ASTA & SAA Project

Vegetables & flower seed multiplication and production in PERU

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PERU VEGETABLE AND FLOWER SEED MULTIPLICATION AND PRODUCTION PROJECT:

Assessment of Needs and Improvement of Key Challenges

REPORT PHASE 1

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Introduction

The American Seed Trade Association (ASTA), through the Seed Association of the Americas (SAA) is developing a project with the intention to encourage and increase production of vegetable and flower seeds in Peru and improve the environment for companies that are already producing there, as well as facilitating the movement of seeds between both countries.

The project shall provide US vegetable and flower seed companies with a comprehensive overview of the current challenges and opportunities for producing seeds in Peru and an industry strategy to mitigate those challenges.

The objective is to perform an evaluation of phytosanitary regulation in Peru, knowing the interests of companies, to propose improvements in the seed movement in technical and administrative aspects.

The project includes an objective assessment of the challenges faced by US companies producing or interested in producing vegetable and flower seeds in Peru and a study of the impact of relevant seed policies and regulations.

The assessment should also provide ASTA and its members with key recommendations for actions to improve business opportunities for the production and trade of flower and vegetable seeds. This phase will include issues related to phytosanitary policies, the seed law and the production environment as well as direct communication with ASTA member companies.

It will be carried out in two phases and this report refers to Phase 1, which included a survey to ASTA members, visits and coordination meetings in Peru with key stakeholders from the public and private sectors and face-to-face meetings with seed company's participants that attended the SAA Seed Congress in Argentina.

1. - Survey

1.1 Preparation, distribution and interviews.

According to the objective of the project and the indications of ASTA, two types of surveys were drawn up: one for the companies that were producing seeds in Peru and another for those companies interested in producing in Peru.

ASTA distributed them to three groups:

- ASTA's Vegetable and Flower Emerging Issues Working Group
- ASTA members attending the SAA Congress
- ASTA members who expressed interest in Peru earlier this summer

Six surveys were received from companies which are already installed in Peru producing vegetable seeds and a US company interested in producing flower seeds in Peru.

During the SAA Congress, interviews were held with representatives of 8 companies, some of them together with Ric Dunkle and Abigail Struxnes of ASTA.

The following are comments of the companies in the interviews and surveys, extracted textually.

- *Packaging requirements,* SENASA is very strict in their requirements for packaging. If seed arrives in paper packets, the seed is automatically put in quarantine.

  If the packet is taped shut rather than sealed correctly, SENASA can retain the seed, destroy or quarantine it.

  We have seen issues with too strict review of seed imported that may have "weed" seeds; plants as pests list probably needs updating (eliminate species that are not weeds or already exist in Peru).

- *Countries of origin* that are not listed in SENASA database.
  Combination between country of origin and export place doesn´t exist in their database because at least one of the countries doesn´t exist.

  Combination between country of origin and export place doesn´t exist in their database because both countries are existing individually in their database as an origin country but not as a re-exporter country.

- *Sampling seeds* at customs for lab analysis. Take too much seeds and the lab results take close to 30 days. During that time the seeds are in custody by customs.

  The authority opens envelopes, packages, cans to take seeds for lab testing; this consumes seeds that could be used for multiplication and creates extra planning considerations. Many times there were already phyto documents that seed was free from pests. For example, Pepper and sweet Corn seed are considered a reasonable crop with risk of pests; therefore, SENASA always take sample for each country origin.

- The non-compliance of the phytosanitary requirements for SENASA to the importation of pepper seed from India. SENASA require certificated to field inspection and laboratory, however, these seeds only have one of them.

- Corn seed zero Tolerance of LLP in conventional Seeds

- Specific Seed Treatments for seed import

- Pathogens regulated that are not seed-borne

- *Peruvian Seed for future Re-export:* For re-export purposes Peru is asked for more pathogens to be written in the Additional Declaration (AD) of the phytosanitary certificate than normally necessary for import into the European Union. Peru is very

restrictive in giving these extra AD's, while ISPM 38 is clarifying that specific need to Seed companies.

- SENASA requires copies of the IP's or Import laws involved to be sent, which companies often don't have because not all countries work with IP's or publish requirements. The consequence for re-export could be blocked shipments because of insufficient information or additional testing instead of working with an AD (extra costs/time to customer).

› *Risk Management:* Peru has a list of "high risk countries" vs. a list of "low risk" countries
  - The Netherlands was on the "High risk" list, which leads to imposing more strict rules and extra on-shore testing of imported seeds.
  - There is uncertainty of the current status is of the United States (attached rule is from January 2015). It would be beneficial to know current country statuses and reasoning behind status.

