Survey Protocol for Citrus Canker

Location detail

District:

VDC:

Elevation:

Orchard owner:

Area of orchard:

Crop information

- Age of Orchard:
- Age of tree:
- Variety of lime or Mandarin:
- Crop stage:
- Sapling or Seedling:
- No. of tree/orchard

Time of survey

No. of survey: Four times per year

- Flowering stage (February- March):
- Fruiting stage: (May - June):
- Harvesting Stage: (October- November):
- Post harvest stage: At the time of grading of fruits

Plant part to be observed

- Leaf
- Twigs/branches
- Fruits
- Collateral/alternate hosts

Survey method

- Serpentine/Zig-Zag Path way
- No. of survey orchard: All suspected orchards based on visual symptoms if any. Random 5 % selection of non suspected orchards.

- No. of tree/orchard : 5% tree of orchard
- In nursery field: 10 saplings/seedling per nursery

Sampling method

Leaf - Suspected/infected 5-10 leaves/tree from low to mid parts/strata of the tree.

Twigs - Suspected/infected 5-10 twigs/tree from low to mid parts/strata of the tree.

Fruit- Suspected/infected 5-10 fruits/tree from low to mid parts/strata of the tree.

Post harvest: Suspected/infected 5-10 fruits/per 5% of lot

Testing method

- Visual symptom
- Bacteriological lab. technique

Samples should be kept on open and shade condition for 24 hrs to remove excess moisture if not reached sample in laboratory timely

Dispatch of samples

Use mailing or A4 size nepali/paper envelope to dispatch

Collected samples to be reached in diagnosis laboratory as soon as possible but not later than one week.

Disease diagnostic protocol in the laboratory

- Examine visual observation in all the collected samples
- Selection of suspected samples subjected for isolation.
- Examine the presence of bacterial ooze or confirm bacterial infection under microscope.
- Media preparation (Selected medium/nutrient agar/yeast dextrose carbonate agar)
- Isolation
- Purification
- Identification
- Preservation

Additional information on survey format

- Scientific name of host
- Common name of host (Include detail of cultivar/variety if known)
- Suspected pathogen fungi/bacteria/virus/nematodes
- Description of symptom observed in the field
- Local/common name of disease
- Date of survey
- Name of surveyor
- Designation
- Signature