



Test design

General information –
Test in crops –
Data collection –



-EN_PKD_b_Test Design_200504.docx-

*...for intelligent
agriculture*



General information

Combining penergetic b and penergetic p

- To achieve the best possible results, penergetic b and penergetic p must be used in combination.
- Do not use penergetic b and penergetic p simultaneously. There must be an interval of at least 10 days, ideally 30 days between the application of the two products.

General rules for trials

- If machinery (e.g. sprayer, tanks etc.) is used for the trial, use this equipment first for the control field and then do the penergetic field. After the application, clean the machinery. It takes up to several weeks before the effect of the penergetic information disappears from the machinery.
- If equipment is used (test tubes, watering cans, fertilizer containers, etc.), it is essential to use separate instruments throughout the experiment and mark them accordingly.
- Penergetic recommends a trial size of at least half a hectare.
- For plot or strip field tests, distances of 5 - 10 meters must be kept between the control and test areas.
- For pot tests, a distance of 1.5 meters between the pots of the trial and control groups is required.
- In the case of sloping sites, place the penergetic plot at the bottom of the area, otherwise rain, for example, flushes the penergetic products down on to the control plot.
- Attention must be paid in combination with the AquaKat. Water or metal can transmit the effects over long distances (waterpipes etc.).

Adjustment of the quantities of fertilizers and pesticides

Penergetic products allow a reduction of fertilizers and pesticides. This depends on many factors (soil quality, microbiology, biological activity ...) and must be individually analyzed and adapted.

Setting up and documenting a measurement

- A photo documentation from the start until the end of the trial period (high quality images) is mandatory.
- Use previous documentations (evaluations/analyses without penergetic products) to enable a clear comparison.
- If necessary, carry out soil analysis to determine the effect on the soil.
- Description of the initial situation and the objective.
- Use the data collection form below.

Data collection: crops

General data

Penergetic consultant		
Customer		Date:
Farm location: country, city		
Using penergetic products for the first time?	<input type="checkbox"/> Yes	<input type="checkbox"/> No, for _____ years
Total farmland in ha		
Objective of the trial		

Trial data

Crop type / variety		
Crop rotation	<input type="checkbox"/> Yes (details)	<input type="checkbox"/> No
Cover crop	<input type="checkbox"/> Yes (mention type / composition)	<input type="checkbox"/> No

	Area (ha)	Planting date	Harvest date	Productivity (kg / ha)
Control				
penergetic test				

Special weather conditions	
● Rain (quantity, when)	
● Temperature variation	
● Frost / hail / snow	
● Others	

Analysis







Soil analysis before planting	<input type="checkbox"/> Yes (please attach copy)	<input type="checkbox"/> No
Soil analysis after harvest	<input type="checkbox"/> Yes (please attach copy)	<input type="checkbox"/> No
Yield and quality analysis of crop	<input type="checkbox"/> Yes (please attach copy)	<input type="checkbox"/> No

Seed dressing

<input type="checkbox"/> Seed dressing / inoculant	<input type="checkbox"/> penergetic p seed dressing 4002	<input type="checkbox"/> Both
Dose of penergetic p 4002?		

Products

Penergetic

Penergetic product	Art. no.	Molasses or powder		Dosage / ha	Stage (BBCH)
<i>penergetic b</i>		<input type="checkbox"/>			
		<input checked="" type="checkbox"/>			
<i>penergetic p</i>		<input type="checkbox"/>			
		<input type="checkbox"/>			
Other penergetic products		<input type="checkbox"/>			
		<input type="checkbox"/>			

Fertilizer

Type of fertilizer (quantity) per ha	N:	P:	K:	S:
	Liquid manure/slurry:			
	Other:			
Dosage per ha?				
Number of applications?			When?	
Fertilizer reduction with penergetic?	<input type="checkbox"/> Yes (by what percentage?)		<input type="checkbox"/> No	

Herbicides

Type of herbicide(s)		
Dosage per ha?		
Number of applications?		When?
BBCH Stage?		
Herbicide reduction with penergetic?	<input type="checkbox"/> Yes (by what percentage?)	<input type="checkbox"/> No

Fungicides

Type of fungicides		
Dosage per ha?		
Number of applications?		When?
BBCH Stage?		
Fungicide reduction with penergetic?	<input type="checkbox"/> Yes (by what percentage?)	<input type="checkbox"/> No

Other information

Irrigation (flow rate / h, etc.)	