Carrot seed example: For carrot originating from the US there is the following rule: *The Inspector of SENASA will take a sample to be referred to the Diagnostic Center Unit of Plant Health of SENASA, leaving the loading retained until obtaining the results of the analysis. The cost of the diagnosis will be assumed by the importer.* This is quite restrictive, which could be the result of the risk analysis by Peru.

1.2 Survey Answers Evaluation

1. - *Horticultural companies*: answered surveys cover all important companies in this area that are producing seeds in Peru in the last 25 years. The most recent one began to produce seeds 14 years ago. Therefore, they have substantive production experience.

2. - *Crops*: Tomato, Pepper, Tomatillo, Cucurbits (cucumber, zucchini, melon, and watermelon), other crops: Lettuce, Carrot, Cauliflower, Sweet corn.

3. - *Phytosanitary import requirements*.

a) Without AD. An important amount of origins for each species does not require AD, but only a general requirement of free of pests. The use of this general requirement has made possible an active seeds movement, but with the counterpart that sample extraction is always required, to perform analysis or to follow a post-entry quarantine, upon entry.

b) Case of some origins / species requiring AD certification, pose several problems to the companies:

- Certification of pests that are not transmitted by seeds.

- Field inspection requirements, including analysis on the plant, that do not have options to perform analysis on seeds.

- Sample extraction requirement for analysis at entry.

c) Sampling at entry implies uncertainty and time to finally get the seed released, as well as concerns about the sample size.

d) Several companies have problems with plants as pests (weeds) and seeds of other species, because tolerances are very restrictive.

4. - *Pest Risk Analysis*. Companies indicate that very few are required or pending. For exporting from Peru, they require the support of SENASA to obtain the information requested by third countries, to carry out the PRA.

5. - *Small lots*, currently importers can request post-entry quarantine for a consignment. It is perceivable that there is a need to define formal procedures that include all possible phytosanitary situations and measures.

6. - Other problems:

-Management of the Peruvian import permit in the US. (SENASA requirements are entered into the APHIS system for each permit).

- Re-export, companies express difficulties in achieving the required certification for several countries on the same lot.

FLOWERS: A survey from a company with interest to produce in Peru was received. Species that this company produces in the US are: Petunia, Pansy, Vinca, Dianthus, Marigold, Angeloni. The only problem it poses in the survey is the handling of import permits.

The surveys received as well as the interviews carried out during the SAA Congress, provided the main lines of the concerns of the companies on the phytosanitary aspects, to be evaluated at the time of the visit to Peru.

2. - Review of the Regulatory Framework for seeds

This information has been obtained from the SENASA Web Site and is presented translated but with minimal modification.

2.1 Phytosanitary regulation

2.1.1 Operation of SENASA

According to the information available on its Website, the Servicio Nacional de Sanidad Agraria (SENASA) of Peru, in order to achieve the satisfaction of its users, has implemented an ISO 9001: 2015 Quality Management System in the processes of:

- Entry authorization and Sanitary- Phytosanitary Certification
- Standards setting for Plant and Animal Quarantine.

Likewise, ISO 9001: 2015 and ISO / IEC 17025: 2017 in the processes of:

- Animal Health Diagnosis
- Plant Health Diagnosis
- Control of Inputs and Toxic Residues

They rely on an Integrated Management System, based on the principles of quality management, process management, information security and internal control; the same one that permanently evaluates to promote its continuous improvement and fulfillment of the institutional objectives.

In the plant area, the Office of Diagnosis and Production Center is the support body, where the Plant Health Diagnostic Center is located and the Plant Health Directorate is the executive body

- Plant Health Diagnostic Center

The Plant Health Diagnostic Centers, under the framework of Law No. 27322 on Agricultural Health, is responsible for carrying out the diagnosis and identification of pests that are intercepted in plants, plant products and other regulated articles that enter the national territory, allowing the adoption of control measures to reduce the risks of introduction of exotic or quarantine pest and, avoiding significant economic losses to national agriculture. It also supports the export processes of plant products through surveys and field diagnostics, by detecting pests considered as limiting factors in international trade.

In the same way, it reinforces the actions of official nature, analyzing samples of plants, plant products or specimens sent by the Executive Directorates of SENASA at the national level in support of phytosanitary programs and projects and, for the benefit of the country's farmers.

