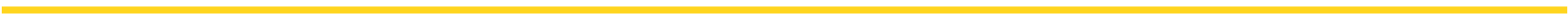


Current status of phytosanitary regulations and cross-border seed trade in Africa

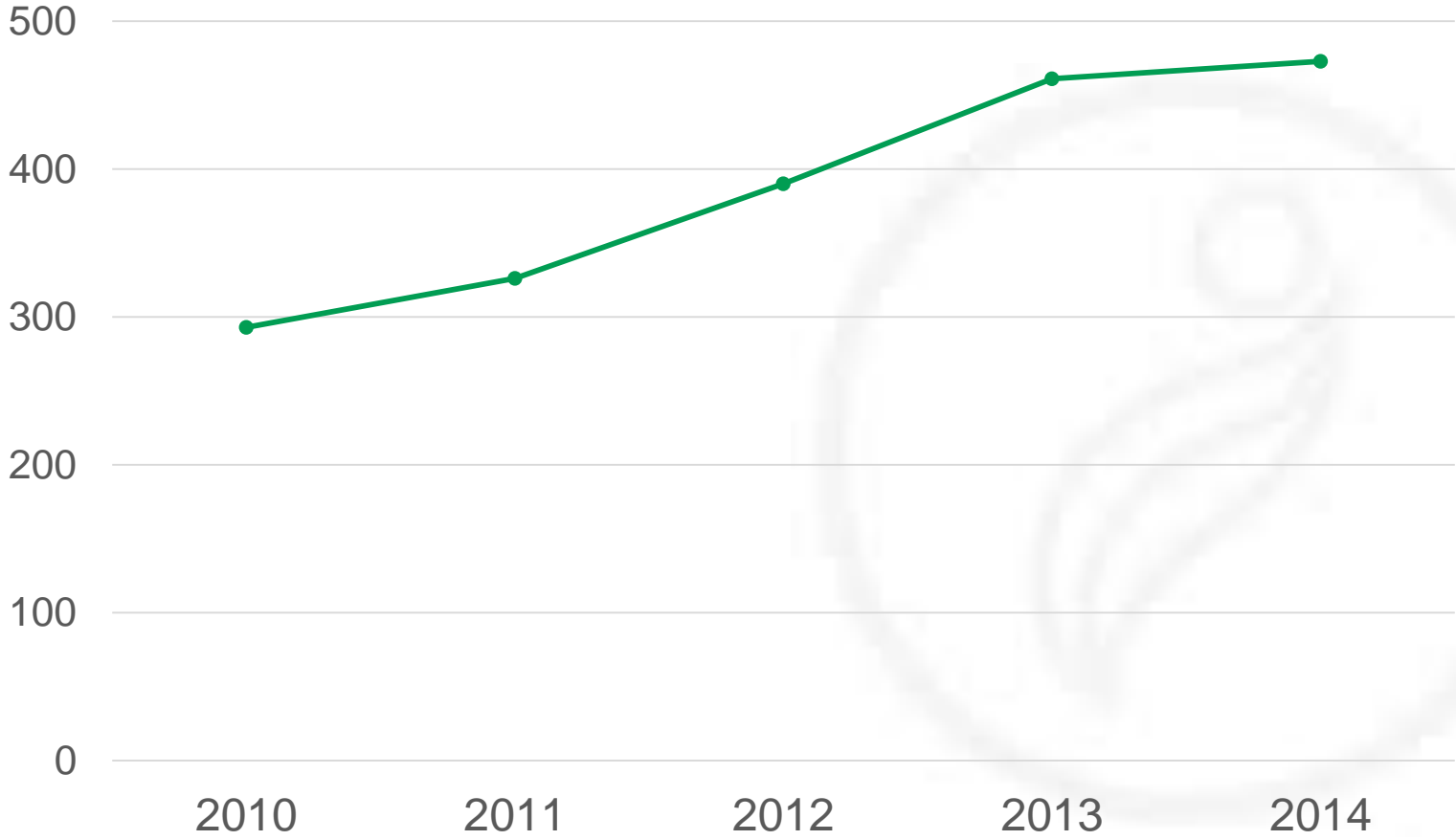
Dennis Johnson

Dakar, 2 March, 2017



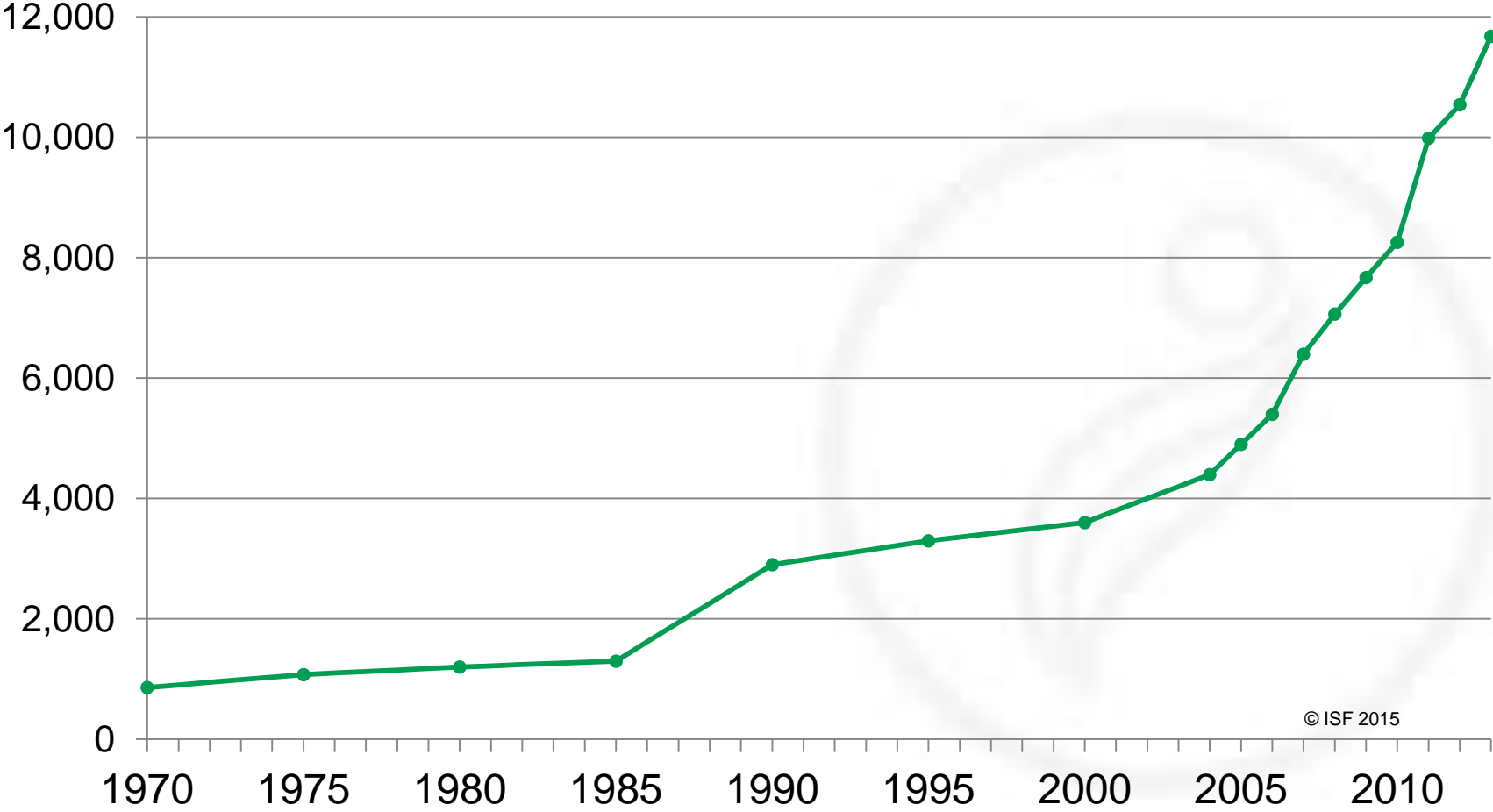
Growth in African Seed Trade

Value in Million USD



Growth in International Seed Trade

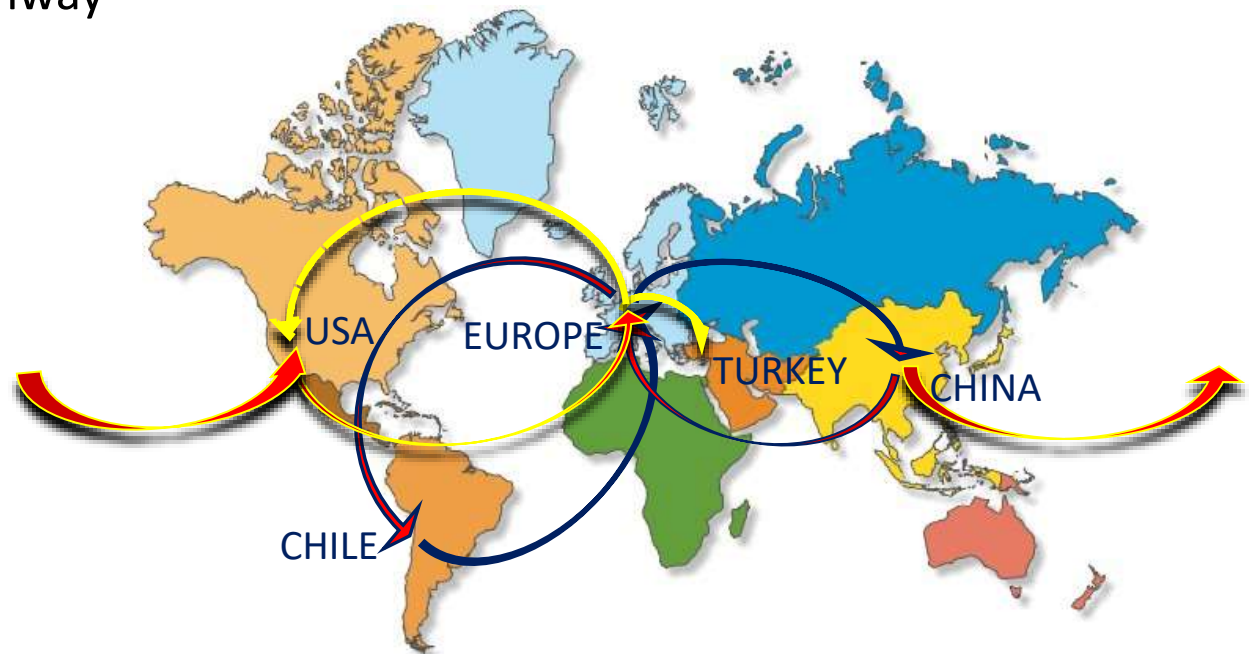
Value in Million USD



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When is seed a pest risk?

- The seed industry is global - Frequent re-exports of variable quantities of seed
- Our customers – growers, farmers, consumers - expect healthy seeds
- Seed can be a pathway



International Plant Protection Convention (IPPC)

The Commission of Phytosanitary Measures (CPM), governing body of the IPPC, agreed on the following strategic objectives:

- Protecting sustainable agriculture and enhancing global food security through the prevention of pest spread
- Protecting the environment, forests and biodiversity from plant pests
- Facilitating economic and trade development through the promotion of harmonized scientifically based phytosanitary measures
- Developing phytosanitary capacity for members to accomplish the preceding three objectives

Pest Risk Analysis (PRA)

Pest Risk Analysis for Seed

- Identification of an organism and a pathway – Is seed a pathway for the introduction and spread of the regulated pest?
- Pest risk assessment – Assessment of introduction, establishment, and spread, and assessment of economic impacts
- Pest risk management – Identification of phytosanitary measures that (alone or in combination) reduce the risk to an acceptable level

