

Appendix M: R-Plots

Insects (Aquatic and Terrestrial)

Toxicities

Insect.LC50s

0.69 2 34 567810111213141516171819202122232425262728293031323334353637383940410 84000000



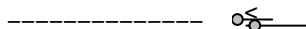
1 10 50 9099

Mortality.Aq..Invert.HC50



Mortality.Aq..Invert.HC05

1 10 50 9099

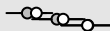


Pasture (2641.8, 2149)



0.03, 0.02

Developed (2510.1, 125)



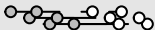
0.03, <0.01

Mosquito Control (881.2, NA)



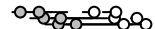
<0.01, NA

Other Crops (830.1, 0)



<0.01, <0.01

Wheat (181.8, 22)



<0.01, <0.01

Other Grains (106.7, 89)



<0.01, <0.01

Corn (66.8, 10)



<0.01, <0.01

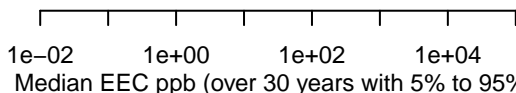
Vegetables and Ground Fruit (0.1, 0)



<0.01, <0.01

Total Range (9952763 acres)

○ 2 ○ 3



%s (overlap, treated)

Uses

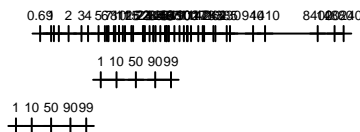
malathion: mal.aquainsects.tox.txt
yearly peak 1-d, 4-d, 21-d (from bottom up)
huc:18b, bin:2,3
Ash Meadows naucorid (439) Range

Toxicities

Insect.LC50s

Mortality.Aq..Invert.HC50

Mortality.Aq..Invert.HC05



Mosquito Control (69045, NA)

5.57, NA

Developed (48934, 2446)

3.95, 0.2

Corn (22043, 4101)

1.78, 0.33

Other Grains (21876, 22622)

1.76, 1.82

Wheat (9167, 9808)

0.74, 0.79

Cotton (5778, 5572)

0.47, 0.45

Other Crops (2920, 0)

0.24, <0.01

Nurseries (289, 288)

0.02, 0.02

Other RowCrops (113, 123)

<0.01, <0.01

Orchards and Vineyards (98, 45)

<0.01, <0.01

Vegetables and Ground Fruit (9, 8)

<0.01, <0.01

Pasture (2, 3)

<0.01, <0.01

Total Range (1240347 acres)

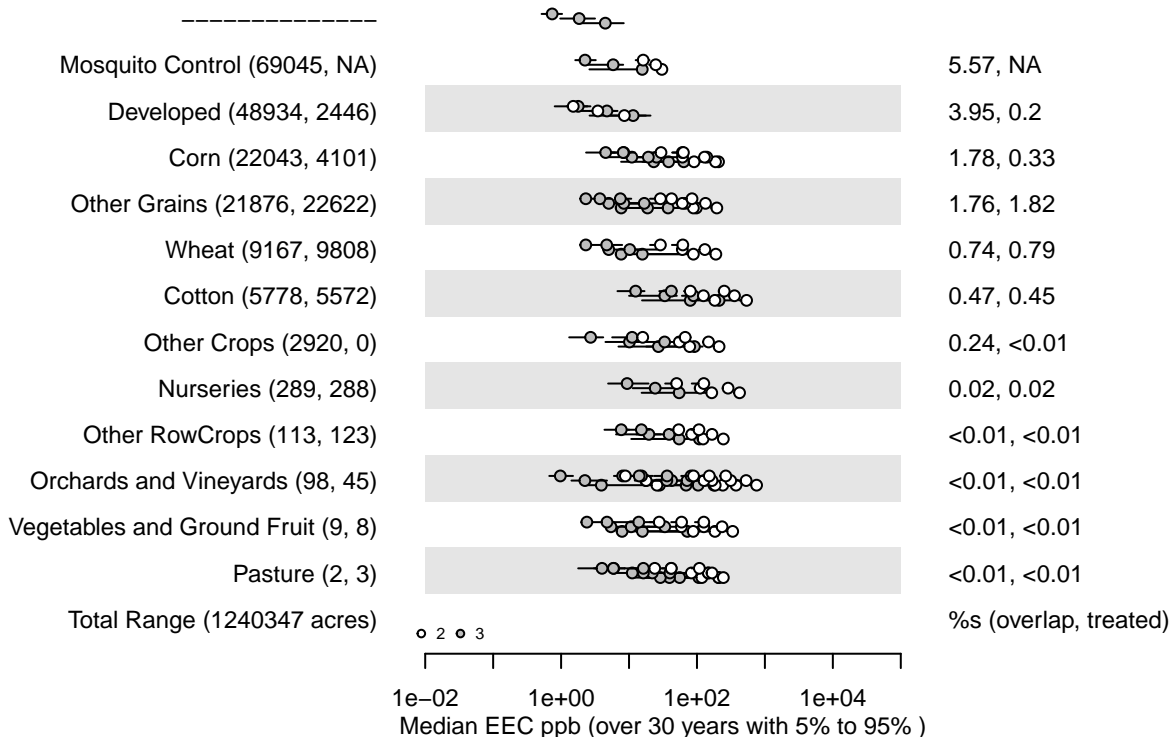
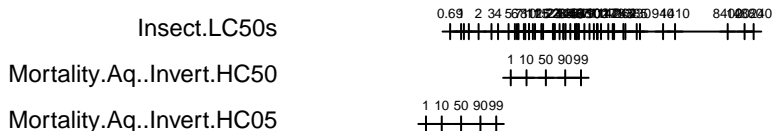
%s (overlap, treated)

Uses

○ 2 ○ 3

1e-02 1e+00 1e+02 1e+04
Median EEC ppb (over 30 years with 5% to 95%)

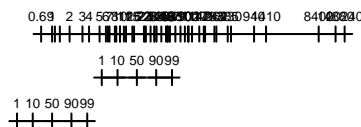
malathion: mal.aquainsects.tox.txt
yearly peak 1-d, 4-d, 21-d (from bottom up)
huc:12a, bin:2,3
Comal Springs dryopid beetle (454) Range



malathion: mal.aquainsects.tox.txt
yearly peak 1-d, 4-d, 21-d (from bottom up)
huc:12a, bin:2,3
Comal Springs riffle beetle (453) Range

Toxicities

Insect.LC50s
Mortality.Aq..Invert.HC50
Mortality.Aq..Invert.HC05



Vegetables and Ground Fruit (17437, 13285)

Nurseries (4789, 4789)

Orchards and Vineyards (3406, 2048)

Other RowCrops (1379, 548)

Cotton (990, 902)

Christmas Trees (393, 285)

Total Range (17758965 acres)

Mosquito Control (3641760, 47254)

Developed (1436353, 71817)

Corn (1266481, 60822)

Pasture (326415, 75892)

Wheat (92309, 32054)

Other Grains (38373, 10637)

Other Crops (28861, 6)

20.51, 0.27

8.09, 0.4

7.13, 0.34

1.84, 0.43

0.52, 0.18

0.22, 0.06

0.16, <0.01

0.1, 0.07

0.03, 0.03

0.02, 0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

%s (overlap, treated)

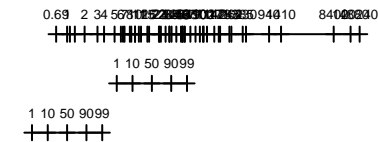
1e-02 1e+00 1e+02 1e+04
Median EEC ppb (over 30 years with 5% to 95%)

malathion: mal.aquainsects.tox.txt
yearly peak 1-d, 4-d, 21-d (from bottom up)
huc:4,7,10a,11a, bin:2
Hine's emerald dragonfly (445) Range

Uses

Toxicities

Insect.LC50s
 Mortality.Aq..Invert.HC50
 Mortality.Aq..Invert.HC05



Developed (75741, 3787)

Pasture (73345, 25391)

Corn (22831, 5637)

Wheat (15007, 15702)

Other Grains (12186, 3563)

Other Crops (9423, 0)

Vegetables and Ground Fruit (8283, 8578)

Orchards and Vineyards (7055, 2246)

Christmas Trees (1692, 1100)

Other RowCrops (398, 410)

Nurseries (231, 231)

Total Range (4026785 acres)

1.88, 0.09

1.82, 0.63

0.57, 0.14

0.37, 0.39

0.3, 0.09

0.23, <0.01

0.21, 0.21

0.18, 0.06

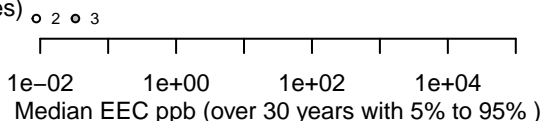
0.04, 0.03

<0.01, 0.01

<0.01, <0.01

%s (overlap, treated)

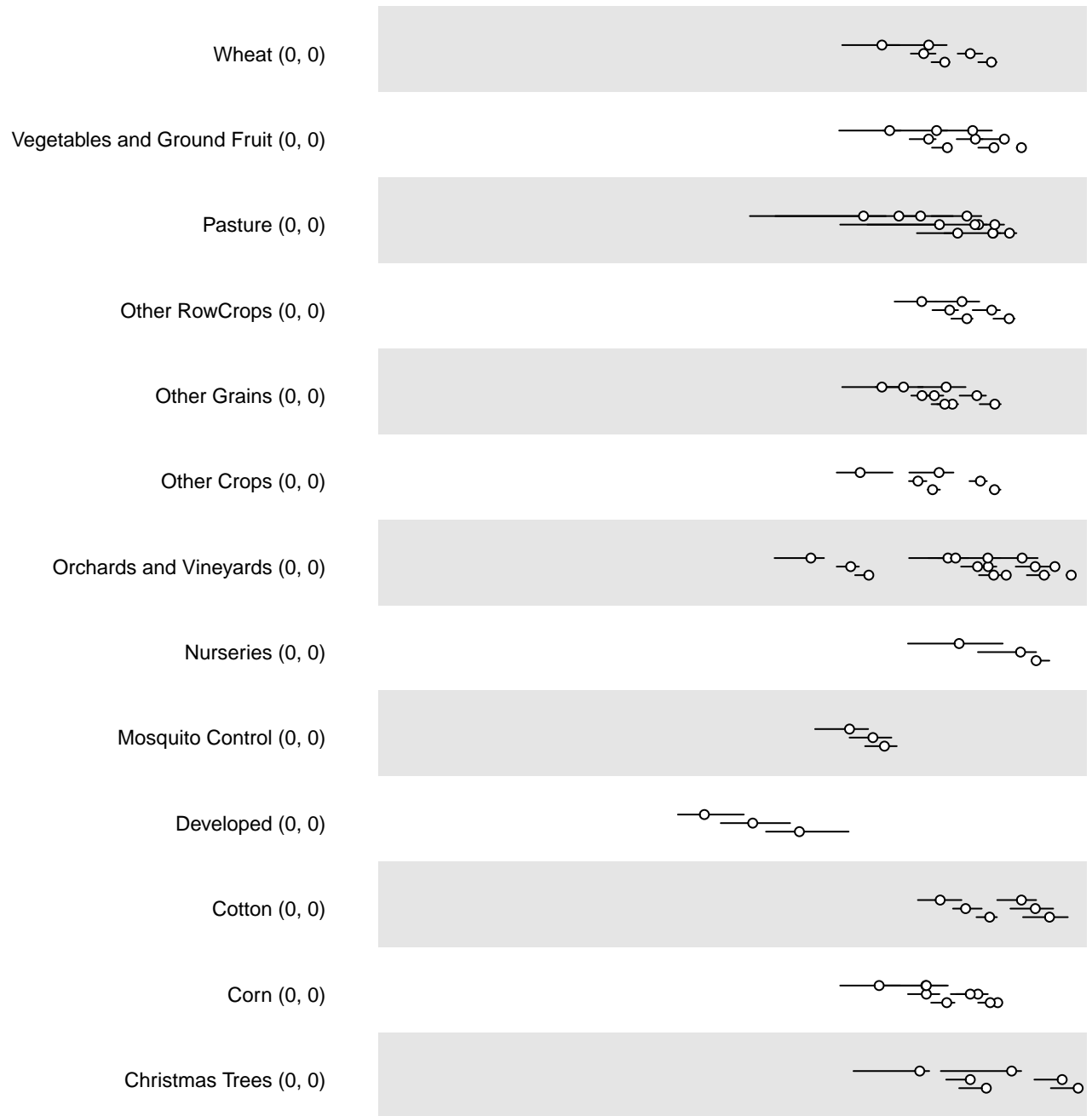
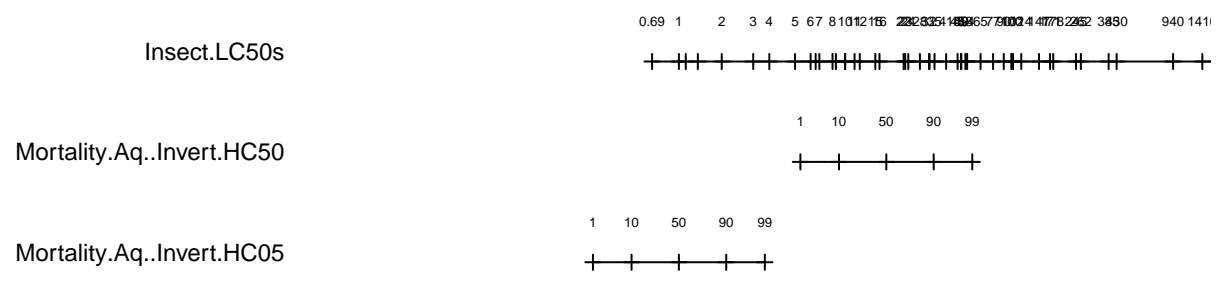
Uses