Since 2006, the Plant Health Diagnostic Center has started the process of implementing the ISO 9001: 2000 Quality Management System.

Laboratory areas:

- Entomology

It performs identification of insects and mites in plants and plant products, which allows timely determination of exotic pests and changes in the distribution of pests in the country, in order to control them.

The main tests performed are: identification of immature and adult states of the Insecta class and some arthropods of other classes associated with plants and plant products. The systematic identification and taxonomy of insects is used to identify species.

Likewise, there is a Referential Insect Collection, initiated by Dr. Charles Townsend, in the year 1927, which is increased and updated every year.

› Mycology

It develops diagnostic procedures to determine species or subspecies of phytopathogenic fungi, in crops and seeds of horticultural, forage, industrial, ornamental, forest and fruit species.
Diagnostic methodologies are traditional phytopathological techniques (observation of symptoms, mounting of pathogen structures directly from the sample and isolation in selective and / or differential culture media, and use of taxonomic keys).

› Bacteriology

Performs tests to determine species, subspecies and pathovar of phytopathogenic bacteria, in crops and seeds of horticultural, forage, industrial, ornamental, forest, fruit and other species.
The diagnostic methodologies correspond to conventional microbiological techniques (selective culture media, differential, biochemicals set) and serological techniques (NCM-ELISA, DAS-ELISA, Immunoblot, Immunostrip).

› Virology

Performs the detection and diagnosis of diseases caused by viruses that affect crops of horticultural, fruit, industrial, forage, ornamental and others of economic importance and quarantine species, using the techniques of Indirect ELISA, DAS-ELISA and Immunostrips.
The diagnostic methodologies as well as the taxonomic classification used are governed by ICTV, International Committee of Virus Taxonomy, a globally accepted organization.

› Nematology

It determines the presence of phytoparasitic nematodes of economic importance, in their mobile and cystic forms in soil, roots and plant tissue.
The extraction methods used are: Baerman modified (trays), for the determination of mobile forms, Centrifuge method for mobile soil nematodes and modified Fenwick, for cystic forms.
For the identification of phytoparasite nematode species, it uses conventional taxonomy and for the identification of Meloidogyne and Globodera species, it is done by comparing perineal patterns.

› Weeds

Performs taxonomic identification of weed seed species, especially those that are quarantine and can enter the national territory through imports.

It also executes the identification of weeds in the plant stage, from the national territory. This laboratory has a Herbarium of Reference and a Collection of Seeds of weeds.

❖ Directorate of Plant Health

The Directorate of Plant Health has two sub-directorates related to the issues of import, export, PRA and Phytosanitary Surveillance.

The Sub-Directorate of Pest Risk Analysis and Phytosanitary Surveillance is the body responsible for planning and supervising phytosanitary surveillance, as well as carrying out pest risk analyzes.

Regarding the Phytosanitary Surveillance System: SENASA, received a project to strengthen the Phytosanitary Surveillance System that allowed increasing the generation of timely and efficient phytosanitary information on the occurrence of pests in the country and abroad.

They carry out property surveillance in the main crops of economic importance and for this they have a procedure manual for the phytosanitary inspection of selected properties.

Preparation of PRA studies is carried out based on the procedure approved by SENASA, which is based on the guidelines of the International Standards of Phytosanitary Measures (ISPM) 2, 11 and 21 and Resolution No. 025 of the General Secretariat of the Andean Community. They have an approved procedure for the preparation of this study (PRO-SARVF-01).

List of quarantine pests: This list is constantly updated and is intended to define agricultural pests not present with a greater phytosanitary risk for crops in Peru. This list has the scientific name of the pests their taxonomic level and the host. Because it does not contain the pathway, it is not possible to know which pests are regulated for seeds. It contains more than 80 regulated weeds. The updated list appears in the following link Lista de Plagas Cuarentenarias (PDF) Updated July 04, 2019

Phytosanitary import requirements: The phytosanitary import requirements are established based on the PRA carried out by seed species, country of origin and country of origin and can be consulted at the following link:

https://servicios.senasa.gob.pe/consultaRequisitos/consultarRequisitos.action

There is a specific regulation regarding plants as pests or weeds, as we commonly call them. It is indicated that all shipments of seeds that have phytosanitary import requirements established by SENASA, must be free of quarantine weeds for Peru.

The inspector at the point of entry may perform a random sampling to be sent to the diagnostic center.

