

1 Requirements for rigor in phenotyping practices

- know your TPE , know your phenotyping site or be sure to have facilities to characterize climatic and soil conditions experienced by plants
- Have a clear understanding of what you are looking for
- Use appropriate irrigation system and manipulate water stress as a function of your targeted trait(s) and TPE select site as a function of target trait.
- Phenotyping techniques must be first relevant (balance cost to effectiveness)

2 What can model do for you :

- Capture new traits ; get stable characteristics of genotype across environments
- Evaluate their impact on plant performance in TPE ; define ideotype
- Help design and analyze MET
- Help to identify integrated measures for highthrough put phenotyping

3 Opportunity to combine promising new tools (imaging...) which model for application in breeding

