



COSAVE

**REGIONAL PILOT PLAN FOR PHYTOSANITARY
CERTIFICATION OF *ZEA MAYS* SEED FOR PROPAGATION
AND EXPERIMENTAL PURPOSES UNDER A SYSTEMS
APPROACH**

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INDEX

1. Background	2
2. Introduction	3
3. Scope	4
3.1. Products included in the PPCF	4
3.2 Regulated pests	4
4. Normative References	4
4.1 International and Regional	4
5. Definitions and abbreviations	5
6. PPCF Participants	6
7. Responsibilities of the participants	8
7.1 NPPO of the exporting country	8
7.1.1 General responsibilities	8
7.1.2 Registration	8
7.2 NPPO of the importing country	8
7.3 Seed companies (at the production, conditioning, storage and export stages)	9
7.3.1 General responsibilities	9
7.3.2 Responsibilities at the Enrollment Stage	10
7.3.3 Responsibilities in the production stage	11
7.3.4 Responsibilities related to the traceability and identification of each seed lot	12
7.3.5 Responsibilities at the export stage	12
8. Issuance of Phytosanitary Certificate	13
9. Noncompliances and Actions	13
10. Review and update of the PPCF	13
11. Annex: Records	13
11.1 PPCF Enrollment and Registration Forms	13
12. Annex: Field inspection	14
13. Annex: Regulated pests	14

Regional Pilot Plan for the Phytosanitary Certification of *Zea mays* seed for propagation and experimental purposes under a systems approach.

1. Background

International seed trade involves the movement of the same consignment between different countries, both for commercial and research and development purposes. The seed production chain may involve breeding and multiplication programs that may develop their stages in several countries and be distributed among others.

In this context, a risk of seed-associated pests is identified, as these could be introduced into an environment where they have a high probability of becoming established and dispersing.

Therefore, National Plant Protection Organizations (NPPOs) are required to identify, assess and manage the pest risk associated with the international movement of seed. These actions should consider the purpose of the actions (e.g. research, multiplication, laboratory testing, sowing in greenhouses, isolated plots or under natural conditions).

In accordance with the guidelines established by ISPM No. 38 "International Movement of Seeds" of the International Plant Protection Convention (IPPC), the Work Plan agreed between the Southern Cone Plant Health Committee (COSAVE) and the Seed Association of the Americas (SAA) signed in December 2019 has the general objective of promoting the implementation of equivalent and harmonized phytosanitary measures for the exchange of seeds at the regional and extra-regional level.

This agreement includes among its strategic lines phytosanitary measures under a "systems approach", in order to consider pre- and post-harvest seed procedures that contribute to pest risk management.

In September 2020, the COSAVE Steering Committee communicated at the SAA virtual meeting the decision to develop an intra-regional pilot project under a systems approach for the movement of maize seed for experimentation purposes within the Region.

2. Introduction

Systems approaches allow consideration of pre- and post-harvest procedures that contribute to effective pest risk management. ISPM No. 14 provides guidelines for the development and evaluation of integrated measures in a systems approach as an option for pest risk management.

This Regional Pilot Plan for the Phytosanitary Certification of *Zea mays* seeds whose intended use is propagation or sowing and whose purpose is experimentation under a Systems Approach (hereinafter PPCF), is framed within the objectives defined in the Work Plan agreed between COSAVE and SAA.

It is worth mentioning that the scope of the PPCF covers COSAVE member countries, which may consider it as a source of reference for the establishment of similar agreements with other countries or regions.

This document provides guidance to COSAVE member countries for the implementation of pest risk mitigation measures under a systems approach. Technical explanations will be provided, as appropriate, to ensure that all parties understand the rationale for the actions requested.

It was agreed to start with a Pilot Plan for experimental seed due to a:

- Its high value.
- System of production and management of the extreme care crop with permanent monitoring and control by the seed companies.
- Careful registration system that ensures knowledge and traceability at all stages of production, collection, packaging and export.
- High cost of material sampling, in addition to the fact that samples are analyzed in many cases using destructive techniques.
- Inconvenience that causes pathogen detection techniques to be ineffective in some cases when taking samples at such small scales.

The present RPPP establishes the phytosanitary measures required during the seed production process, including pre-sowing, production, harvest and post-harvest. It also includes the responsibilities of the participants of the RPPP and the requirements for phytosanitary certification for regulated pests covered by the document.

3. Scope

The PPCF covers the countries that are part of COSAVE and applies to private actors involved in the chain of production, import and export of *Zea mays* seeds for propagation and experimental purposes.

Seed production must be carried out within the territory of COSAVE member countries, within the framework of ISPM No. 38 "International Seed Movement".

National NPPOs may authorize entities to perform phytosanitary actions in compliance with ISPM No. 45 "Requirements for national plant protection organizations when authorizing entities to perform phytosanitary actions".

