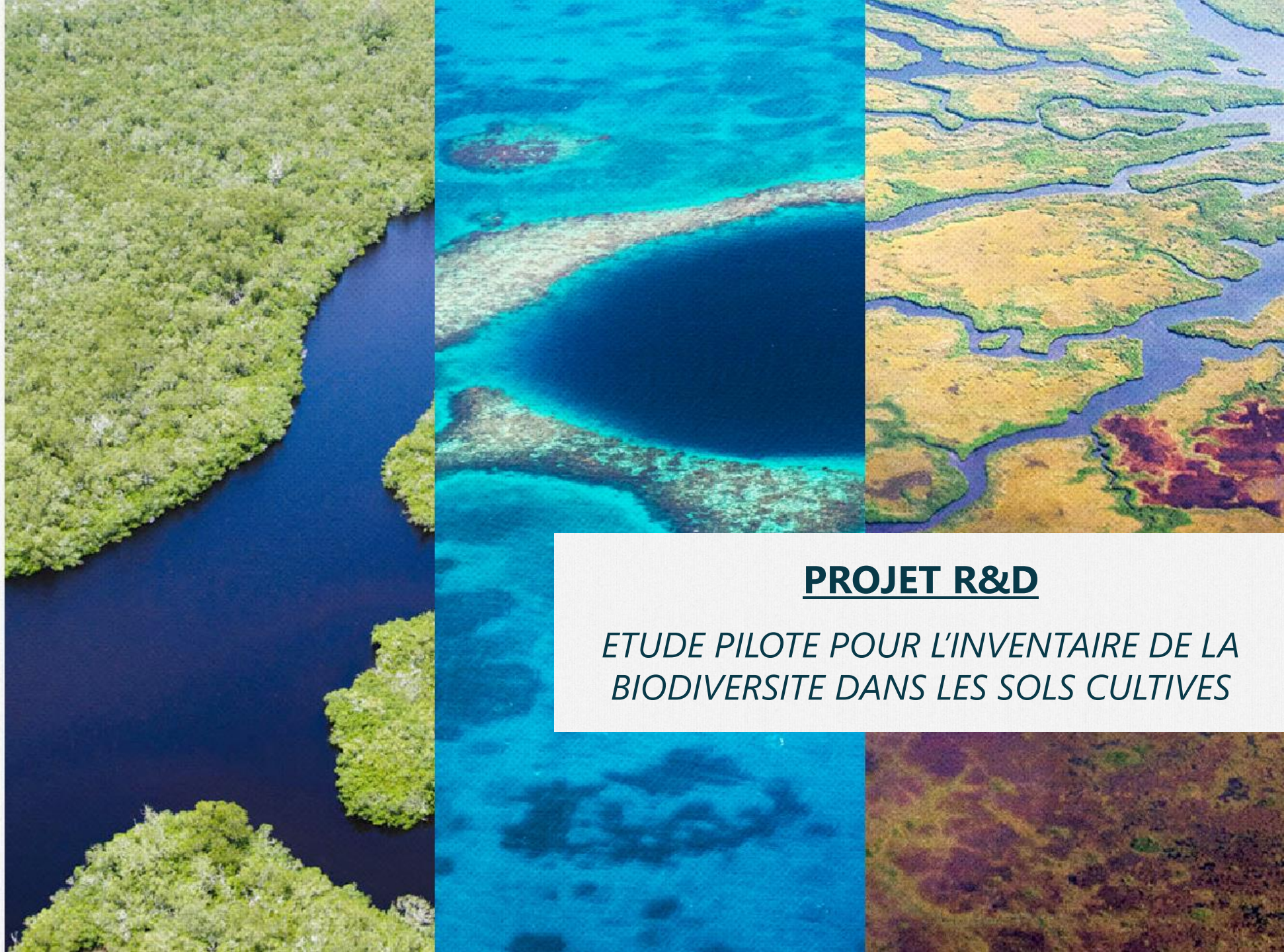




RÉVÉLATEUR DE BIODIVERSITÉ



PROJET R&D

*ETUDE PILOTE POUR L'INVENTAIRE DE LA
BIODIVERSITE DANS LES SOLS CULTIVES*

Description de l'étude pilote

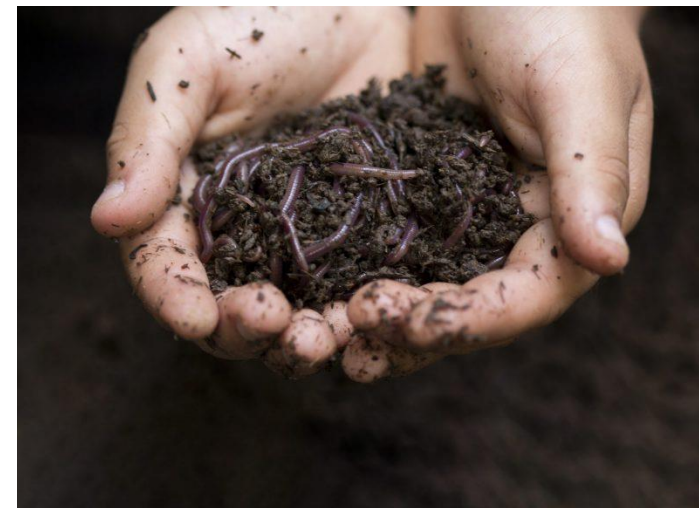
■ 15 échantillons prélevés en Octobre 2022

- 1 site : la Ferme du Grand Laval
- 3 types de milieux (culture, prairie, verger)
- Différents types de pratiques agricoles

■ Objectifs :

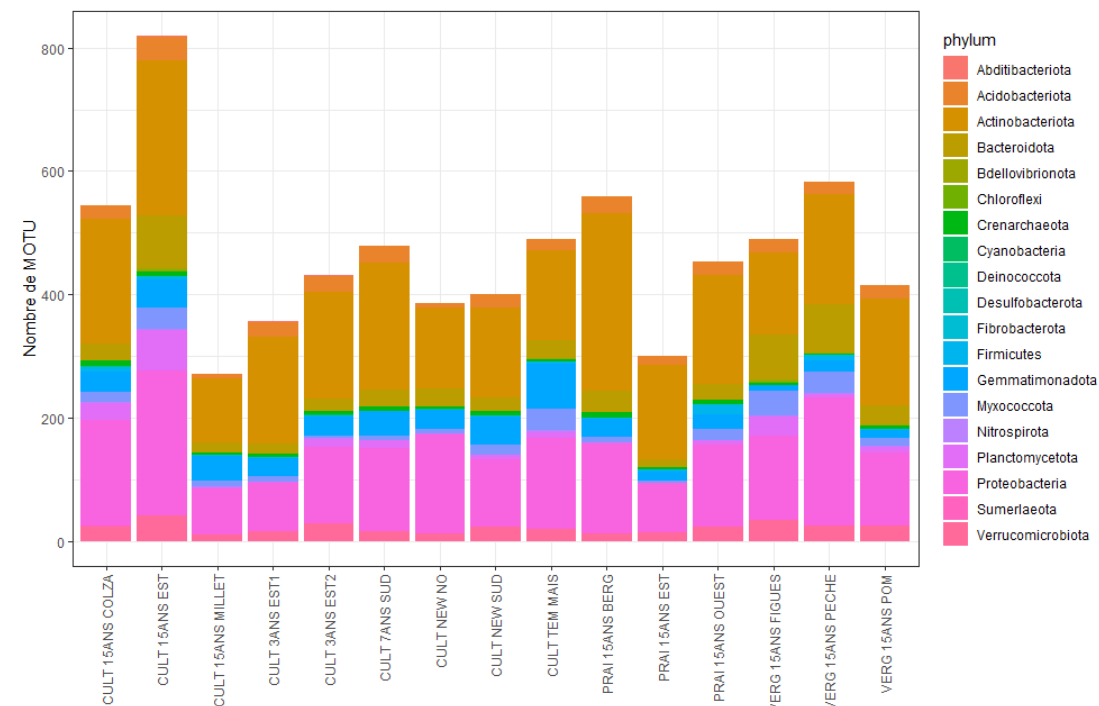
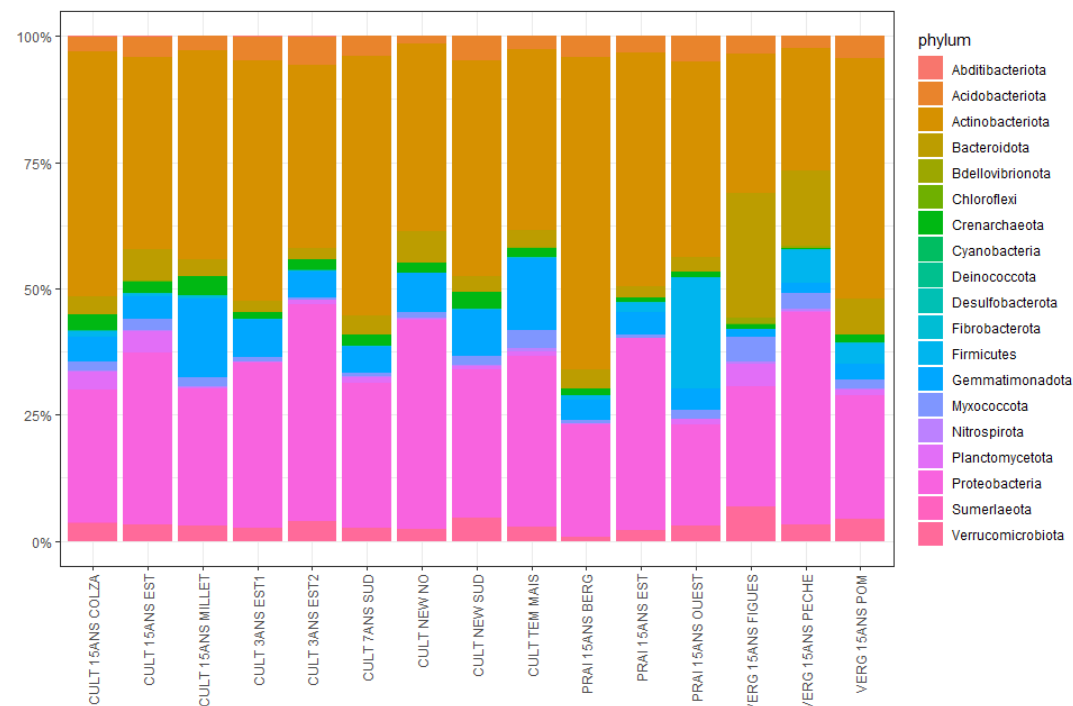
Comparer grâce à l'ADN environnemental la biodiversité des sols sur différents habitats présents sur la ferme du Grand Laval

