

**Summer Field School [Online] on
MOUNTAIN ECOSYSTEMS AND RESOURCE MANAGEMENT
19-28 September, 2021**

Name of Faculty Member (Facilitator)	Dr. Bal Krishna Joshi (Senior Scientist, Nepal Agricultural Research Council, Kathmandu)
Technical Session Group No.	8.3
Technical Session Group Name	Sustainable Agriculture; Organic Farming; Agro-Biodiversity
Topic	R for Agrobiodiversity Measurement (RAM)
Sub-Topics	<ul style="list-style-type: none"> ▪ Agrobiodiversity and its measurement ▪ Agrobiodiversity statistics (agro-statistics) ▪ Agrobiodiversity levels and types ▪ Agrobiodiversity indicators (score and index; Household/ Village/ community/ site) ▪ Measurement objects ▪ Data generation (Data type, Survey tool) ▪ Software for agrobiodiversity statistics ▪ R and R Studio for agrobiodiversity <ul style="list-style-type: none"> – Data file – R packages for agrobiodiversity measurement: Vegan and BiodiversityR – Output and interpretation
Synopsis (if any) (max. 100 words)	Agrobiodiversity can be described, quantified, compared and related by using different statistical tools, called agrobiodiversity statistics (agro-statistics). Both quan-qualitative data are used and the measurement objects may be certain site, community, household, crop group, species, landrace, etc for estimating scores and indexes as agrobiodiversity indicators. Among the many software, R is free software which suits for different disciplines. RStudio is integrated part of R and includes a console, syntax-highlighting editor, tools for plotting, history, debugging and workspace management. Vegan and BiodiversityR packages are useful for estimating diversity index. Agricolae is general package for agricultural scientists.
List of Learning Material (Files to be availed to us before 31 August 2021)	<ul style="list-style-type: none"> ▪ PPT presentation (pdf file): 1 ▪ R and RStudio handout: 1 ▪ Published papers: 7 ▪ Bibliography (further reading): 5 ▪ List of weblinks (further reading): 7 ▪ Software and R packages: 5