3.1. Products included in the PPCF

Maize (*Zea mays*) seed for propagation and experimental purposes. Only refers to botanical seed.

3.2 Regulated pests

The regulated pests included in the FFPP are indicated in the annexes to the general document, which will be updated as the pests to be regulated change.

The list of regulated pests results from the analysis of the phytosanitary requirements that each COSAVE country establishes for the product in question (species/plant part/intended use). The list is subject to updates. For this reason, prior to the implementation of this TPMP, seed companies should contact NPPOs.

4. References Normative

4.1 International and Regional

IPPC. ISPM No. 2: Framework for pest risk analysis. IPPC. ISPM No. 5: Glossary of phytosanitary terms.

IPPC. ISPM No. 7: Phytosanitary certification system.

IPPC. ISPM No. 11: Pest risk analysis for quarantine pests. IPPC. ISPM No. 12: Guidelines for Phytosanitary Certificates.

IPPC. ISPM N° 13: Notifications of non-compliance y actions actions.

IPPC. ISPM No. 14: Application of integrated measures in a systems approach to pest risk management.

IPPC. ISPM No. 23: Guidelines for inspection.

IPPC. ISPM No. 27: Diagnostic Protocols for Regulated Pests. IPPC. ISPM No. 31: Methodologies for sampling consignments.

IPPC. ISPM No. 32: Categorization of commodities according to pest risk.

IPPC. ISPM No. 38: International Movement of Seed.

IPPC. ISPM No. 45: Requirements for national plant protection organizations when authorizing entities to perform phytosanitary actions.

IPPC. ISPM No. 47: Auditing in the phytosanitary context.

COSAVE. Regional Plant Protection Standard 3.15: Harmonized phytosanitary requirements by risk category for the entry of plant products.

COSAVE. Regional Standard 3.13: Guidelines for an integrated system of pest risk mitigation measures ("System Approach").

5. Definitions and abbreviations

Definitions marked with "*" are available in ISPM No. 5 "Glossary of Phytosanitary Terms" and correspond to the version in force at the time of preparation of this document.

Phytosanitary certificate*: Official document on paper or its official electronic equivalent, in accordance with IPPC model certificates, which attests that a consignment meets phytosanitary import requirements.

Systems approach*: Pest risk management option that integrates different measures, at least two of which act independently, with cumulative effect (ISPM No. 14, 2002; revised ICPM, 2005; CPM, 2015).

Consignment*: Quantity of plants, plant products or other articles being moved from one country to another, and covered, if necessary, by a single phytosanitary certificate (a consignment may consist of one or more products or lots).

Equivalence (of phytosanitary measures)*: A situation in which, for a specified pest risk, different phytosanitary measures achieve a contracting party's appropriate level of protection.

Official laboratory: Laboratory owned or accredited by the NPPO to perform official diagnostic tests.

Batch: A set of units of a single product, identifiable by its homogeneous composition, origin, etc., forming part of a consignment (FAO, 1990).

Phytosanitary measure*: Any legislation, regulation or official procedure intended to prevent the introduction or spread of quarantine pests or to limit the economic impact of regulated non-quarantine pests.

Production site*: Any facility or grouping of fields operated as a single production unit or farm unit. For the purposes of this document, it includes one or more production sites.

Production Site: A defined part of a production site that is managed as a separate unit for phytosanitary purposes (CPM, 2015). For the purposes of this document, a production site may consist of one or more production plots.

Plot: Minimum traceable area with defined boundaries and identified by the seed company with a specific number or code, managed in a uniform manner for the purpose of phytosanitary certification in which a product is grown. The plot contemplates seed of equal origin, homogeneous sowing date and common use of agricultural machinery.

Pest*: Any plant or animal species, breed or biotype or pathogenic agent harmful to plants or plant products.

Regulated pest*: Quarantine pest or regulated non-quarantine pest [IPPC, 1997].

Seed (as a product): Seeds (in the botanical sense) for planting (FAO, 1990; revised ICPM, 2001; CPM, 2016).

Experimental seed: Seed used in the early stages of a breeding program, with low production volumes, high strategic value and almost always sown in isolation.

Season (Sin. Campaign): Dimension of time that allows defining the years in which the biological cycle of an agricultural activity takes place. For example, the season 2021/22.

6. Participants of PPCF

- NPPOs of COSAVE member countries.
- Seed companies.

