Functional Diversity Data Summary

Grace Pratt

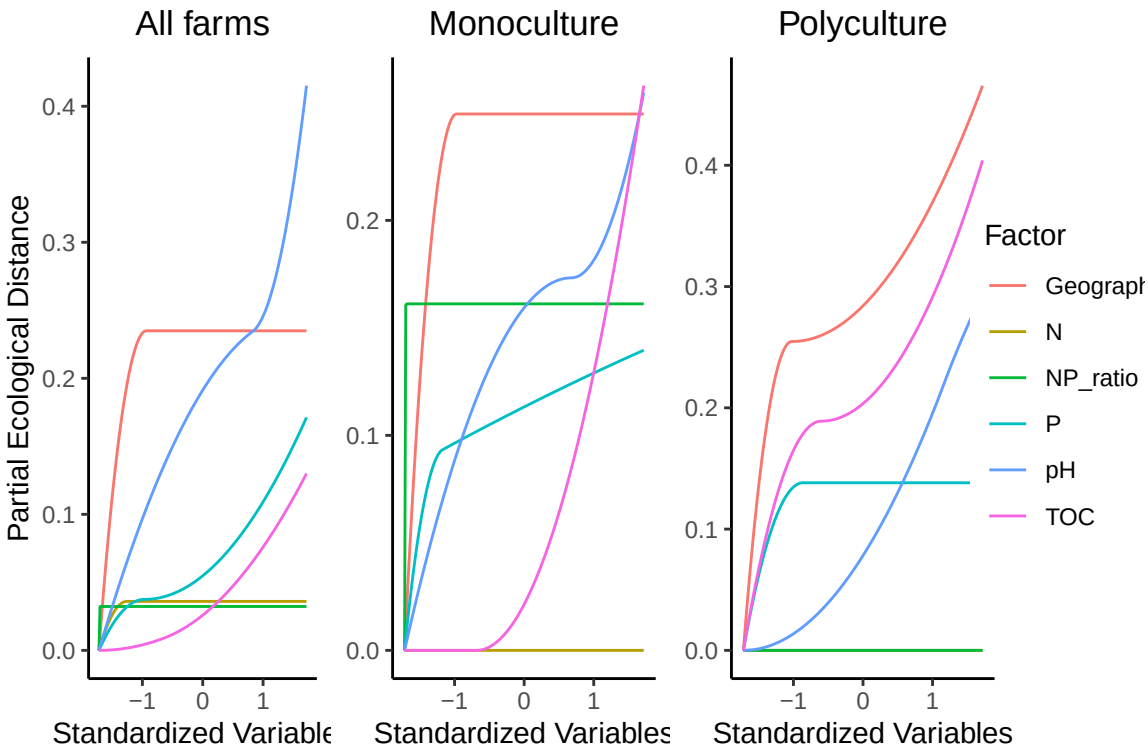
5/21/2020

ALL FUNGI

```
##                   Predictors Coefficients
## 1                 Geographic   0.23493379
## 2                         pH   0.42166575
## 3                          P   0.17296745
## 4                        TOC   0.13144304
## 5                          N   0.03599873
## 6                   NP_ratio   0.03224491
## 7 Percent Deviance Explained  23.52121049
```

```
##                   Predictors Coefficients
## 1                 Geographic    0.2494917
## 2                         pH    0.2623261
## 3                          P    0.1398516
## 4                        TOC    0.2664581
## 5                          N    0.0000000
## 6                   NP_ratio    0.1611733
## 7 Percent Deviance Explained   37.9294239
```

```
##                   Predictors Coefficients
## 1                 Geographic    0.4683307
## 2                         pH    0.2959810
## 3                          P    0.1381967
## 4                        TOC    0.4072622
## 5                          N    0.0000000
## 6                   NP_ratio    0.0000000
## 7 Percent Deviance Explained   46.0710622
```