The ISF Regulated Pest List

GOAL: Establish meaningful, science based and relevant crop specific pest lists and facilitate the harmonization of phytosanitary requirements

- Lists of regulated pests taken from NPPO databases and company information on Additional Declarations required per crop and country; updated for new pests every 2 years
- Classification of each pest by whether “seed is a pathway” and remarks pertinent to the industry
 - If seed a pathway, information on seed assay and seed treatment
- Information reviewed by 3 experts and documented with references to support or refute the classification
- Feedback mechanism open to experts outside the industry

The ISF Regulated Pest List: Contents

- Seed/crop species: Each pest list is for one species
- Pest type: bacterium, fungus, virus, etc.
- Pest classification: Is seed a pathway? Answer, references, remarks
- Detection: Is there a seed test? Answer, test type, references, remarks
- Risk Mitigation: Managed by seed treatment? Answer, treatment type, references, remarks

Pest Classification: Is seed a pathway?

- Not a host, when the crop in question is not a host
- No, if seed is not the pathway for entry or spread
- Yes, if seed is a pathway for entry or spread of the pathogen
- Pathway not proven, when pathway is not verified, is not proven, if the evidence is doubtful, if there is conflicting evidence
- Yes, but crop is not a host, if seed is the pathway but the crop in question is not a host

Summarized Information to Date: Is seed a pathway?

| Crop Species | Regulated pests (no.) | Is seed a pathway? | | | |
|------------------|-----------------------|--------------------|--------------------|----|------------|
| | | Yes | Pathway not proven | No | Not a host |
| Carrot | 92 | 4 | 8 | 46 | 42 |
| Cucumber | 90 | 4 | 9 | 56 | 31 |
| Lettuce | 64 | 5 | 16 | 56 | 23 |
| Melon | 69 | 12 | 20 | 45 | 23 |
| Onion | 94 | 7 | 13 | 44 | 36 |
| Pepper | 107 | 9 | 18 | 46 | 35 |
| Spinach | 38 | 21 | 8 | 34 | 34 |
| Squash & pumpkin | 54 | 9 | 17 | 50 | 24 |
| Average (%) | | 9 | 14 | 47 | 31 |

Accessing the ISF Regulated Pest List

http://pestlist.worldseed.org/isf/pest_lists_db.html

ISF International Seed Federation
Seed is Life

ABOUT **OUR WORK** RESOURCES EVENTS **Members**

> **Phytosanitary Matters**

- Seed Health
 - ISHI-Veg
- Pest Risk Analysis
- **Pest Lists**

PEST LIST DATABASE

The database will be updated as and when more pest lists are completed or new information is available. It is not expected that changes will be notified.

GO TO THE DATABASE >

IS SEED A PEST RISK? **ISF REGULATED PEST LIST INITIATIVE**

ISF REGULATED PEST LIST INITIATIVE

Seed moved internationally, either for research or trade, are subject to phytosanitary regulations to minimise the risk of introducing or spreading pests worldwide. However, in some instances the phytosanitary measures imposed are unnecessary as seed is not a pathway for the entry, establishment or spread of the pest in question. After scanning national phytosanitary regulations from around the world, ISF has listed the regulated pathogenic organisms (bacteria, fungi, insects, nematodes, oomycetes, phytoplasma, viruses and viroids) for a number of seed species. Using their knowledge and experience, company seed and field pathologists provided an expert interpretation of scientific publications on whether seed was a means for the entry of each pest in the list and the conditions for its establishment.

Scientific articles published in refereed journals or scientific websites of the International Committee on Taxonomy of Viruses (ICTV), the Nematode-Plant Expert Information System (Nemaplex), the International Mycological Association (mycobank) and others were consulted. These ISF Pest Lists have been assembled in the form of a database. For those pests for which seed is a pathway or where the pathway is not yet conclusively proven, the database provides information on detection and risk mitigation. The database is a work in progress.