If the result of the diagnosis detects a quarantine weed, the shipment will be rejected and if non-quarantine weeds are detected, the following tolerances are established for entry to the country:

a) For annual weed seeds the maximum tolerance is 0.1%

b) For perennial weed seeds the tolerance is 0.05%

If shipments exceed that tolerance, there is a possibility of physical selection and separation.

The Sub-Directorate of Plant Quarantine, aims to prevent the entry of regulated pests in imported consignments, international transit and to regulated areas, as well as to ensure the phytosanitary quality of exported consignments, in support of national production and agro exports.

Performs actions on exports, imports, international transit, internal quarantine and phytosanitary treatments and has the following functions:

- Development of standards and phytosanitary procedures.
- Establishes through Resolution phytosanitary import requirements, applicable to the processes of entering the country, international transit and internal quarantine of plants, plant products and other regulated articles.
- Issuance of Phytosanitary Import Permits, of International Transit and other Registries (Registry of Importers, responsible professionals, places of production for post-entry quarantine, Germplasm Import Registry, etc.) and Certificates requested in the importation of products of plant origin.
- Phytosanitary inspection through external and internal Control Points for export, import and internal quarantine of plant products and other regulated articles.
- Issuance of Phytosanitary Export Certificates, Re-Export Certificates and Export Certificates of industrialized products for export purposes.
- Authorization to mobilize plant products in the national territory, through the so-called international transit.
- They are the official authority responsible for information and notification before the World Trade Organization (WTO) regarding phytosanitary measures.

2.1.2 Legal framework for import and export

Decreto Legislativo 1059. Ley General de Sanidad Agraria (General Law on Agricultural Health).

http://www.vertic.org/media/National%20Legislation/Peru/PE_Ley_Sanidad_Agraria_1059.pdf

Decreto Supremo N° 018-2008- Reglamento de la Ley General de Sanidad Vegetal (Regulation of the General Law Plant Health).
https://www.senasa.gob.pe/senasa/descargasarchivos/jer/GESTION/DS%20018-2008-AG.pdf

Decreto Supremo Nº 032-2003-AG, Aprueba el reglamento de cuarentena vegetal (Approves Regulation for plant quarantine).
https://www.senasa.gob.pe/senasa/descargasarchivos/2014/10/DS-032.pdf

Decreto Supremo N° 015-2015. Modifica y complementa normas reglamentarias para fortalecer el marco normativo del SENASA. (Modifies and complements regulations to strengthen SENASA legal framework).

https://www.minagri.gob.pe/portal/decreto-supremo/ds-2015/13836-decreto-supremo-n-015-2015-minagri

Resolución Directoral Nº 032-2003 AG. Establecen Categorías de Riesgo Fitosanitario. (Establishes phytosanitary risk categories).
https://www.senasa.gob.pe/senasa/descargasarchivos/2014/10/08.pdf

Resolución Directoral N° 72-2008-AG-SENASA-DSV. Precisan que todos los envíos de semillas sexuales que cuentan con requisitos fitosanitarios establecidos por el SENASA para su importación, deben venir libres de malezas cuarentenarias para el Perú. (Establishes weed regulation for import).
https://www.senasa.gob.pe/senasa/descargasarchivos/2014/10/013-RD-N%C2%B0-72-2008-AG-SENASA-DSV.pdf

Resoluciones Directorales que aprueban requisitos fitosanitarios. (Phytosanitary import requirements are approved by Directors resolution)

Procedimiento para el desarrollo de ARP para plantas, productos vegetales y otros artículos reglamentados. (PRO-SARVF-01) (Procedures for PRA preparation)

https://www.senasa.gob.pe/senasa/descargasarchivos/2014/12/PROCEDIMIENTO-DE-ARP-2013.pdf

Procedimiento de Autorización fitosanitaria para bancos de germoplasma, laboratorios y/o viveros internacionales (PRO-SARVF-01) (Procedures for phytosanitary authorization of germplasm banks, laboratories and / or international nurseries).
https://www.senasa.gob.pe/senasa/descargasarchivos/jer/DIR_NOR_CUAVEG/RD%2012-2010-AG-SENASA-DSV.pdf

Procedimiento de Autorización de Personas Naturales o Jurídicas que ejecutan Tratamientos Químicos con fines Fitosanitarios (PRO-SCV-TC-01). (Procedure for Authorization of Natural or Legal Persons that execute Chemical Treatments for Phytosanitary Purposes).
https://www.senasa.gob.pe/senasa/descargasarchivos/2014/10/07.pdf

