

Early Detection of Exotic Fruit Flies



STAKEHOLDERS INVOLVED

- Local government
- Universities
- Experts



SOURCES OF INFORMATION

- Scientific Journal
- Research Institutions
- Universities
- Local Government



REGULATION

- Law of the Republic of Indonesia No. 16 of 1992 concerning Animal, Fish, and Plant Quarantine
- Government Regulation of the Republic of Indonesia No. 14 of 2002 concerning Plant Quarantine article 85



TYPE OF SURVEILLANCE

- Specific survey to detect the introduction of exotic fruit flies at early phase
- The surveillance conducted by plant quarantine inspectors at Tanjung Priok sea port, Jakarta.



OBJECTIVES

- To conduct early detection of exotic fruit flies, if found can be followed by quarantine measures such as eradication program
- To inform the incidence of exotic fruitflies earlier to the exporting country
- To determine pest status of fruitflies as official quarantine pest list



DIAGNOSTIC

- Detection and identification of fruitflies conducted by plant quarantine officer
- Pest diagnostic supported by Agricultural Quarantine Testing Standard Laboratory, universities and government research institution



RECORD KEEPING

- Specimen photograph (in field and laboratory)
- Specimen voucher
- Electronic data → biolink
- Mapping of fruitflies geographical distribution



OUTCOME

To prevent the spread of exotic fruit flies that might be potential to become dangerous pest



PEST SURVEILLANCE ACTIVITY

- Two main techniques were used to collect fruit flies that may brought along with imported fresh fruits
 - Trapping
 - ✓ Traps were installed around warehouse where imported fresh fruits were kept before distributed domestically
 - ✓ The target was rotten fruits which usually discarded close to the warehouse
 - ✓ At least three traps with three different kind of lure (Cue lure, Methyl eugenol and Trimed lure) were used
 - ✓ Traps are monitored once a week.
 - Host rearing
 - ✓ Rotten fruit and other sign of pest infestation were collected both from warehouse and super markets for host rearing
 - ✓ Fruits were put in insect cages for two weeks to observe the emergency of fruit flies

PEST SURVEILLANCE ACTIVITY (Cont'd)

- Preparation
 - ✓ Set up 15 traps (modified Stainer) will be installed at 5 warehouse
 - ✓ Plastic jars (diameter \pm 20 cm) for host rearing
 - ✓ Identification of location
 - ✓ Equipment for insect collection and preservation
 - ✓ Work plan



PEST SURVEILLANCE ACTIVITY(Cont'd)

- Surveillance practice
 - Trapping method*
 - ✓ Three traps was installed out side the ware house with three different lure. The distance between trap about 10 meters.
 - ✓ Monitoring conducted every one week in the morning.
 - ✓ Collect fruit flies into vials or plastic bag for flies that still alive.
 - ✓ Chilled for identification.
 - ✓ Pinned collection
 - ✓ Surveillance duration for 6 months.



PEST SURVEILLANCE ACTIVITY (Cont'd)

Host rearing

- ✓ Rotten fruits and other sign of pest infestation were put in the plastic jar have been filled with sterilized sand or saw dust.
- ✓ Cover the opening of the plastic jar with another plastic jar (slightly different in size) which its base already replaced with insect proof screen.
- ✓ Observe for the presence of fruit fly for about 2 weeks.
- ✓ Emerged fruit fly feed with sugar solution or honey for maturation.
- ✓ Chilled for identification
- ✓ Pinned collection



PEST SURVEILLANCE ACTIVITY (Cont'd)

- Result
No exotic fruit flies recorded