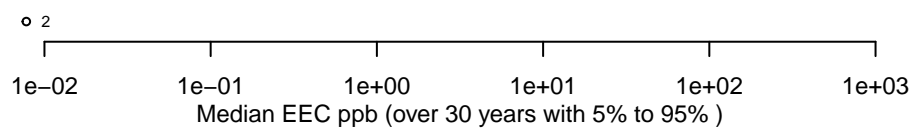
malathion: mal.aquainsects.tox.txt
 yearly peak 1-d, 4-d, 21-d (from bottom up)
 huc:4, bin:2,3
 Hungerford's crawling water Beetle (441) Range

Toxicities

Uses



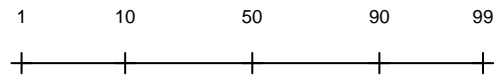
Total Range (10613 acres)



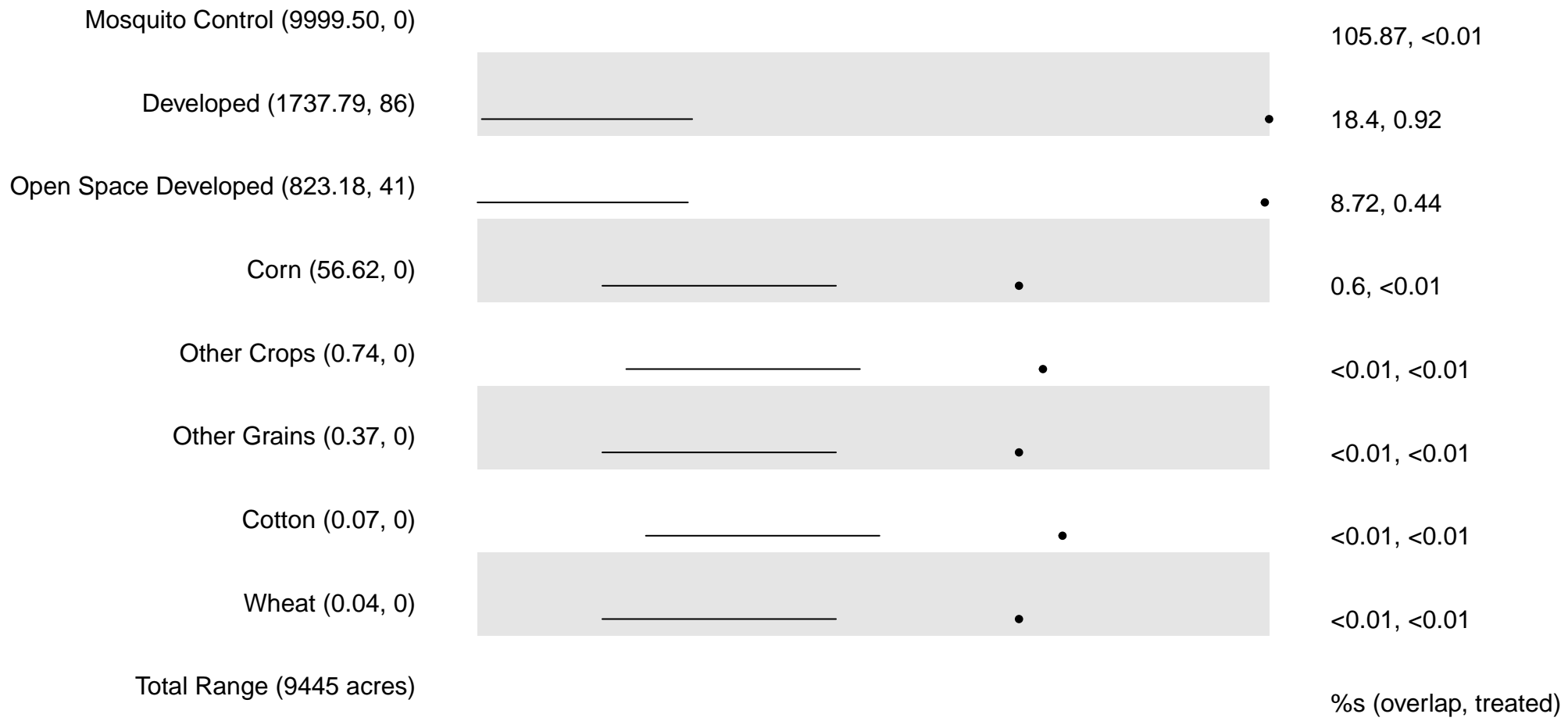
malathion: mal.aquainsects.tox.txt
yearly peak 1-d, 4-d, 21-d (from bottom up)
huc:9,10a,10b,17b,17a, bin:2
Meltwater lednian stonefly (1849) Range

Toxicity

insect.mortality

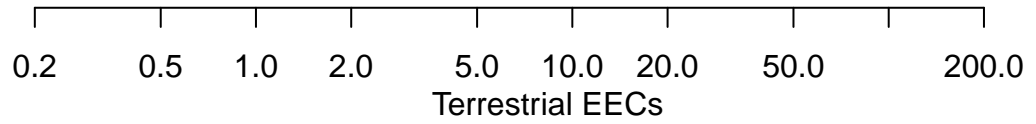


Uses



Total Range (9445 acres)

%s (overlap, treated)



Texamaurops reddelli
Kretschmarr Cave mold beetle (448)
EECs: Arth (from bottom)
Tox Data: mal.insect.tox.txt

A horizontal number line with five tick marks. Above the tick marks are the numbers 1, 10, 50, 90, and 99.

Uses

64.15, NA

11.99, 0.6

4.36, 0.22

2.29, 2.19

1.19, 1.35

0.63, <0.01

0.28, 0.31

0.2, 0.2

0.15, 0.09

0.05, 0.05

0.02, <0.01

0.02, 0.03

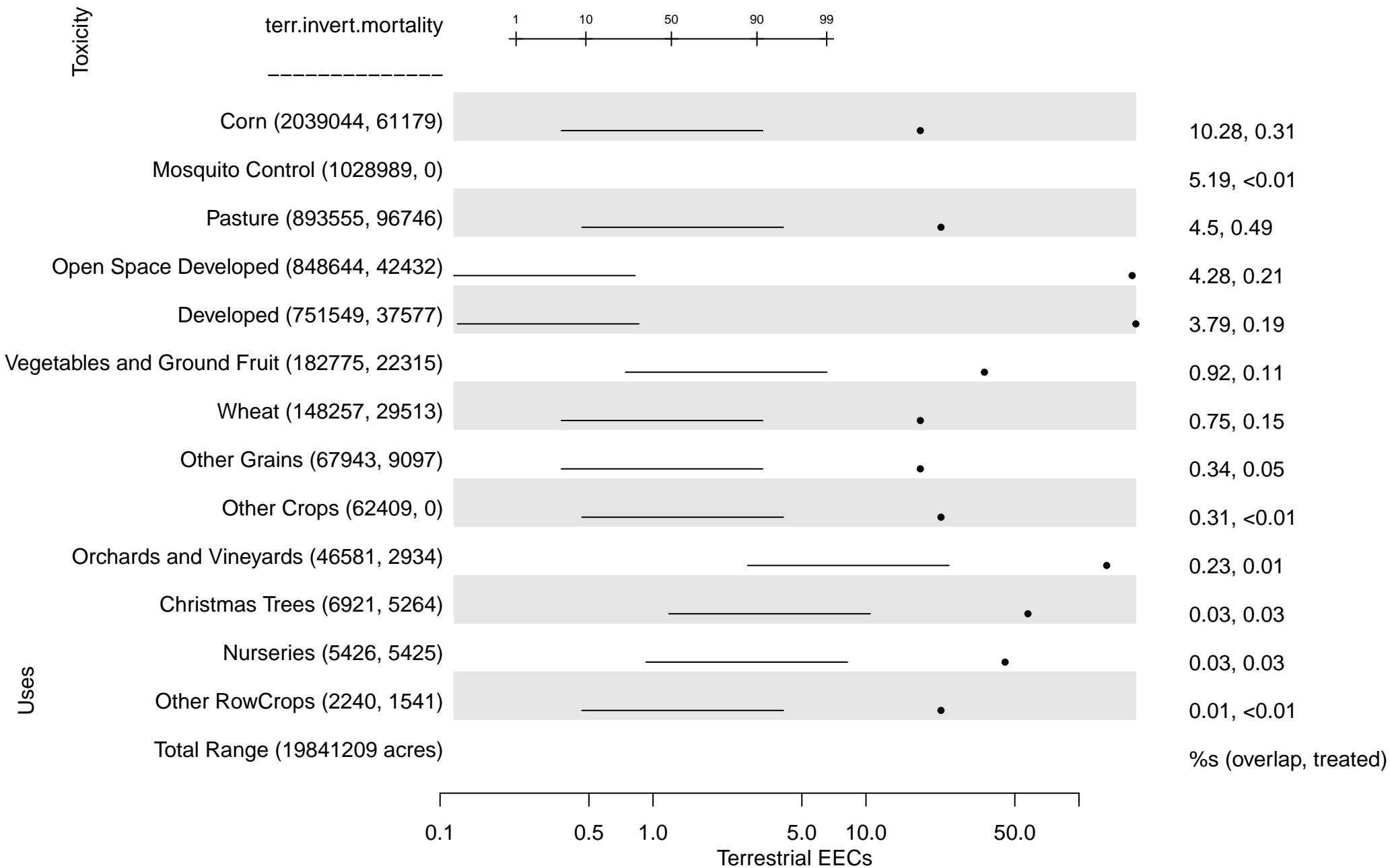
<0.01, <0.01

<0.01, <0.01

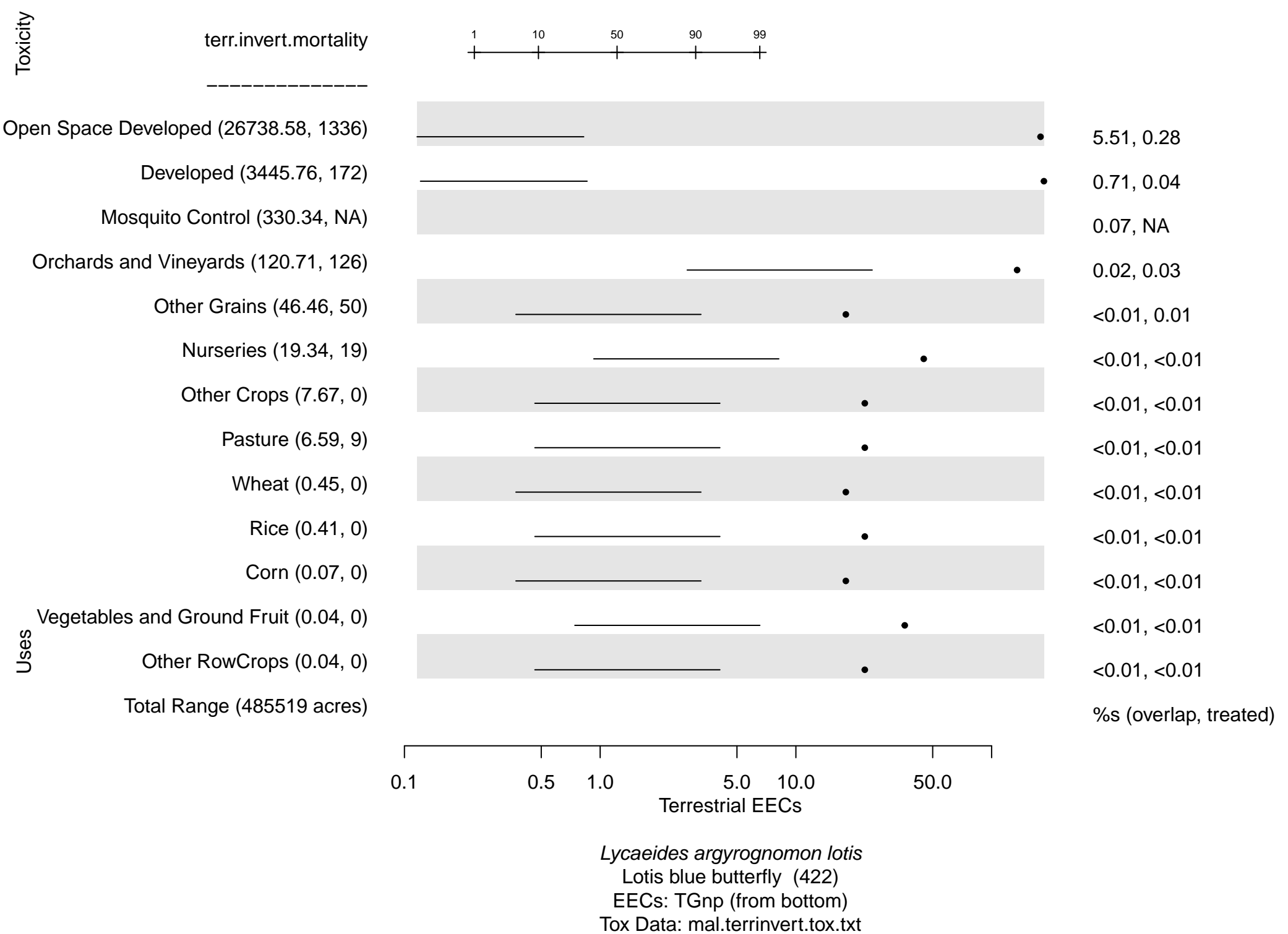
%s (overlap, treated)