➔ 4 groupes ciblés : *Procaryotes*, *Eucaryotes*, *Champignons* & « Vers de terre »



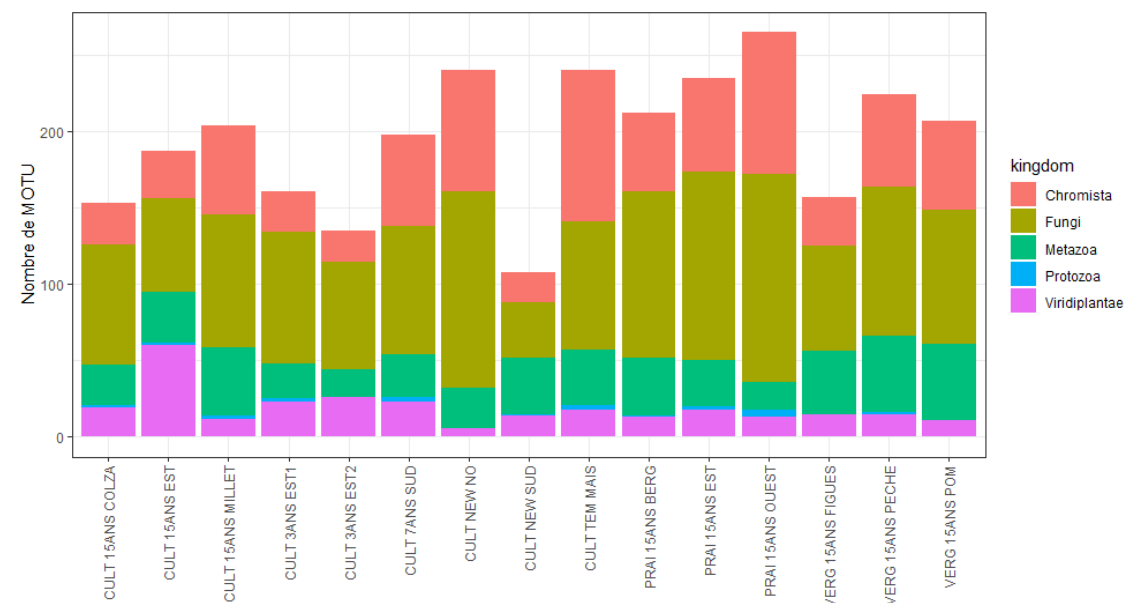
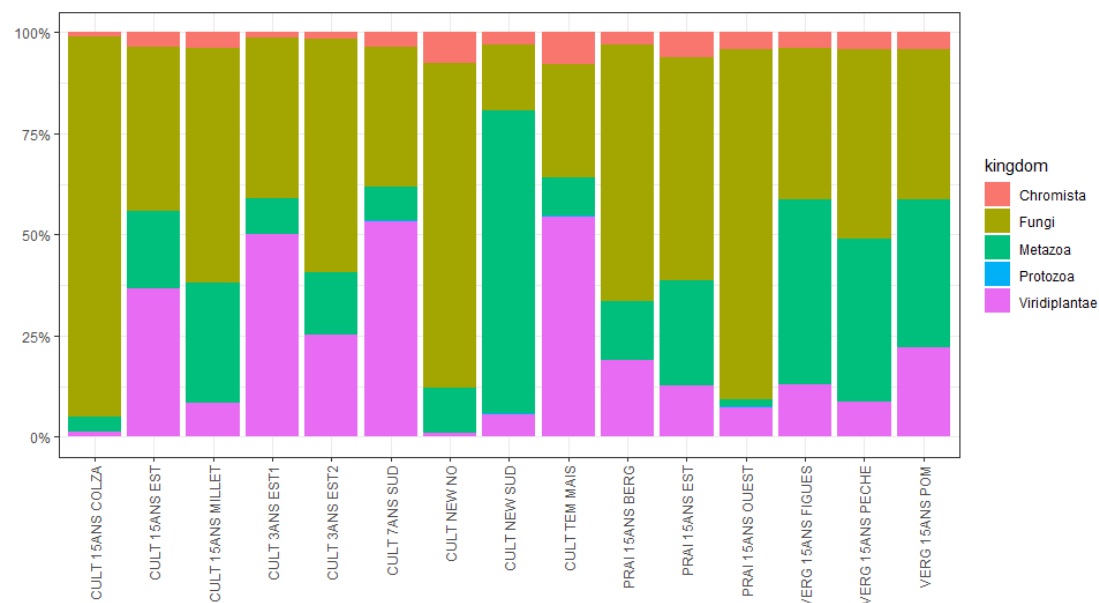
Composition des communautés du sol

■ Procaryotes



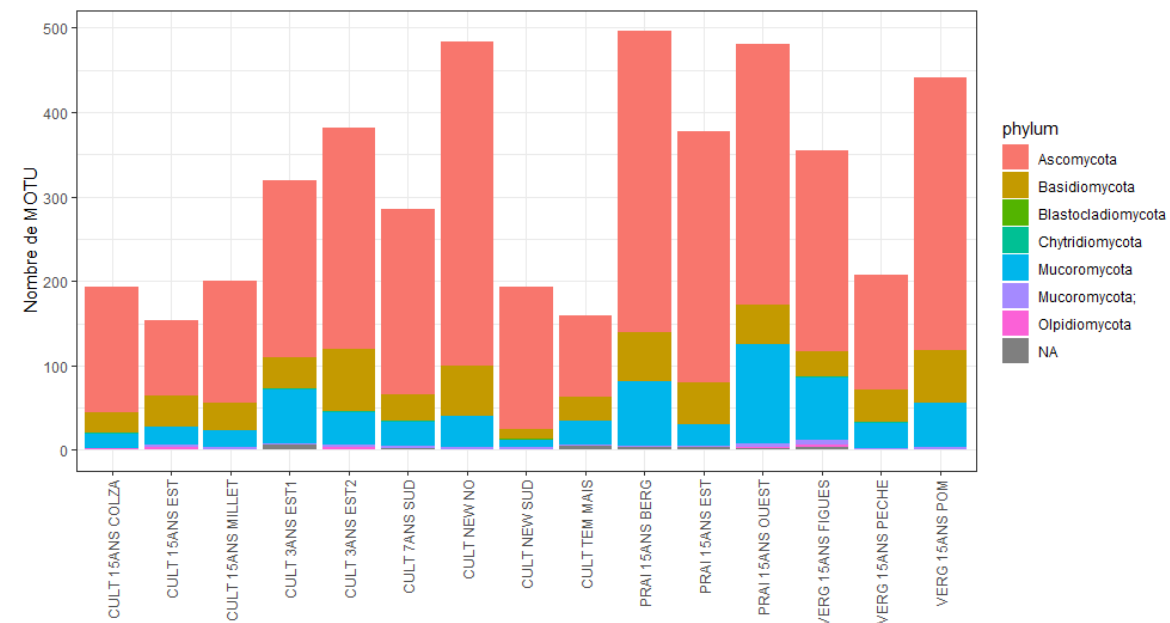
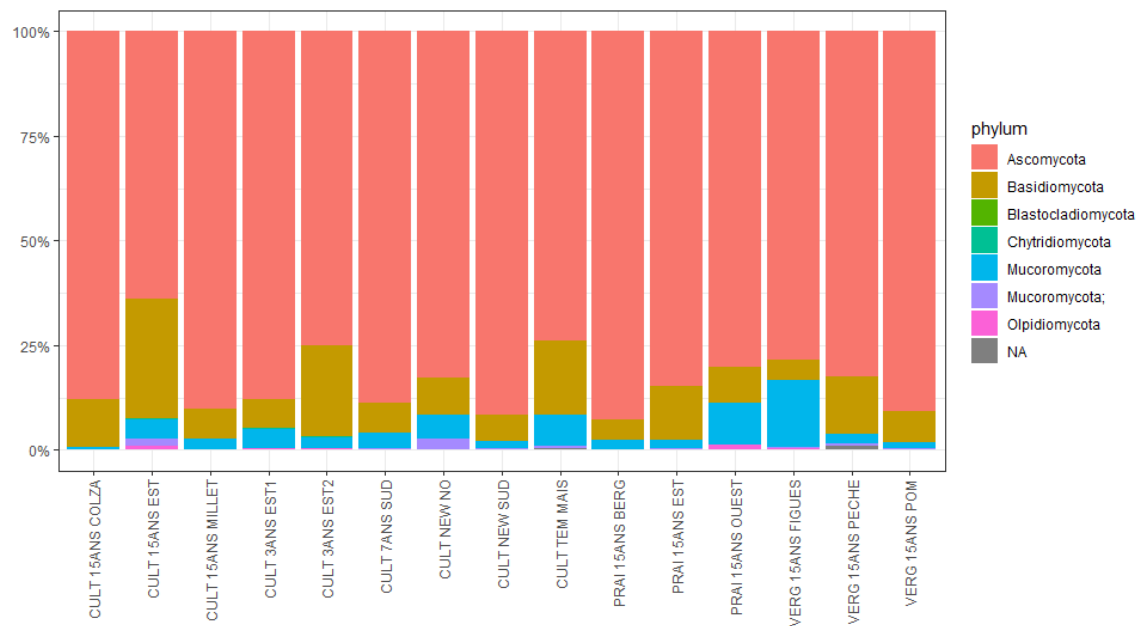
Composition des communautés du sol

