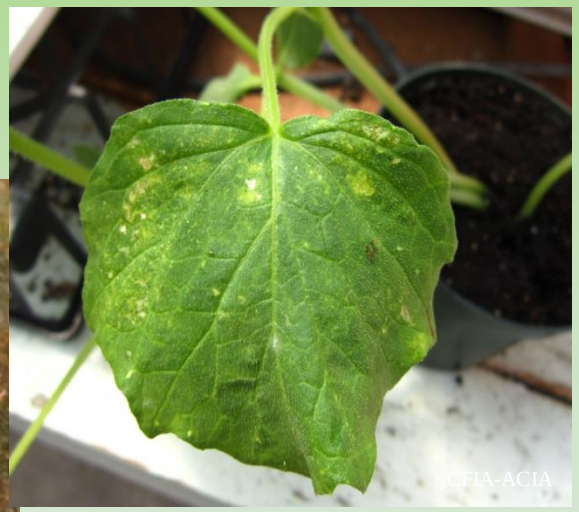
# Pest Risk Analysis (PRA)
# Stage 1: Initiation

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# Stages of PRA

- **Stage 1: Initiation**
- Stage 2: Pest Risk Assessment
  - Step 1: Pest Categorization
  - Step 2: Assessment of the Probability of Introduction
  - Step 3: Assessment of Impacts
  - Step 4: Overall Assessment of Risk
  - Step 5: Uncertainty
- Stage 3: Pest Risk Management

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# Initiation Stage

1. Initiation Point
2. Determination of an organism as a pest
3. Definition of the PRA Area
4. Previous PRA
5. Conclusion

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# Initiation Stages

**Initiation Point** → • **Pest** • **Pathway** • **Policy** → **Organism a pest** → **Identification of PRA Area**

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**Previous PRAs**

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**Conclusion**

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# Initiation Points-3 Ps

- Identification of a **Pathway**
- Identification of a **Pest**
- **Policy**

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# Initiation Points

- **Pathway**

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# Pathway

- **Any means that allow the entry or spread of a pest; could be**
  - an imported commodity
  - a means of transportation or storage
  - packaging, or other articles associated with the commodity
  - a natural means of spread (e.g., wind)

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# PATHWAY

## An Imported Commodity

- Consider the commodity itself and pest that might be associated with it either directly as the host or as hitchhiker

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# Pathway

## A means of transportation or storage

- A pathway may also be a means of transportation or storage, regardless of the commodity with which it is associated

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# Pathway

## Packaging or other articles associated with the commodity

- Articles associated directly with the commodity may be a pathway for spread of plant pests
    - Soil on carrots
    - Wooden pallets
    - Growing Media

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# Pathway

## Natural means of spread (e.g., wind)

- A natural means of spread may also be a pathway, as some species are naturally much more mobile than others.

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# Examples

- A request to import something that has not previously been imported from the proposed country of origin
- A different end-use is proposed for a commodity that is already being imported

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# Examples

- A new treatment is proposed for a commodity that is already being imported
  - Sulfuryl fluoride rather than methyl bromide fumigation of *red beans*

- An interception is made
  - Live pests are found on a previously unidentified pathway or commodity

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# Identification of pests associated with a pathway

- For a PRA initiated by a pathway, a list of pests associated with pathway at origin should be prepared

- For a commodity import for example. the list should include the following information

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# The list should include the following information

- Pest list with scientific name
- Taxonomic status
- Part of the plant attacked by the pest
- Presence or absence in the exporting and importing country
- Preliminary assessment of whether a pest follows the pathway
- Information sources

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# Initiation Point

## Pest


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# Pest

- A pest has been intercepted on an imported commodity
- A new pest has been reported in an exporting country
- New hosts are discovered for a pest of concern
- A pest is reported to be more injurious than previously realized

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# Pest

- A new pest is discovered in the PRA area
- A request is made to import an organism for industrial, research, biocontrol, or other purposes
- An organism is discovered to be a vector for other pests