Procedimiento para la inspección fitosanitaria y toma de muestra para el diagnóstico fitosanitario en la importación de semilla sexual (PRO-SCV-16). (Procedures for phytosanitary inspection and sampling for diagnostics in the importation of sexual seed).

https://www.senasa.gob.pe/senasa/descargasarchivos/2014/12/Procedimiento-PRO-SCV-16.pdf

Directiva General Nº 043-2000-AG-SENASA-DGSV-DDF. Manual de procedimiento de Cuarentena Pos entrada (Post Entry Quarantine Procedure Manual)

Procedimiento de Guarda Custodia (PRO-SCV 17). (Custody guard procedures).

https://www.senasa.gob.pe/senasa/descargasarchivos/2014/12/24-ene2018-procd.-de-GC.pdf

2.1.3 Import procedures

Phytosanitary Import Permit (PFI): It is an official document issued by SENASA that authorizes the importation of a consignment of plants, plant products and regulated articles.

For the importation of plants or plant products into the country, the importer must have this document prior to the inspection, certification and shipment of the product to our country.

It is valid for 90 calendar days and is valid for a single shipment. Extension for additional 90 days within the period of validity of the PFI is obtained from VUCE.

Phytosanitary Inspection: Mandatory procedure for the entry into the country of plants, plant products and regulated items, begins with the request to obtain the Inspection and Verification Report (IIV)

Once the phytosanitary inspection is finished, the Plant Quarantine Inspector issues the Inspection and Verification Report and informs the Customs (SUNAT) and Storage Terminals of the report corresponding to the inspected consignment.

The final opinions issued by the Quarantine Inspector are: entry or rejection (destruction or re-shipment to the country of origin)

Post-entry quarantine (CPE): It is the procedure by which a plant propagative material is subject to confinement actions in a place of production of the importer but authorized by SENASA, for a specific period.

The purpose of this procedure is to verify the absence of potential pests, which could have been transported in the imported material, difficult to intercept at the points of entry and which are usually manifested during the active growth of the crop.

The material subject to post-entry quarantine is:

- Plants and their parts: cuttings, stakes, buds, corms, bulbs, rhizomes and other similar destined for propagation and/or planting.
- Germplasm of sexual seed.
- Organisms and biological control entities that arrive in special culture media or on pest organisms.
- Others, when the Plant Quarantine Branch deems it necessary and indicates it by rule or in the PFI.

Authorized points of entry: Only through the Quarantine Air and Maritime Control posts of Callao, Lima Post Custom and others determined by SENASA, by specific authorization of the General Directorate of Plant Health.

Custody Guard: Official procedure that ensures that certain seeds, plant products and other imported regulated articles are stocked in private warehouses, previously authorized by SENASA until the official procedures that determine their entry are concluded.

The requirements to qualify for the custody procedure are the following:

- Be a commercial lot (seed samples or those for experimental purposes are not included)
- Comply with the presentation of the required documentation for importation (Phytosanitary Import Permit, Phytosanitary Certificate of Origin and Warehouse Register for Custody), as established by SENASA
- To be "apparently free of pests" at the phytosanitary inspection at the point of entry, otherwise, the opinions of the Plant Quarantine Inspector at the point of entry must be met.

Specific procedure: There are two import procedures that it is important to explain in more detail.

Procedure for the importation of germplasm: It is the entry of seed germplasm into the country, which is carried out by public and private Research Centers of the country, for germplasm from International Research Centers or Institutes.

- The importation of this material is necessarily subject to the post-entry quarantine procedure.

The documentary requirements:

- Simple copy of the legal entity constitution document
- Document proving to be a research center in agriculture that for the fulfillment of its objectives, imports seed
- List of Research Centers from which seeds are intended to be imported.
- List of species and countries of origin of the seeds to be imported.

Phytosanitary inspection and sampling for phytosanitary diagnosis in the import of seeds. The objective of this procedure is to establish the basic guidelines to be considered in the phytosanitary inspection and sampling, of the seed shipments that are imported, in order to verify their phytosanitary condition upon arrival.

Several terms are defined as: Closed post-entry quarantine, container, conditioned shipment, sample, work subsample, sachet, vials and two referring to the classification of the countries of origin of the import:

Country of High Phytosanitary Risk (PRFA): Country of origin of the seeds, which reports a history of interceptions of quarantine pests in shipments imported by country, presence of quarantine pests in their territories, which is transmitted by seeds or there are not import records of seeds.