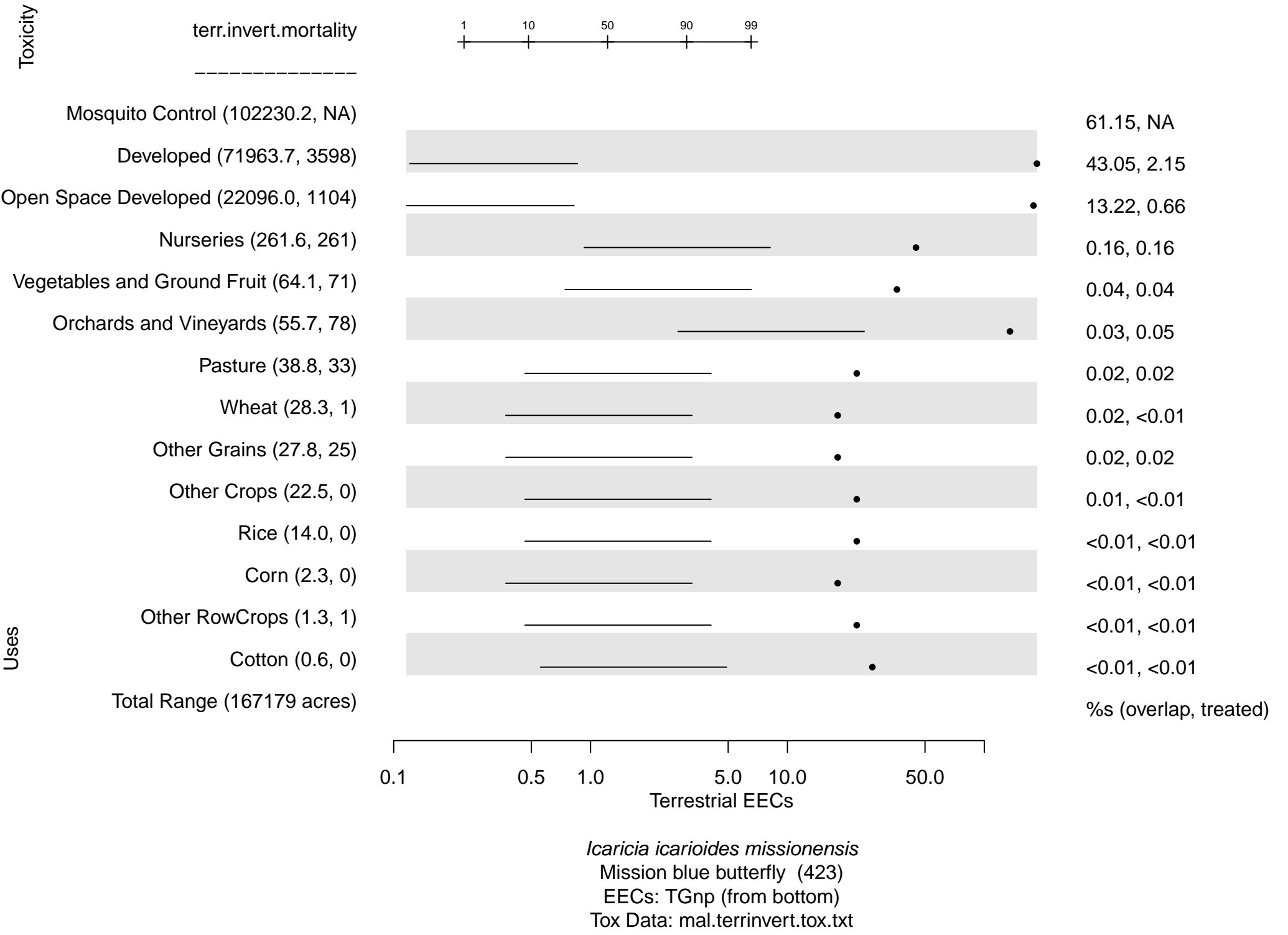
Taxon	Terrestrial EECs (approx.)
Insects	10.5
Plants	1.5
Fish	1.2
Birds	1.1
Mammals	1.0
Reptiles	0.8

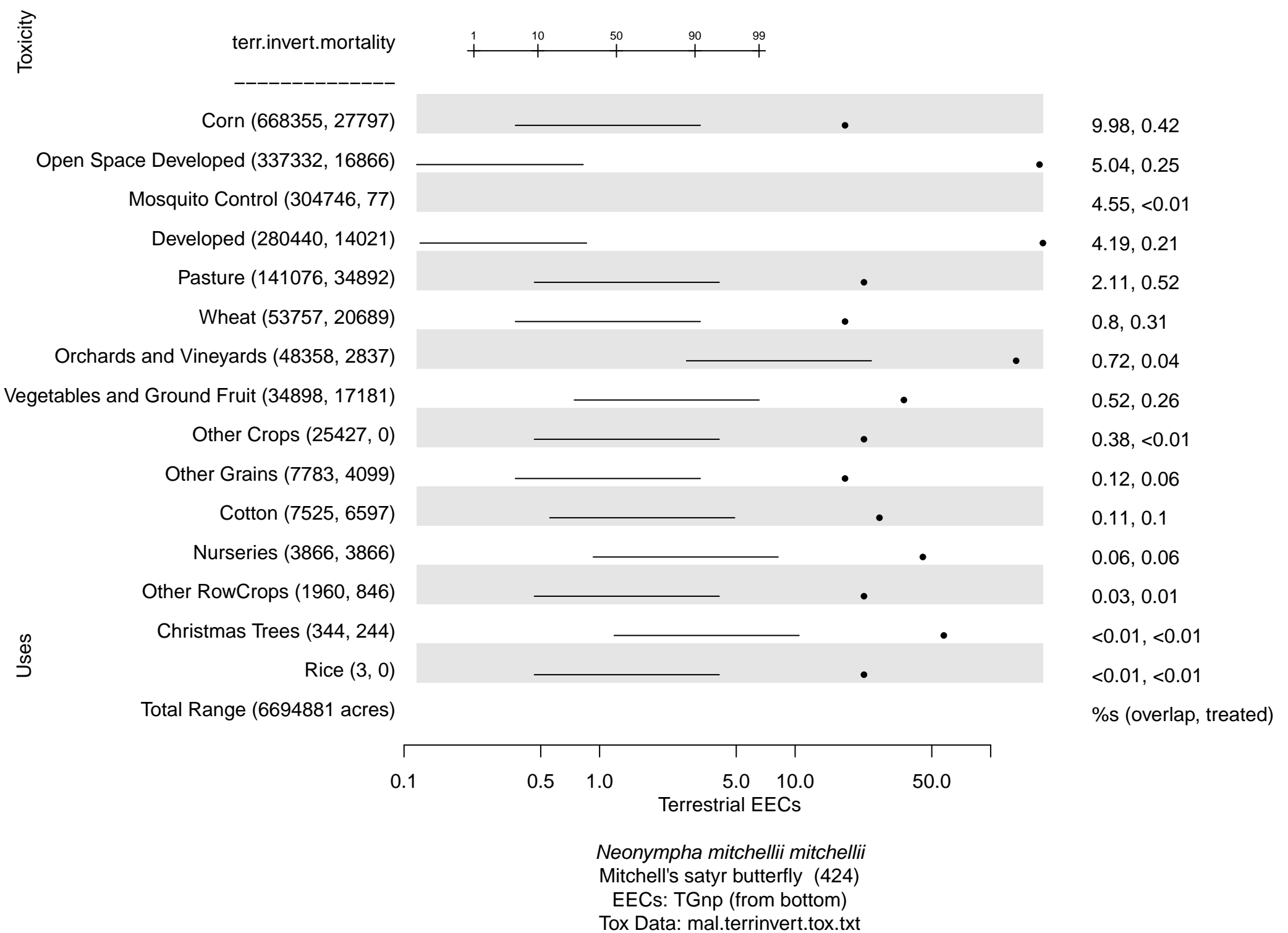
Euphilotes battoides allyni
El Segundo blue butterfly (419)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt



Lycaeides melissa samuelis
 Karner blue butterfly (420)
 EECs: TGnp (from bottom)
 Tox Data: mal.terrinvert.tox.txt







Uses

A horizontal number line with five tick marks. Above the tick marks are the numbers 1, 10, 50, 90, and 99.