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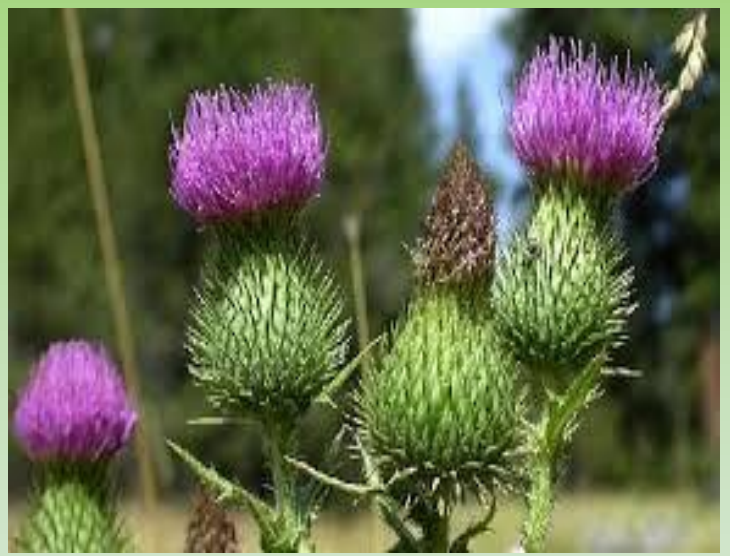
# Pest

- A request is made to import a new plant species or variety planting
- A proposal is made to import or release a living modified organism
- An organism is reported that is new to science or for which there is little information available



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# Identification of Pathways for a Pest

- A list of potential pathways that could allow the entry of a particular pest is prepared
  - Fruits
  - Cut flowers and foliage
  - Clothing of international passengers

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# Policy

- An NPPO decides to review an existing policy, phytosanitary regulation, requirements or operations

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# Initiation

Initiation Point

- Pest
- Pathway
- Policy

**Organism a pest**

Identification of PRA Area

**Not a pest**

**End**

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# What is a Pest?

- A pest is "…any species, strain or biotype of plant, animal or pathogenic agent, injurious to plants or plant products"

- an insect, fungus, bacterium, virus, nematode, invasive plant

- any type of living organism that is harmful to plants

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# Determination of an organism as a pest

- Comparison to predictive indicators such as
  - Known to be a pest elsewhere
  - Shares characteristics with known pests
    - has similar biology & effects on plants
  - Found in connection with signs of injury to plants or beneficial organisms

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# Determination of an Organism as a pest

- Related to known pests
- Known as a vector for known pests
- Known to cause adverse effects on non-target organisms beneficial to plants

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# Describing the Pathway

- **Onions from Argentina**
  - Fresh, frozen, dried, canned?
  - Cleaned? Plant debris associated with shipment?
  - Have they been fumigated? Hot water treated? Inspected?
  - Are they packed or wrapped? Bagged?
  - Type of containers
  - Shipment by air, ship, passenger baggage?

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# Pathway Description

- Method of production / harvesting
  - Origin
  - Wild grown or cultivated
  - Pest management practices
  - Method of harvesting
  - Pre-shipment processing, e.g. seed cleaning, de-barking, surface sterilization...

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# Pathway Description

- Intended end-uses
  - Multiplication or planting
  - Consumption
  - Processing
  - Industrial applications
  - Research
  - Others?

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# Pathway Description

- The more you know about the pathway, the more accurate the PRA will be and the more effective or appropriate any subsequent phytosanitary measures will be
  - Ask questions
  - Consider all aspects of pathway
  - Get detailed descriptions
  - Understand it

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# Initiation

- Initiation Point
- Pest
- Pathway
- Policy

→ Organism is a pest → Identification of PRA Area

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# Definition of the PRA Area

- Area in relation to which a pest risk analysis is conducted [FAO, 1995]
- PRA area must be clearly defined
  - Whole country
  - Part of a country
  - Several countries together
- This is the area which is considered in all subsequent parts of the PRA

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# Previous PRAs

- Check for previous PRAs
  - Same pest or pathway
  - Related pest or pathway
- Are any previous PRAs
  - Still relevant?
  - Up-to-date?
- Benefits of checking for previous PRAs
  - Efficiency
  - Consistency
  - Background information
  - History of previous recommendations

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# End of Stage 1

- Organism has been determined to be a pest, PRA continues
- Organism is not a pest, the PRA stops

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