, protect human life from disease carried by pests and animals, protect animals, aquatic resources and plants from pests, diseases and disease causing organisms and to protect an importing country from the entry, establishment or spread of pest.

Sanitary and Phytosanitary Standards deal with:

- plant, animal and aquatic resources quarantine
- certification assurance of food safety and security which deal with contaminants in agricultural products and poisonous substances in food or drink.
- checking free zones from pests or diseases
- other sanitary and phytosanitary measures

## **THE INTERNATIONAL REGULATORY FRAMEWORK ON QUALITY CONTROL QUARANTINE OF AGRICULTURAL PRODUCTS**

The International Regulatory Framework on the establishment of the Agreement on the Application of Sanitary and Phytosanitary measures and Agreement on Technical Barriers to Trade (TBT Agreement) are under the General Agreement on Tariff and Trade (GATT), in Organization with The Food and Agricultural Organisation of the United Nations Codex Alimentarius Commission (CAC) measures, guidelines and regulations; and other international conventions and agreements to which

members nations of the World Trade Organisation (WTO), who are signatories must meet their obligations to ensure implementation and compliance with standards on quality and safety contained therein. These include International Plant Protection Convention (IPPC), ECOWAS Rules and Regulations, European Union Commission and Decision on Aquatic Animal and Products, Convention on International Trade in Endangered Species of wide Fauna (CITES), International Office of Epizootics (OIE), Bioterrorism Act, etc.

With regards to good safety measures, World Trade Organisation (WTO) members must base their national measures on International Standards guidelines and other recommendations and pleas by the CAC. However, the nations have rights to apply national measures necessary to protect human, animal and plant life and health, provided such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevails, or a disguised restriction on international trade.

**What are the Advantages/Socio-Economic impacts of Best Practices?** These include but are not limited to:

- Prevention/arrest of transfer introduction of diseases across and within borders
- Assurance of food safety and security
- Ensure and encourage fair trade and confidence in International markets

- Reduce product rejection in the International markets
- Prevention of food borne diseases, viruses, death etcetera
- Encourages water/air/soil pollution control
- Increase in agricultural production
- Ensure disease control/prevent loss of production and revenue
- Increase in earnings and investment in the agricultural sector: increase in investment will reduce poverty, generate employment, ensure youth empowerment, reduce youth restiveness
- Generate and increase foreign exchange earnings (competitive market pricing) and increase local earnings from good quality products
- Reduce post harvest losses
- Increase consumer satisfaction through products' safety and attractiveness, et cetera
- Ensure proper monitoring, surveillance, control measures and standards in agricultural production, processing and marketing
- Protection of indigenous plant, animal, aquatic resources.

## **BEST PRACTICE PROCEDURES IN QUARANTINE SERVICE DELIVERY**

### **Aquatic Resources and Products**

These are quality control standards in production, processing storage and marketing conditions and application of farm inputs such as feeds, chemicals, fertilizers, etc.

These are standards that must be adhered to and enforced to ensure the aquatic resources and their products gets to consumers in wholesome form from production throughout the entire supply chain.

### **Production:**

There must be general management practices on the farm. This must include having strict sanitary measures in place for the production systems and farm equipments which include taking readings and keeping records of physiochemical parameters of the environment (water), number of organism, quantity and application of feed and other inputs etcetera.

- Standardisation of seeds – aquatic resource young ones:  
Establishment of guidelines for producing/ensuring good quality seed certifications
- Development and maintenance of good quality broodstock food with the right type of feed, growth in a very healthy environment to a mature age that guarantees the production of good quality organisms, eggs and milt is ensured.
- Each farm or production unit must develop an HACCP plan that must be updated regularly while farms must be subjected to auditing periodically by the Service.

### **Processing:**

Construction of processing facilities should be standardized. The facility must be L shaped or a straight line and totally screened to avoid cross-contamination of any form. The processing facility such as a smoking kiln,

drying chamber must have a temperature regulator and smoke gauge conspicuously fitted. All processing facility must have an HACCP plan.