Eucaryotes

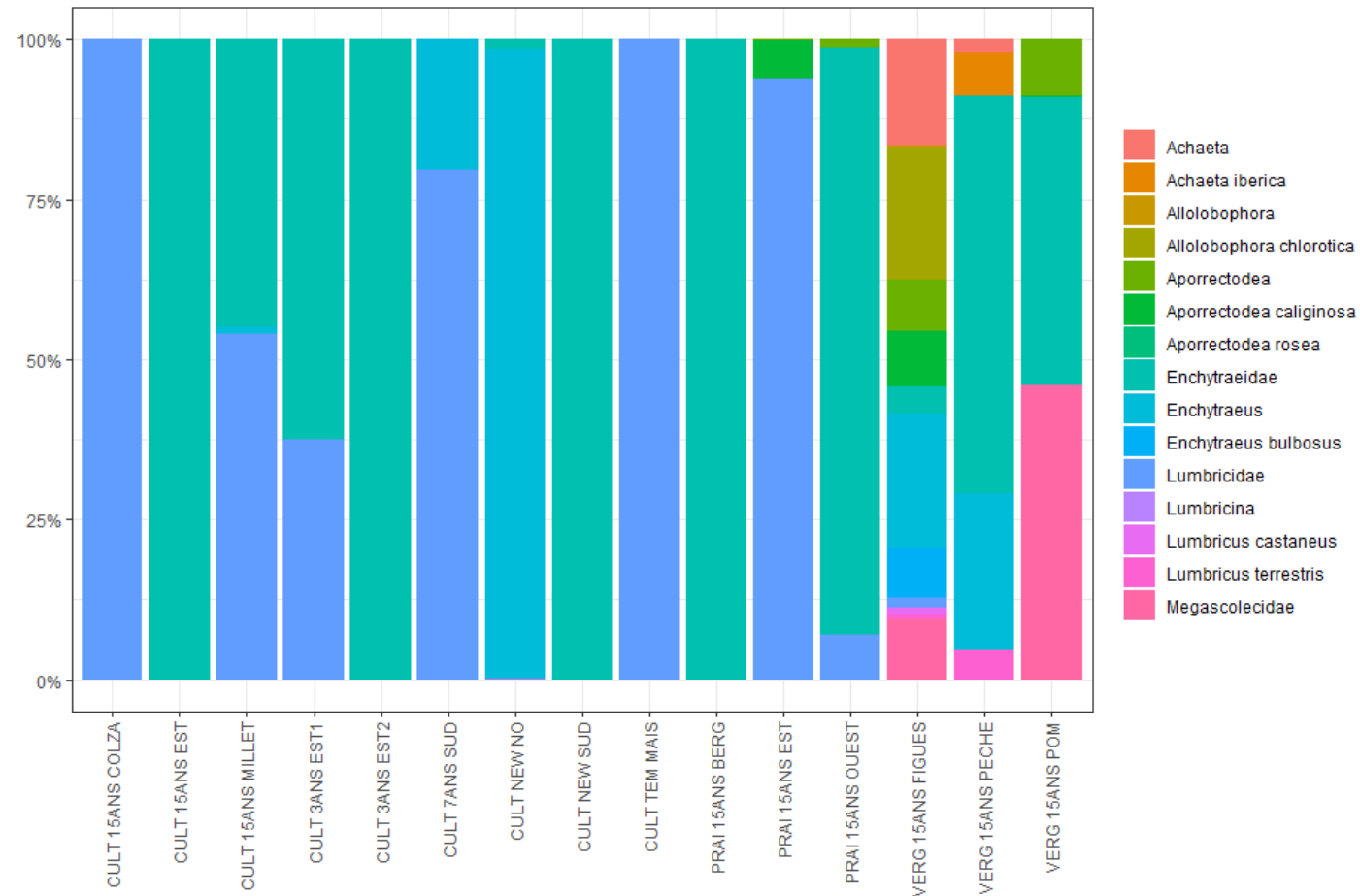


Composition des communautés du sol

■ Champignons

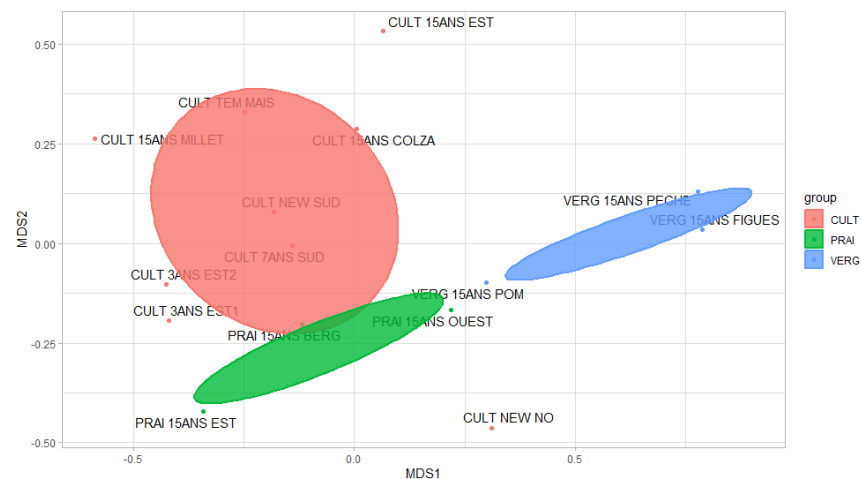


■ Vers de terre

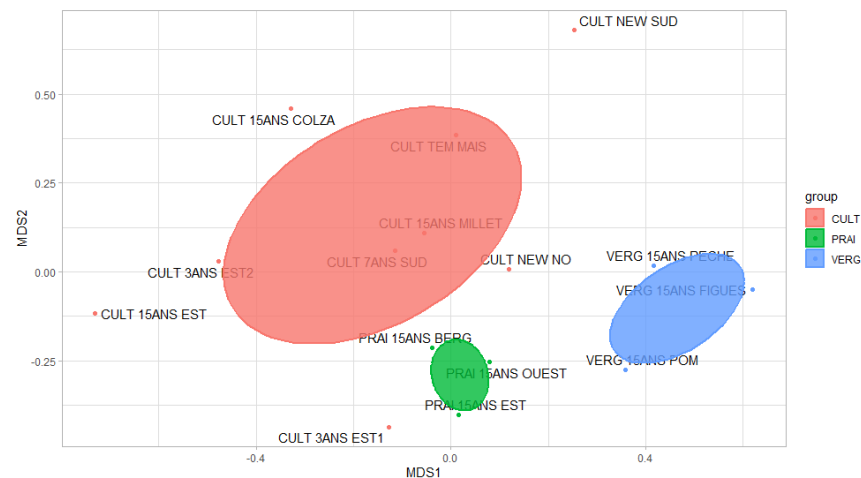


Structuration des communautés du sol

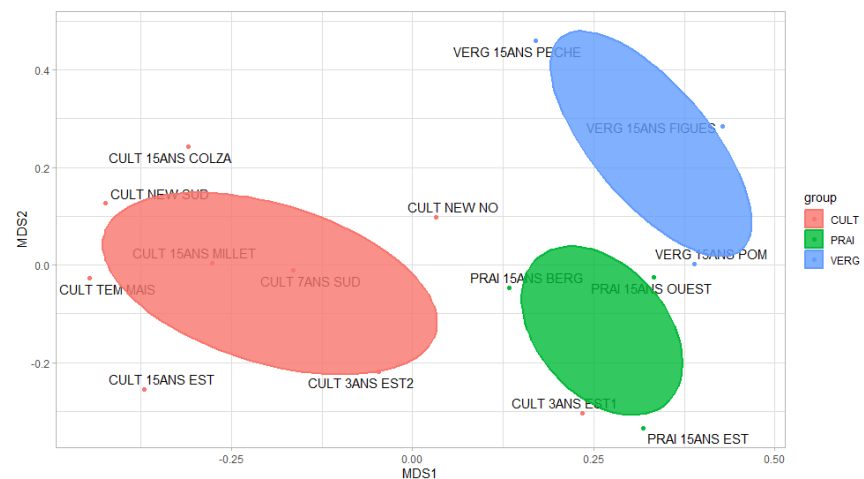
Procaryotes



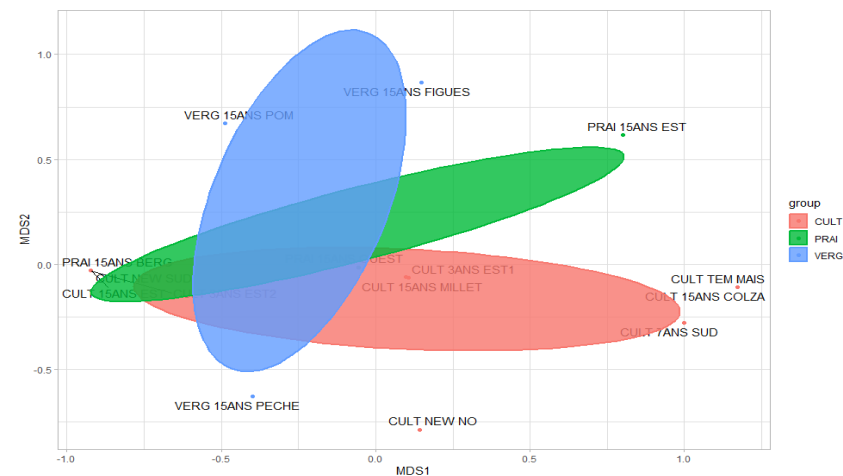
Eucaryotes



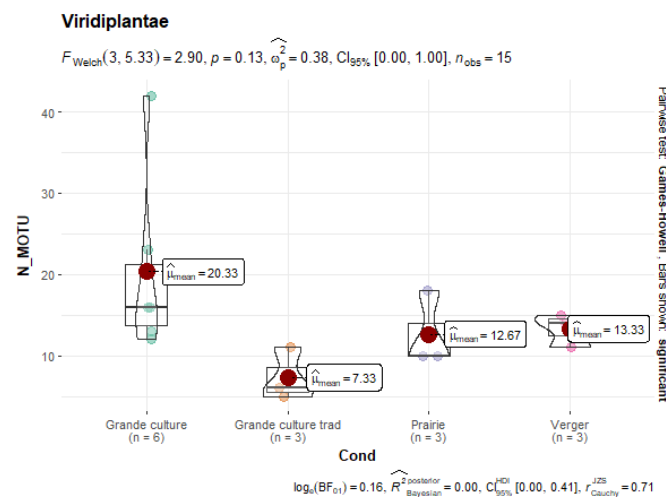
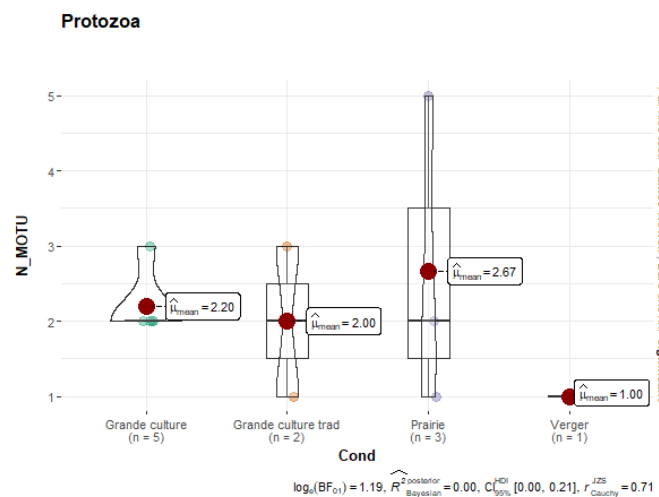
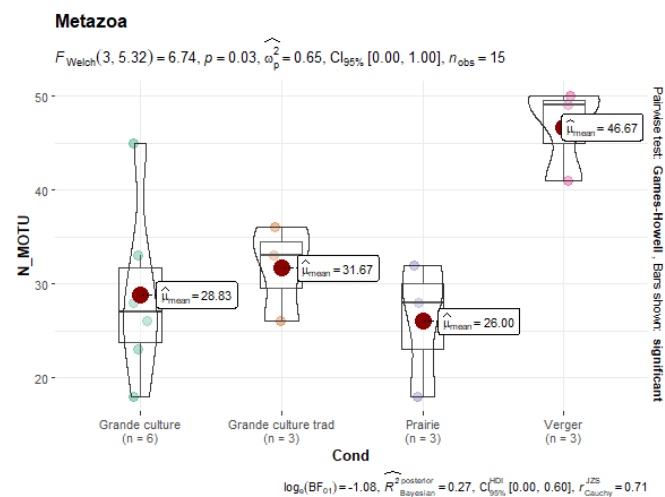
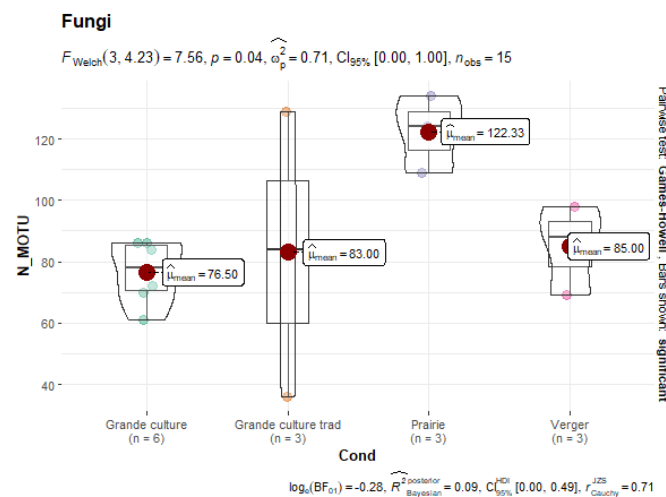
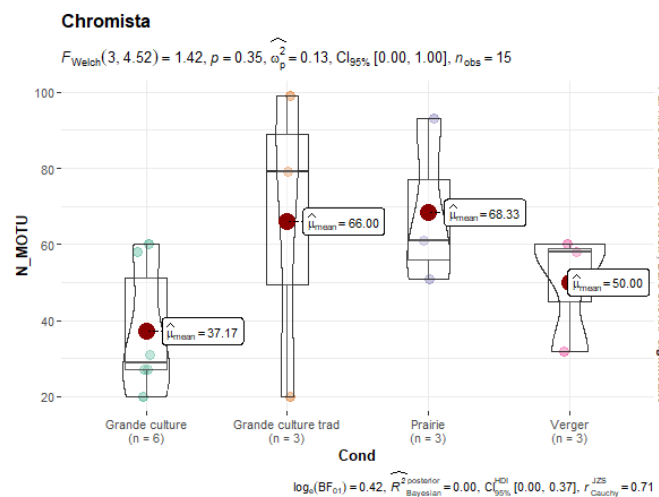
Champignons



Vers de terre



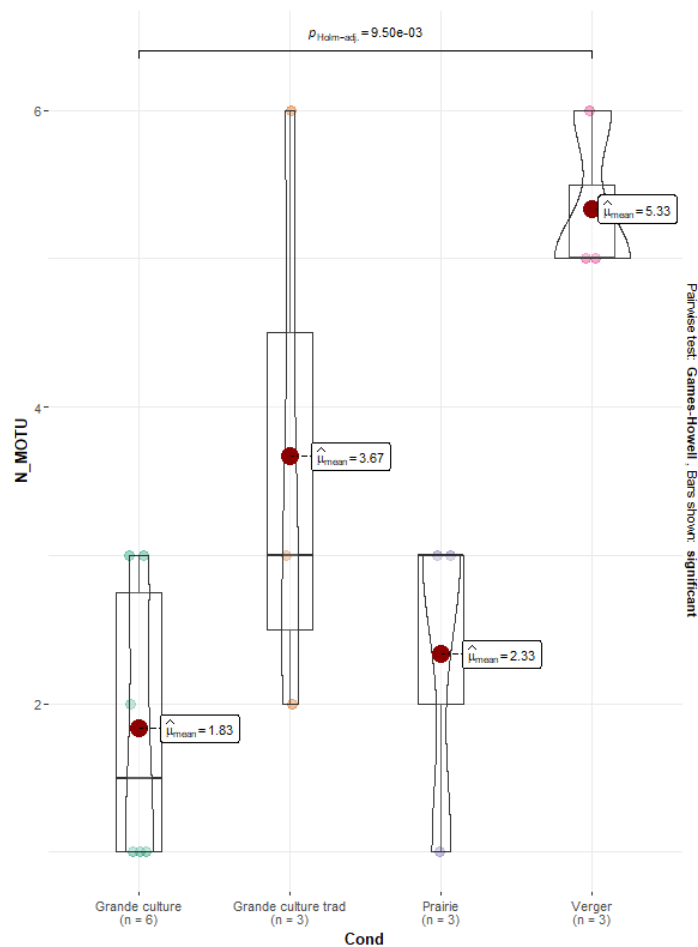
Analyses Eucaryotes



