



### Other plant analytical services available at the laboratory are:

- Acid insoluble ash (%)
- Modified acid detergent fibre (%)
- Neutral detergent fibre (%)
- Lignin (%)
- Tannin (%)
- Total fat (%)
- Qualitative test of phytochemicals (flavonoids, saponins, alkaloids, etc.)

### Seed analysis

The laboratory tests the following parameters in seed:

- Germination (%)
- Physical purity (%)
- Moisture content (%)
- Test weight/thousand grain weight (g)
- Grain shape, size and appearance
- Colour determination of grain
- Water uptake (ml) in grain
- L/B ratio in grain
- Swelling capacity (ml/1000 grain)

### Fruit analysis

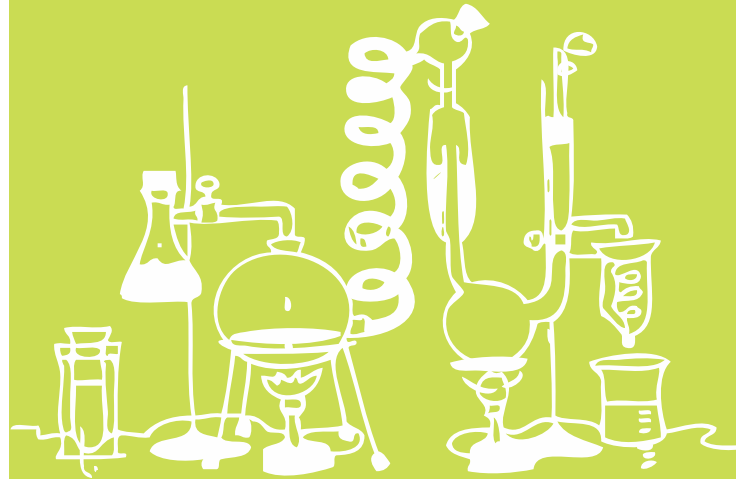
The laboratory analyses the following parameters in fruits:

- Total soluble solid (TSS)
- Acidity (malic acid, citric acid and oxalic acid)

### Water analysis

The laboratory can perform following tests on water:

- Water pH
- Nitrogen (%)
- Phosphorus (ppm)
- Potassium (ppm)
- Total solid (%)



For more information:

Local Initiatives for Biodiversity  
Research and Development (LI-BIRD)

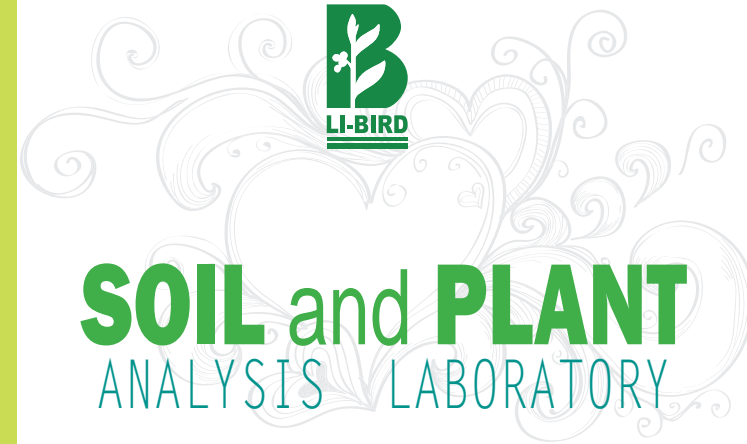
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## INTRODUCTION

Local Initiatives for Biodiversity, Research and Development (LI-BIRD) is a non-profit making non-governmental organization (NGO) with its headquarters in Pokhara, Kaski, Nepal. LI-BIRD has several multi-disciplinary projects and most of them involve agriculture based research activities.

Soil and plant analysis data have a significant role in establishing the scientific basis in agricultural research and development. LI-BIRD's soil and plant laboratory provides standard soil and plant analytical services and data to LI-BIRD projects as well as external clients such as universities, NGOs and individual PhD students.

The soil and plant analysis laboratory was established in 1999. The laboratory is reasonably well equipped and practices stringent quality control. It provides routine analysis in soil, proximate analysis in plant, seed analysis, fruit analysis, water analysis and slurry analysis.

The laboratory has already played a role in making LI-BIRD the partner of choice in agriculture based natural resource management. We look forward to doing the same for you by providing quality analytical service and reliable data.



### Goal

Strengthening the scientific basis of agriculture and natural resource management through reliable soil and plant analytical services and data.

### Laboratory Services

The laboratory follows stringent norms to ensure quality analytical services for scientific integrity of data and client satisfaction.

### Soil analytical services

#### Physical analysis

The laboratory mainly provides the following soil physical analyses:

- Soil moisture content (%)
- Particle size distribution (% sand, % silt, % clay)
- Soil colour classification (Muncell color chart)

### Chemical analysis

The laboratory conducts soil chemical analyses using gravimetric, titrimetric, spectrophotometric, flame photometric and colorimetric methods. Analytical services are provided for the following parameters:

- pH (1:2.5)
- Organic matter (%)
- Available phosphorus (ppm)
- Available potassium (ppm)
- Total nitrogen (%)
- Cation exchange capacity (CEC) - meq/100g
- Cations ( $\text{Na}^+$ ,  $\text{K}^+$ ) meq/100g
- Total acidity (meq/100g)
- Boron (ppm)
- Analysis of other micronutrients, such as, Zn, Fe, Mg, Mn and Cu will be added in the near future

### Plant Analytical Services

#### Proximate analysis

The laboratory provides proximate analyses in plant/feed samples for the following parameters:

- Dry matter content (%)
- Plant phosphorus (%)
- Plant potassium (%)
- Plant nitrogen/crude protein (%)
- Crude fibre (%)
- Crude fat (%)
- Total ash (%)
- Carbohydrate/nitrogen free extract (%)