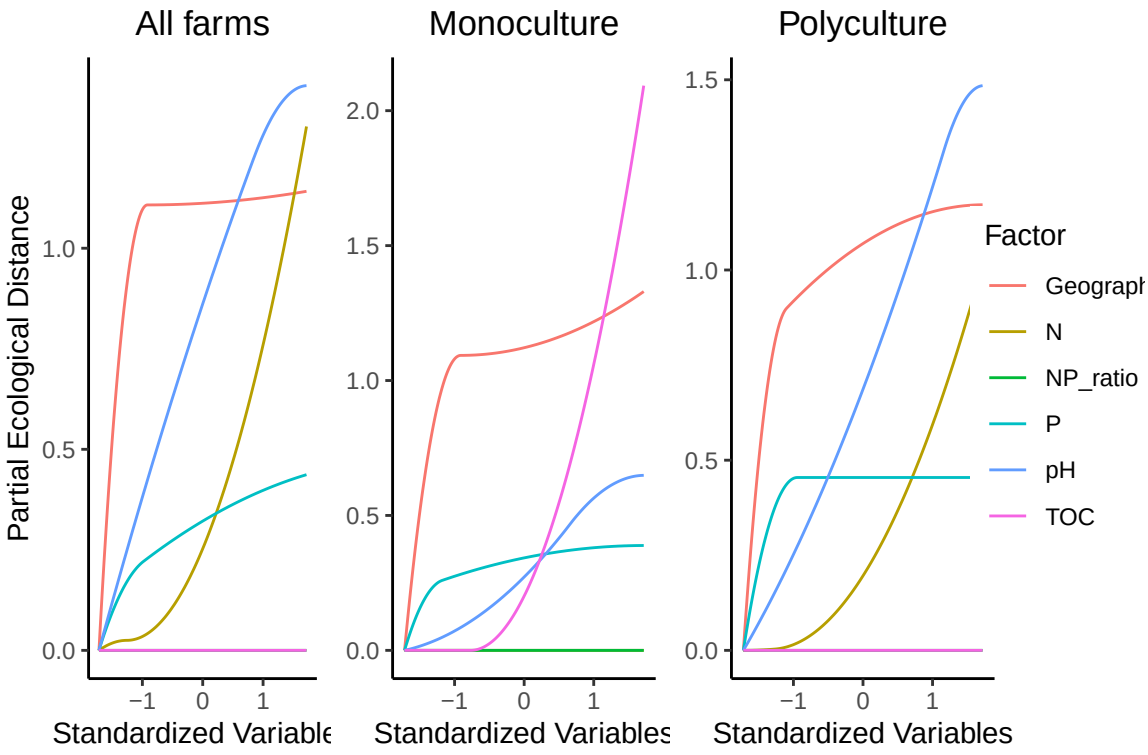


AMF FUNCTIONAL GROUP

```
##                   Predictors Coefficients
## 1                 Geographic    1.1420410
## 2                         pH    1.4044242
## 3                          P    0.4376559
## 4                        TOC    0.0000000
## 5                          N    1.3176671
## 6                  NP_ratio    0.0000000
## 7 Percent Deviance Explained   14.3118263
```

```
##                   Predictors Coefficients
## 1                 Geographic    1.3329127
## 2                         pH    0.6487356
## 3                          P    0.3885961
## 4                        TOC    2.1219492
## 5                          N    0.0000000
## 6                  NP_ratio    0.0000000
## 7 Percent Deviance Explained   15.7222275
```

```
##                   Predictors Coefficients
## 1                 Geographic     1.171523
## 2                         pH     1.484823
## 3                          P     0.454472
## 4                        TOC     0.000000
## 5                          N     1.024876
## 6                  NP_ratio     0.000000
## 7 Percent Deviance Explained    20.022538
```

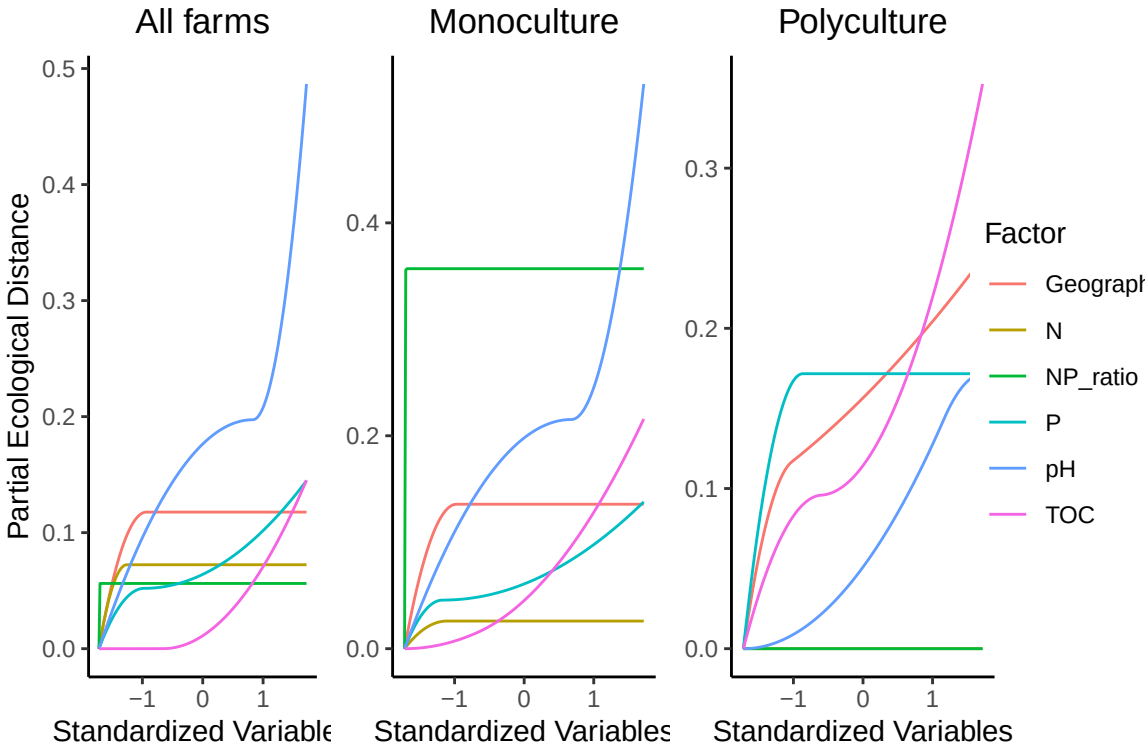

All farms
Monoculture
Polyculture
Partial Ecological Distance
0.0
0.5
1.0
1.5
2.0
−1
0
1
Standardized Variable
Standardized Variables
Factor
Geograph
N
NP_ratio
P
pH
TOC

PLANT PATHOGENS

```
##                   Predictors Coefficients
## 1                 Geographic   0.11772271
## 2                         pH   0.49805694
## 3                          P   0.14597519
## 4                        TOC   0.14735548
## 5                          N   0.07235028
## 6                   NP_ratio   0.05622265
## 7 Percent Deviance Explained  11.14974917
```

```
##                   Predictors Coefficients
## 1                 Geographic   0.13570632
## 2                         pH   0.54105479
## 3                          P   0.13902491
## 4                        TOC   0.21819627
## 5                          N   0.02595778
## 6                   NP_ratio   0.35694942
## 7 Percent Deviance Explained  33.21564709
```

```
##                   Predictors Coefficients
## 1                 Geographic    0.2450483
## 2                         pH    0.1716905
## 3                          P    0.1716697
## 4                        TOC    0.3563473
## 5                          N    0.0000000
## 6                   NP_ratio    0.0000000
## 7 Percent Deviance Explained   22.2517718
```