Analyses Eucaryotes - Metazoa

Annelida

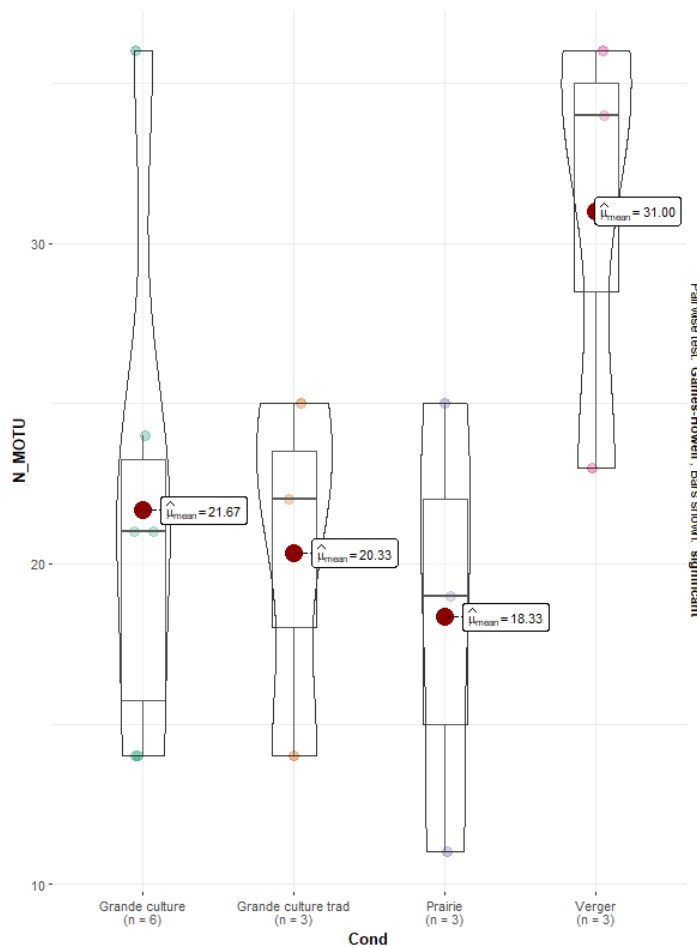
$F_{\text{Welch}}(3, 4.72) = 12.95, p = 0.01, \hat{\omega}_p^2 = 0.80, \text{CI}_{95\%} [0.08, 1.00], n_{\text{obs}} = 15$



$\log_e(\text{BF}_{01}) = -1.84, R^2_{\text{posterior Bayesian}} = 0.43, \text{CI}_{95\%}^{\text{HDI}} [0.00, 0.67], r_{\text{Cauchy}}^{125} = 0.71$

Arthropoda

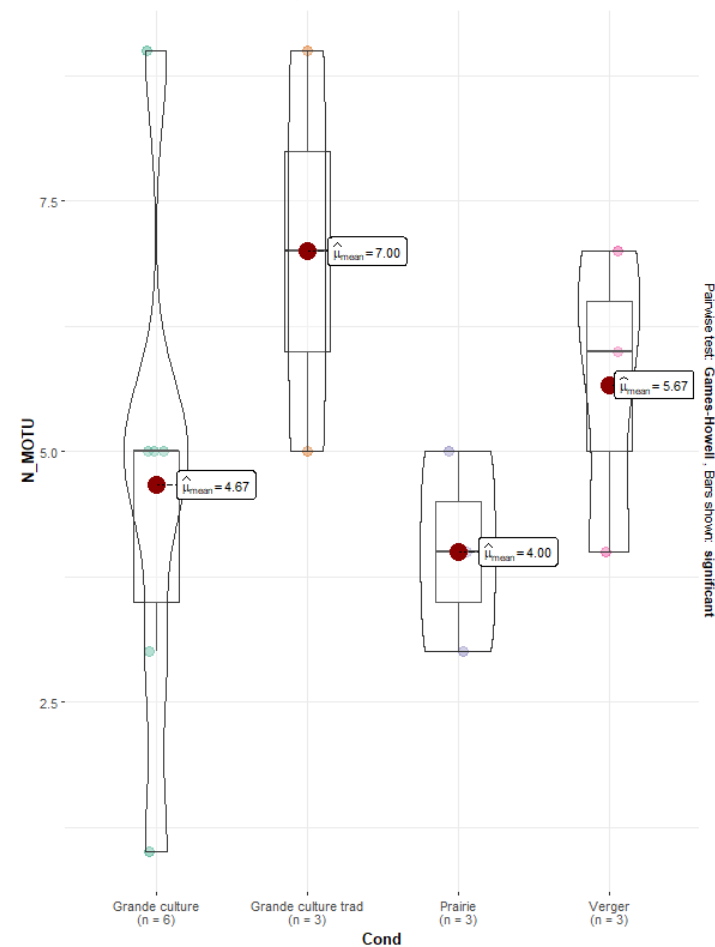
$F_{\text{Welch}}(3, 5.09) = 1.58, p = 0.30, \hat{\omega}_p^2 = 0.16, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



$\log_e(\text{BF}_{01}) = 0.47, R^2_{\text{posterior Bayesian}} = 0.00, \text{CI}_{95\%}^{\text{HDI}} [0.00, 0.36], r_{\text{Cauchy}}^{125} = 0.71$

