Chapter-8
Crop Cutting Data

Crop cutting data is an essential component of estimating crop yield and production. Harvesting the entire plot for yield estimation is often costly, time-consuming, and difficult due to variations in farmers' plot sizes. Therefore, a sample-based crop cutting method is used to estimate crop productivity in demonstration plots.



Selection of Sample Areas

- Select 3–4 representative sample areas randomly within the demonstration plot.
- Each sample area should measure 1meter x1 meter (1 sq meter).
- Identify and mark the sample areas preferably at the tillering stage (for cereals) to facilitate periodic monitoring.
- Ensure that the selected areas represent the overall crop condition of the demonstration plot. Therefore, selected area should not be on boarder or under the tree/building shade.

Crop Growth Monitoring and Data Collection

- Record crop growth observations at different stages, from tillering to maturity and harvest. At the
- maturity stage, record the following parameters from each 1 m² sample:
    - Number of plants per square meter
    - Number of spikes/panicles per square meter (for cereals)
    - Number of spikelets per spike/panicle
    - Number of pods per plant (for pulses)
    - Number of grains per pod (for pulses)

Crop Cutting and Grain Sampling

- Ideally, harvest the selected sample areas separately to determine actual grain yield per square meter. However, where separate harvesting is not feasible at the farm level, record crop maturity parameters from the marked sample areas.
- After harvesting and threshing the demonstration plot, record the total grain weight.
- Determine the average grain weight using:
  - **100-grain weight (Seed Index):** Generally used for crops with larger grains.
  - **1,000-grain weight (Test Weight):** Generally used for crops with smaller grains.

Estimation of Crop Production

- Use the grain weight, crop maturity observations, and sample-based yield parameters to estimate crop productivity.
- Calculate the estimated yield per hectare and total production of the demonstration plot.
- Record the results systematically for comparison across demonstration plots, crop varieties, and crop management practices