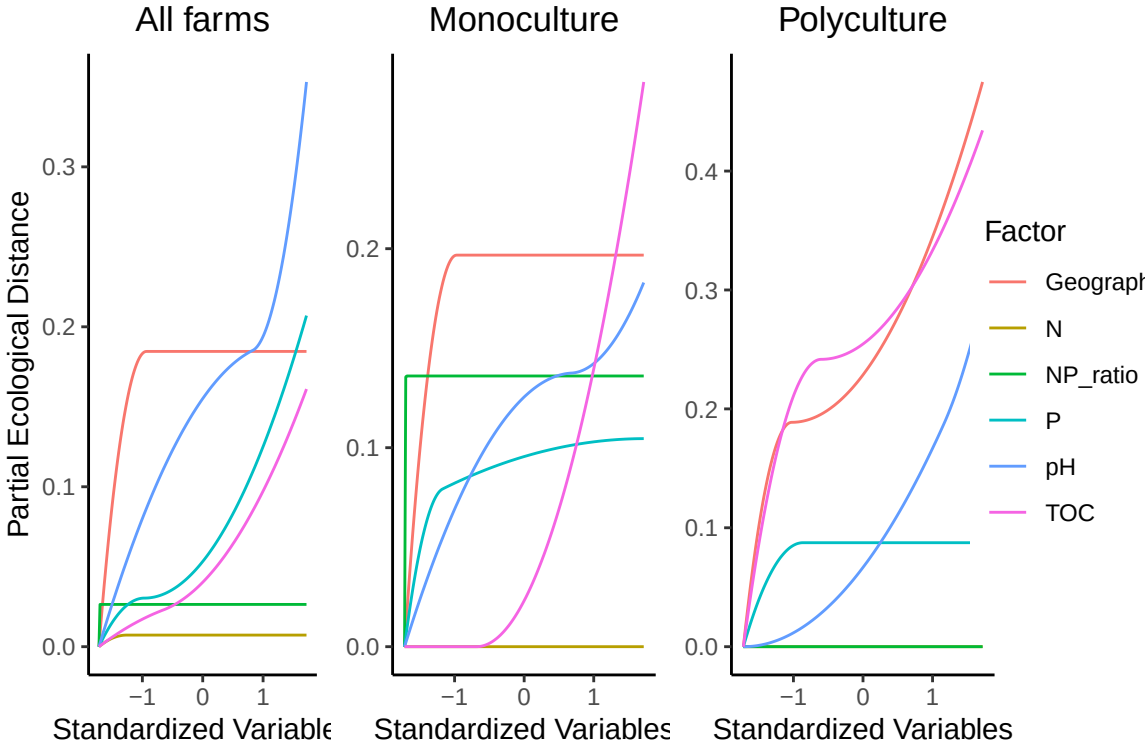


SAPROTROPHS

```
##                   Predictors Coefficients
## 1                 Geographic   0.18460890
## 2                         pH   0.35933185
## 3                          P   0.20927755
## 4                        TOC   0.16285305
## 5                          N   0.00725989
## 6                   NP_ratio   0.02643250
## 7 Percent Deviance Explained  17.06990738
```

```
##                   Predictors Coefficients
## 1                 Geographic    0.1967693
## 2                         pH    0.1844701
## 3                          P    0.1045594
## 4                        TOC    0.2878780
## 5                          N    0.0000000
## 6                   NP_ratio    0.1360407
## 7 Percent Deviance Explained   30.2507243
```

```
##                   Predictors Coefficients
## 1                 Geographic   0.47854947
## 2                         pH   0.29672471
## 3                          P   0.08745943
## 4                        TOC   0.43711100
## 5                          N   0.00000000
## 6                   NP_ratio   0.00000000
## 7 Percent Deviance Explained  39.57684189
```

