Ethiopia’s Experience in Bio-agents and Bio-pesticides Registration and Evaluation
There is no regulation under use at present for import and registration of both Bio-agents and Bio-pesticides.

But the existing special decree NO. 20,1990 in use for the registration of chemical pesticides is under revision so that to include the Bio-pesticides.
A new pesticide regulation is under way

- The need of end users in pesticide kind and quantity and number of business men engaged in pesticide business is increasing from time to time.
- Exportable agricultural products are required to fulfill criteria set by importing countries.
- These and others necessitated the need to revise the regulation in use.
Status of the draft Law

- It has been commented by stakeholders on a workshop.
- The comments and recommendations have been incorporated.
- It has been commented by FAO expert, and the comment is incorporated.
- The final version is made ready to be seen by the council of ministers.
Main changes considered in the draft proclamation

- It includes Bio-pesticide registration and it is assumed to follow the chemical pesticide registration procedure.
- It gives room for efficacy data generated other than locally generated data.
- If it is approved detail guideline for its implementation will be prepared.

- So far no bio-agent or bio-pesticide is in commercial use
- However, different bio-agents and one bio-pesticide have been imported into the country for research purposes
The bio-agents under efficacy trial are

1. Predatory mites *Phytoseiulus persimilis* & *Amblyseius clifornicus* for the control of spider mites and thrips on Roses in green houses
2. The parasitoid *Hymnoptera, Pausia juniporarum* for the control of the aphid *Cinara cupressiuora* on Cupressus.
3. The leaf defoliator beetle, *Zygogogramma biocolorata* for the control of *Parthinium weed*

- The only bio-pesticide under efficacy trial is “Green Muscle” on desert locust
2. The current Procedure for the importation of Bio-agents and Bio-pesticides for research purpose

- The importation of the aforementioned research materials is made as follows:
  - The client forwards import application to the Animal and Plant Health and Regulatory Department of the MOARD
The application is then directed to the Biological Control Agents Introduction Committee of the Ethiopian Agricultural Research Institute (EARI) through the plant quarantine section of the department.

The committee conducts a pre-import evaluation on the materials in question and the evaluation report along with the agreement made to conduct the trial is sent back to the department.

Import permit is issued by the department.
3. EARI evaluation format

- The committee at EIAR makes literature assessment on the material on the following:

A) Information about the target pest
   - Identity (scientific and common name)
   - Geographical distribution and other countries where it is a major pest
   - Related pests and beneficial insects
   - Statues of the pest in Ethiopia
     - Local distribution
     - Host range
     - Nature of damage
     - Extent of losses
     - Estimated values of production loss
Control measures applicable

Drawbacks, effectiveness, costs, sustainability, environmental safety of the bio-agent and the need for the use of the agent for the control of the target pest

B) Information on the bio-control agent
   - Identity (Genus, Species, family, order, common name, isolate designation and trade name)
   - Biology of the bio-control agent
     - Lifecycle and length of life stages
     - Relation of the of the life the lifecycle with that of the target pest and other hosts
     - Host finding behavior
     - Response to physical factors (e.g. temperature, light, photoperiod etc.)
◆ Center of origin and distribution
◆ Related species and summary of their host range
◆ Mode of action against the target pest
◆ Potential for control of the target pest
◆ Non-target organism at risk from the bio-control agent
◆ Possible interactions with existing bio-control program
- Mode of action against the target pest
- Potential for control of the target pest
- Non-target organism at risk from the bio-control agent
- Possible interactions with existing bio-control program
c) Post entry application of the proposed bio-control agent

- Purpose of importation and quantity
- When and where initial releases are proposed
- Dispersal effect on the target pest and for what period
- Assessment methods for establishment of the bio-control agent
- Dispersal and effect on other species of fauna in the vicinity of target pest and for what period
- Assessment methods on non target organisms
Risk aversion methods
Quarantine measures
- Phytosanitary requirements
- Handling during importation (packing, means of transportation and storage)
The registration of both the bio-agents and the bio-pesticides under efficacy trial will be effected after the new regulation is announced.
THANK YOU