Country with Low Phytosanitary Risk (PRFB): Country of origin of the seeds, which has no history of interceptions of quarantine pests in shipments imported by country, does not have a report of quarantine pests in its territories, which is transmitted by seeds .

In the general considerations it mentions the following:

- The Directorate of Plan Health will periodically evaluate the relationship of PRFA and PRFB by updating the country lists based on the criteria indicated in the definitions. This list is available on the SENASA portal.
- SENASA only authorizes the entry of seed shipments, regardless of their volume of import and intended use, if they are free of quarantine pests.
- The importer or interested party assumes the total cost that demands the performance of the phytosanitary measure indicate by SENASA.
- Once the ICV (inspector) has taken the work subsample, it will proceed to seal the surplus of seeds with the official SENASA label on the bags or in their original containers, as appropriate, in order to maintain the traceability of the shipments.
- The ICV must prepare the seed subsample on the same day of inspection or exceptionally on the morning, next day, so that it can be sent to the UCDSV (Diagnostic Center) following established packaging and identification procedures.
- At the end of the working day, the ICV enters all the samples obtained during the inspection day duly identified (product, weight, importer, file number, requested analysis and sampling date) to the administrator or person in charge of the PC (control point), who will keep them in custody in a safe storage area until they are referred to the UCDSV.
- Under no circumstances seed samples obtained should be kept by the inspector, in the desks or drawers for personal or collective use of the office. The administrator or responsible for the PC, for traceability purposes, must be in charge of the registration of the entry and exit of the samples (REG-SCV-01) that is carried out, which can be requested for monitoring or auditing purposes.
- Those shipments that have been selected by the system for phytosanitary diagnosis and whose amounts of seeds do not reach the minimum necessary for their referral to the UCDSV , according to Annex N ° 3 the user or his customs agent must inform the ICV before phytosanitary inspection that he welcomes to use to the post-entry quarantine procedure or custody guard.

Documentary verification and phytosanitary inspection procedures are detailed where the inspector can opt for the following measures:

a) **Without phytosanitary analysis:** when there is not phytosanitary import requirement or no phytosanitary problem was found, the ICV issues the IIV / APIV with favorable opinion, or;

b) **With phytosanitary analysis:** when a phytosanitary import requirement exists, a phytosanitary problem is detected in the consignment or as a result of the random selection for consignments in cans or sachets, established by the DSV, sampling for phytosanitary diagnostic is determined.

Another item of this procedure is related to the determination of the number of packages selected for inspection where it is indicated:

- The species that make up the shipment must be identified and classified according to the species, type of packaging and country of origin. The amount of packages to be inspected is selected based on the risk associated with the country of origin taking into account the values considered in Annex N ° 1 for PRFA and Annex 2 for PRB, in case some country is not categorized, this new country is considered into the PRFA list.
- In those cases where the shipment is made up of seeds of the same species, but of different origins, each species origin is considered for sampling as indicated in the previous item.
- In those cases where the shipment is made up of seeds of different species and it is possible to identify the country of origin, each one of these species will be subject to the amounts indicated in Annex No. 1 and No. 2 for inspection as appropriate.
- Thus, for example, if you have a phytosanitary import permit for lettuce, cauliflower and pumpkin seeds, whose declared origin is USA and Holland and provenance Spain, to begin, the origin of each species shall be identified:
- Lettuce seed (Origin Holland), Cauliflower seed (Origin Holland and USA), pumpkin seeds (origin USA).
- The ICV separately inspects each species and origin for which it selects the quantities indicated in Annexes 1 or 2.

Related to sampling, the product must be identifiable, uniform, the sampling unit is the type of package and all possible situations are detailed. They have defined the quantity of seeds to be analyzed, according to species, country and type of analysis to be carried out.

When each species of seeds that make up the shipment does not exceed 0.2 kilos, the importer may choose one of the following options:

a) Retention of the shipment in primary zone or authorized warehouse for custody, until the favorable opinion of ICV or

b) Entry of the shipment for follow up of the closed post-entry quarantine at a place of production authorized by SENASA; for which, the ICV of the DE initiates this procedure. The importer must sow 20 seeds as a minimum for each laboratory analysis (Annex 3) and takes samples of the seeded species, the number of plants selected for sending to analysis will be in accordance with the approved instructions and when they have the second pair of true leaves (dicotyledonous) or with 3-4 true leaves (monocotyledonous).

SENASA will carry out a mandatory inspection for the follow up of the quarantine and a final inspection at the end for lifting it, whose results shall determine the final destination of the product.