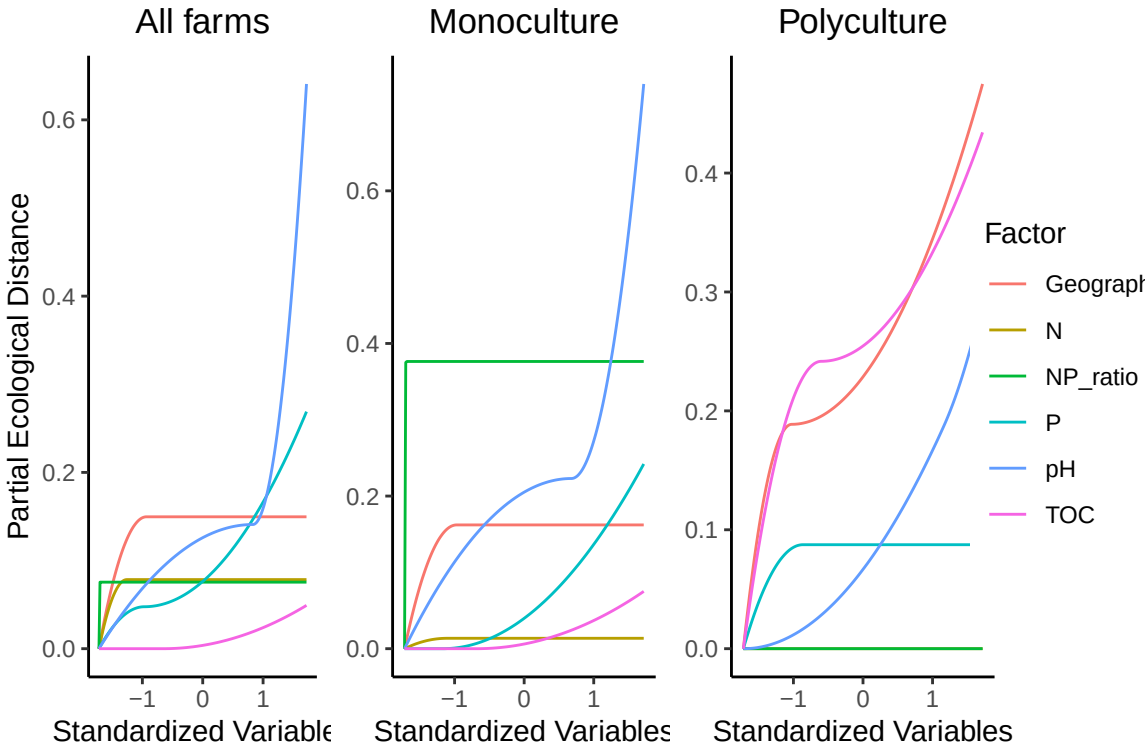


FUNGAL PARASITE

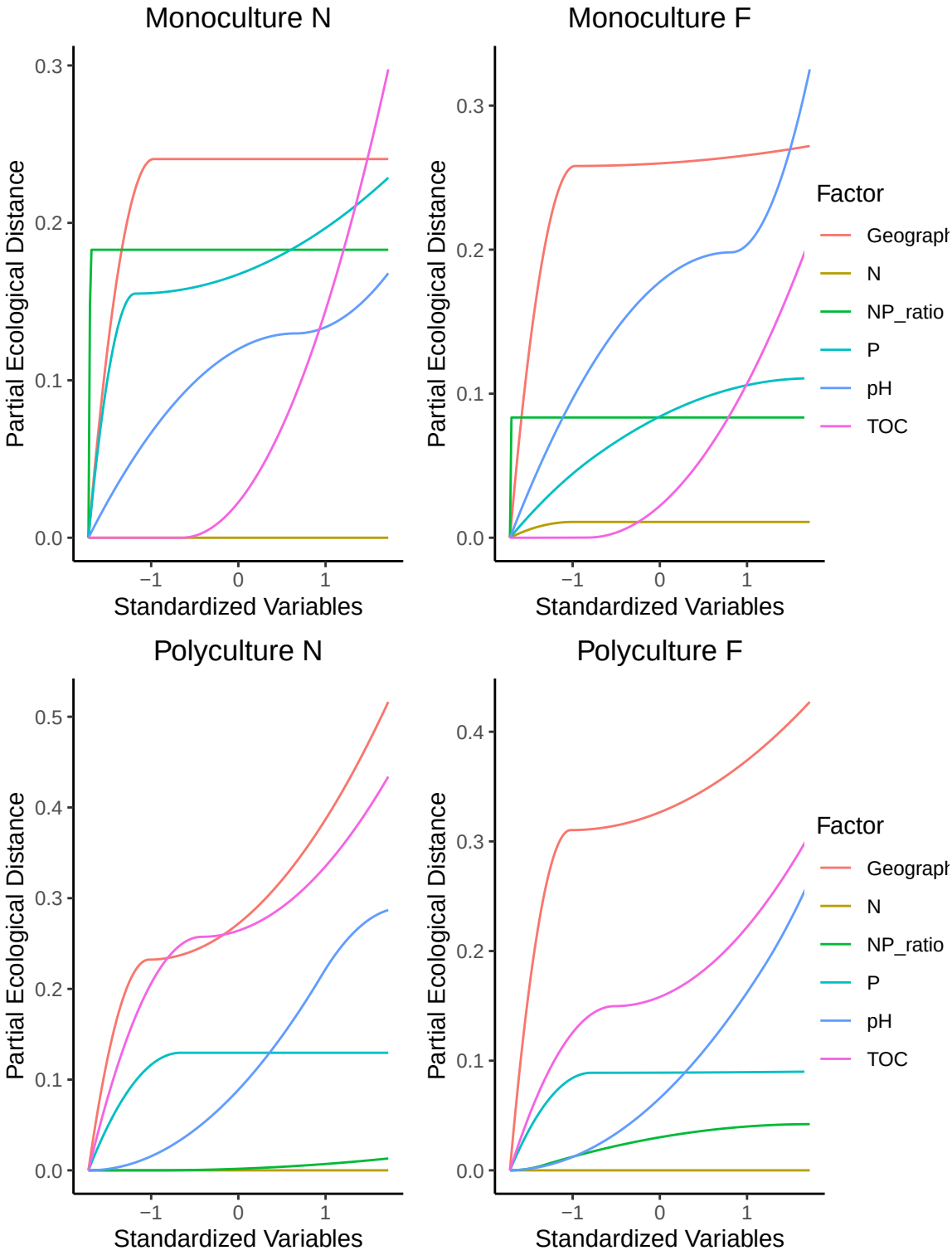
```
##                   Predictors Coefficients
## 1                 Geographic   0.14963239
## 2                         pH   0.66033953
## 3                          P   0.27182604
## 4                        TOC   0.04986160
## 5                          N   0.07841128
## 6                   NP_ratio   0.07548854
## 7 Percent Deviance Explained  11.23764778
```

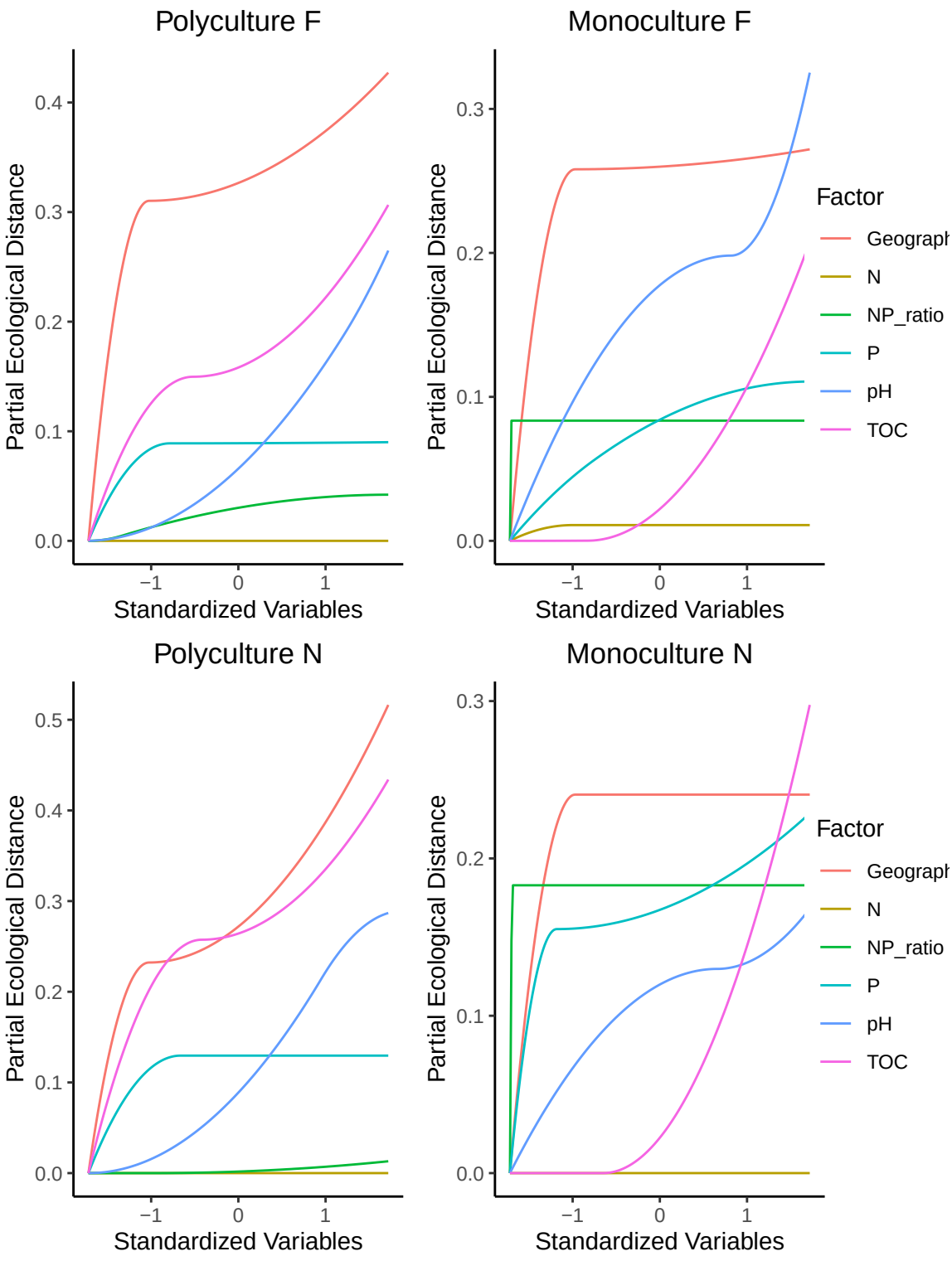
```
##                   Predictors Coefficients
## 1                 Geographic   0.16219013
## 2                         pH   0.75741315
## 3                          P   0.24496451
## 4                        TOC   0.07617834
## 5                          N   0.01362458
## 6                   NP_ratio   0.37639233
## 7 Percent Deviance Explained  28.87434446
```

```
##                   Predictors Coefficients
## 1                 Geographic   0.35461896
## 2                         pH   0.16193637
## 3                          P   0.19093089
## 4                        TOC   0.29053125
## 5                          N   0.01343859
## 6                   NP_ratio   0.00000000
## 7 Percent Deviance Explained  13.98470385
```