### **Marketing:**

Marketing strategy must be products specific for live/fresh, foreign, smoked, dried, salted etcetera. There must be a HACCP plan in place or all aspects of the supply chains – handling, packaging, storage, preservation and transportation.

For products to be exported out of Nigeria, a sampling plan must be put in place in batch the products. Batching can be by sizes, species and based on overall quality. Samples will be collected batch/batch for analysis. Samples must be examined organolephically, analyzed chemically and microbiologically: The analytical results must be within acceptable standards/limits of such products. There are several other guidelines for the export of fish and fish products to the EU markets and also to the US markets.

### **Conditions for the Export of Aquatic Resources (Live Fish) from Nigeria**

- All exports of aquatic resources (live fish) from the country must be by a limited liability company registered with the Corporate Affairs Commission in Nigeria. The certified true copy of the Memorandum of Association and Certificate of Registration MUST accompany all applications while the originals will be submitted for viewing only.

- The application for approval to export aquatic resources (live fish) MUST be on the letter head of the exporting company. The letter must clearly state the intent to export aquatic resources (live fish); the scientific name of the species being exported, the common name and the local name of if known, the total number of aquatic resources (live fish); total weight mode of transportation out of the country. The application MUST be addressed to:

The Executive Director,  
Nigeria Agricultural Quarantine Service (NAQS),  
Abuja.

Attention: Head, Aquatic Resources (AR)

- All exports MUST be accompanied by a valid Export Permit after approval to export must have been given.
- Approval to export is subject to the inspection of the intended Holding Facility (farm, tanks, ponds etcetera) for the aquatic resource (live fish). This MUST be constructed to specifications and approved standards according to specified guidelines as holding facility for quarantine of the aquatic resource. The facility must have been inspected by aquatic resource quarantine officers and approved as appropriate for export purposes. Inspection of facility is carried out at periodically and for renewal of Export Permit.
- The Aquatic Resources product or other regulated articles for export MUST be accompanied by a Sanitary Health Certificate indicating



that the resources described therein have been inspected or tested according to official procedures and are considered free from quarantine pests specified by the importing party (country), including those for regulated non-quarantine pests.

- All exporters must complete Form O and an Health Certificate/Inventory Form at the point of exit. These forms will document details on the export (Data Forms).
- All export must be packaged as approved in Styro foam boxes clearly labeled with details of the Consignor and Consignee, country of destination, number of packaging and waybill number.
- All exporter of live fish must belong to the registered Association of Ornamental
- Fish Farmers and Exporters of Nigeria (AOFFON)
- For export of live fish is a restriction on the total number of **hognose** (*Gnathonemus patensii*) to one thousand per shipment.
- All exporters must repatriate funds generated from export of live fish from the country. Evidences of repatriation (bank statements, Moneygram, western union receipts) must be submitted for renewal of Export Permit for subsequent shipment.

## **Conditions for the Import of Aquatic Resources (Live fish) into Nigeria**

All imports of aquatic resources (live fish) into the country must be by a limited liability company registered with the Corporate Affairs Commission in Nigeria. The certified true copy of the Memorandum of Association and Certificate of Registration MUST accompany all applications while the originals will be submitted for viewing only.

The application for approval to import aquatic resources (live fish) MUST be on the letter head of the importing company. The letter must clearly state the intent to import aquatic resources (live fish); the scientific name of the species being imported, the common name and the local name of if known, the total number of aquatic resources (live fish); total weight expected; mode of transportation into the country. The application MUST be addressed to:

The Executive Director,  
Nigeria Agricultural Quarantine Service (NAQS),  
Abuja.  
Attention: Head, Aquatic Resources (AR)

All imports MUST be accompanied by a valid Import Permit after approval to import must have been given.

Approval to import is subject to the inspection of the intended Holding Facility (farm, tanks, ponds etcetera) for the aquatic resource (live fish). This MUST have a good disposal arrangement for the efficient waste

water from the facility. The waste water must not be discharged directly into natural bodies of water (streams, rivers, lakes, et cetera).