The ISF Regulated Pest List

Remove all filters - List of references by Crop Carrot (Daucus carota) - Get the PDF - List of references by Pest Type Bacterium - Get the PDF

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Showing 1 to 608 of 608 entries

| Pest | | Pest Classification | | | | Detection | | | Risk mitigation | | | | | | | | |
|---------------|--------|---------------------------------|-----------------|--------------------|-------------|---------------------------------|---------------------------------|---|-----------------------|----------------------|----------------------------|---------|--|----------------------|----------------------------|---------|--|
| Species | Crop | Scientific Name | Additional info | Complementary info | Type | Is seed a pathway in this crop? | Main literature references | Remarks | Is there a seed test? | If yes, type of test | Main literature references | Remarks | Can the pest be managed by seed treatment (s)? | If yes, what type(s) | Main literature references | Remarks | |
| Daucus carota | Carrot | Aphelenchoides spp. | | | Nematode | No | 7-9t | A. fragariae and A. besseyi (foliar nematodes) have been found associated with carrot. Presence of disease is not very clear. No references found indicating seed as a pathway for Aphelenchoides spp. in carrot. Available information indicates there is no scientific basis for regulation of Aphelenchoides spp. on carrot seed. | | | | | | | | | |
| Daucus carota | Carrot | Aster yellows phytoplasma group | | | Phytoplasma | No | 7-11, 7-56, 7-112, 7-113, 7-114 | Aster yellows phytoplasma has a very wide host range and is vectored by polyphagous leafhoppers. No references found indicating seed as a pathway for this phytoplasma in carrot. Available information indicates there is no scientific basis for regulation of Aster yellows phytoplasma group on carrot seed. | | | | | | | | | |
| Daucus carota | Carrot | Cacoecimorpha pronubana | | | Insect | No | 7-57, 7-58 | C. pronubana, commonly known as the Mediterranean carnation leaf roller (or tortrix) has a wide host range but is most commonly found on carnation and other ornamentals. It can occur on carrot, however, no references found indicating seed as a pathway for C. pronubana on carrot. Available information indicates there is no scientific basis for regulation of C.pronubana on carrot seed. | | | | | | | | | |

Current Phytosanitary Regulations in Africa

12 Regulated Pests

- Is Seed a Pathway?
 - No – 6
 - Not a host – 1
 - Pathway not proven - 4
 - Yes – 1



Opportunities for the Seed Industry

- Cost savings directly to companies with less field inspections and lab tests for Phyto ADs
- Quick reference for companies to see what is available in terms of risk mitigation (seed tests and seed treatments)
- A tool that allows the industry to respond to new reports regarding seed as a pathway
- Establishes the credibility of the seed industry as a stakeholder
- Promote science based national regulations
- Elimination of irrelevant Phyto ADs that act as non-tariff trade barriers

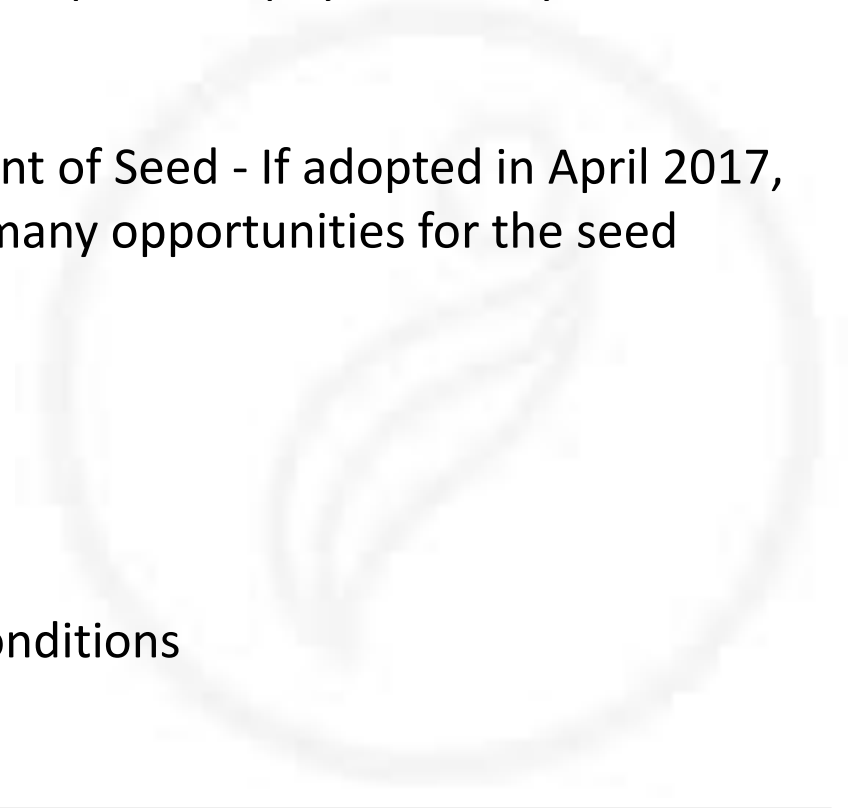
ISPM on the International Movement of Seed