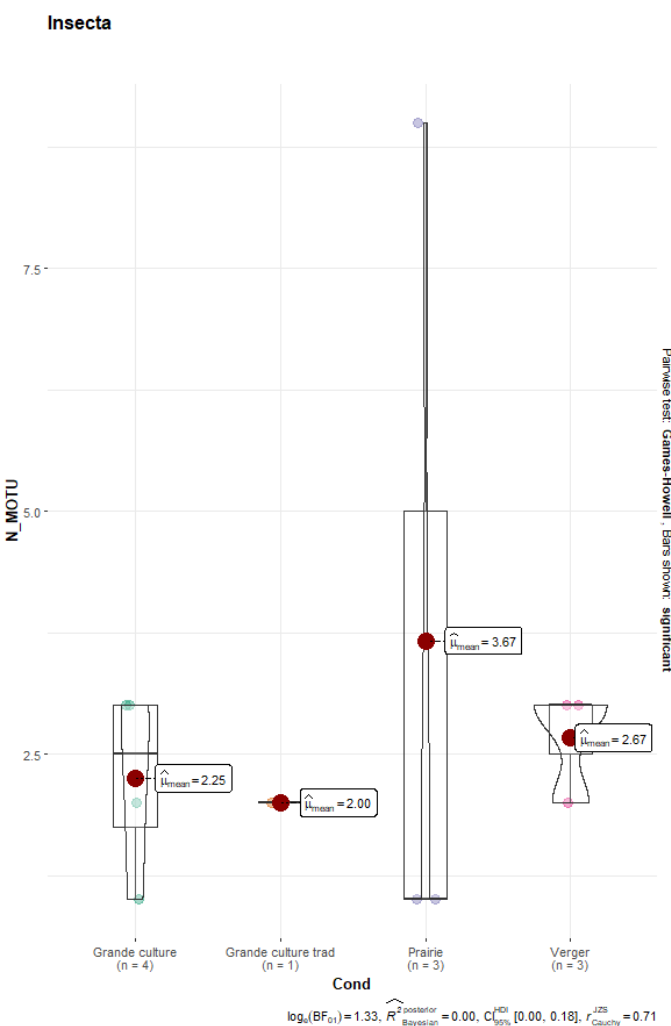
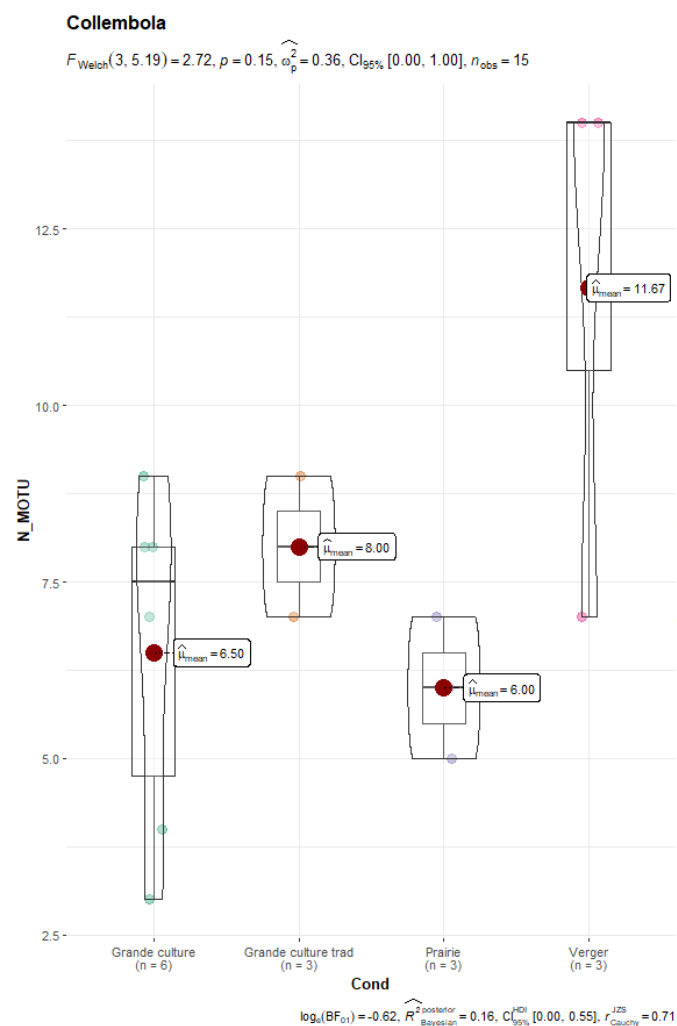
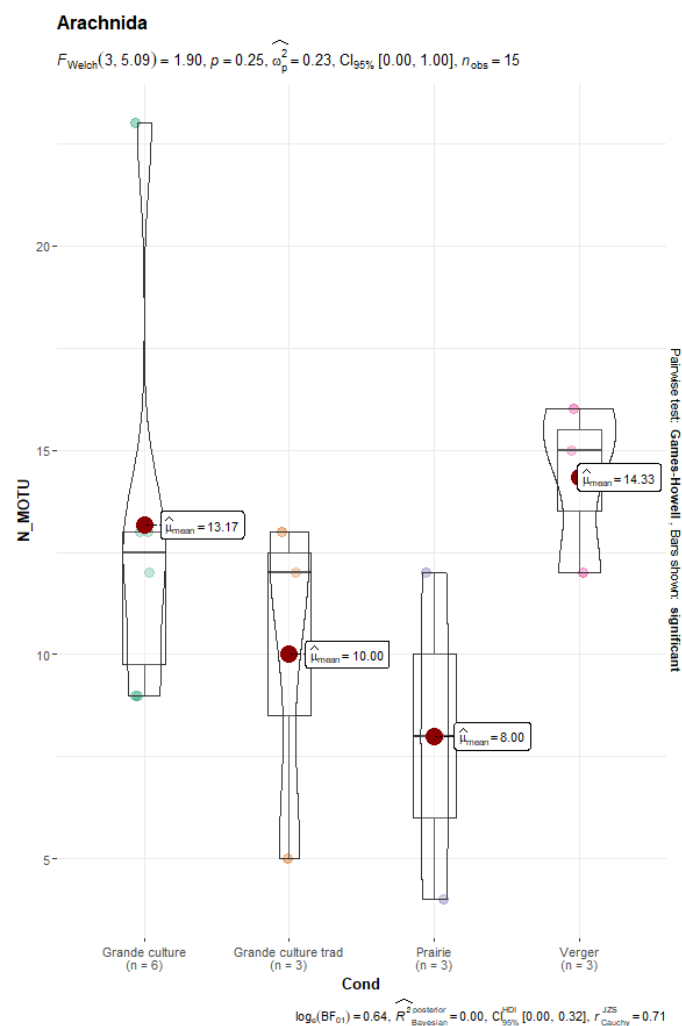
Nematoda

$F_{\text{Welch}}(3, 5.25) = 1.73, p = 0.27, \hat{\omega}_p^2 = 0.19, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



$\log_e(\text{BF}_{01}) = 0.82, R^2_{\text{posterior Bayesian}} = 0.00, \text{CI}_{95\%}^{\text{HDI}} [0.00, 0.28], r_{\text{Cauchy}}^{125} = 0.71$

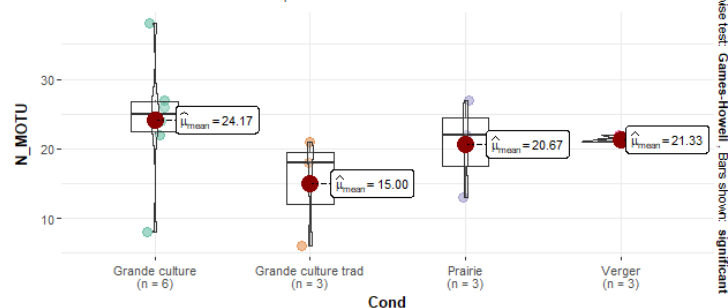
Analyses Eucaryotes – Metazoa - Arthropoda



Analyses Bactéries

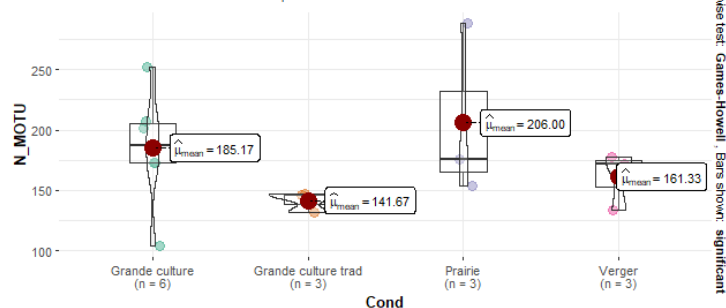
Acidobacteriota

$F_{\text{Welch}}(3, 4.22) = 0.62, p = 0.64, \hat{\omega}_p^2 = 0.00, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



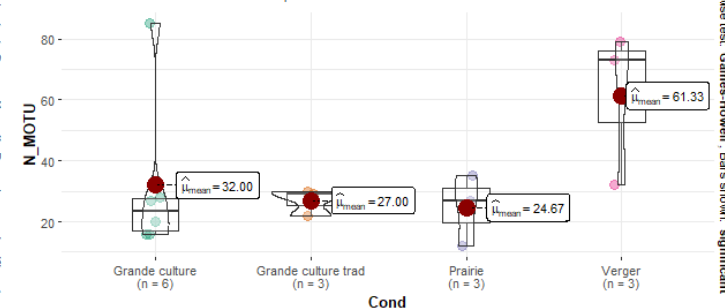
Actinobacteriota

$F_{\text{Welch}}(3, 4.61) = 2.05, p = 0.23, \hat{\omega}_p^2 = 0.27, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



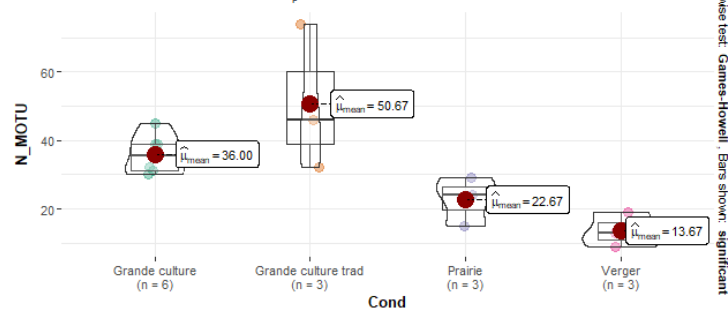
Bacteroidota

$F_{\text{Welch}}(3, 4.68) = 1.46, p = 0.34, \hat{\omega}_p^2 = 0.14, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



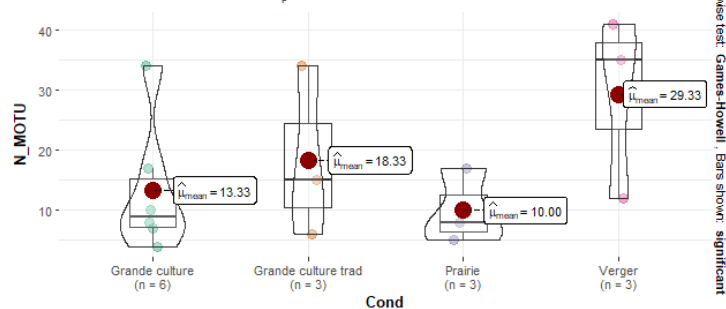
Gemmatimonadota

$F_{\text{Welch}}(3, 4.53) = 10.20, p = 0.02, \hat{\omega}_p^2 = 0.76, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