76.55, NA

12.35, 0.62

6.48, 0.32

1.27, 1.2

1.16, 1.23

0.12, <0.01

0.06, 0.06

_____ •

0.05, 0.05

0.03, 0.05

_____ •

0.01, 0.01

<0.01, <0.01

_____ •

<0.01, <0.01

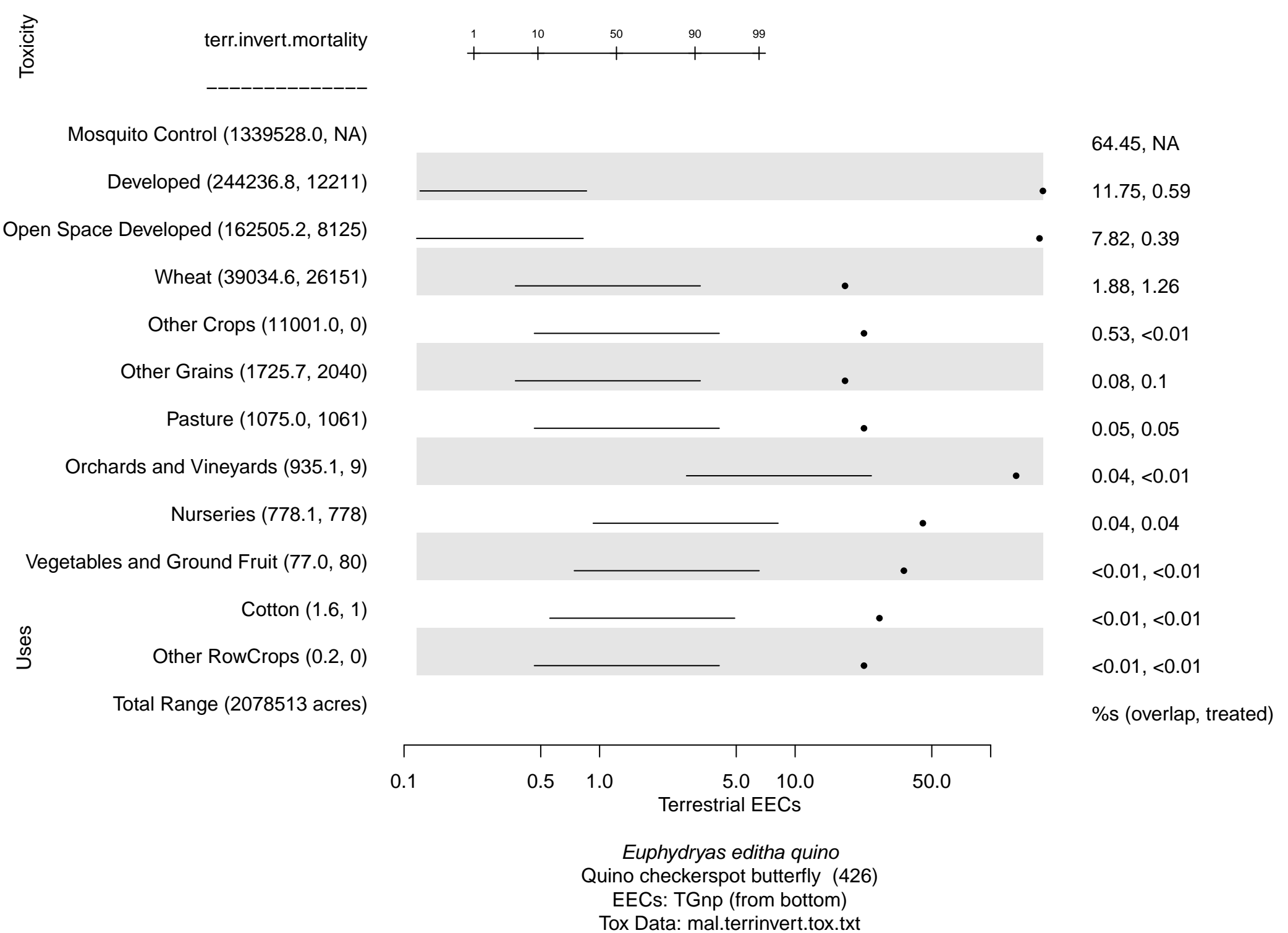
<0.01, <0.01

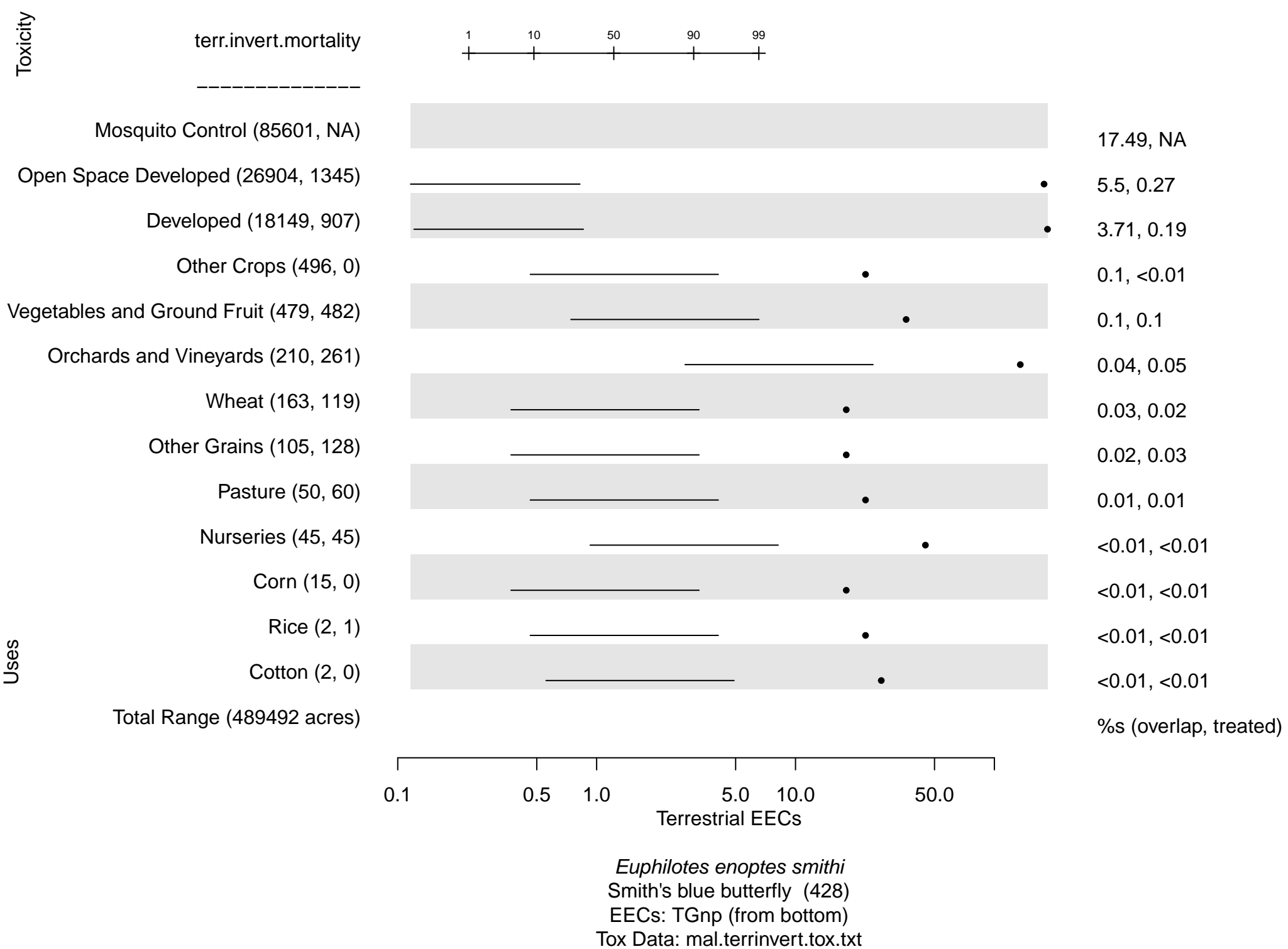
_____ •

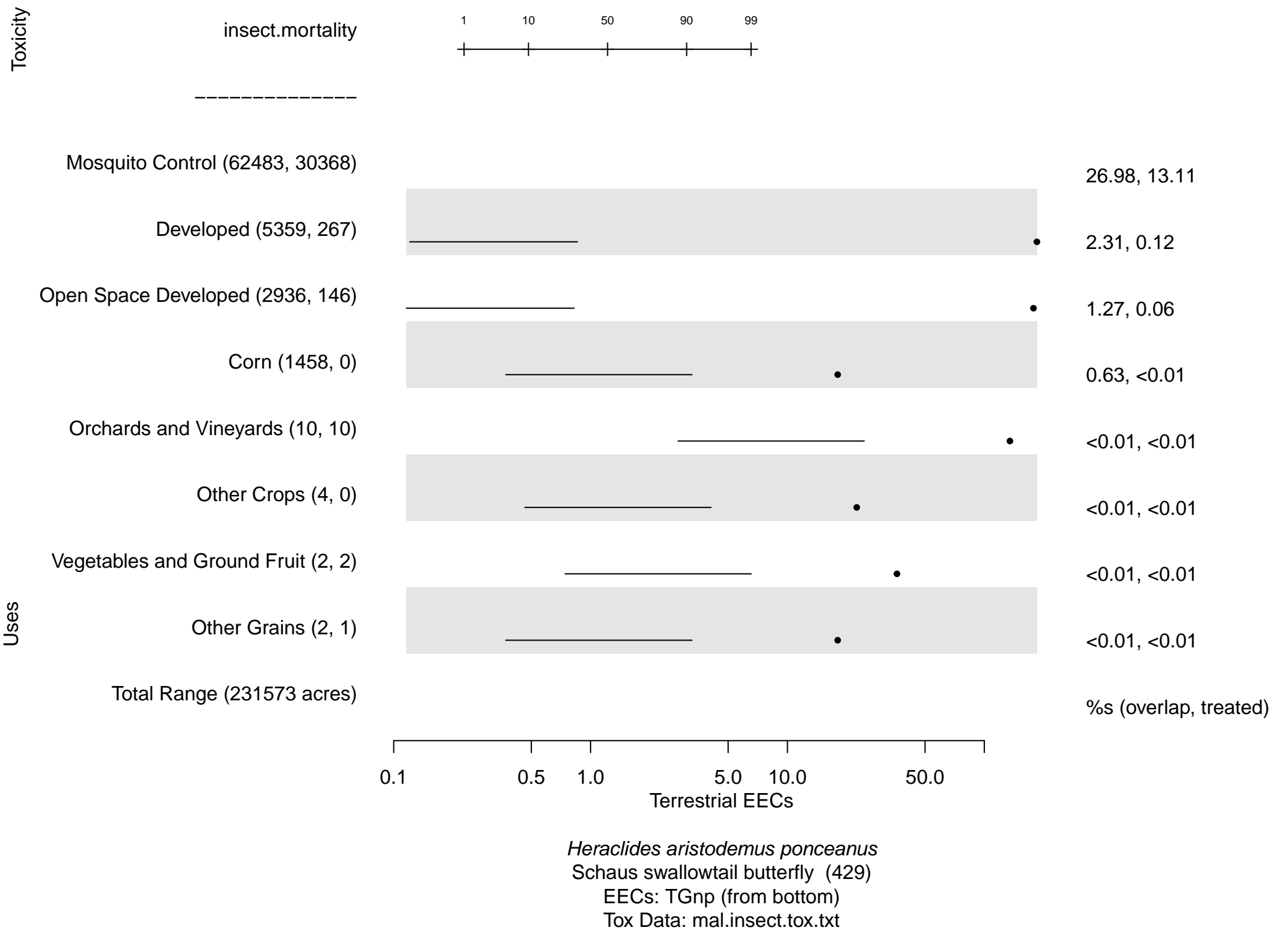
<0.01, <0.01

%s (overlap, treated)

Speyeria zerene myrtleae
Myrtle's silverspot butterfly (425)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt







0000

A horizontal number line with five tick marks. Above the tick marks are the numbers 1, 10, 50, 90, and 99.

A horizontal number line with five tick marks. Above the tick marks are the numbers 1, 10, 50, 90, and 99.

74.69, NA

28.4, 1.42

9.38, 0.47

1.64, 1.69

1.5, 1.42

0.36, <0.01

0.13, 0.13

0.12, 0.12

0.08, 0.08

0.04, 0.05

0.01, 0.03

0.01, <0.01

<0.01, 0.01

<0.01, <0.01

%s (overlap, treated)

Speyeria callippe callippe
Callippe silverspot butterfly (430)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt

A horizontal number line with five tick marks. Above the line, the numbers 1, 10, 50, 90, and 99 are written in black text, each aligned with its corresponding tick mark.

1.15, 1.16

0.97, 0.37

0.67, 0.03

0.27, 0.01

0.26, 0.32

0.16, <0.01

0.1, 0.09

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01. <0.01

<0.01. <0.01

%s (overlap, treated)

0.1 0.5 1.0 5.0 10.0 50.0

Terrestrial EECs

Speyeria zerene hippolyta
Oregon silverspot butterfly (431)

EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt

0000

A horizontal number line with five tick marks. Above the line, the numbers 1, 10, 50, 90, and 99 are written in black text, each aligned with its corresponding tick mark.

50.94, NA

16.37, 0.82

7.12, 0.36

0.05, 0.05

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

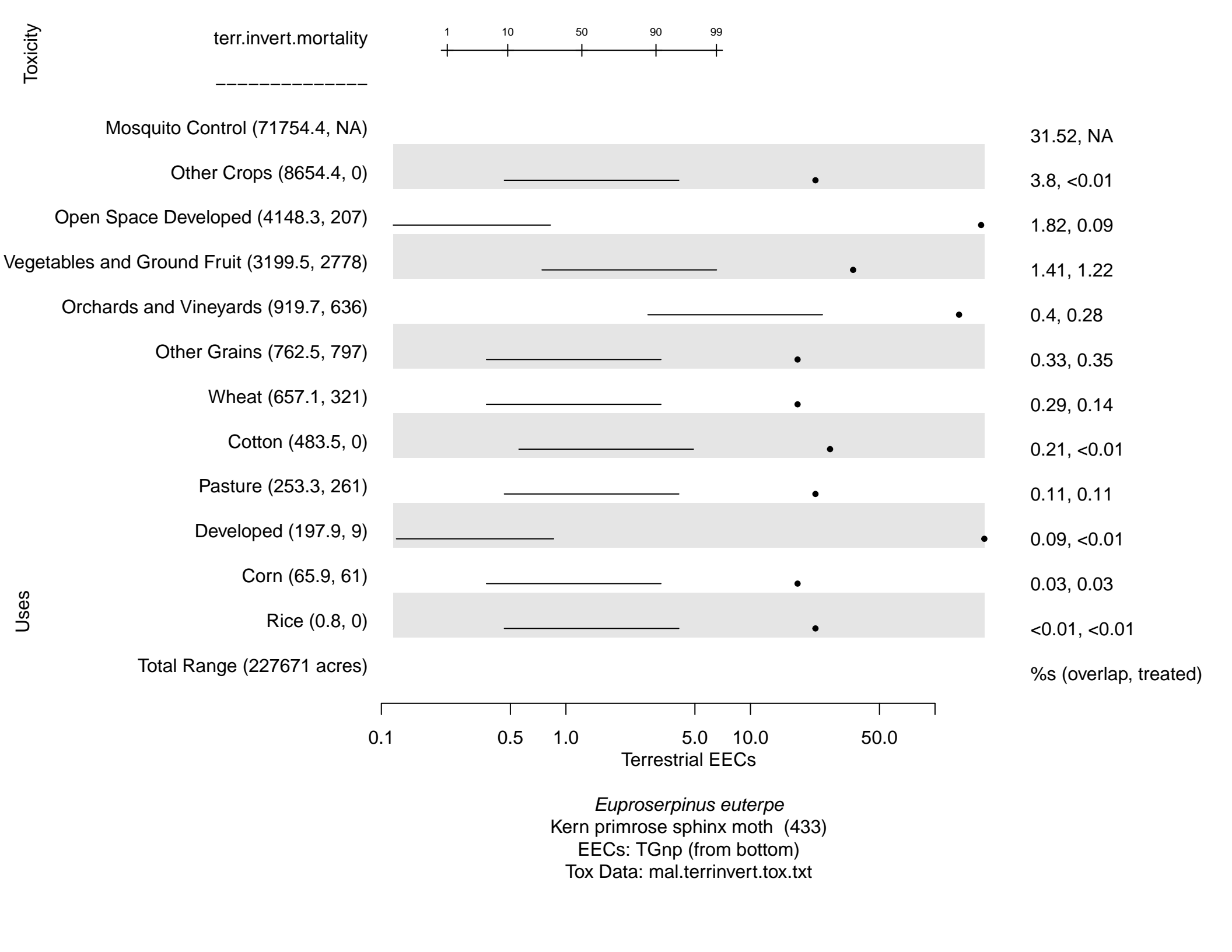
<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