The IPPC provides International Standards of Phytosanitary Measures (ISPMs) that serves as guidelines for countries to implement phytosanitary measures

New ISPM on the International Movement of Seed - If adopted in April 2017, the period of implementation provides many opportunities for the seed industry:

PRA for seeds

- Seeds as a pathway
- Pest transmission under natural conditions



ISPM on the International Movement of Seed

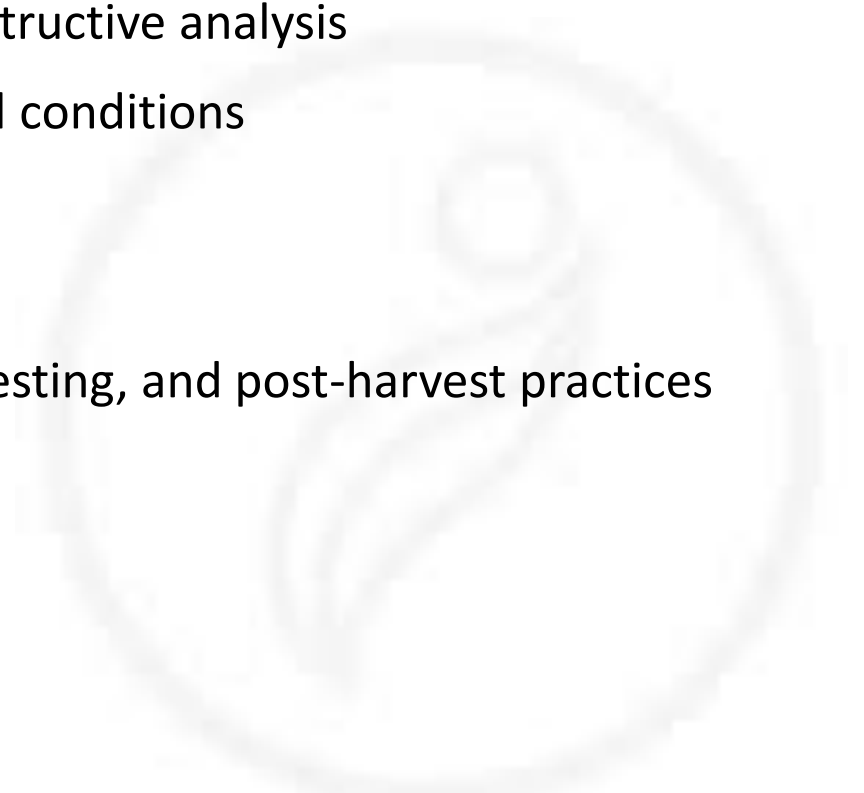
Purpose of Import

- Seeds for laboratory testing or destructive analysis
- Seeds for planting under restricted conditions
- Seeds for field planting

Pest management in seed production

- Pre-planting, pre-harvesting, harvesting, and post-harvest practices
- Seed certification
- Resistant plant varieties
- Seed treatment

Equivalence of Phytosanitary Measures





Seed is Life