# Check ALFAM predictions

Sasha D. Hafner

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## Determine parameter values for model

```
acid.pars
```

```
##          int.f0        int.r1       int.r2      int.r3    man.ph.r1   man.ph.r3 man.source.pig.f0 country
## 1    1.0196004 -1.393616379 -0.7063251 -3.133849   0.6651733 -0.03678573       0.547298565      DK    20
## 2   -0.8196223 -1.062579227 -1.9605953 -3.477660   0.6784625  1.07282631       0.010649964      DK    20
## 3    2.2268319 -0.056757198 -0.9641707 -4.167802   0.5520191 -0.11299219      -2.250455854      NL   210
## 4   -0.8195999 -0.240521155 -1.3352308 -3.319355   0.9771958  0.37857158      -0.015538521      NL    21
## 5    0.6086105 -0.242442769 -0.7359782 -3.623038   0.4999204  0.56572114      -1.183012945      NL    21
## 6    0.1220507 -0.704443278 -1.8756901 -3.100777   0.7616286  0.13162223      -0.572500509      NL 210
## 7    0.5457575 -0.244894519 -4.0232442 -2.441320   1.8137797  0.16618375       0.126003570      NL   210
## 8    0.2130891 -0.626043389 -1.3369312 -2.616785   0.6089017  0.07814877      -1.258405015      NL   210
## 9    0.5003897 -0.813830103 -2.9571641 -2.401078   0.6626218  0.71097421      -0.094348845      NL   210
## 10  -0.6644718 -0.869134295 -0.1869612 -3.491319   0.6084847  0.30971386      -0.679632592      DK
## 11  -0.5702453 -1.450941321 -0.8461731 -3.084432   0.3821639  0.23933598       0.064200824      DK
## 12  -0.6187791 -1.258494747 -0.0541669 -3.181493  -0.1297708 -0.09111272       0.009600826      DK
## 13   0.4879648 -0.003564062  0.8257819 -2.942251   0.2422242  0.19495069       0.162864101      DK
## 14  -0.6656878 -0.322364673 -0.8348979 -2.017325   0.9102287  2.25300782      -2.749275550      DK
## 15  -0.3355142 -0.977413728 -0.3171014 -3.044557   1.2381943  0.42780694      -0.995921250      DK
## 16  -0.6636043 -1.374527145 -0.2487543 -3.395602   0.6039320  0.35496615      -0.453129708      DK
## 17  -0.5655448 -1.797257222 -0.7202709 -3.728464   0.1368254 -0.02001328       0.356655886      DK
## 18   0.3403686 -1.397177730 -0.1544347 -3.367932   0.6648668  0.08394464      -0.332276585      DK
## 19  -0.5937786 -1.442362900 -0.9129302 -3.191580   0.7913245  0.16854843      -0.330626816      DK
## 20  -5.8928450 -1.135086127 -1.0952883 -2.908662   1.1536085  0.16374955       5.586319703      DK
## 21   0.1025777 -1.042061594 -1.7413512 -3.424776   0.5418708  0.27931625       0.166528026      DK
## 22  -0.6389390 -1.357045901 -0.8907651 -3.044802   0.7039975  0.23819002      -0.221176846      DK
## 23  -1.2100039 -0.894588475 -2.9434338 -2.813623   0.8192893  1.21763666       1.100484906      DK
##      man.source
## 1           pig
## 2           cat
## 3           cat
## 4           cat
## 5           cat
## 6           cat
## 7           cat
## 8           cat
## 9           cat
## 10          cat
## 11          cat
## 12          pig
## 13          mix
```

```
## 14          cat
## 15         mink
## 16         mink
## 17          mix
## 18          pig
## 19          cat
## 20          pig
## 21       cattle
## 22          pig
## 23       cattle
```

```r
median(acid.pars$man.ph.r1)
```

```
## [1] 0.6648668
```

```r
median(acid.pars$man.ph.r3)
```

```
## [1] 0.23819
```

```r
median(acid.pars$man.ph.r1) - sd(acid.pars$man.ph.r1)/sqrt(nrow(acid.pars)) * 1.356
```

```
## [1] 0.5551151
```

```r
median(acid.pars$man.ph.r3) - sd(acid.pars$man.ph.r3)/sqrt(nrow(acid.pars)) * 1.356
```

```
## [1] 0.0892778
```

DK only (so only field acidification)

```r
dd <- subset(acid.pars, country == 'DK')
dd
```

```
##         int.f0       int.r1      int.r2      int.r3   man.ph.r1    man.ph.r3 man.source.pig.f0 country   u
## 1    1.0196004 -1.393616379 -0.7063251 -3.133849   0.6651733 -0.03678573       0.547298565      DK 205
## 2   -0.8196223 -1.062579227 -1.9605953 -3.477660   0.6784625  1.07282631       0.010649964      DK 205
## 10  -0.6644718 -0.869134295 -0.1869612 -3.491319   0.6084847  0.30971386      -0.679632592      DK
## 11  -0.5702453 -1.450941321 -0.8461731 -3.084432   0.3821639  0.23933598       0.064200824      DK
## 12  -0.6187791 -1.258494747 -0.0541669 -3.181493  -0.1297708 -0.09111272       0.009600826      DK
## 13   0.4879648 -0.003564062  0.8257819 -2.942251   0.2422242  0.19495069       0.162864101      DK
## 14  -0.6656878 -0.322364673 -0.8348979 -2.017325   0.9102287  2.25300782      -2.749275550      DK
## 15  -0.3355142 -0.977413728 -0.3171014 -3.044557   1.2381943  0.42780694      -0.995921250      DK
## 16  -0.6636043 -1.374527145 -0.2487543 -3.395602   0.6039320  0.35496615      -0.453129708      DK
## 17  -0.5655448 -1.797257222 -0.7202709 -3.728464   0.1368254 -0.02001328       0.356655886      DK
## 18   0.3403686 -1.397177730 -0.1544347 -3.367932   0.6648668  0.08394464      -0.332276585      DK
## 19  -0.5937786 -1.442362900 -0.9129302 -3.191580   0.7913245  0.16854843      -0.330626816      DK
## 20  -5.8928450 -1.135086127 -1.0952883 -2.908662   1.1536085  0.16374955       5.586319703      DK
## 21   0.1025777 -1.042061594 -1.7413512 -3.424776   0.5418708  0.27931625       0.166528026      DK
## 22  -0.6389390 -1.357045901 -0.8907651 -3.044802   0.7039975  0.23819002      -0.221176846      DK
## 23  -1.2100039 -0.894588475 -2.9434338 -2.813623   0.8192893  1.21763666       1.100484906      DK
```

```r
median(dd$man.ph.r1)
```

```
## [1] 0.6650201
```

```r
median(dd$man.ph.r3)
```

```
## [1] 0.238763
```

```r
median(dd$man.ph.r1) - sd(dd$man.ph.r1)/sqrt(nrow(dd)) * 1.356
```

```
## [1] 0.5464313
```

```r
median(dd$man.ph.r3) - sd(dd$man.ph.r3)/sqrt(nrow(dd)) * 1.356
```

```
## [1] 0.03387907
```

```r
mean(dd$man.ph.r1)
```

```
## [1] 0.6256797
```

```r
mean(dd$man.ph.r3)
```

```
## [1] 0.4285051
```

```r
mean(dd$man.ph.r1) - sd(dd$man.ph.r1)/sqrt(nrow(dd)) * 1.356
```

```
## [1] 0.507091
```

```r
mean(dd$man.ph.r3) - sd(dd$man.ph.r3)/sqrt(nrow(dd)) * 1.356
```

```
## [1] 0.2236212
```