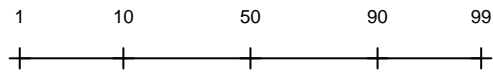
%s (overlap, treated)

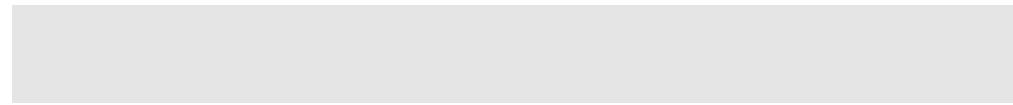
Glaucopsyche lygdamus palosverdesensis
 Palos Verdes blue butterfly (432)
 EECs: TGnp (from bottom)
 Tox Data: mal.terrinvert.tox.txt



Toxicity

terr.invert.mortality





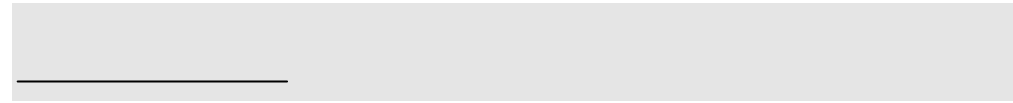
Mosquito Control (72387, NA)

14.49, NA



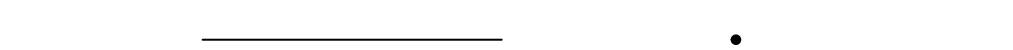
Open Space Developed (3201, 160)

0.64, 0.03



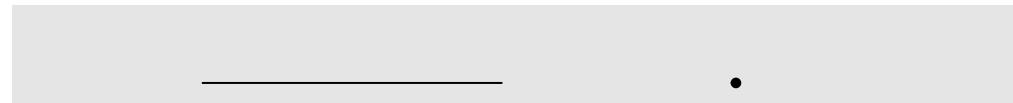
Developed (2012, 100)

0.4, 0.02



Pasture (23, 23)

<0.01, <0.01



Other Crops (6, 0)

<0.01, <0.01



Other Grains (3, 2)

<0.01, <0.01



Nurseries (2, 2)

<0.01, <0.01



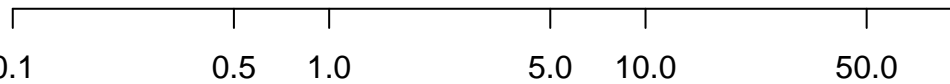
Wheat (2, 2)

<0.01, <0.01



Corn (2, 0)

<0.01, <0.01

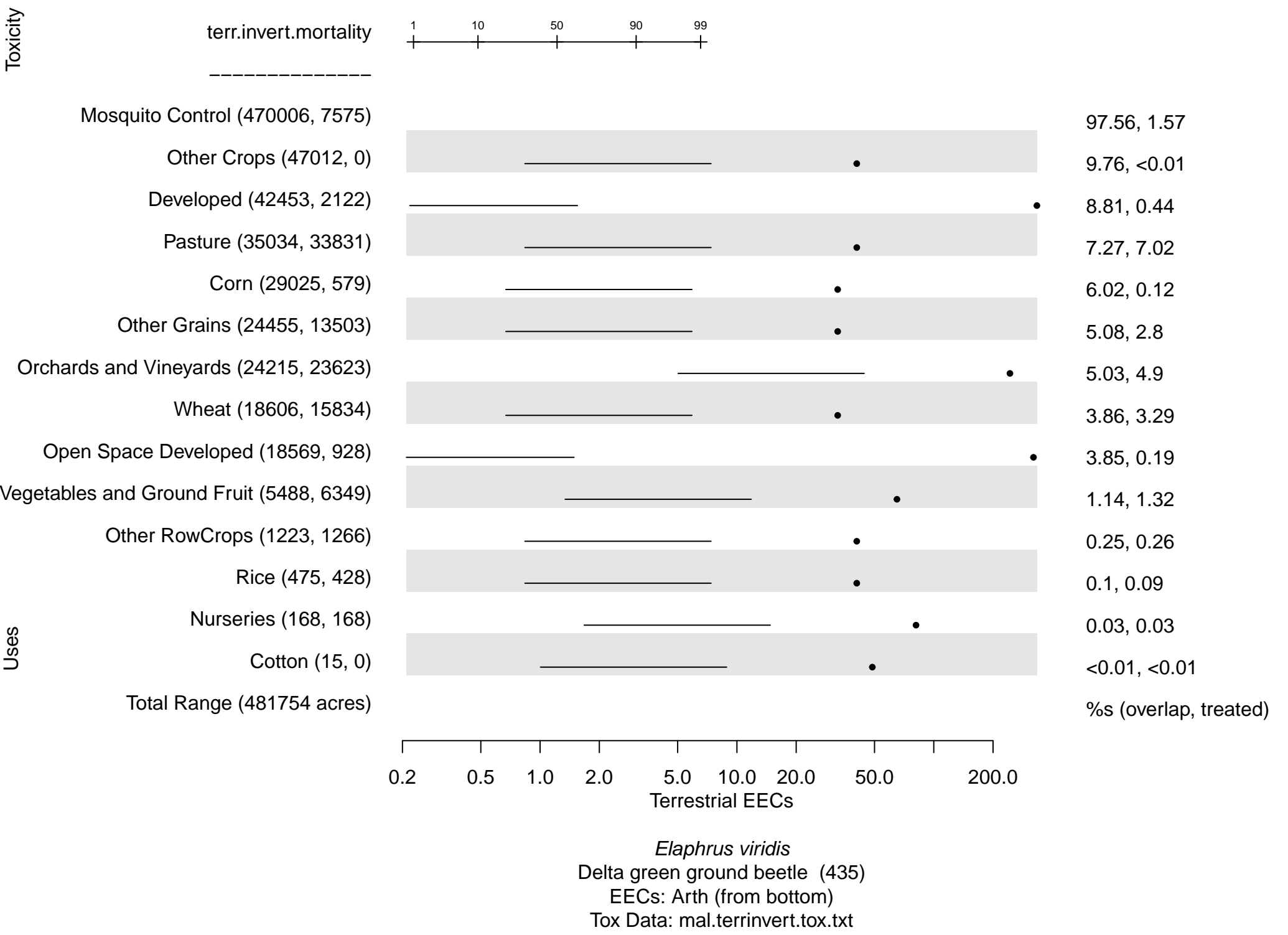


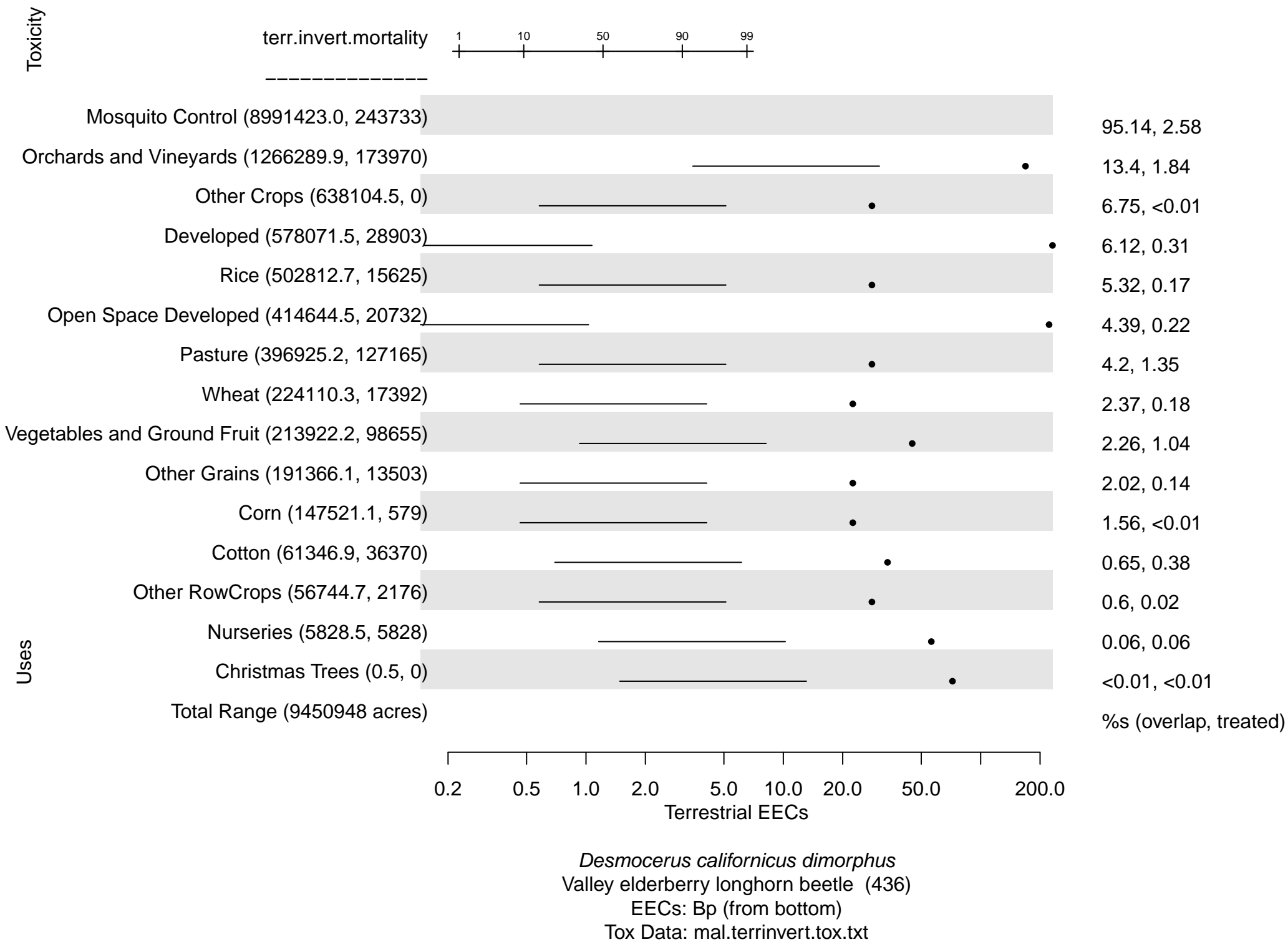
Terrestrial EECs

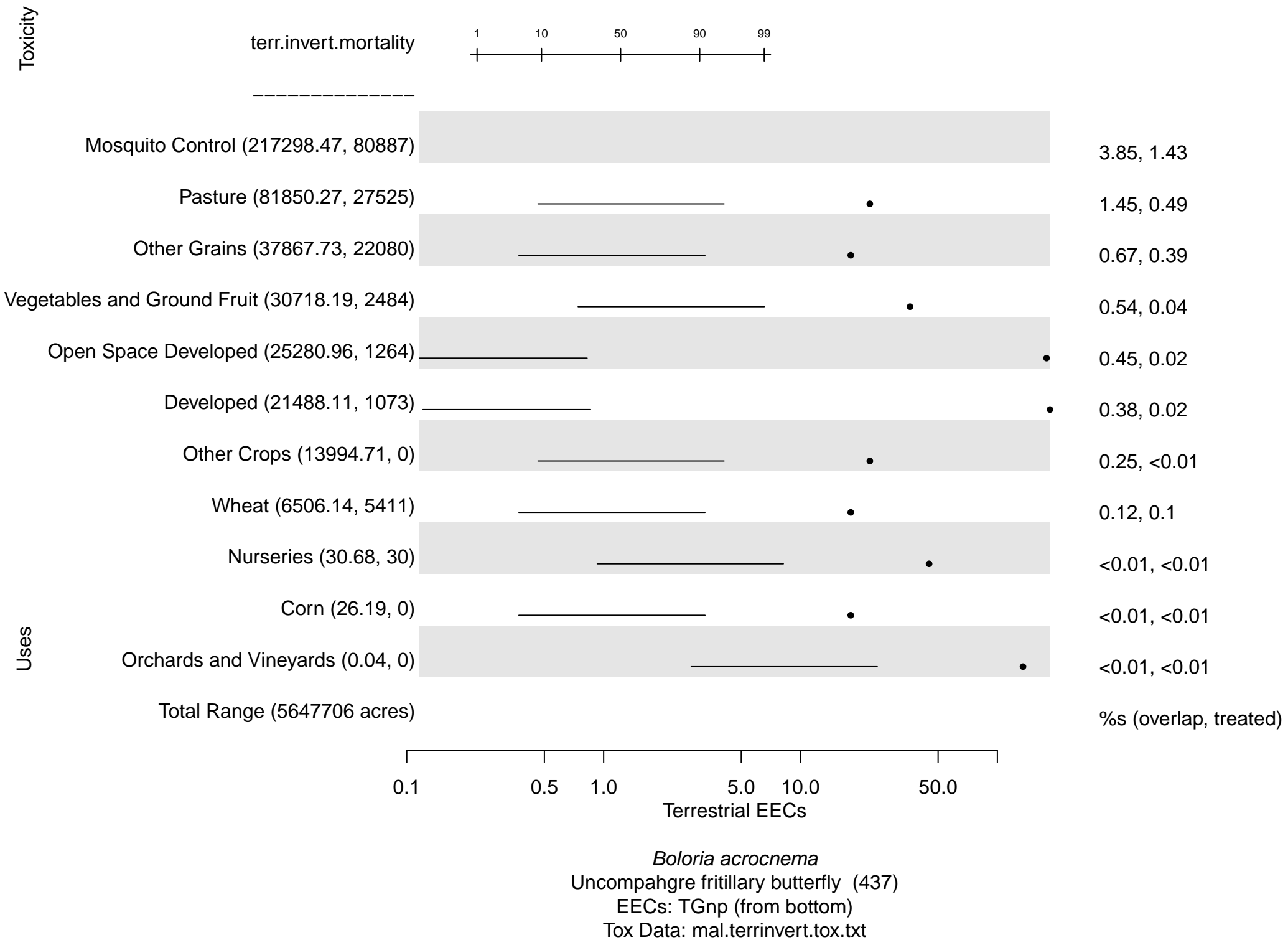
%s (overlap, treated)

