



ESSAI 4

Nutrition innovante

COLZA / COMPARAISON ANUELLE
D'EFFICACITÉ DE 2 BIOSTIMULANTS
APPLIQUÉS AU SEMIS



Microbiome Analysis Report



SOIL
Silt loam

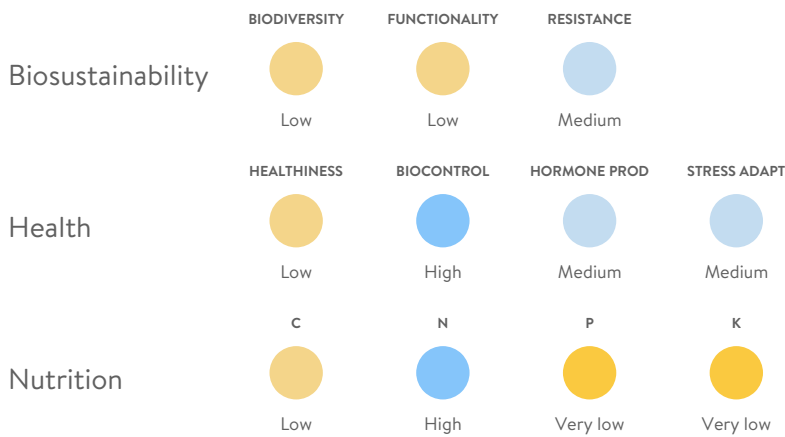
CROP
Rapeseed (colza)

VARIETY
? To be competed

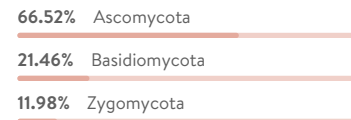
DATE
25-Aug-2020

S U M M A R Y

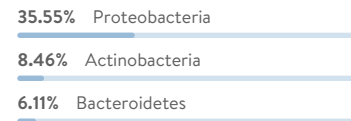
All the information shown in this microbial report is based on the detection presence of **616** different species whose distribution is



FUNGAL PHYLUM DISTRIBUTION



BACTERIAL PHYLUM DISTRIBUTION



LEGEND

- Not Detected
- Very low
- Low
- Medium
- High
- Very High

CONCLUSIONS

- The *Phosphorus and Potassium* nutrition values are low.
- The healthiness value is Low, we have found one relevant disease risk (Root rot).
- You have a Low biodiversity value. Aggressive management can be affecting your soil biosustainability.

B I O S U S T A I N A B I L I T Y



Richness, evenness and equilibrium of microbial species



Capability of soil microbial communities to perform multiple functions



Ability of communities or populations to remain unchanged when stressed by disturbance



HEALTH

HEALTHINESS
Low

2 Disease Risks found

Crop health according to the pathogens detected

RELEVANT RISK DETECTED

ROOT ROT

LEAVES, ROOTS



WORLDWIDE INCIDENCE

((())) Widely spread

100 out of 100 parcels analysed are affected by Root rot

RISK LEVEL

HIGH

Based on 2 pathogens

! FEATURED MICROORGANISM FOUND related to Root rot

Fusarium sp. • FUNGUS

SLIGHT RISK DETECTED



DAMPING OFF

||||| MEDIUM Risk level

NOT DETECTED

ALTERNARIA BLACK SPOT • BLACKLEG • DOWNY MILDEW • POD ROT • POWDERY MILDEW • SCLEROTINIA STEM ROT • WHITE LEAF SPOT • WHITE RUST • SEEDLING DISEASE COMPLEX

BIOCONTROL

High

Microbial species grouped according to the type of pest they encounter, capable of preventing pathogenic species from taking hold or proliferation

Fungicide agents

— HIGH

Insecticide agents

— LOW

Bactericide agents

— NOT DETECTED

Nematicide agents

— HIGH

HORMONE PRODUCTION

Medium

Microbial species grouped according to the type of phytohormone they generate

Auxin production (IAA)

CELL DIVISION

STEM ELONGATION

— MEDIUM

Cytokinin production (CK)

CELL PROLIFERATION

CELL DIFFERENTIATION

— MEDIUM

Gibberellin production (GA)

STEM ELONGATION

GERMINATION

FLOWERING

— HIGH

STRESS ADAPTATION

Medium

Microbial species grouped according to their relationship with the metabolisms linked to the capability to withstand stress conditions

Exopolysaccharide production

NUTRIENT TRAP

SALINITY PROTECT.

DROUGHT PROTECT.

— MEDIUM

ACC deaminase (ACC-d)

PATHOGEN PROTECT.

SALINITY PROTECT.

DROUGHT PROTECT.

— HIGH

Heavy metal solubilization

BIOREMEDIATION

DETOXIFICATION

ALLEVIATE HEAVY METAL STRESS

— LOW

Salicylic acid (SA)

DROUGHT PROTECT.

SALINITY PROTECT.

ALLEVIATE HEAVY METAL STRESS

— HIGH

Salt tolerance

SALINITY PROTECT.

ROOT GROWTH PROMOTION

— MEDIUM

Abscisic acid (ABA)

GROWTH REGULATION

PLANT RESISTANCE

INCREASE YIELDS

— VERY HIGH

Siderophore production

IRON AVAILABILITY

BIOFERTILIZER

— MEDIUM

BC-R-Othe-ITS3-16S4-BPP1-2020-09-09-C22013-3/4

NUTRITION

Nutritional status based on the microbial mobilization of certain compounds

MAJOR COMPOUNDS

C

Carbon

LOW

N

Nitrogen

HIGH

CARBON PATHWAYS

<p>GAIN</p> <p>Carbon fixation ■ VERY HIGH</p> <p>INDIRECT BENEFITS</p> <p>Organic matter release ■ LOW</p>	<p>LOSS</p> <p>Aerobic respiration ■ MEDIUM</p> <p>Fermentation ■ VERY HIGH</p> <p>Methanogenesis ■ VERY HIGH</p>
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NITROGEN PATHWAYS

<p>NUTRIENT SUPPLY</p> <p>Inorganic nitrogen release ■ HIGH</p> <p>INDIRECT BENEFITS</p> <p>Inorganic nitrogen cycle health ■ LOW</p>	<p>NUTRIENT COMPETITION</p> <p>Inorganic nitrogen consumption ■ VERY HIGH</p>
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P

Phosphorus

VERY LOW

K

Potassium

VERY LOW

PHOSPHORUS PATHWAYS

<p>NUTRIENT SUPPLY</p> <p>Inorganic P solubilization ■ VERY LOW</p> <p>INDIRECT BENEFITS</p> <p>Organic P assimilation ■ LOW</p>	<p>NUTRIENT COMPETITION</p> <p>Inorganic P consumption ■ LOW</p>
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POTASSIUM PATHWAYS

<p>NUTRIENT SUPPLY</p> <p>Potassium solubilization ■ VERY LOW</p>	<p>NUTRIENT COMPETITION</p> <p>Potassium consumption ■ MEDIUM</p>
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MINOR COMPOUNDS

Fe

Iron

LOW
Iron assimilation

Zn

Zinc

HIGH
Zinc transport equilibrium

Mn

Manganese

MEDIUM
Manganese transport equilibrium

S

Sulfur

MEDIUM
Sulfur cycle equilibrium

Ca

Calcium

HIGH
Calcium transport

Cu

Copper

MEDIUM
Copper export

Mg

Magnesium

VERY LOW
Magnesium transport

Cl

Chlorine

VERY HIGH
Chlorine transport

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