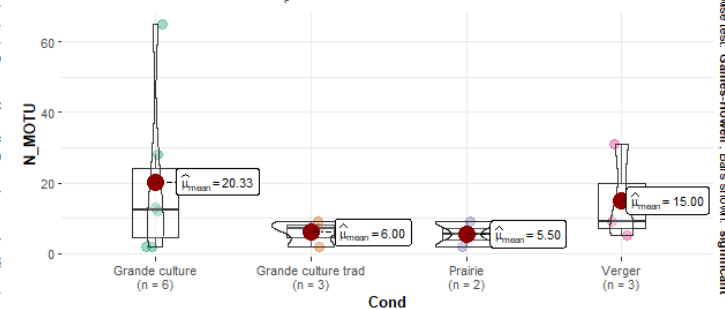
Myxococcota

$F_{\text{Welch}}(3, 4.78) = 1.17, p = 0.41, \hat{\omega}_p^2 = 0.06, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



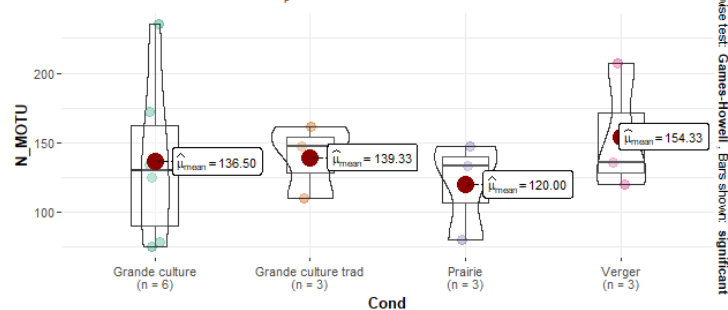
Planctomycetota

$F_{\text{Welch}}(3, 3.94) = 0.81, p = 0.55, \hat{\omega}_p^2 = 0.00, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 14$



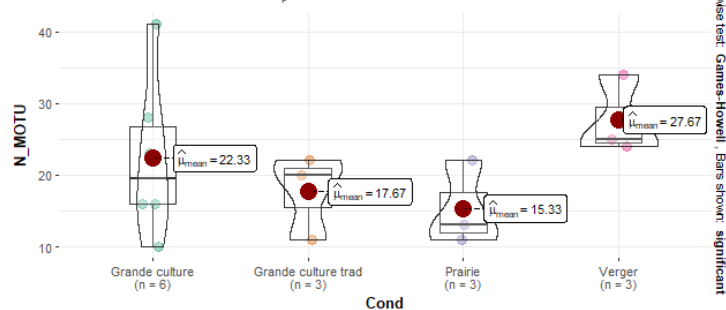
Proteobacteria

$F_{\text{Welch}}(3, 5.29) = 0.30, p = 0.82, \hat{\omega}_p^2 = 0.00, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$



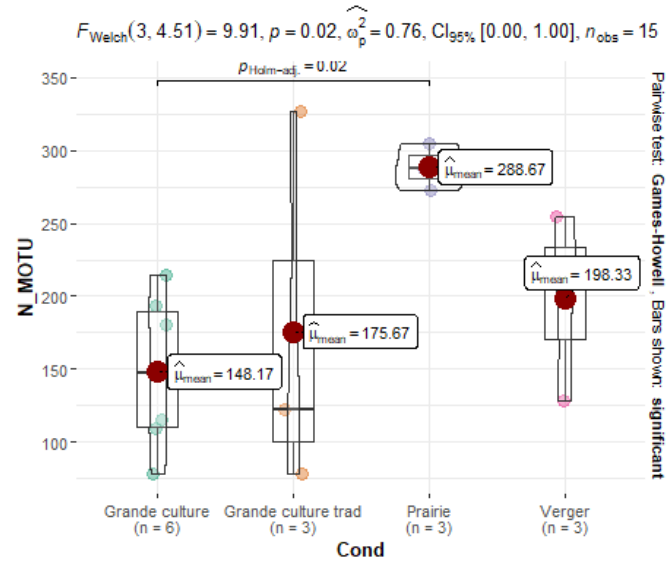
Verrucomicrobiota

$F_{\text{Welch}}(3, 5.46) = 2.21, p = 0.20, \hat{\omega}_p^2 = 0.28, \text{CI}_{95\%} [0.00, 1.00], n_{\text{obs}} = 15$

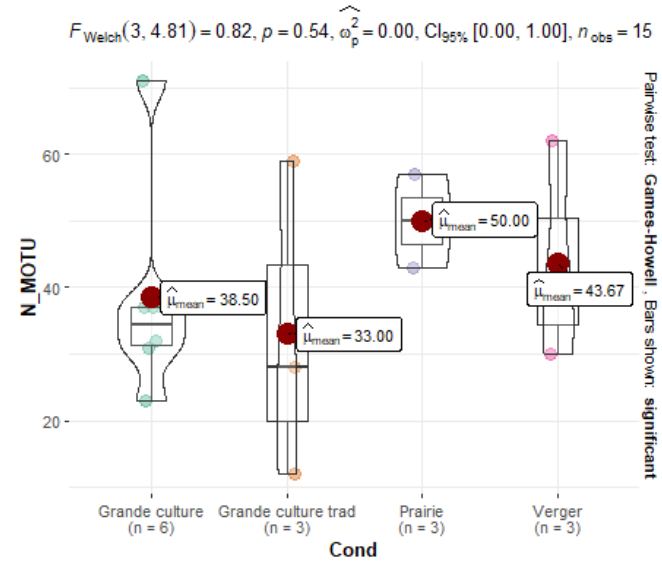


Analyses Fungi

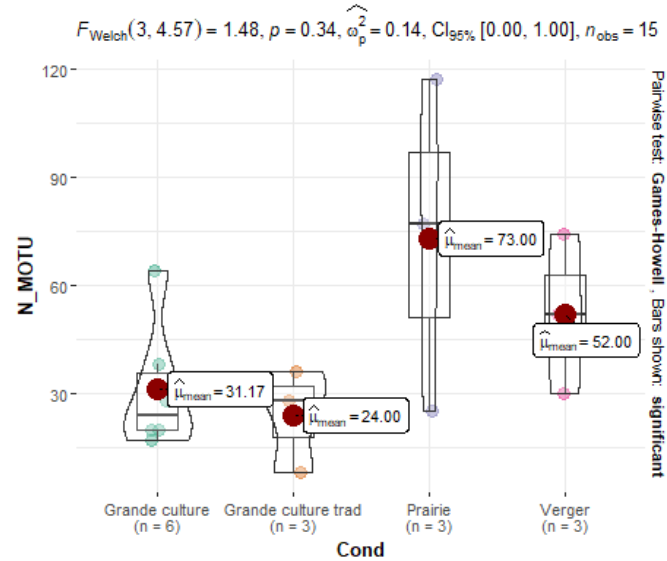
Ascomycota



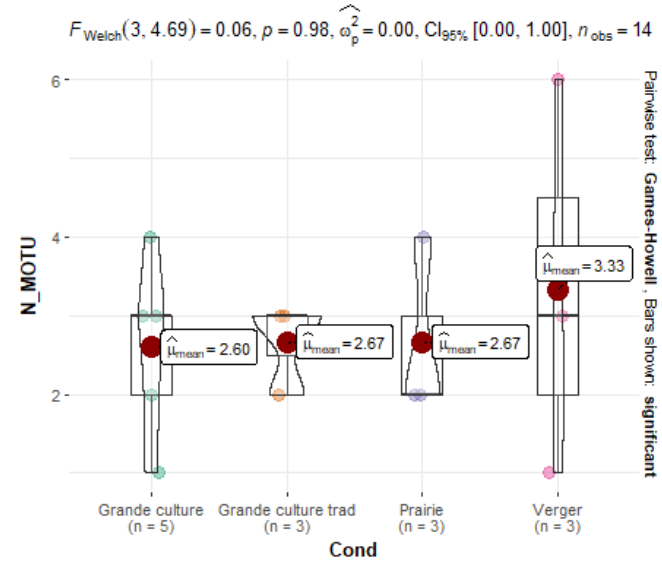
Basidiomycota



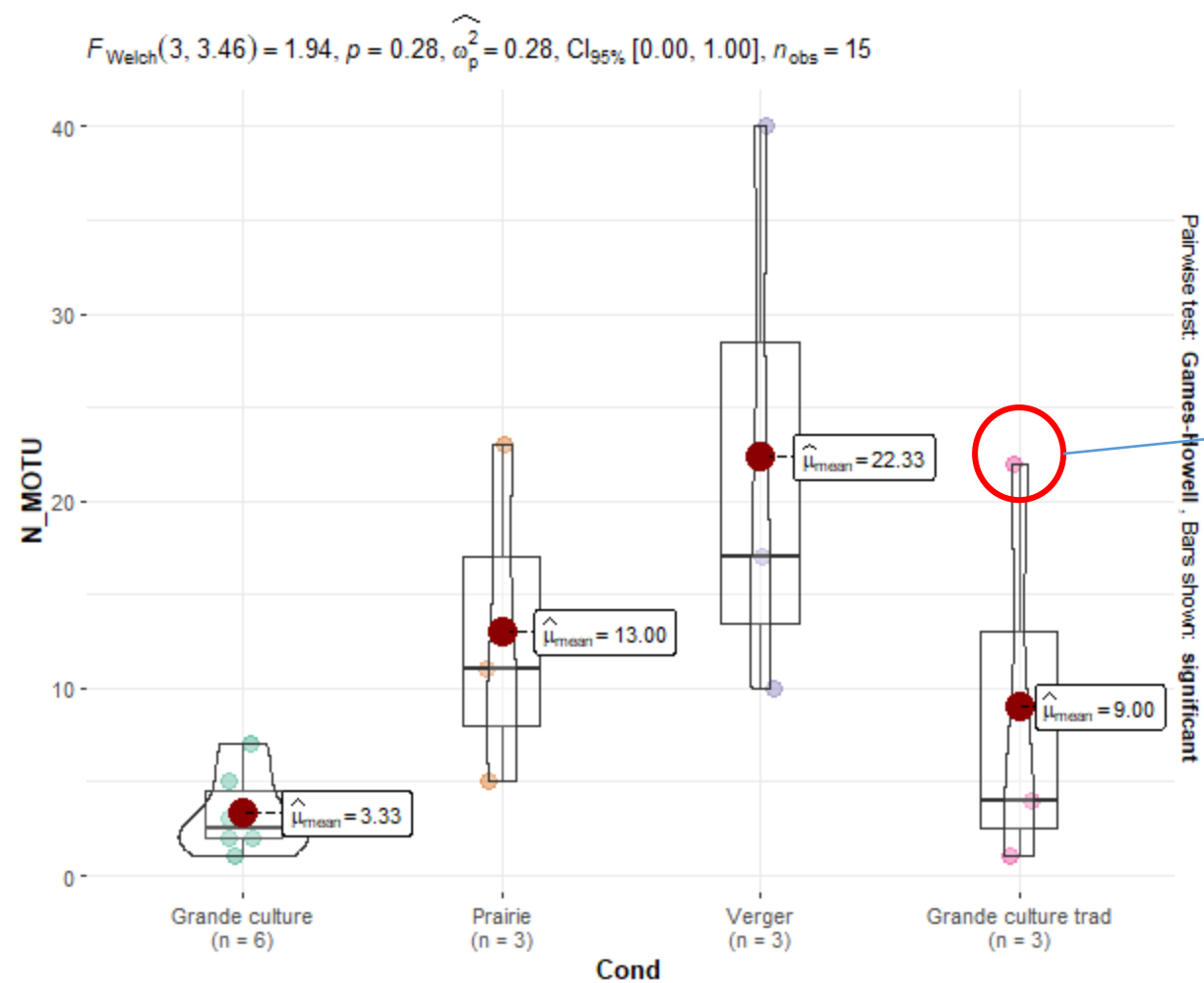
Mucoromycota



Mucoromycota;