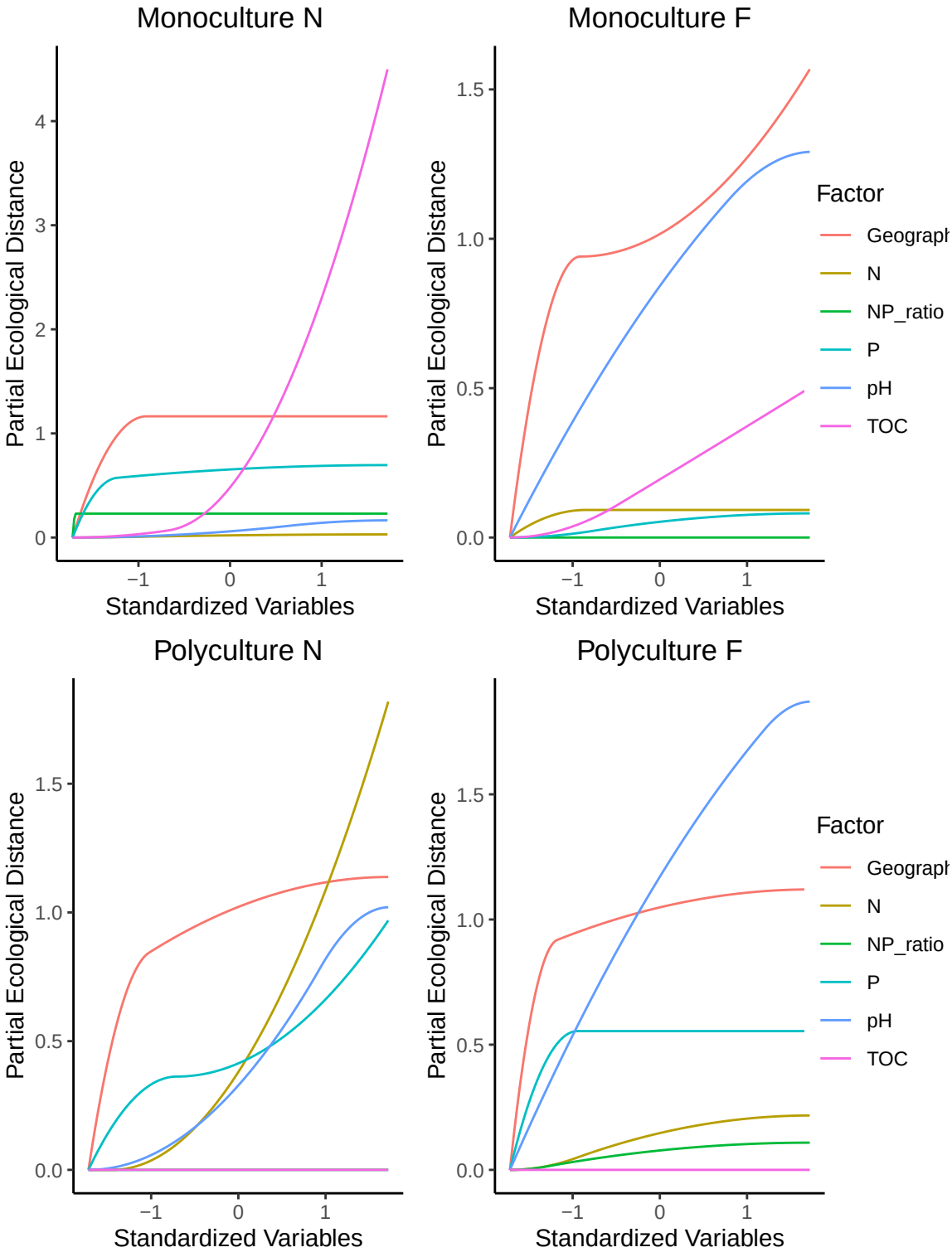


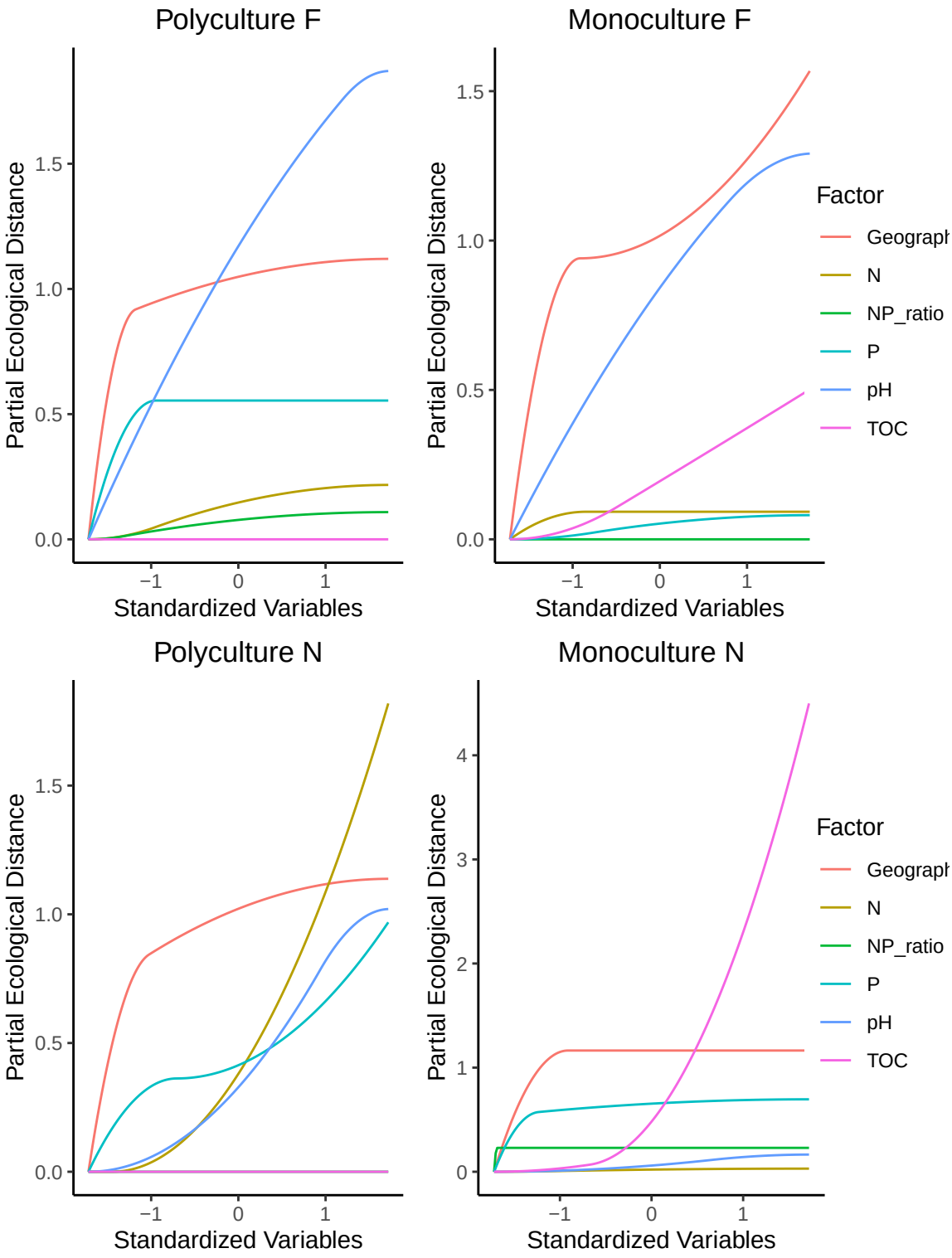
All Fungi FTBL Groups




Polyculture F
Monoculture F
Polyculture N
Monoculture N
Partial Ecological Distance
Standardized Variables
Factor
Geograph
N
NP_ratio
P
pH
TOC

