Survey Protocol for Citrus Cankер

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