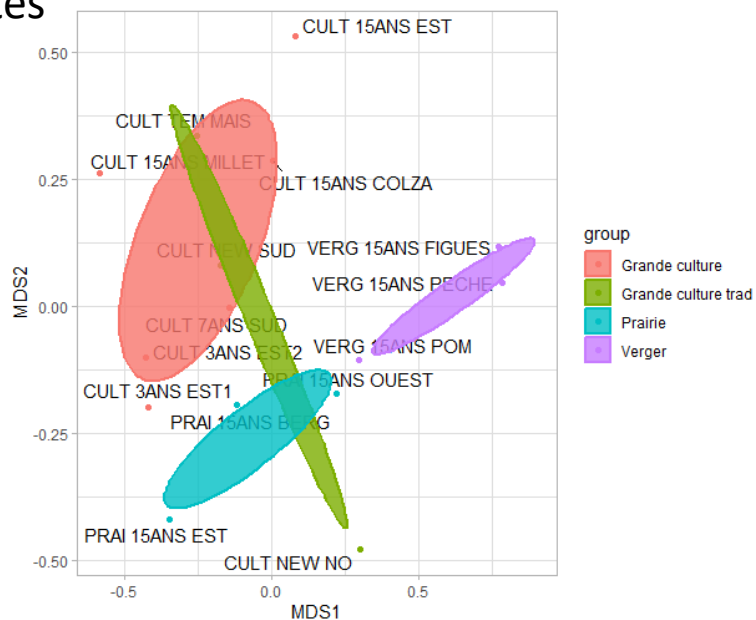
Analyses Vers de terre



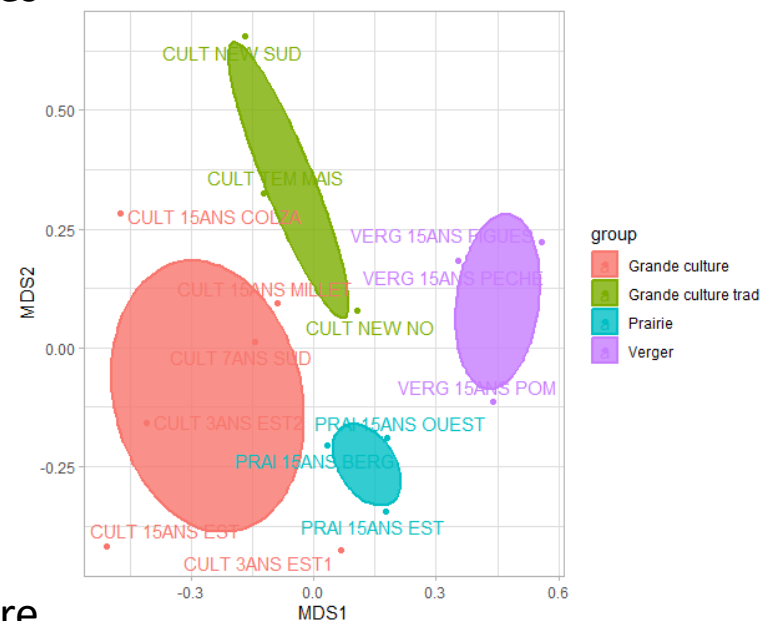
Labour récent

Structuration des communautés du sol

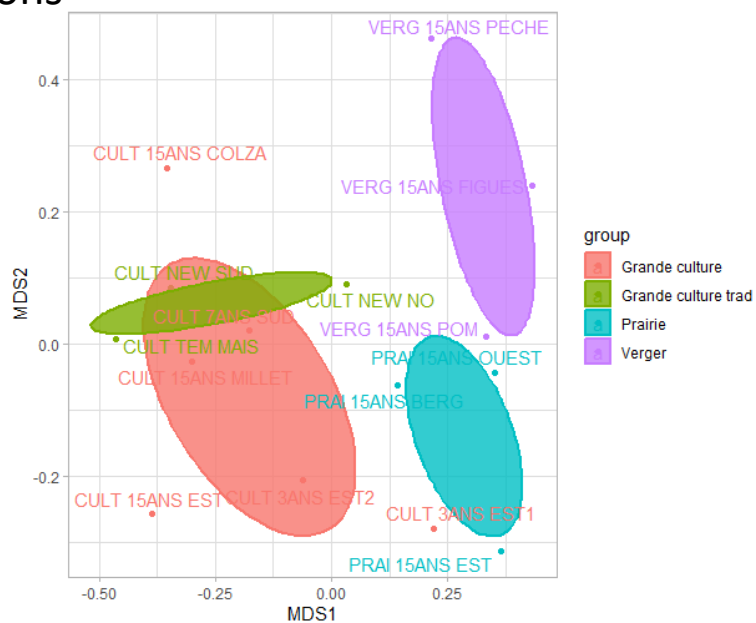
Procaryotes



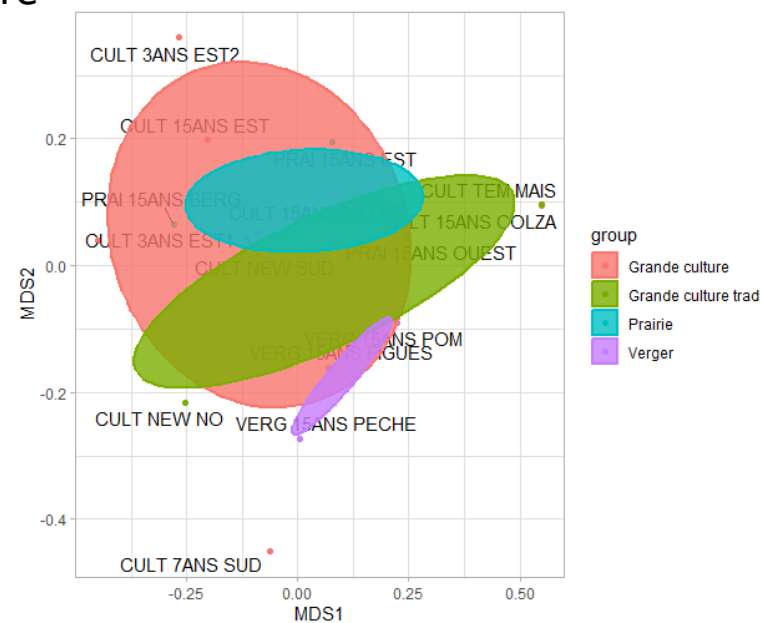
Eucaryotes



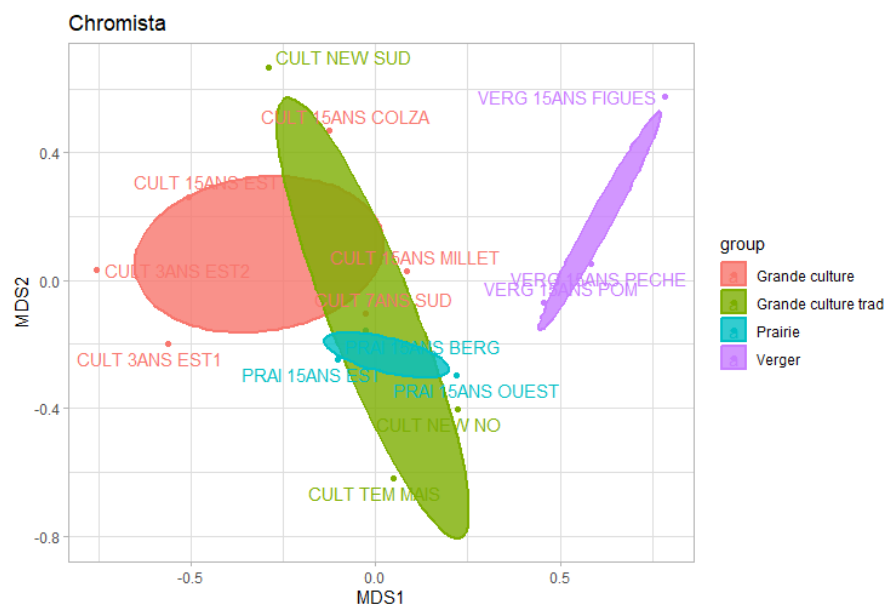
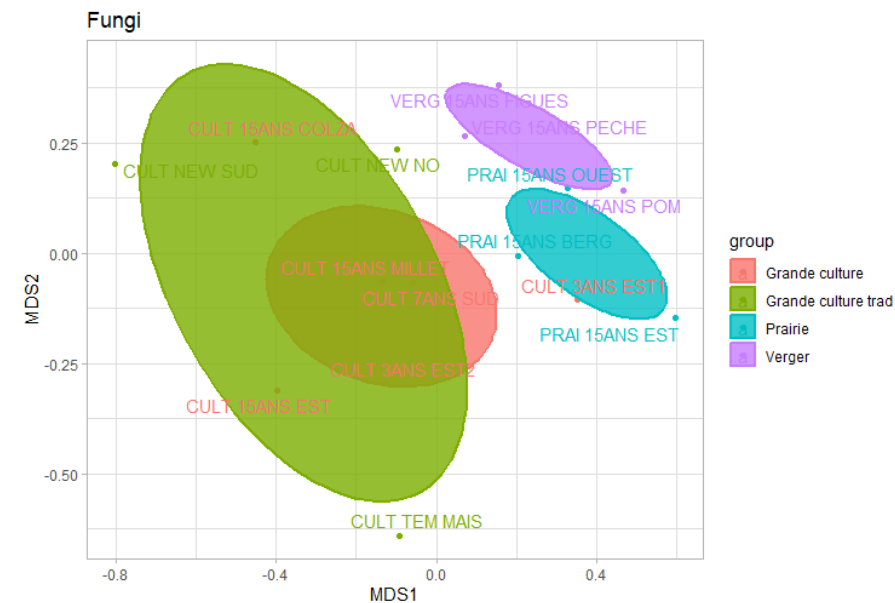
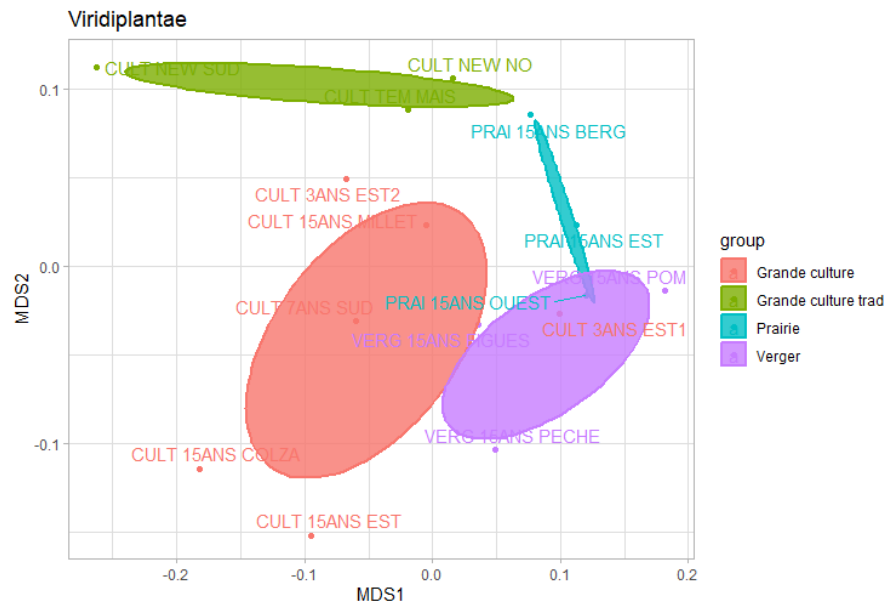
Champignons