Observed benefit / effect

Visual changes (soil structure, color of plant), earthworms, mycorrhizae growth, development and size of the roots, smell of the soil, soil compaction:

Observation 1:		
Observation 2:		
Observation 3:		
Observation 4:		

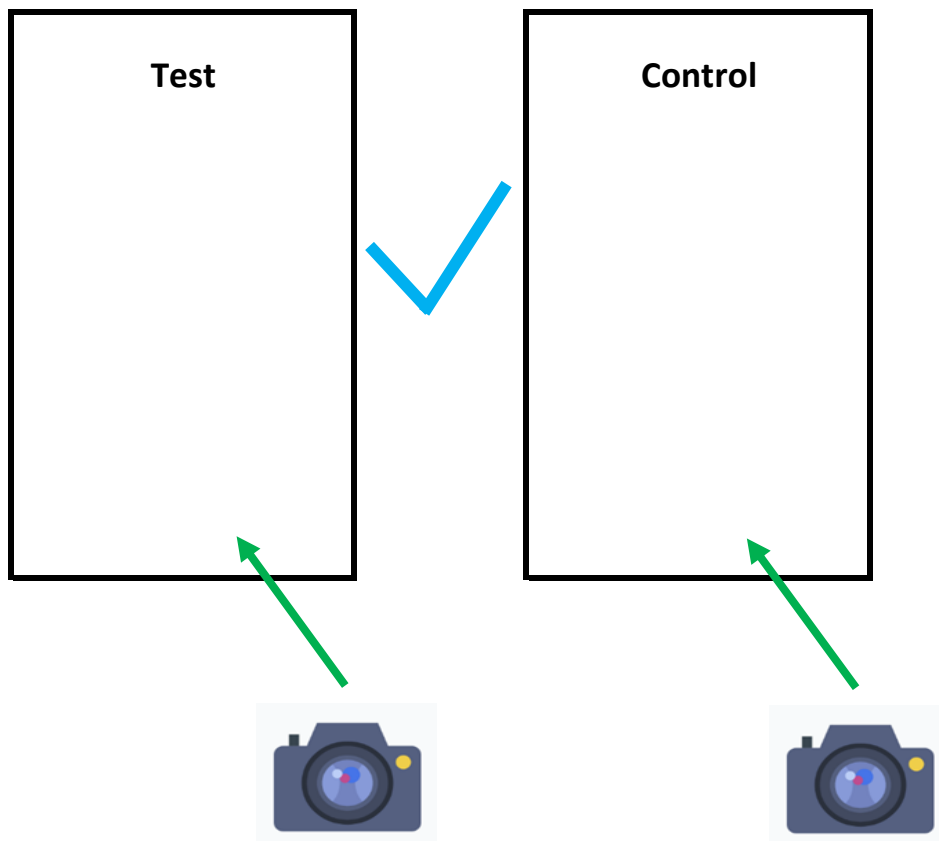
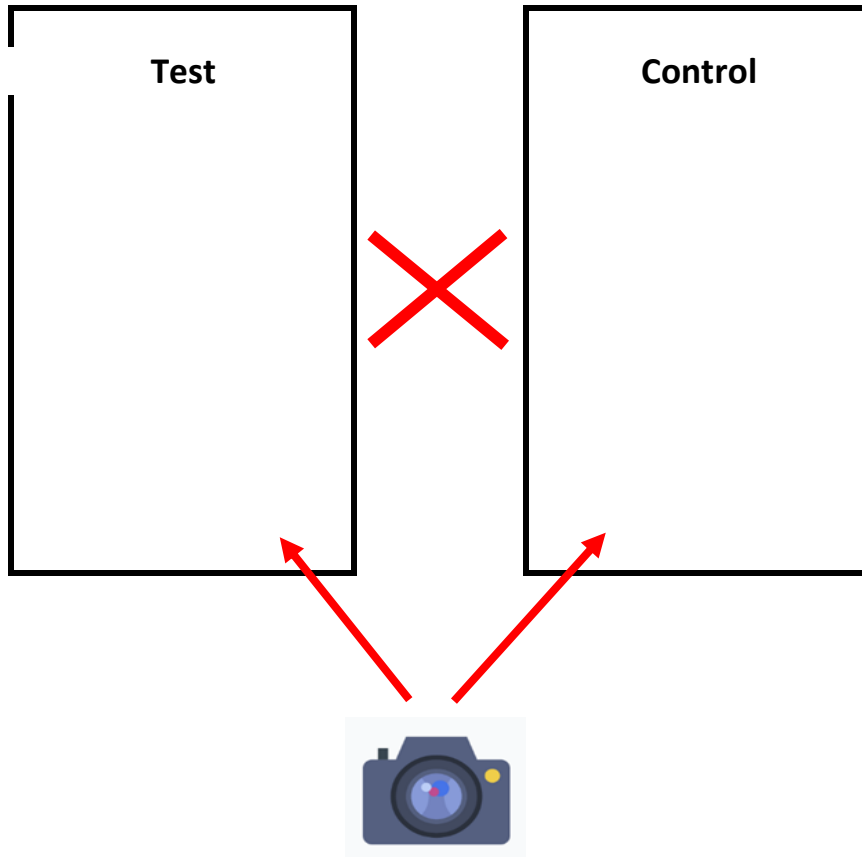
Customer quote	