The aquatic resources (live fish) to be imported MUST be accompanied by a certificate of origin, including that the resources are from area(s) free from contagious diseases of the species. The resource MUST be certified free from parasites.

All aquatic resources (live fish) to be imported MUST be certified free from signs of communicable diseases such as Vibrio (cholera) or any contagious disease to man or other animals.

A written Notification of Expected Date of Arrival, Port of Entry, Mode of Transportation MUST be submitted to NAQS-AR, as officers of NAQS at Port of Entry must verify import and document on arrival.

It is mandatory to complete the DATA FORM for each import.

Sampling of imported resource, for quarantine, will be carried out on arrival by NAQS officers at port of entry, based on quantity or number of species imported.

Monitoring of the imported resource will be carried out by the NAQS-AR for the next three years. No sale or transfer of the imported resource is allowed without authorization from and documentation by the NAQS-AR.

The holding facility of the down lines must also have in place, approved system of discharge of waste water from the facility.

The importer MUST ensure and facilitate the monitoring of the import within the stipulated period.

### **Plant Quarantine:**

#### **Pre-entry Ports Inspection**

Officers are empowered to carry out the following functions:

- Inspection of carriers (i.e. vehicles, ships, aircrafts)
- Search any persons, baggages, packages, conveyances or any other regulated articles upon entry into or exit from Nigeria
- Ensure that plant imports are accompanied by plant import permits and phytosanitary certificates;
- Take samples of inspected plants, plant products and regulated articles for laboratory tests, pest identification and growing-on-test in quarantine glasshouses at the post entry quarantine station for further phytosanitary action
- Direct at the owners expense, the treatment or disposal, including reshipment and confinement in quarantine sites, of plants, plant products and regulated articles for preventing the spread of regulated pests;
- Be present when official service seal on containers containing plants, plant products and regulated articles are being broken for the prevention of spread of regulated pests;

- Refuse to issue phytosanitary certificate for plants, plant products, and regulated articles for exportation, where the requests are found not to be in compliance with the phytosanitary requirements of the importing country until they have been duly implemented.

### **Post Entry Ports Inspection**

The following activities are carried out at the Plant Quarantine Post-Entry Quarantine Stations:

- Formulation of quarantine regulation on crop basis, which guides importation of plant materials, based on biological risk;
- Issuance of plant Import Permits for the entry of germplasm and authorized plant imports for research and commercial purposes;
- Screening of imported plant/plant materials for pests and pathogen detection in laboratories and through growing-on-test in the glasshouse;
- Inspection, treatment (where necessary) and certification of plant/plant materials for export to ensure that they are pest free and acceptable in the international markets;
- Treatments (fumigation etc) of imported plants and plant materials to rid them of foreign pest before the release to consignees;
- Coordinate internal quarantine process to curtail the establishment/spread of exotic pests/pathogens incursion, and effect control and/or eradication programmes to counter their effects;
- Initiation of Pest Risk Analysis (PRA) to make biological recommendations and decisions;

- Undertaking biotechnological research for the production of pest free planting materials through tissue culturing;
- Developing appropriate linkages with other related scientific organizations (Research Institutes, APDs, Universities and International Organizations).
- Instilling appropriate scientific culture among the staff through participation at meetings, seminars, symposia etc. and access of scientific information through the use of modern information technology (internet).

### **Animal Quarantine:**

#### **Quarantine Service Delivery in Veterinary/Animal**

Decree 10 of 1988 otherwise cited as the “Animal Diseases Control” Decree 24 clearly states the mandate of preventing the introduction, and spread of animal diseases through the importation/exportation of animals, animal products and by-products, infectious agents and biologics.

Service delivery involves the inspection of cargoes, containers, baggages, etc at all the seaports, airports and land borders to ensure compliance with the Act. All imports/exports of animals, animal products etc can only be done under a permit issued by the Quarantine Service which will state in which form these animals and their products can be exported or imported into Nigeria.