7. Responsibilities of the participants

7.1 NPPO of the exporting country

7.1.1 Responsibilities general

- Audit, coordinate and supervise the implementation of and compliance with this PPCF.
- Designate the personnel of the NPPO, duly trained and experienced to carry out the activities required by the CSBP.
- Inspection, sampling and official laboratory testing by the NPPO or its designee to verify freedom from the pests regulated in the annex(es) of the RSPP.
- Take immediate action to correct any non-compliance detected and, if necessary, suspend or revoke the registration until the non-compliance has been corrected.
- Evaluate the implementation of additional actions to be taken in case of noncompliance with the PPCF.
- Issue phytosanitary certificates attesting to compliance with the SQP for each export consignment.
- Receive, evaluate and approve the voluntary application for registration by seed companies to this CFPP.
- Draw up the list of production sites, production sites and/or plots declared by the seed companies.
- Receive, evaluate and approve the Harvest Report sent by the seed companies.

7.1.2 Registration

- Receive the voluntary application for registration by seed companies to this CFPP.
- Evaluate and approve the registration of seed companies.
- Prepare the list of production sites and/or plots declared by the seed companies.
- Publish or communicate the list of those registered to participate in the PPCF through a mechanism agreed upon by COSAVE member countries. The information includes exporting country, company name of the registered seed companies and identification codes of the places and sites of production, according to the codification used by each NPPO, indicating whether they are qualified to continue in the CFQP.
- Maintain an updated list of responsible professionals declared by the seed companies.
- Monitor the traceability of seed lots produced under the CFPP.

7.2 NPPO of the importing country

- Make phytosanitary import requirements available to seed companies.
- Agree on audits among the NPPOs covered by this RPPC if required.
- Verify at the point of entry that consignments comply with the provisions of the present PFPP.

The following procedures will be carried out at the Point of Entry:

- Documentary verification: In addition to the provisions of ISPM No. 12, it includes verifying that the information in the import application corresponds to seed lots that come from registered and approved seed companies and comply with the phytosanitary and traceability requirements established in the RSPM.
- Physical verification: Includes verification of the identity and integrity of the consignment and visual inspection of the consignment. It includes verifying that the experimental seed containers have the label that provides traceability information.
- Approve the entry of shipments that comply with the PPCF.
- Proceed to the retention or rejection of those shipments that do not comply with the PPCF.
- Notify, as soon as possible, the NPPO of the exporting country of the detection of any regulated pests and other instances of non-compliance, in order for the NPPO of the exporting country to take and inform the counterpart of the necessary corrective actions.

7.3 Seed companies (in the production, packaging, storage and export stages)

7.3.1 Responsibilities general

- Comply with the conditions of the PPCF for the export of experimental seed, applying safekeeping measures and actions to maintain the integrity of the shipment.
- Notify the NPPO of the exporting country of any irregularities or non-compliance detected during the performance of the CFPP that may represent a phytosanitary risk in the export of experimental seed.
- Make the production plan available to the NPPO, including the type of production and sanitary management planned.
- Inform the NPPO of the exporting country of the opportune moment for the execution of the different verification activities, in order to comply with the phytosanitary measures as detailed in the SQP.
- Comply with the responsibilities detailed in the PPCF.

- Promote, conduct and record staff training on aspects related to the implementation of the PPCF (attendance at meetings, courses, refresher courses, etc.).
- Participate in training or knowledge exchange opportunities proposed by the NPPO.
- Implement good practices throughout the seed production process (from pre-planting to post-harvest).
- Monitor and record the phytosanitary condition of production sites by evaluating the presence of regulated pests or compatible symptomatology at any stage of the crop cycle.
- Notify the NPPO of the presence of regulated pests or compatible symptomatology or any situation that compromises compliance with the RPPP.
- Maintain records up to date and available for audits scheduled by the NPPO.
- Allow access by NPPO staff to production facilities, storage facilities and documentary records related to the performance of the CFPP.
- Apply for the phytosanitary certificate only for those experimental seed lots that have satisfactorily completed the activities detailed in the RBPB.

7.3.2 Responsibilities in the stage of Registration

- Apply for registration as a seed company with the NPPO, which implies declaring the production sites and/or plots involved in the CFPP prior to planting, by submitting the following documentation:
 - Application for voluntary adherence to the CFPP in accordance with the documentation indicated by the NPPO (Annex I).
 - Application for registration of the production site and/or plots for seed production according to the documentation or Computer System selected by the NPPO (Annex II).
 - Submit a sketch indicating the access to the establishment and providing detailed and relevant references of the access to the production sites and/or production plots according to the documentation or Computer System selected by the NPPO (Annex III).
 - Submit a sketch of the establishment detailing the production sites and/or production plots and indicating which of these are the ones applying for registration in the CFPP. It must also provide any useful reference with respect to the delimitation of the production plots, any information regarding their access, their facilities (conditioning and storage place) and their main entrance, and any reference to their location within the establishment, in accordance with the

- documentation or Computer System selected by the NPPO (Annex IV).
- Coordinates of the georeferenced points of the vertexes of the plots (Annex V).
- Inform the NPPO of the designation of the qualified persons who will fulfill the role of responsible professional, both titular and alternate, on behalf of the seed company. Their function is to verify the technical and traceability activities detailed in the PPCF, for which they must be a professional in agronomy or related sciences. Likewise, he/she will be the point of reference for communication with the NPPO for the control of the implementation of the GCPP, when requested.