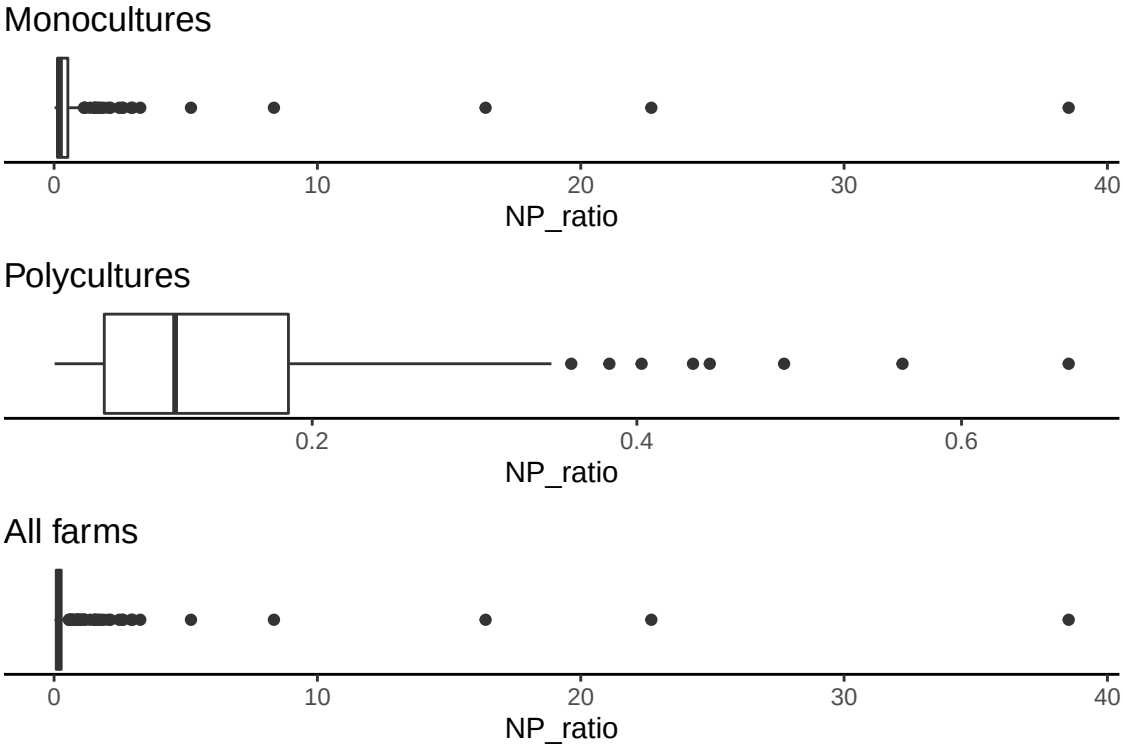
AMF FTBL Groups



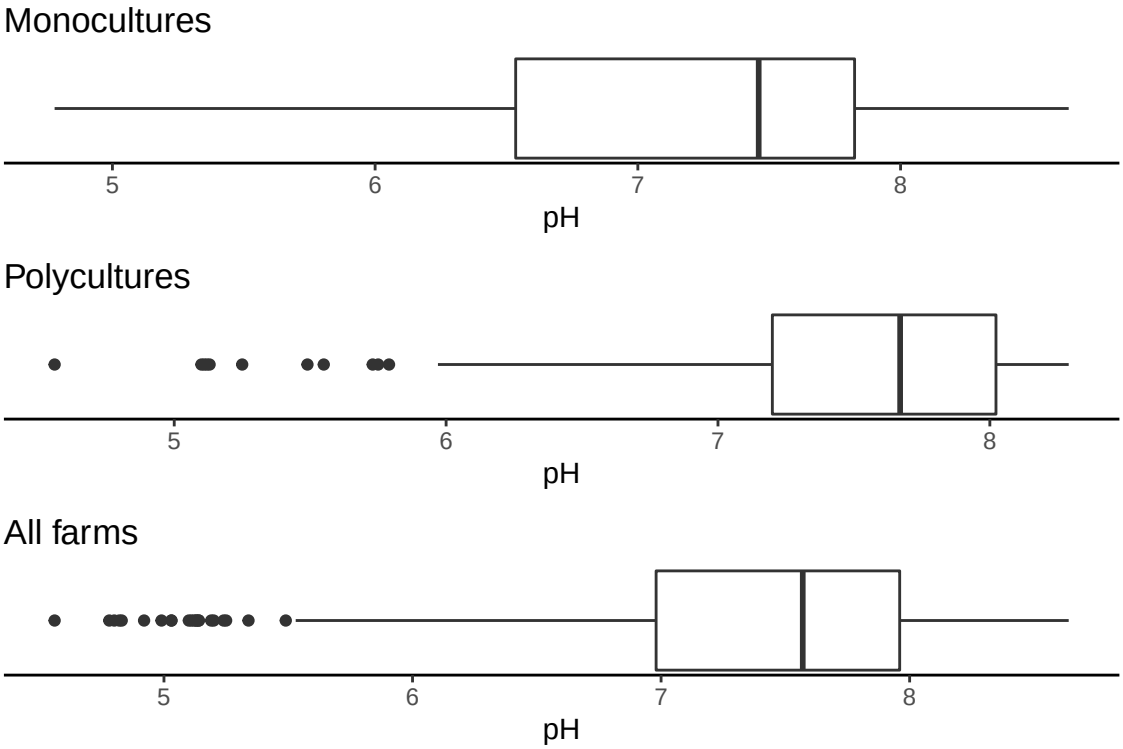

Polyculture F
Monoculture F
Polyculture N
Monoculture N
Partial Ecological Distance
Standardized Variables
Factor
Geograph
N
NP_ratio
P
pH
TOC