Procedures for cases of importing seeds for production purposes for export are also mentioned.

2.1.4 Evaluation of the Phytosanitary Regulation

The NPPO of Peru has the structure and legal framework to fulfill its responsibilities properly.

Based on its quality management system, it has detailed procedures and manuals for its officials to carry out their activities. Within the procedures, there is a specific one for the importation of seeds, which is important for the industry and is not found in other countries in South America.

The query mechanism of phytosanitary import requirements generates confusion in relation to:

a) Searching for vegetable seeds or specifically by species and,
b) Countries of origin and provenance. There are approved combinations and if you change the country of origin you may not have phytosanitary import requirements.

The phytosanitary requirements for the importation of vegetable seeds indicate that there are a significant number of approved countries of origin; this allows the industry to undertake a very interesting seed movement. Most part of these origins is approved based on a requirement that only implies the issuance of a Phytosanitary Certificate and sampling for referral to the quarantine laboratory for analysis. In the cases in which SENASA sets the requirements through a PRA, they are very restrictive and in most part of the cases do not offer optional phytosanitary measures.

It is supposed that the Diagnostic Center should have a lot of information about pest detection in this type of cases which relies on mandatory sampling for analysis.

Related to seed sampling, the problem of small lots is not taken into account

The mechanism to consult the export requirements is also available for export, but its application is difficult considering the information necessary for the re-export of seeds.

In relation to Phytosanitary Surveillance, published information does not indicate any specific activity in vegetables and flowers.

2.2 Seed regulation

At the Institutional level, the regulation of seeds has been developed in INIA and SENASA, since both have been the Seed Authority in Peru. Currently there is a process of transition from INIA to SENASA, since in accordance with Legislative Decree No. 1387 of September 2018, which strengthens of SENASA competences; this organization is nominated as the Seed Authority.

About seed regulations, it is governed by the General Seed Law (Law No. 27262 published on 05/13/2000 and amended with Legislative Decree No. 1080, published on 06/28/2008).

3. Peru Mission

In November 3-9, Mr. Diego Risso, Mrs. Ma. Inés Ares and Mrs. Ana Peralta, made a visit to Lima, Peru, where they met various companies importing and producing vegetable seeds, two associations (APESemillas and ADEX) and at official level, with INIA and SENASA.

See the analyzed report of the mission in Annex 1.

4. Statistics of import and export of vegetable and flower seeds.

Annex 2 presents the information of import and export of vegetable seeds, years 2017 and 2018, provided by the Association of Exporters (ADEX), which shows the main species, companies, importing countries and exporters in the aforementioned years.

5. Conclusions of Phase 1

Production level: Companies consulted raised advantages of the country, as isolation, presence of water, cost of hand labor and climatic conditions permitting two crop seasons a year. No significant impediments were identified by the industry currently operating in Peru

Therefore Peru is a country that has the ecological conditions for this type of industry, including the production of flower seeds.

Regarding the possibility of increasing the presence of currently present or potential American seed producing companies, it is considered necessary to analyze other aspects such as logistics, labor, services and other business environment issues.

Business level: The visits performed, the approaches received in the surveys and the interviews were evaluated and the following is the summary of conclusions that could be extracted:

Communication:

Communication problems have been detected between the NPPO and the users, even if SENASA has a very well organized Web Site, populated with lots of information, there are communication problems with users in several aspects. The most relevant ones would be:

- Lack of communication of changes in the phytosanitary import requirements or on its updates.

- For new export markets, a procedure for the follow-up of PRA requests with dossier submission with the information required by the importing countries is missing. So, users are not able to support this procedure and if the importing country does not answer, the process is canceled from the SENASA system. .

-The same happens when SENASA requires information to an exporting country to initiate the PRA.

- High and low risks countries qualification, on which sampling is based at entry are not published in the Web.

- Information is not provided on the detection of quarantine pests in consignments and changes in sampling intensity.

- Initiation of PRA due to quarantine pests' interceptions is not communicated.

Import procedures

Pest Risk Analysis: Based on what is reported by the companies and by SENASA, Pest Risk Analysis (PRA) is carried out for all species / origins. However, there are a high number of

approvals solved with a generic requirement. The companies included in this diagnostic Phase have not expressed the urgent need to have new PRAs.

Regulated pests: SENASA has a list of quarantine pests/species published and updated. There is no access to a list of pest regulated on seeds, although they manage it internally.