Conclusion and further comments (please do not feel restricted by the amount of space provided, add extra sheets as required):

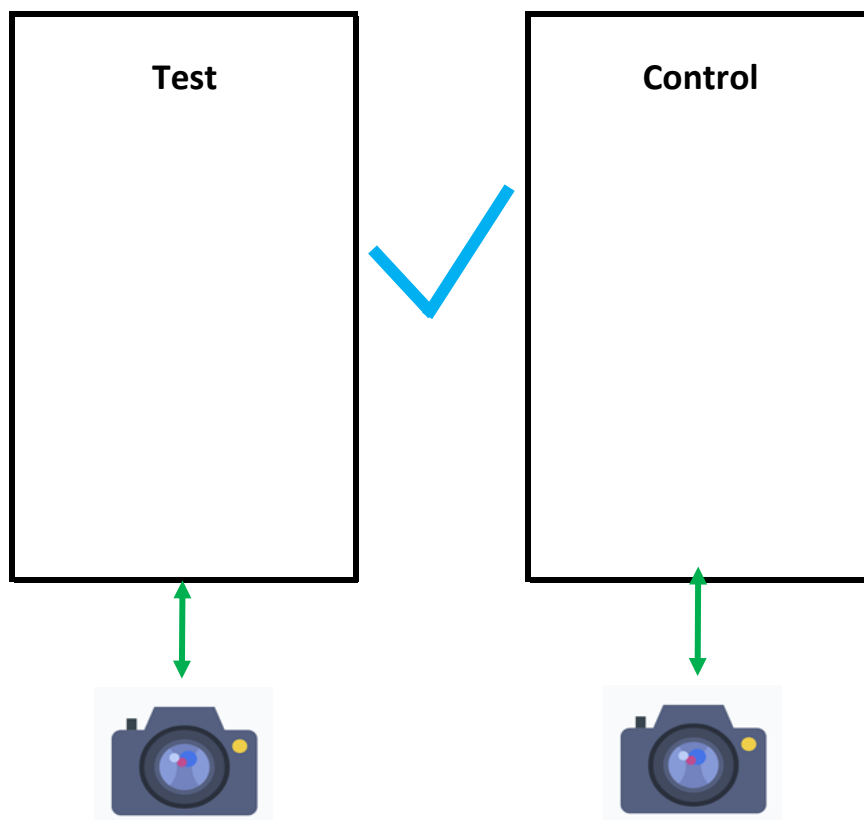
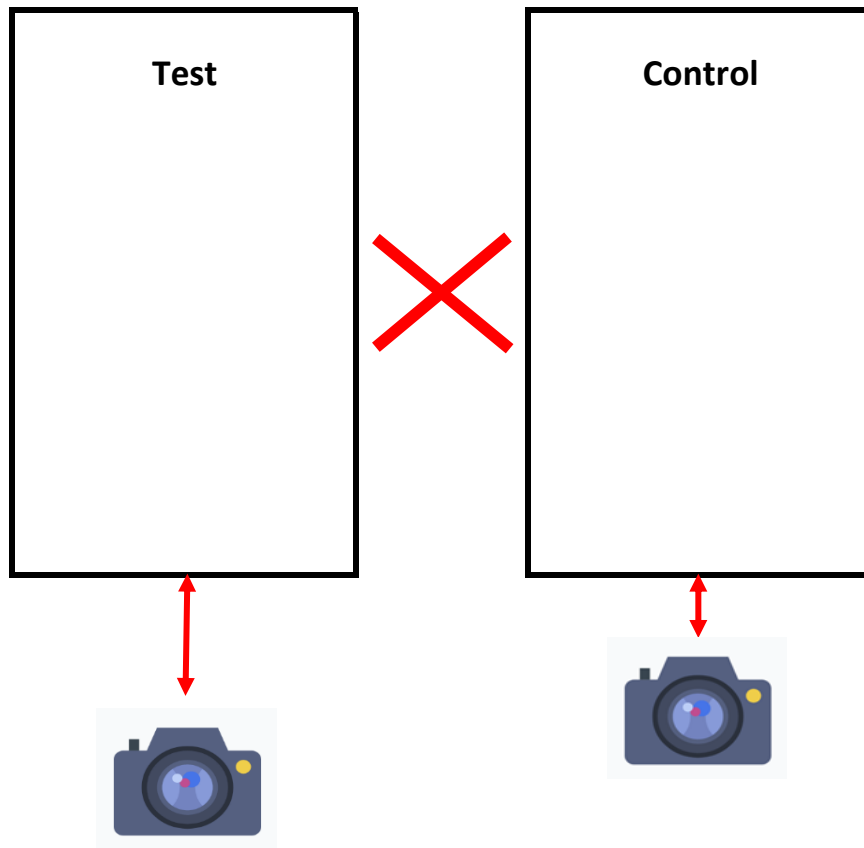
Pictures