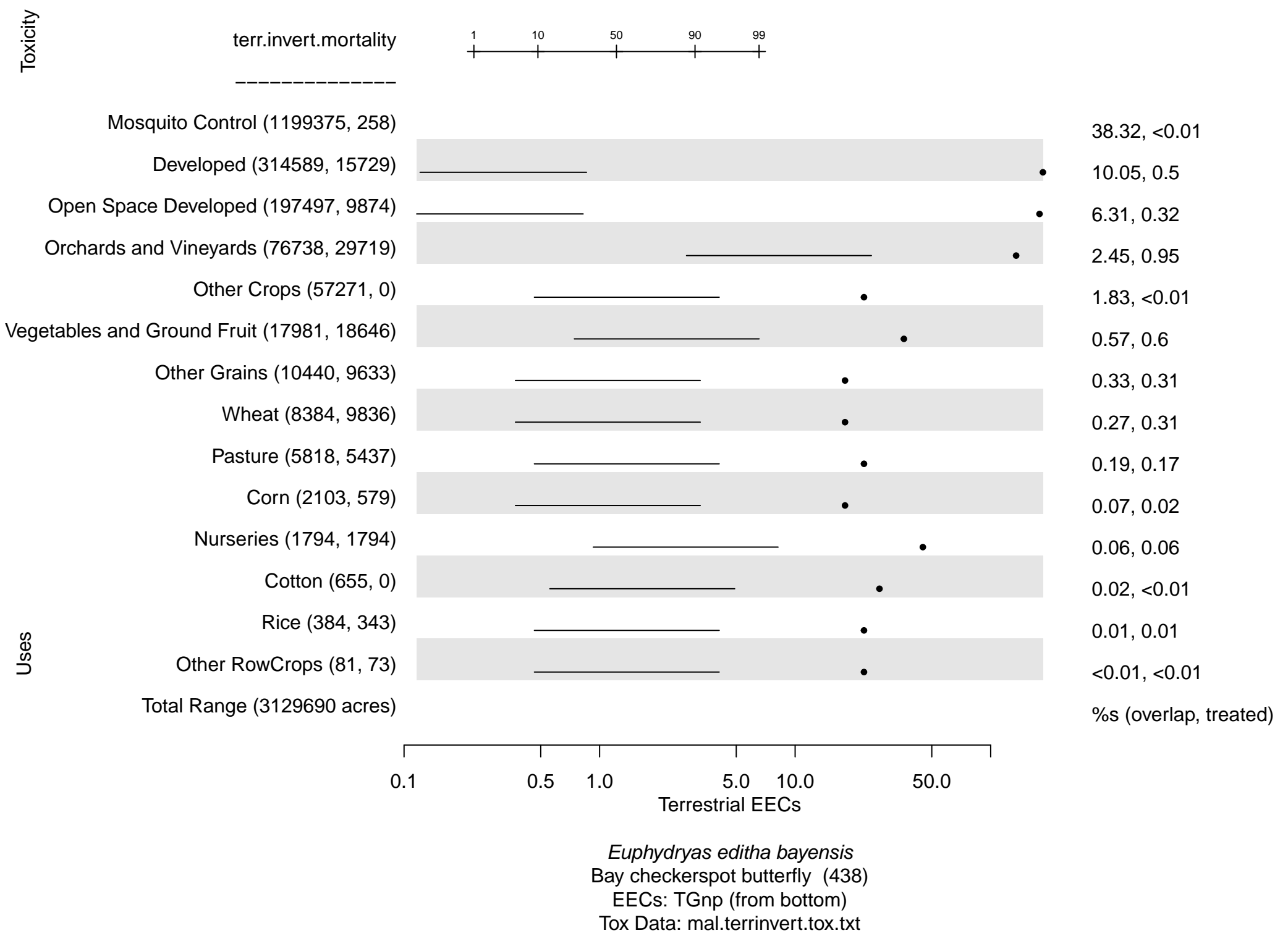
Hesperia leonardus montana
Pawnee montane skipper (434)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt

Uses



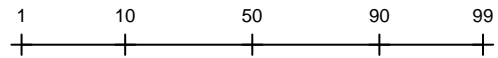


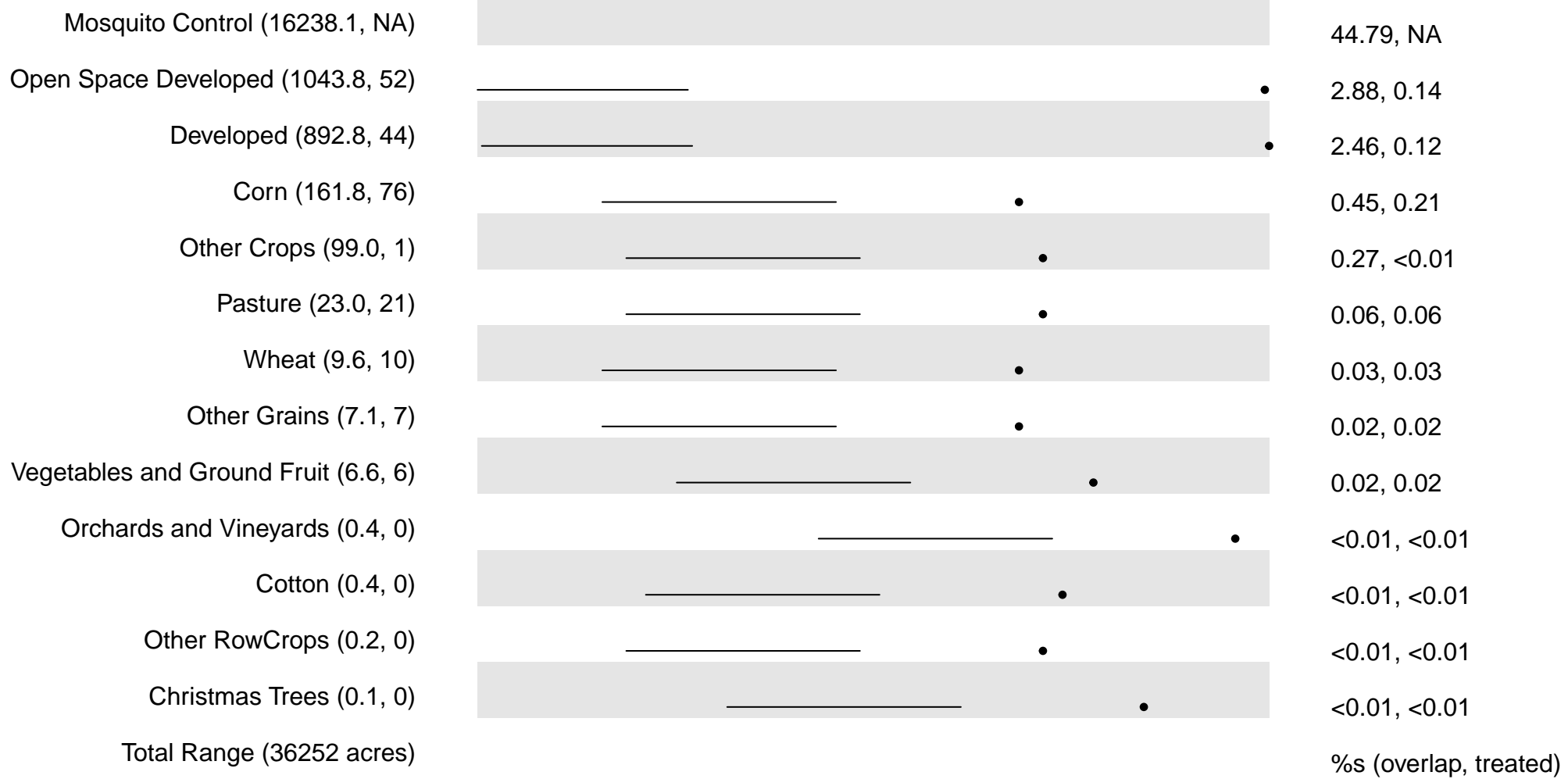




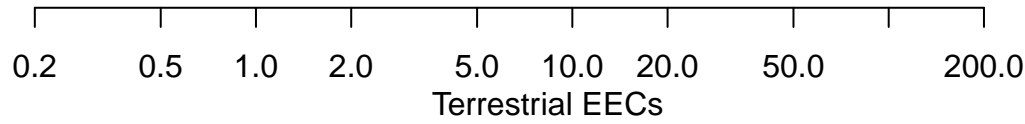
Toxicity

terr.invert.mortality





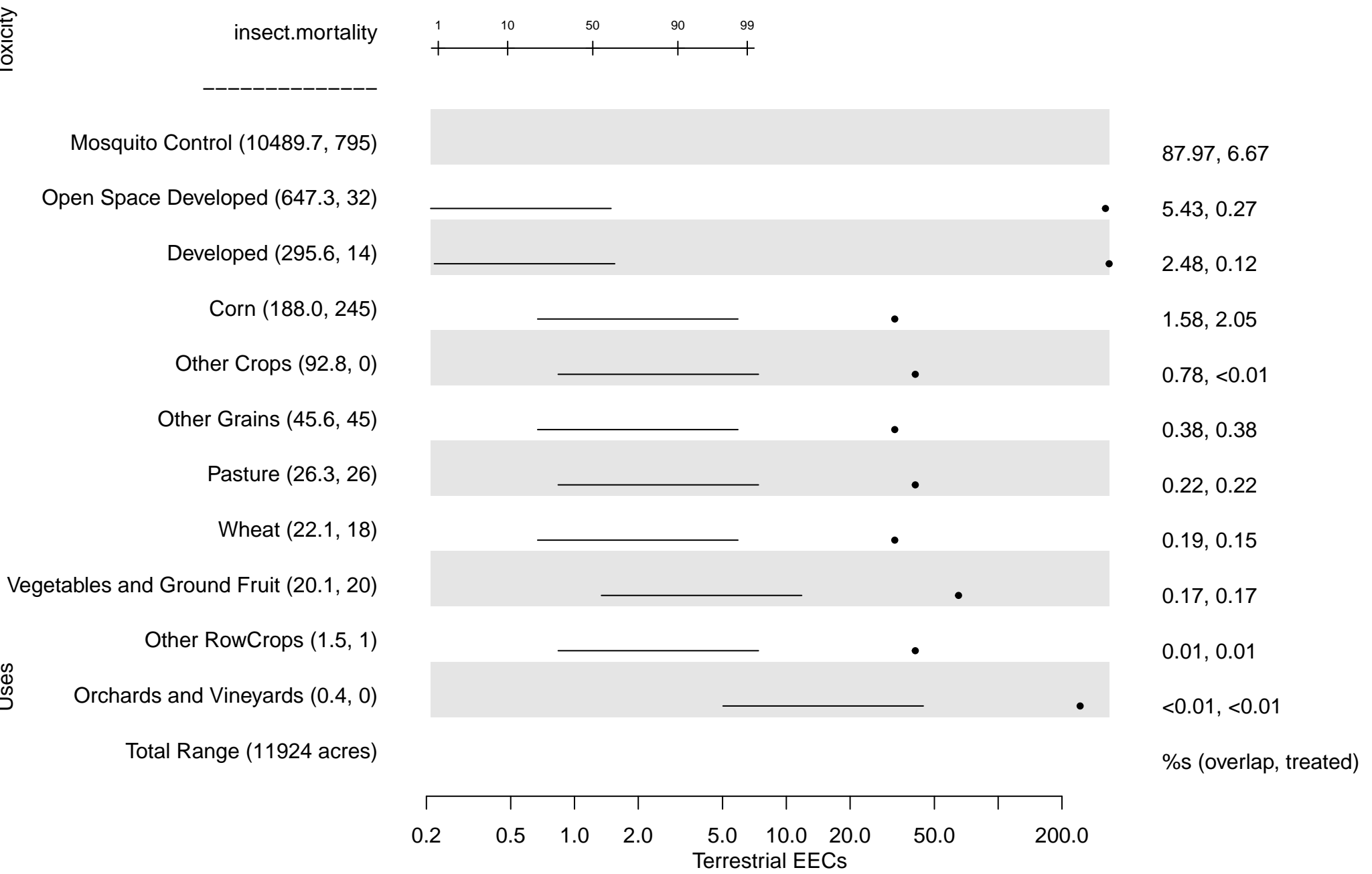
Uses



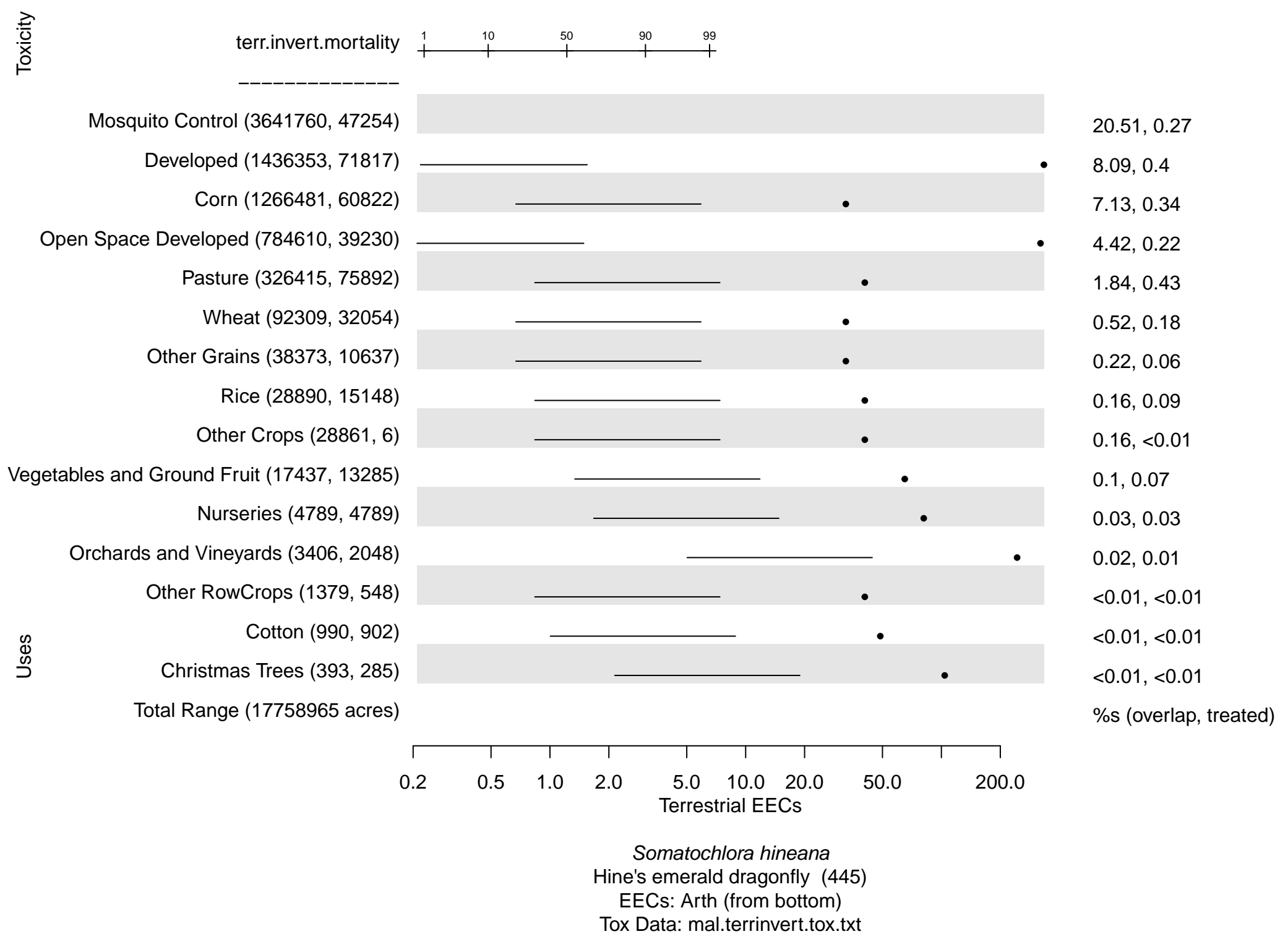
Cicindela dorsalis dorsalis
Northeastern beach tiger beetle (442)
EECs: Arth (from bottom)
Tox Data: mal.terrinvert.tox.txt

Toxicity

Uses

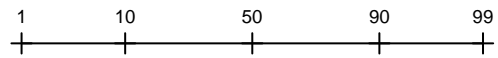


Cicindela puritana
Puritan tiger beetle (443)
EECs: Arth (from bottom)
Tox Data: mal.insect.tox.txt

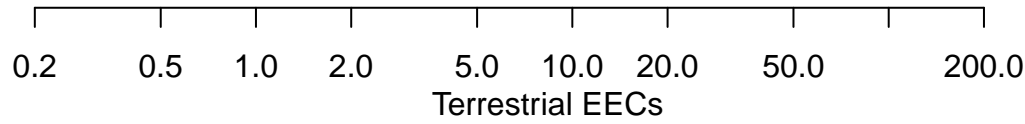
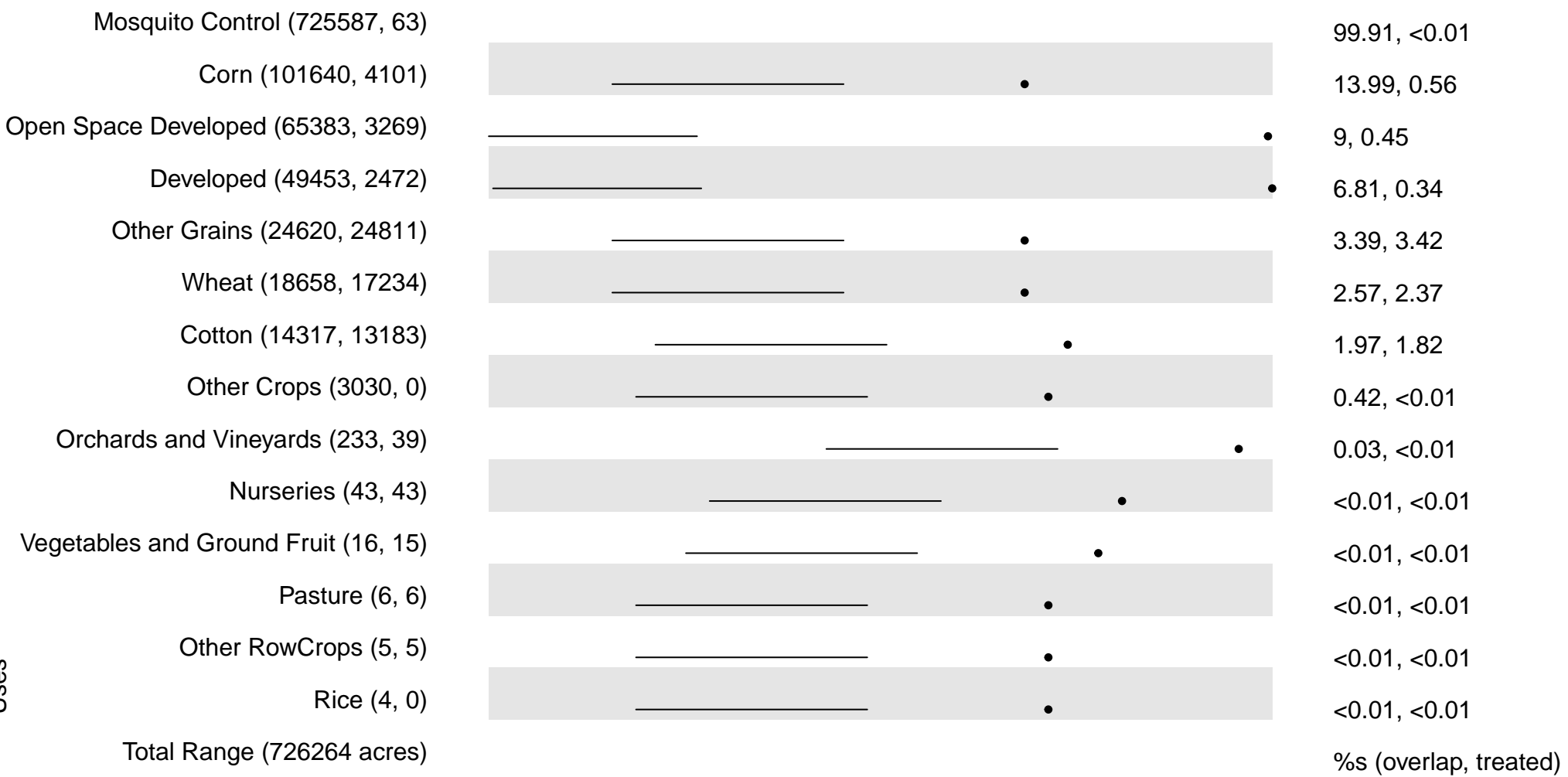