Box Plots of environmental range

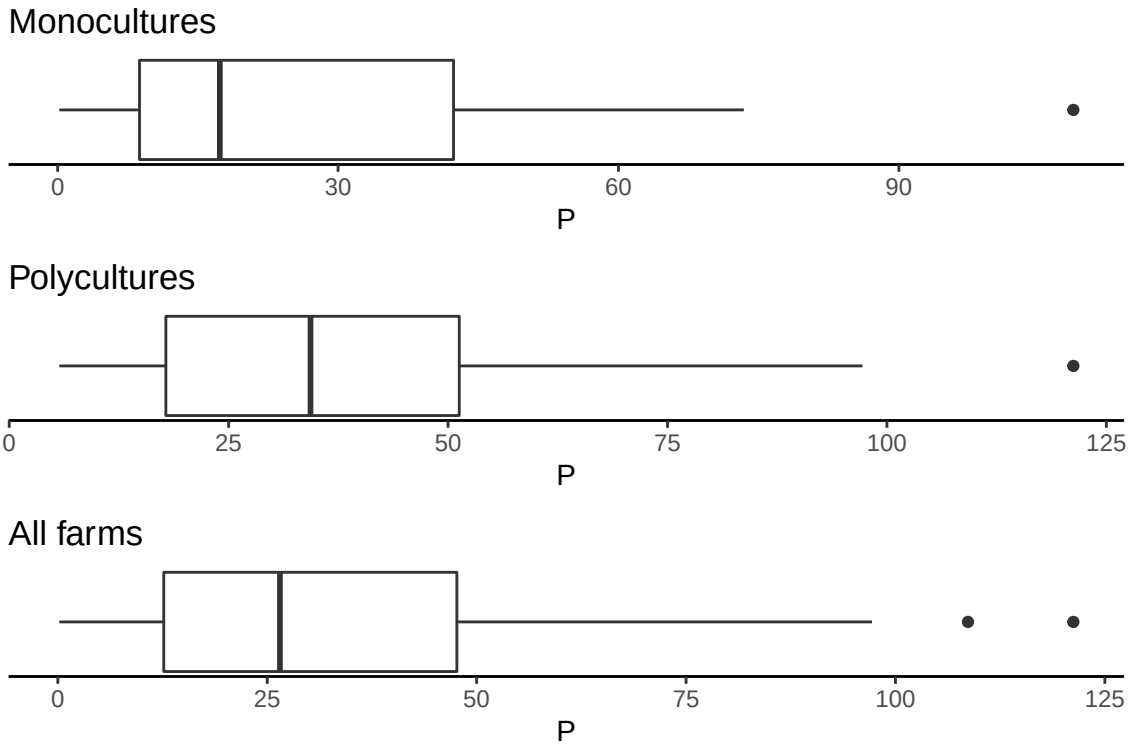
NP Ratio



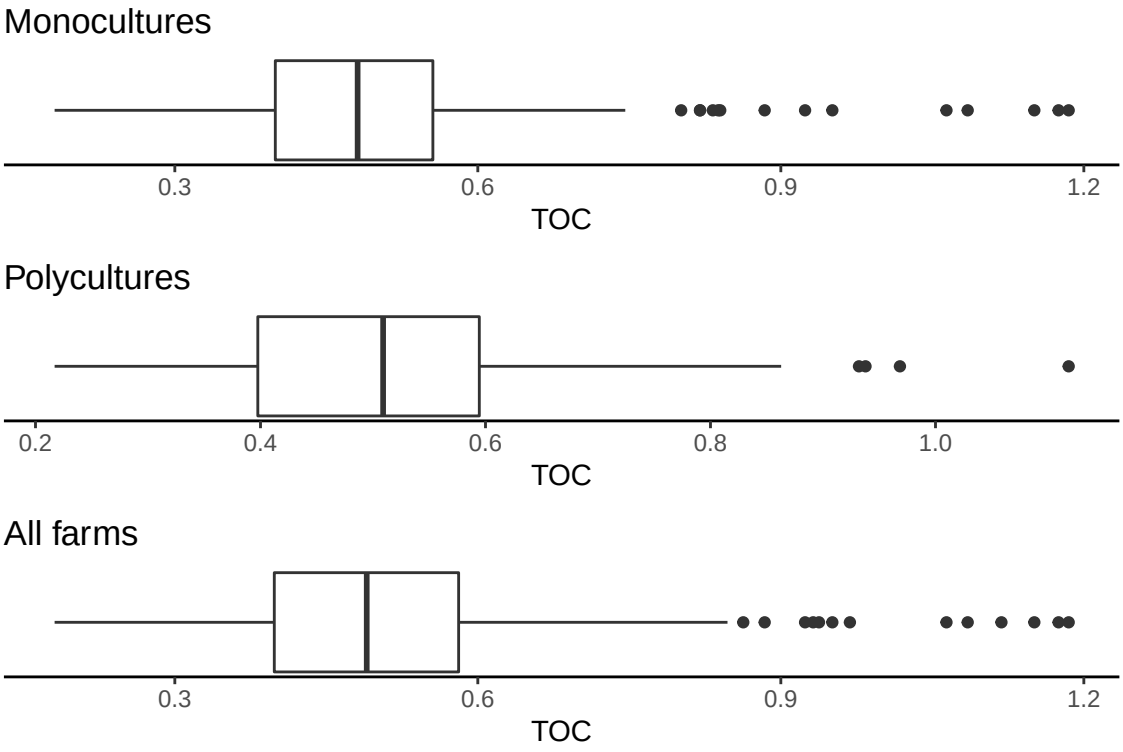
pH


Monocultures
5
6
7
8
pH
Polycultures
5
6
7
8
pH
All farms
5
6
7
8
pH

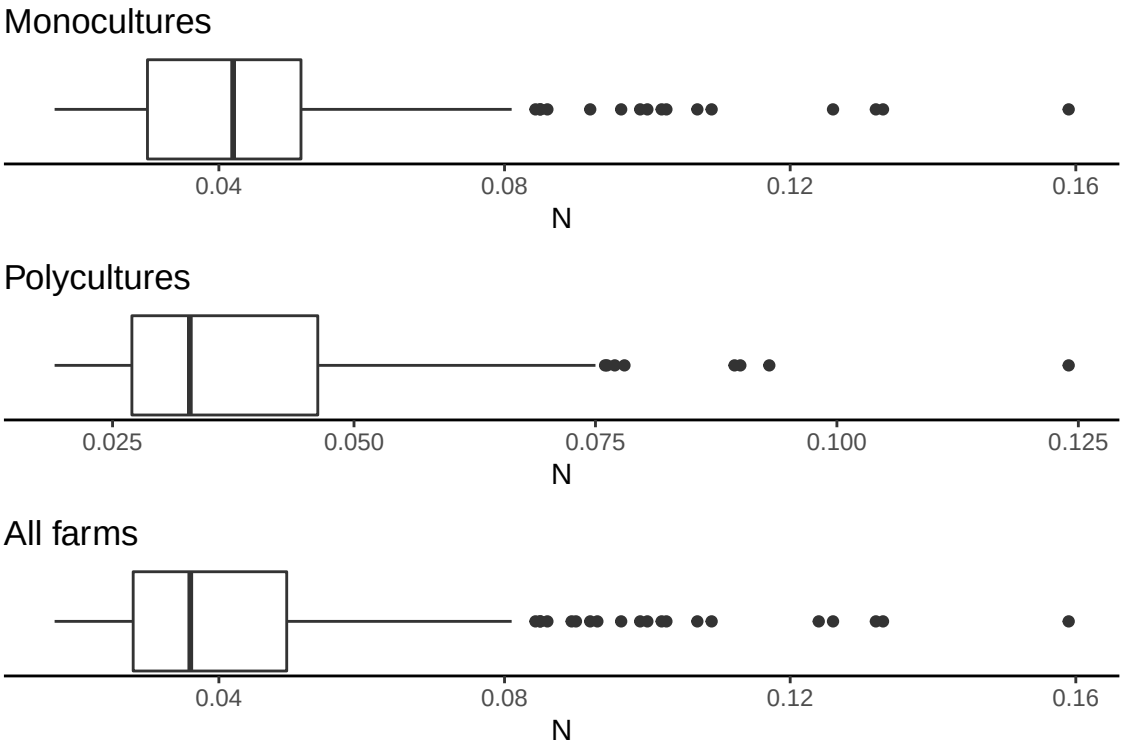
P


Monocultures
0
30
60
90
P
Polycultures
0
25
50
75
100
125
P
All farms
0
25
50
75
100
125
P

TOC


Monocultures
0.3
0.6
0.9
1.2
TOC
Polycultures
0.2
0.4
0.6
0.8
1.0
TOC
All farms
0.3
0.6
0.9
1.2
TOC

N


Monocultures
0.04
0.08
0.12
0.16
N
Polycultures
0.025
0.050
0.075
0.100
0.125
N
All farms
0.04
0.08
0.12
0.16
N