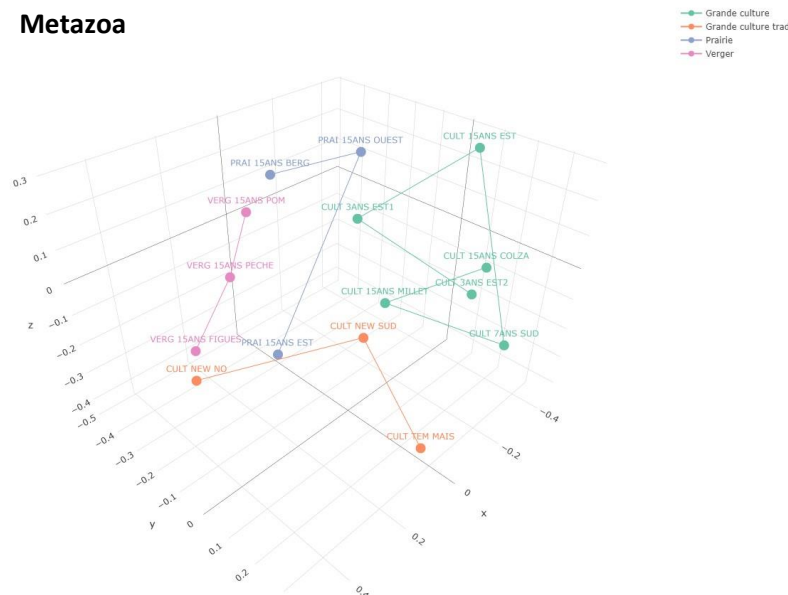
Vers de terre



Structuration des communautés du sol –zoom par Règne

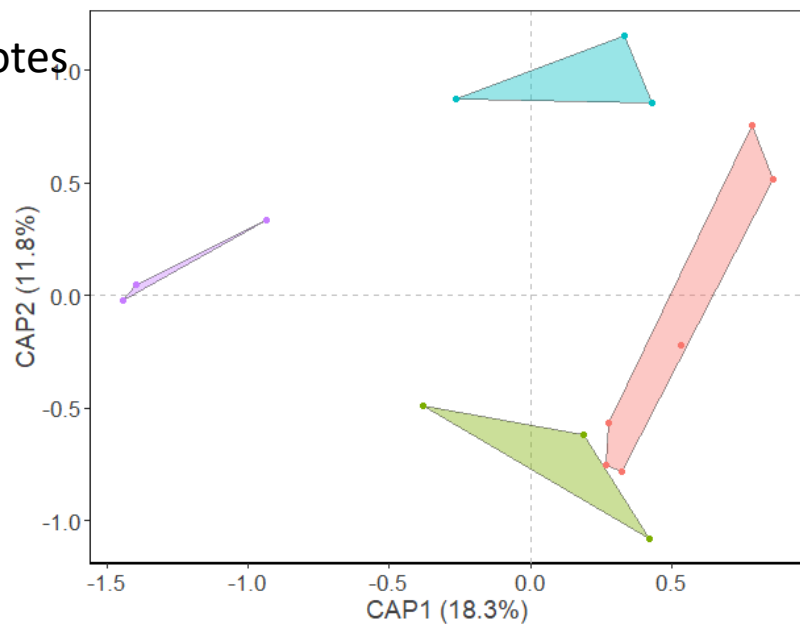


Metazoa

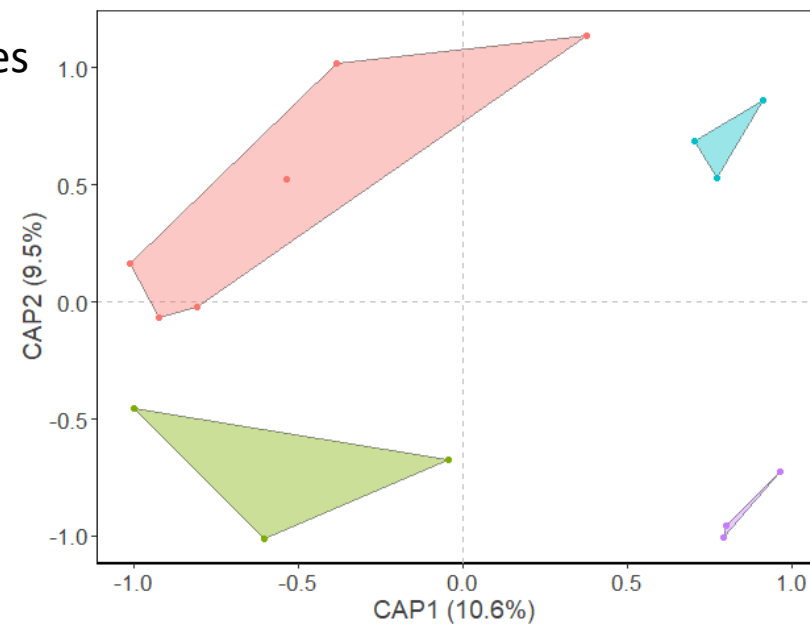


Structuration des communautés du sol

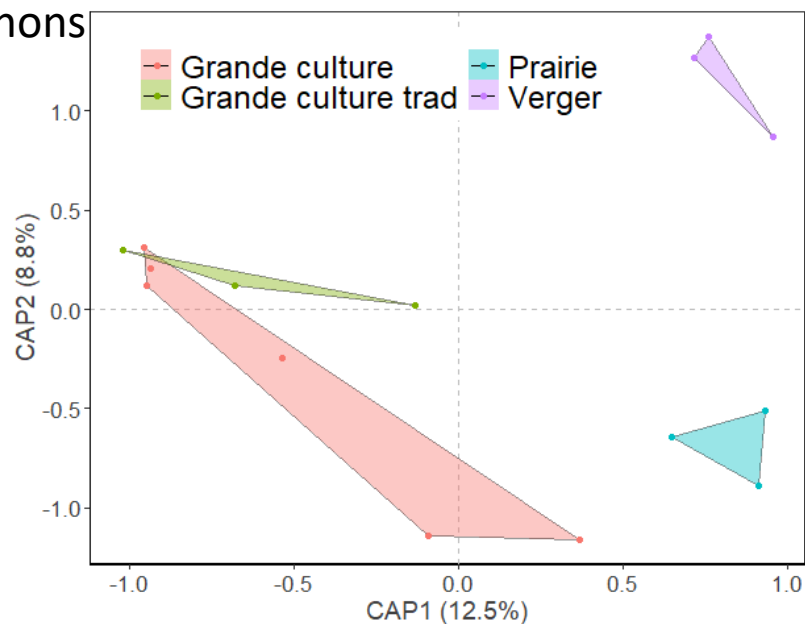
Procaryotes



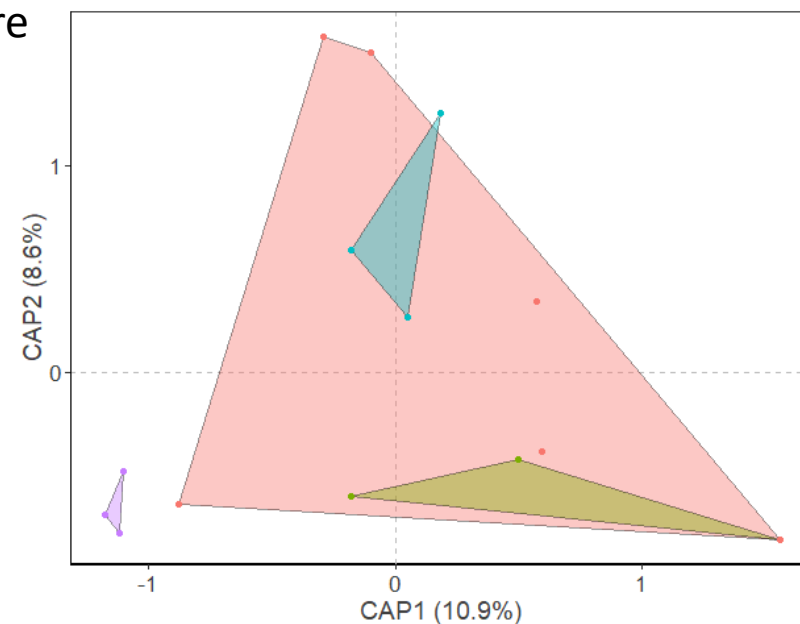
Eucaryotes



Champignons



Vers de terre





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MERCI DE VOTRE ATTENTION