Add at least 4 pictures according to the following instruction.

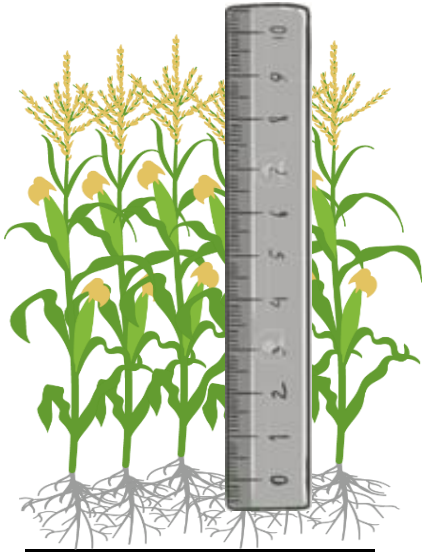
Angle: Same for test and control



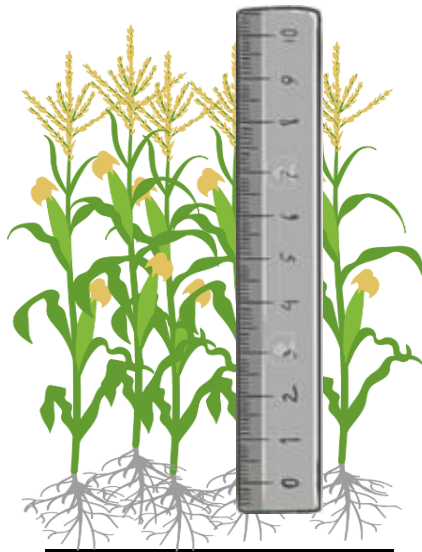
Distance: Same for test and control



Height reference



Test



Control



Test



Control