openfield

Résultats Plateforme 2021

ESSAI 4

Nutrition innovante

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

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BECROP
By BIOMEMAKERS

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Microbiome Analysis Report

#C22013

Block 1 - PF OPENFIELD Colza

SOIL	CROP	VARIETY	DATE
Silt loam	Rapeseed (colza)	? To be competed	25-Aug-2020

SUMMARY

	BIODIVERSITY	FUNCTIONALITY	RESISTANCE
Biosustainability	Low	Low	Medium

	HEALTHINESS	BIOCONTROL	HORMONE PROD	STRESS ADAPT
Health	Low	High	Medium	Medium

	C	N	P	K
Nutrition	Low	High	Very low	Very low

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

FUNGAL PHYLUM DISTRIBUTION

66.52% Ascomycota
21.46% Basidiomycota
11.98% Zygomycota

BACTERIAL PHYLUM DISTRIBUTION

35.55% Proteobacteria
8.46% Actinobacteria
6.11% Bacteroidetes

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.

BIOSUSTAINABILITY

BIODIVERSITY	FUNCTIONALITY	RESISTANCE
LOW	LOW	MEDIUM
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

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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

Bactericide agents
- NOT DETECTED

Insecticide agents
- LOW

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

NUTRITION

Nutritional status based on the microbial mobilization of certain compounds

MAJOR COMPOUNDS

C Carbon — LOW

N Nitrogen — HIGH

CARBON PATHWAYS

GAIN

Carbon fixation
VERY HIGH

INDIRECT BENEFITS

Organic matter release
LOW

LOSS

Aerobic respiration
MEDIUM

Fermentation
VERY HIGH

Methanogenesis
VERY HIGH

NITROGEN PATHWAYS

NUTRIENT SUPPLY

Inorganic nitrogen release
HIGH

INDIRECT BENEFITS

Inorganic nitrogen cycle health
LOW

NUTRIENT COMPETITION

Inorganic nitrogen consumption
VERY HIGH

P Phosphorus — VERY LOW

K Potassium — VERY LOW

PHOSPHORUS PATHWAYS

NUTRIENT SUPPLY

Inorganic P solubilization
VERY LOW

INDIRECT BENEFITS

Organic P assimilation
LOW

NUTRIENT COMPETITION

Inorganic P consumption
LOW

POTASSIUM PATHWAYS

NUTRIENT SUPPLY

Potassium solubilization
VERY LOW

NUTRIENT COMPETITION

Potassium consumption
MEDIUM

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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Any further enquiry concerning this report will be attended at

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