penergetic
the natural biotechnology

penergetic p

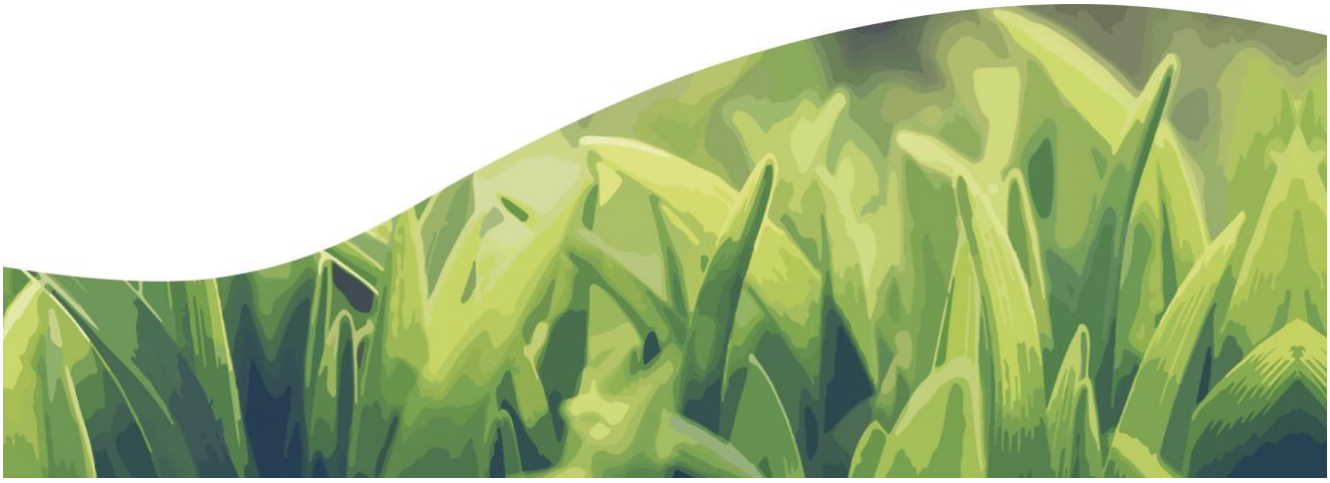
Test design for

penergetic p shield

and

penergetic p protector

General information –
Data collection –



...for intelligent agriculture

SWISS MADE

General information

Combining penergetic b, penergetic p, penergetic p shield and penergetic p protector

- To achieve the best possible results, penergetic b, penergetic p, penergetic p shield and penergetic p protector must be used in combination (according to Application & Dosage).
- To be efficient, penergetic p and penergetic p shield must be applied together.
- Penergetic p protector can be used alone.
- Do not use penergetic b and any of the penergetic p products 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, 1.5 meters must be kept in between the pots of the trial and control groups
- 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?	☐ Yes	☐ No, since _____ years
Total farmland in ha		
Objective of the trial		

Trial data

Crop type / variety		
Crop rotation	☐ Yes (details)	☐ No
Cover crop	☐ Yes (mention type / composition)	☐ 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	☐ Yes (please attach a copy)	☐ No
Soil analysis after harvest	☐ Yes (please attach a copy)	☐ No
Yield and quality analysis of crop	☐ Yes (please attach a copy)	☐ No

Seed dressing

☐ Seed dressing / inoculant	☐ penergetic coat seed dressing 4002	☐ Both

Products

Penergetic

Penergetic products	Art. no.	Molasses or powder		Dosage / ha	Stage (BBCH)
penergetic b		☐			
		☐			
penergetic p		☐			
		☐			
penergetic p shield		☐			
penergetic p protector		☐			
Other penergetic products		☐			
		☐			

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?	☐ Yes (by what percentage?)		☐ No	

Fungicides

Type of fungicides			
Dosage per ha?			
Number of applications?		When?	
BBCH Stage?			
Fungicide reduction with penergetic p shield?	☐ Yes (by what percentage?)	☐ No	

Insecticides

Type of insecticides			
Dosage per ha?			
Number of applications?		When?	
BBCH Stage?			
Insecticide reduction with penergetic p protector?	☐ Yes (by what percentage?)		☐ No

Herbicides

Type of herbicide(s)			
Dosage per ha?			
Number of applications?		When?	
BBCH Stage?			
Herbicide reduction with penergetic?	☐ Yes (by what percentage?)		☐ No

Other information

Irrigation (flow rate / h, etc.)	

Observed benefits / effects

Visual changes (soil structure, color of plant), earthworms, mycorrhizae growth, development and size of the roots, observed fungi, severity of disease overall and at stages, fungus growth (measurement and /or percentage), insect count, avoidance information, pollinator count, percentage of leaf damage, percentage damage caused by herbivorous insects (caterpillar), input cost comparison:

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):

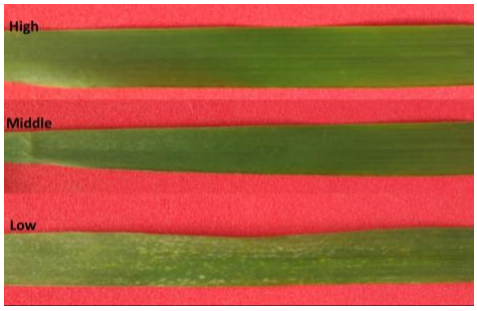
Pictures

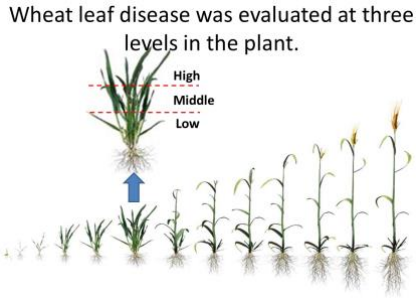
The following pictures are mandatory for each trial:

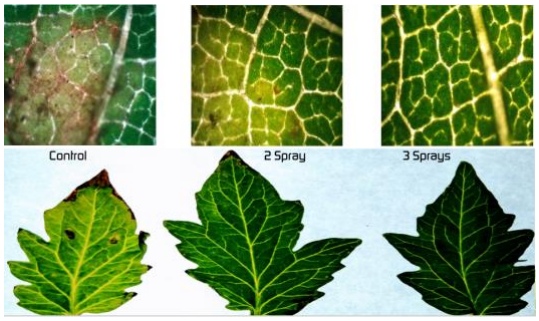
- Pictures of minimum 10 leaves (overview) and then individual pictures of Test and Control.
- Place a ruler (measuring tape) next to the samples for size comparison
- Add information about evaluation time, number of sprays and when the picture was taken (eg. 22 days after 1st application, picture taken on 02.07.2022)
- Regular monitoring and photos to be taken of the field, leaves and crop details.

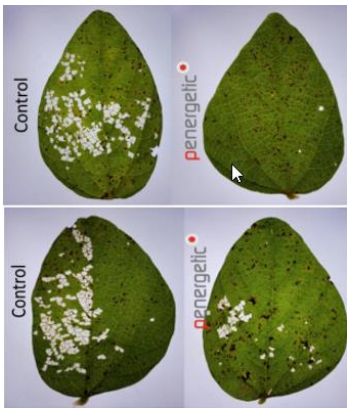
Add at least 10 picture-sets according to the following instruction.

Some samples how the photos should look like









Follow the Checklist Reference Pictures with the guidance of taking pictures.