Risk management: In cases where phytosanitary import requirements are established for certain quarantine pests, alternative risk management measures are not offered, for seed pests, as suggested by ISPM No 38. They usually request more than one measure for the same pest.

Phytosanitary Import Requirements: SENASA has approved the entry of more than forty species of vegetable seeds of almost fifty origins. For flowers seeds, there are more than one hundred that have been approved. This is confirmed through import statistics.

Inspection at arrival: There are several problems with sampling at arrival, due to the way to extract the seed sample, the volume extracted and the number of packages opened for extraction.

Seed Associations Level:

Currently, the Peruvian Seed Association (so called APESemillas) includes a portion of the seed companies currently operating in the Peruvian market, mainly dedicated to importation and distribution.

On the other hand, in the Association of Exporters (ADEX) it is possible to find most part of the companies dedicated to seed production in the vegetable sector. In ADEX they have found a strong voice and active human resources acting as spokesman for their constraints and problems.

We were also informed that CultiVida (CropLife national program in Peru), is about to create a “Seed group/association”, under their umbrella program.

We see this situation as a threat, since a single vision and a single voice is not built up to face regulatory agencies of the seed sector and could weaken the next phase (Phase 2) of this project.

Official level:

INIA: As reported in the visit performed, from 2020 INIA will not be the Seed Authority.

SENASA: The NPPO of Peru has the structure and legal framework to fulfill its responsibilities properly.

It has established detailed procedures and manuals for its officials to carry out their activities. Within the procedures, there is a specific one for the importation of seeds.

In the meetings held, they have been open to reviewing the import procedure, as well as defining guidelines for other required procedures, together with the companies.

Based on all the programs that SENASA has established, for different products, and mainly for the surveillance and export of fruits, there is little staff for all other relevant areas.

Regarding the phytosanitary import requirements for vegetable seeds, there are more than 40 species and 40 countries of origin approved, which allows the industry the possibility of a very interesting seed movement, which is not usual in other countries.

Most part of these origins are approved based on a single requirement that involves a Phytosanitary Certificate and sampling at arrival to be sent to the laboratory for analysis or CPE.

ISPM No.38 is not fully implemented; therefore it is necessary to strengthen capacities in all aspects of seed movement.

As for the Diagnostic Center, it was not possible to visit it and we only spoke with two specialists that attended one of our meetings with SENASA, therefore there is no appropriate evaluation of this facility.

It is important to understand that with this project it could be expected that seeds as a commodity be prioritized within the institution to continue moving forward in the future.

FAS/APHIS Perú: They were informed of the project and the result of the visit, being at the orders of the consultants in the follow-up of the same.

6. PLAN FOR PHASE 2

Based on what was found and evaluated in Phase 1, the following activities will take place in Phase 2:

1. Establish a Proposal of Work Plan SENASA/APHIS with the objective to facilitate import/export operations of vegetable and flower seeds for production or multiplication in Peru.

    1.1. Prepare a draft proposal of work plan
    1.2. Prepare a protocol of agreement on a procedure to integrate and maintain a list of quarantine pests for Peru associated with its respective hosts for seeds of vegetables and flower species.
    1.3. Analyze the list of regulated weeds as quarantine pests and their technical justification, to clarify the regulation of these pests
    1.4. Training for SENASA officials, on seed production techniques and practices in companies installed in Peru, for better knowledge of the possible application of System approach as a phytosanitary measure

2. Host workshops and trainings for SENASA and other government officials
    2.1. Host workshop on analysis of possible alternative risk management measures for seeds, taking into account ISPM 38 i.e.: post entry quarantine, bilaterally agreed diagnostic protocols, seed certification procedures in the U.S., cases of small lots, system approach including Good management practices and others, for more attendants (25-30) and for three days.

2.2. Host training for SENASA officials, on seed production techniques and practices in companies installed in Peru, for better knowledge of the possible application of System approach as a phytosanitary measure.

2.3. Host four discussion meetings on the topics of:
- Review of current import procedures
- Preparation of a proposal of procedure for seed export,
- Preparation of a proposal of phytosanitary measures for small lots, including system approach
-Review of Labs procedures for seeds.

3. Planning and coordination of exploratory mission of U.S. companies and APHIS representatives to Peru visiting SENASA and other regulatory and operational agencies.

4. Planning and coordination of exploratory mission of SENASA to the U. S. visiting APHIS and seed industry representatives and facilities.

5. Preparation of the Final Report

6. Serve as liaison for ASTA company business development