MIAPPE – ISA-Tab mapping

Mapping of selected essential MIAPPE attributes to elements of the ISA-Tab structure
in Phenotyping Configuration: Basic, Field and Greenhouse:
● included, □ add if applicable

Checklist section	ISA-Tab level	Checklist attribute	ISA-Tab structure	Basic	Field	Greenhouse
General metadata	Investigation	Unique identifier Title Description	Investigation Identifier Investigation Title Investigation Description	● ● ●	● ● ●	● ● ●
Timing and location	Study	*Timing* - Start of experiment (date) - Duration (days/months/year)	Characteristics	●	●	●
		Experiment location - Geographic location	Characteristics	●	●	●
Biosource	Study	Organism (taxon) Infraspecific name Seed origin	Characteristics	● ● ●	● ● ●	● ● ●
Environment	Study	Growth facility (growth chamber, GC / greenhouse, GH / open top chamber, OTC / experimental garden / field)	Characteristics	●	●	●
		Aerial conditions - air humidity (moisture) - daily photon flux (light intensity) - temperature (°C): - average day temperature, - average night temperature	Protocol "Aerial conditions" with parameters		●	●
		Rooting conditions - Rooting medium: aeroponics / hydroponics (water-based, solid-media based) / soil type (sand, peat, clay, mixed, etc) - pH *For field:* - Plot size, - Sowing density *For greenhouse:* - Container type - Container volume - Container dimensions - Number of plants per container	Protocol "Rooting" with parameters		●	●
		Nutrients *For soil:* - Extractable N content per unit ground area before fertiliser added, - Type and amount of fertiliser added,	Protocol "Nutrition" with parameters		●	●
		Watering *For soil:* - Range in water potential (MPa) - Irrigation from top/bottom/drip irrigation	Protocol "Watering" with parameters		●	●
Treatments	Study or Assay	*All interventions being part of the experiment*	Factor		□	□
Experimental design	Study	*Experimental units and their grouping* (blocks, superblocks etc.)	Characteristics, Factor, Protocol “Sampling” with parameters		●	●
Sample collection, processing, management	Assay	Plant body of interest (organ)	Characteristics	●	●	●
Observational variables	Assay	*Phenotypic variables* - Trait - Method - Scale		●	●	●
		Environmental variables - Trait - Method - Scale		□	□	□
Observations	Assay	*Raw data*	Raw data file	□	□	□
		Derived data	Derived data file	●	●	●