The service delivery has interest in the source of the animals, their products and by-products which most times are used as raw materials for food products like, cheese, milk, corned beef and others like toilet soaps

detergents etc whose raw material is inedible beef tallow. A dog for instance, to be imported into a country must have a vaccination certificate, Pet green card, history of origin, if imported without vaccination, may either be vaccinated and quarantined for a minimum of three months or be returned to country of origin.

### **Challenges to meeting Best Practice Procedures in Quarantine Service Delivery**

I have taken time to discuss in details Best Practices and procedures in order to have a grasp of the in-depth of challenges being faced as a nation in meeting Best Practice Procedures in Quarantine Service Delivery. These include and are not limited to:

- Lack of awareness, education and publicity on Best Practices in the Agricultural sector of the economy and Quarantine Service Delivery. There is urgent need for publicity of the NAQS activities in voice and print media and for advertorial on the activities, procedures of the different professional arms.
- Lack of infrastructure: These include functional Quarantine facilities, some up to date state of the art quarantine facilities, that are taken for granted in other countries, are yet to be introduced and put to use in Nigeria; Lack of well equipped laboratories: for effective Quarantine Service Delivery, the nation must have Pathology, Microbiology, Mycology, Virology, Bacteriology, Nematology, Molecular, Immunology laboratories at strategic border posts in the country.

- Lack of established Quality Assurance and Hygiene Management System. The nation does not have sufficient Quality Control Measures in place that will guarantee the safety of the people consuming agricultural products and improve confidence in the products both in the local and international markets.
- Ineffective Import and Export certification due to porous borders, lack of trained professional personnel, administrative bottlenecks and compromises etcetera.
- Lack of supportive Legislation and enforcement of quarantine Service Delivery on agricultural products.
- Lack of Government commitments at Products and Market Development. There are no conscious efforts at developing standards for products meant for the local markets as there are no legislative backing on strict SPS compliance along some agricultural production and supply chain.
- Lack of a reliable data base to provide information on quarantine pests, disease and disease control etcetera.
- Lack of adequate research to back up risk assessments which are prerequisites to some international agreements and conventions.
- Lack of published relevant and useful studies on agricultural products, quarantine services, evolving Best Practices etc.
- Lack of commitment on the part of Government to SPS agreement compliance. No concise national programme to ensure compliance with safety and quality issues in methods of production and food handling.



- Lack of coordinated established relationship between Government and stakeholders of agricultural products: producers, processors, importers, exporters, transporters, stores etcetera.
- Lack of developing professionalism in Best Practices Quarantine Service delivery: There are no deliberated efforts at developing professionalism in the management of Best Practice Quarantine Service delivery. There is the need to develop experts and specialists in plant, aquatic resources and animal quarantine. Unnecessary restrictions/limitations of officers to attend international/conferences, seminars and workshops to update their knowledge and share experiences in Quarantine Service delivery.
- Lack of coordination of activities of Government Regulatory agencies:
  - Regulatory agencies do not complement each other's roles and activities rather there is the struggle for supremacy, rivalry in operations, duplication and overlap of duties to the disadvantages of service delivery.
  - General challenges are lack of adequate funding of Quarantine Service delivery in the country; inconsistent energy supply (electricity, fuel) which hampers productivity and movement, illiteracy and deviant attitudes to change, by the poor larger population of agricultural producers; ignorance of knowledge; activities of tout as clearing agents and smugglers of agricultural products; lack of developed packaging industries, undeveloped agricultural transportation system et cetera.

**Conclusion:** In conclusion, therefore, it is important as quarantine officers to

- Be adequately informed on international guidelines/directives on agricultural production, disease and disease control.
- Develop a national guideline/directive on Best Practices in Quarantine Delivery for the agricultural sector.
- As a nation, we must define and develop criteria for approving a farm or zone for production of agricultural products. The approval must be strictly based on health status of the environment/area.
- Develop an official structure for preventions control of diseases, a reporting system for incidences and occurrences of disease/disease outbreak.
- Introduce immediate quality control standards in production, processing, sales, and storage, loading and application of farm inputs such as feeds, chemicals and fertilizers etc.

Thank you.