

Laying out plots and data collection (Target disease – Bacterial wilt):



Setting of PTD blocks	Each plot should be 5 m x 5 m
	Walking space between plots of 1 m
	Select high-yielding potato varieties/ seed
	Equal plant population of per plot
	Plots at right angle
	Spacing: 75 cm by 30 cm
	Data to be collected from 10 randomly selected plants per plot
Parameters for measure of data collection	All other management practices same for each plot
	% germination:
	No of leaves per plant:
	Days to flowering:
	Number of diseased/infected plants
	Severity of infection (low, medium high):
Maturity date	
Yield (kgs per unit area):	
No of tubers per plant:	

Determination of best practice: from comparison and analysis of collected data farmers are able to observe the level of susceptibility of the varieties to the disease, as well as the desirable quality traits.



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PARTICIPATORY TECHNOLOGY DEVELOPMENT (PTD) FOR POTATO VALUE CHAIN



Participatory Technology Development (PTD)

This is the means by which Farmer Field and Business Schools (FFBS) transfer Technologies Innovations and Management practices (TIMPs) of a specific agricultural value chain through demonstration trials.

How to conduct demonstration trials for potato value chain

Challenges associated with potato production identified in a participatory manner and ranked in a pair-wise ranking, as illustrated in the example below:

List of production problems and acronyms

- Low yielding varieties (LYV)
- High incidences of diseases (HID)
- Low soil fertility (LSF)

Pairwise ranking procedure

	LYV	HID	LSF	Scores	Rank
LYV		HID	LYV	1	2
HID			HID	2	1
LSF				0	3

High incidence of diseases is ranked the highest challenge therefore the participatory technology development is set to address the problem, focusing on a specific disease (in this case, bacterial wilt is used as an example).

Description of the PTD for addressing low Potato production due to high incidence of diseases

Value Chain	Potato
Learning Enterprise	Potato
Enterprise VC area	Potato VC at the production level
Background Problem	Low Potato production due to high incidence of bacterial wilt
Objective	To increase incomes and improve production of Potato through reducing bacterial wilt incidence.

Factors to consider:

- Land topography
- Runs (blocks should face East to West)
- Source of manure/fertilizer
- Certified Potato Seed

Guidelines for setting up of trials (target disease – Bacterial wilt):

Designing of plots:

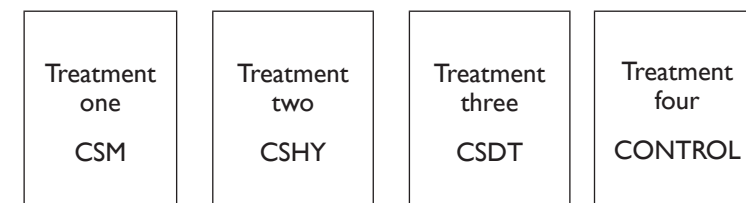
Treatment 1: Certified seed bred for market acceptability (CSM)

Treatment 2: Certified seed bred for high yield (CSHY)

Treatment 3: Certified seed bred for specific disease tolerance (CSDT)

Treatment 4: Farmer saved seed (CONTROL)

Plots design layout:



Participatory layout of PTD plots by two sub-groups of FFBS