7.3.3 Responsibilities in the stage of production

a) Pre-seeding

- Choice of production site.
- Delimit and identify production sites and/or experimental seed production plots as declared in the registration and approved by the NPPO.
- Implement isolation measures for production plots, if applicable, taking into account the way in which regulated pests and their host species are spread.

b) Production

- Record the practices applied at this stage in the field notebook or in the tool available at the seed company and make them available to the NPPO when required.
- To comply with the provisions of "12. Annex: Field Inspection".
- Notify the NPPO of the phenological stage of the crop in order to comply with the field inspection.
- Ensure the hygiene of the means of transport from the production plots to the conditioning facilities.

c) Harvest

- Guarantee the identity and traceability of the seeds for each production plot during the harvesting of the material, avoiding contamination and guaranteeing its sanitation.
- Ensure that the seed is transported from the field to the conditioning site in clean and protected containers to maintain its phytosanitary condition.
- Record the practices applied at this stage in the field notebook or in the tool available at the seed company and make them available to the NPPO when required.
- Prepare and keep the Harvest Report (Annex VI) up to date.

- Inform the NPPO of the start of harvesting at the registered production sites. Once the harvest is completed, send the corresponding Harvest Report to the exporting NPPO, containing the information according to the model established in "11. Annex: Records".

d) Post-harvest (conditioning and storage)

- Ensure that seed conditioning processes are carried out to avoid mixing of different seed lots.
- Ensure cleanliness conditions for spaces, facilities, machinery and tools used during seed lot conditioning and storage.
- Ensure that seed lots are stored properly identified and under controlled conditions of temperature and humidity, with safeguards to guarantee the phytosanitary condition of the seeds.
- Make available to the NPPO, when required, the records of activities and documentation related to the material that is conditioned and stored.

7.3.4 Responsibilities related to the traceability and identification of each seed lot.

- Implement protocols to ensure and maintain the traceability of the material throughout the entire experimental seed production process (pre-planting, production, harvesting, post-harvest), allowing, among other aspects, to verify the origin and provenance of the material to be planted, to know the amount of material planted per plot, its surface, location, amount of material harvested.
- Identify seed lots produced under the CFPP by means of labels that provide information to verify traceability throughout the process.
- Record and keep updated in computer systems or tools of each company, the information related to traceability and health of seed lots produced under the CSBP.
- Make traceability records available to the NPPO to allow verification of the provisions of the PFPP, if required.

7.3.5 Responsibilities in the stage of export

- Submit to the NPPO the phytosanitary import requirements of the country of destination.
- Declare for export, only those seed lots that have complied with the provisions of the SQP.
- Maintain the conditions for safeguarding seed lots approved for export.

8. Issuance of the Certificate Phytosanitary Certificate

If the result of the laboratory test(s) is negative, the Production Site is approved for official inspection.

The exporting NPPO shall issue a phytosanitary certificate for each consignment which shall include the following Additional Declaration:

"THE SHIPMENT OF CORN (*Zea mays*) SEEDS DOES NOT PRESENT A PHYTOSANITARY RISK OF REGULATED PESTS, BY APPLYING A SYSTEMS APPROACH, DULY AGREED AMONG COSAVE COUNTRIES".

9. Non-compliances and Actions

Registered production sites that do not comply with the conditions of the PFPP will not be eligible for phytosanitary certification in accordance with the provisions of the PFPP. However, in the event that the exporting seed company wishes to export, it must resort to the usual certification process.

Likewise, seed companies that incur in successive non-compliances will be disqualified from participating in the PPCF during the current season.

10. Review and update of PPCF

The PPCF will be updated as required by the participating NPPOs. Modifications will be analyzed jointly by the Technical Groups and an agreed proposal will be submitted to the COSAVE Steering Committee. Once the revision is agreed upon, it will be submitted to a consultation instance for the participation of the SEM.

During the first year of application, a periodic review of the PPCF is suggested in order to allow for rapid modifications in the event of situations not contemplated in the PPCF.

11. Annex: Records

11.1 PPCF Registration and Enrollment Forms Annex I.

Application for voluntary membership in the CFQP.

Annex II. Registration of production sites and/or production plots.

Annex III. Sketch of the location of the production site.

Annex IV. Sketch of the distribution of the plots and production sites.

Annex V. Coordinates of the GPS points of the vertexes of the plots.

Annex VI. Harvest Report.

12. Annex: Inspection of field

See Field Inspection Annex.

13. Annex: Regulated Pests

The regulated pests considered for the CFPP will be indicated in the corresponding Annexes.