Toxicity

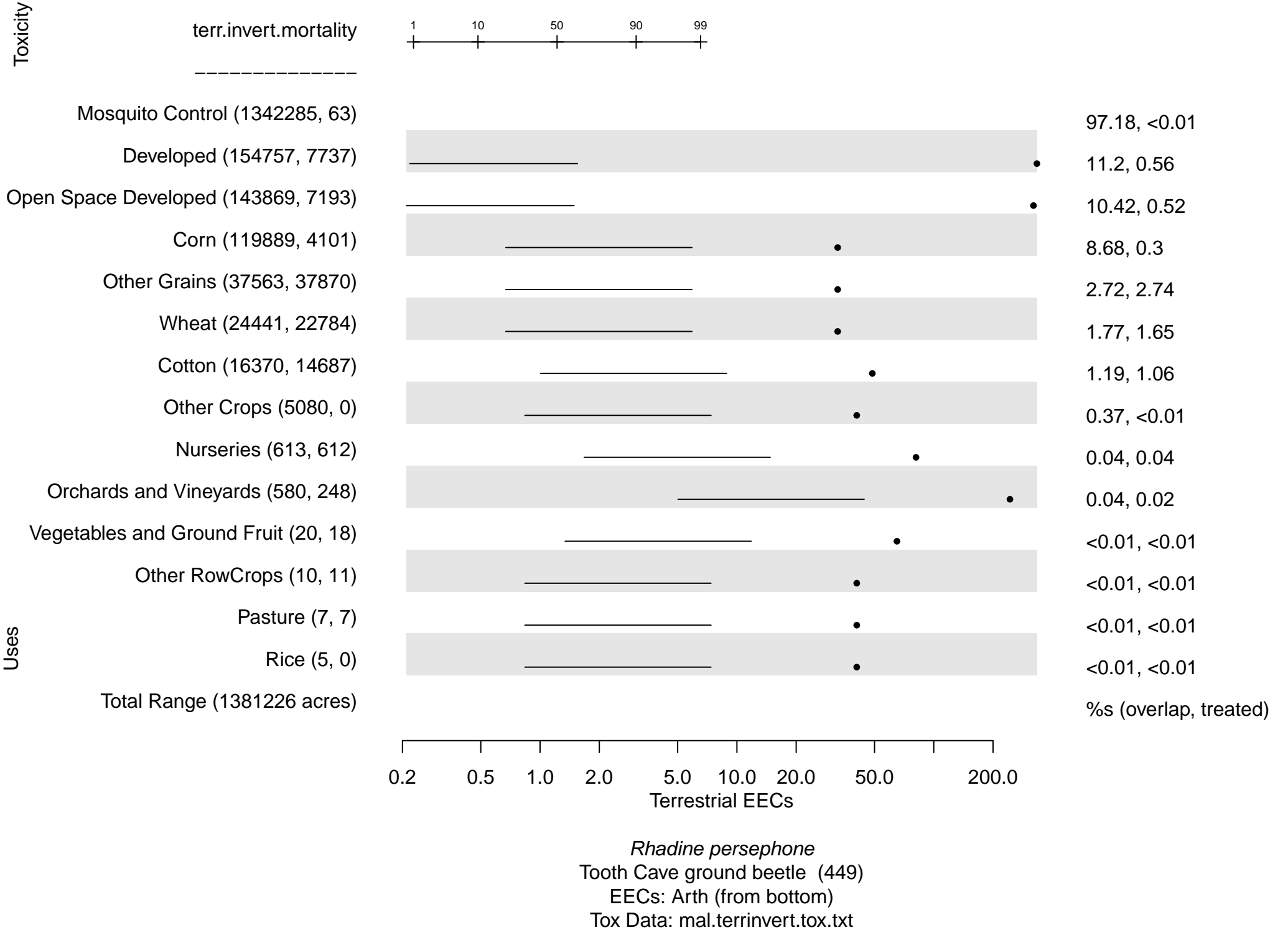
terr.invert.mortality

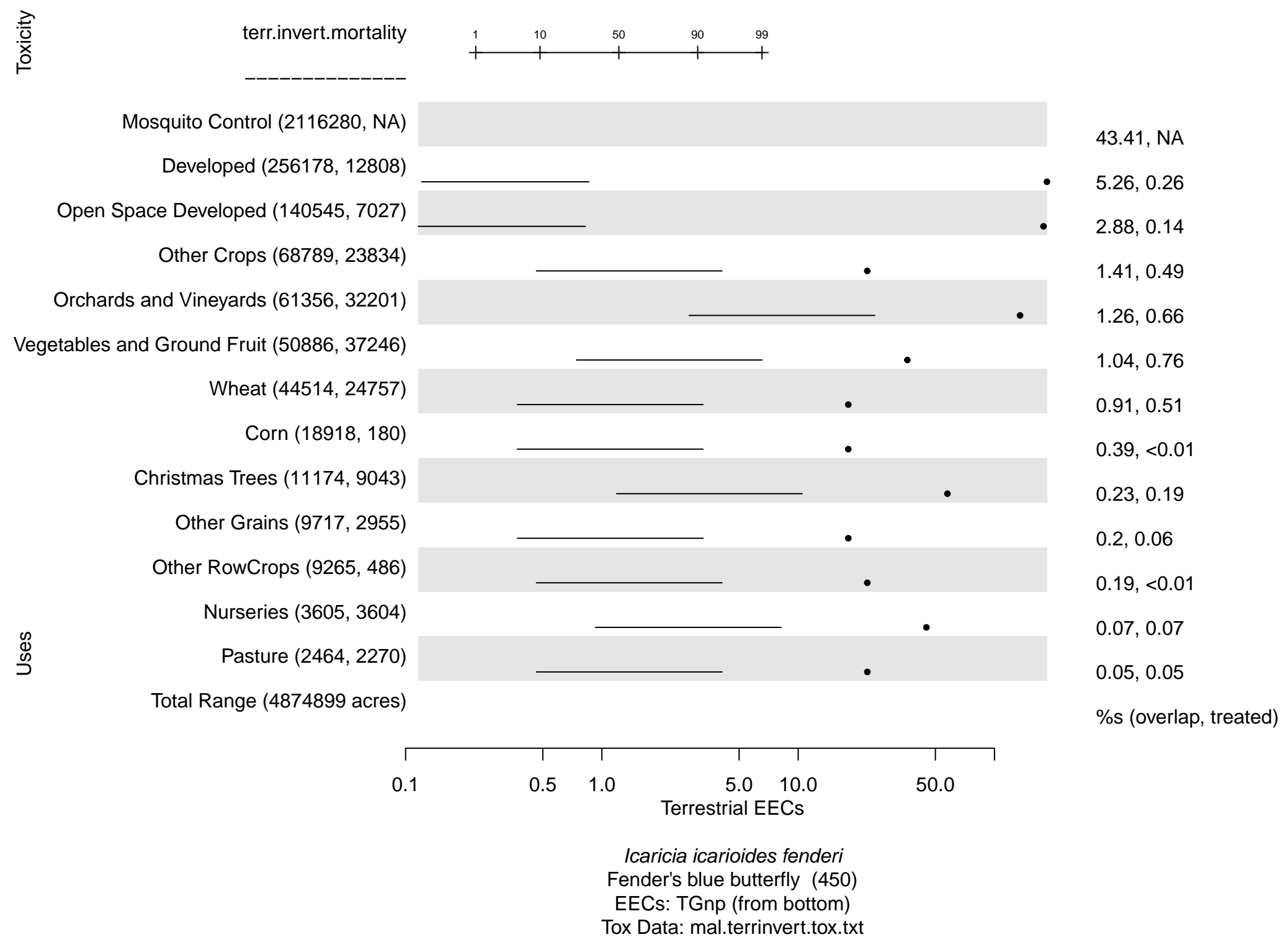


Uses



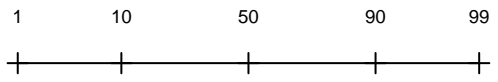
Batrisodes texanus
Coffin Cave mold beetle (447)
EECs: Arth (from bottom)
Tox Data: mal.terrinvert.tox.txt





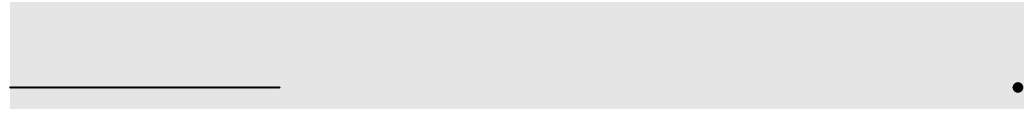
Toxicity

terr.invert.mortality



Mosquito Control (14450.6, NA)

16.07, NA



Open Space Developed (298.5, 14)

0.33, 0.02

Wheat (5.4, 0)

<0.01, <0.01

Developed (4.7, 0)

<0.01, <0.01

Orchards and Vineyards (1.2, 0)

<0.01, <0.01

Pasture (0.8, 0)

<0.01, <0.01

Other Crops (0.4, 0)

<0.01, <0.01

Other Grains (0.2, 0)

<0.01, <0.01

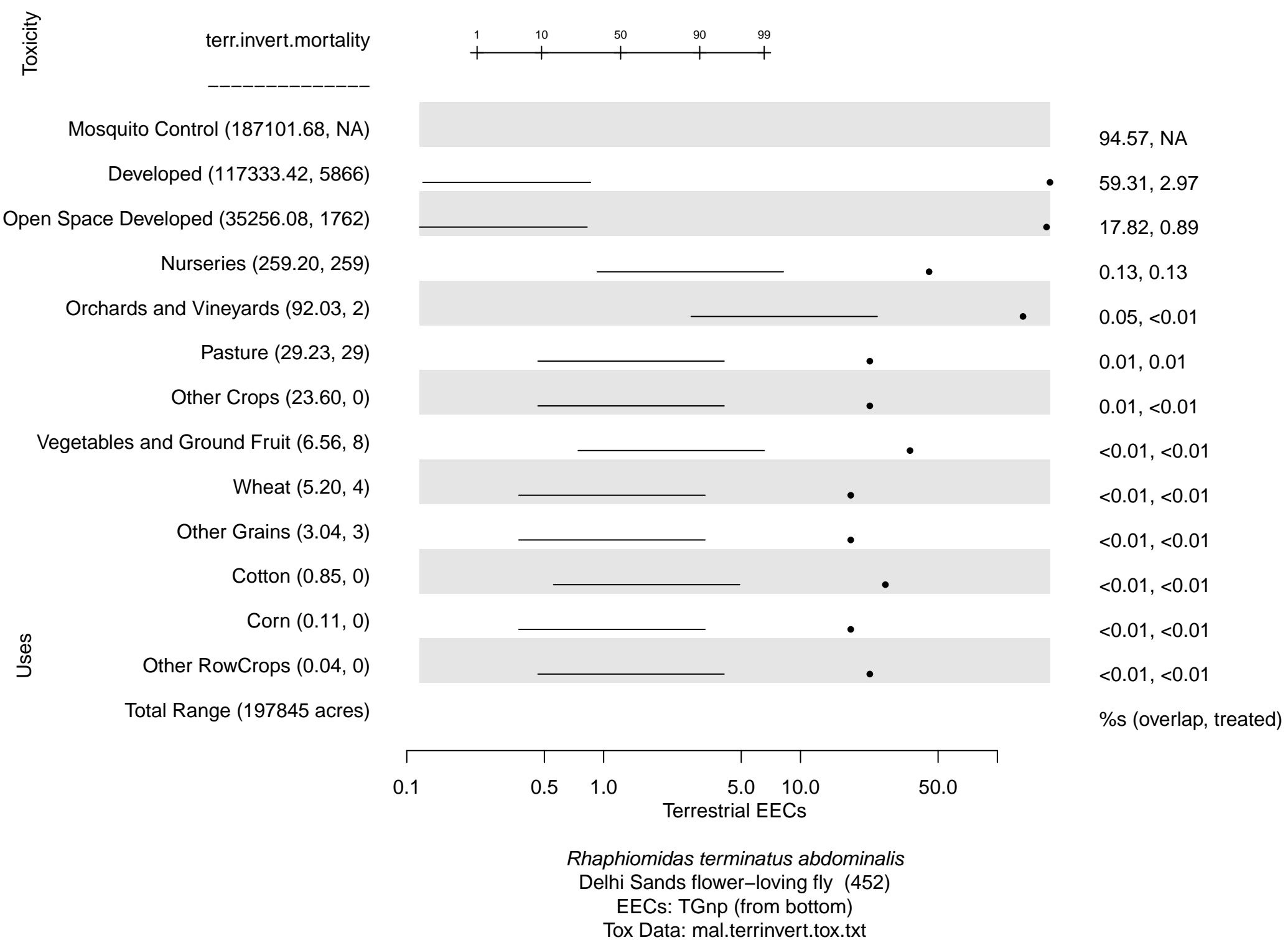
Total Range (89950 acres)

%s (overlap, treated)

Uses



Pyrgus ruralis lagunae
Laguna Mountains skipper (451)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt



A horizontal number line with five tick marks. Above the tick marks are the numbers 1, 10, 50, 90, and 99.

101.86, NA

18.67, 0.93

5.58, 0.28

0.02, 0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

<0.01, <0.01

%s (overlap, treated)

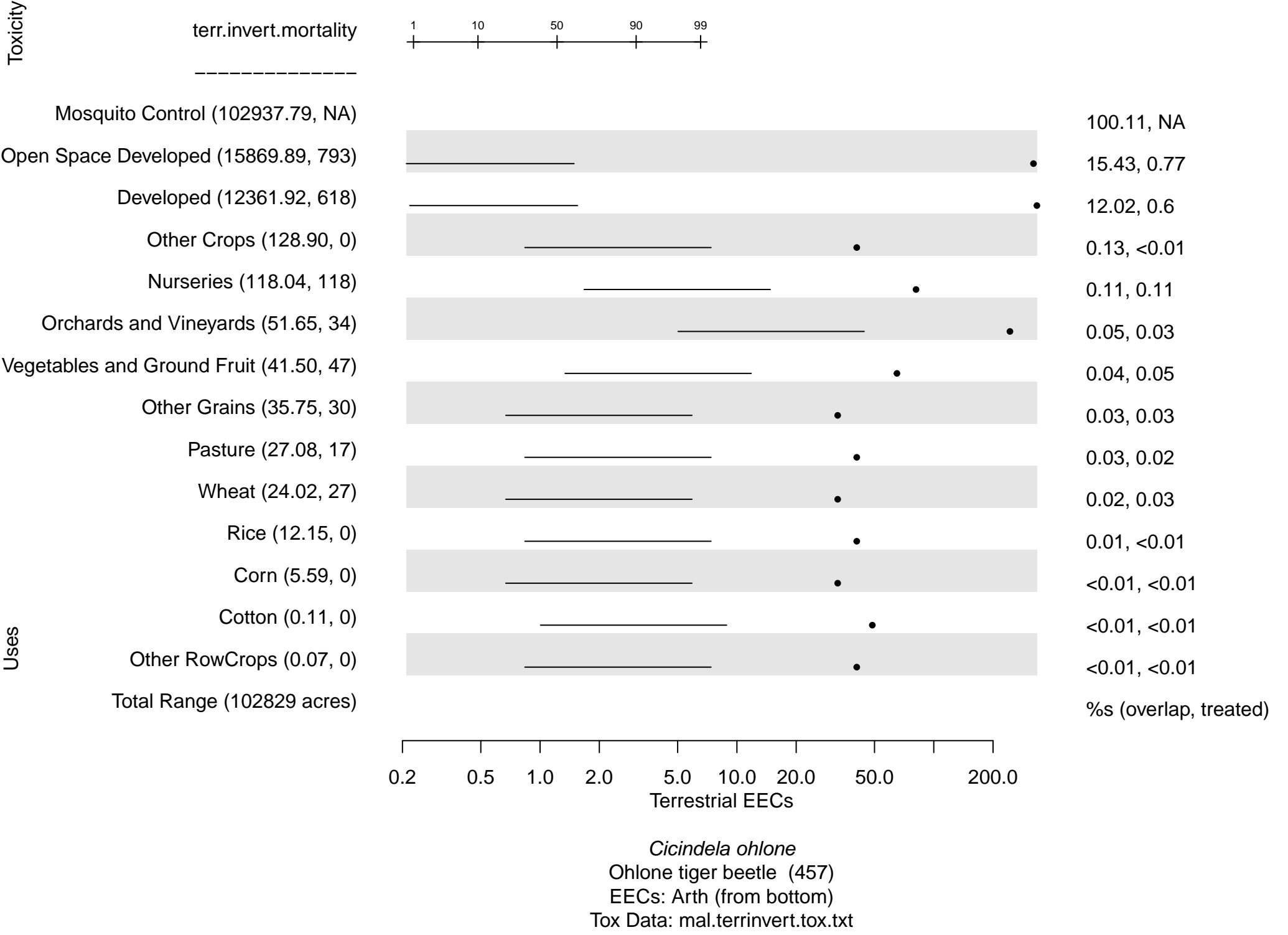
1e-02 1e-01 1e+00 1e+01 1e+02

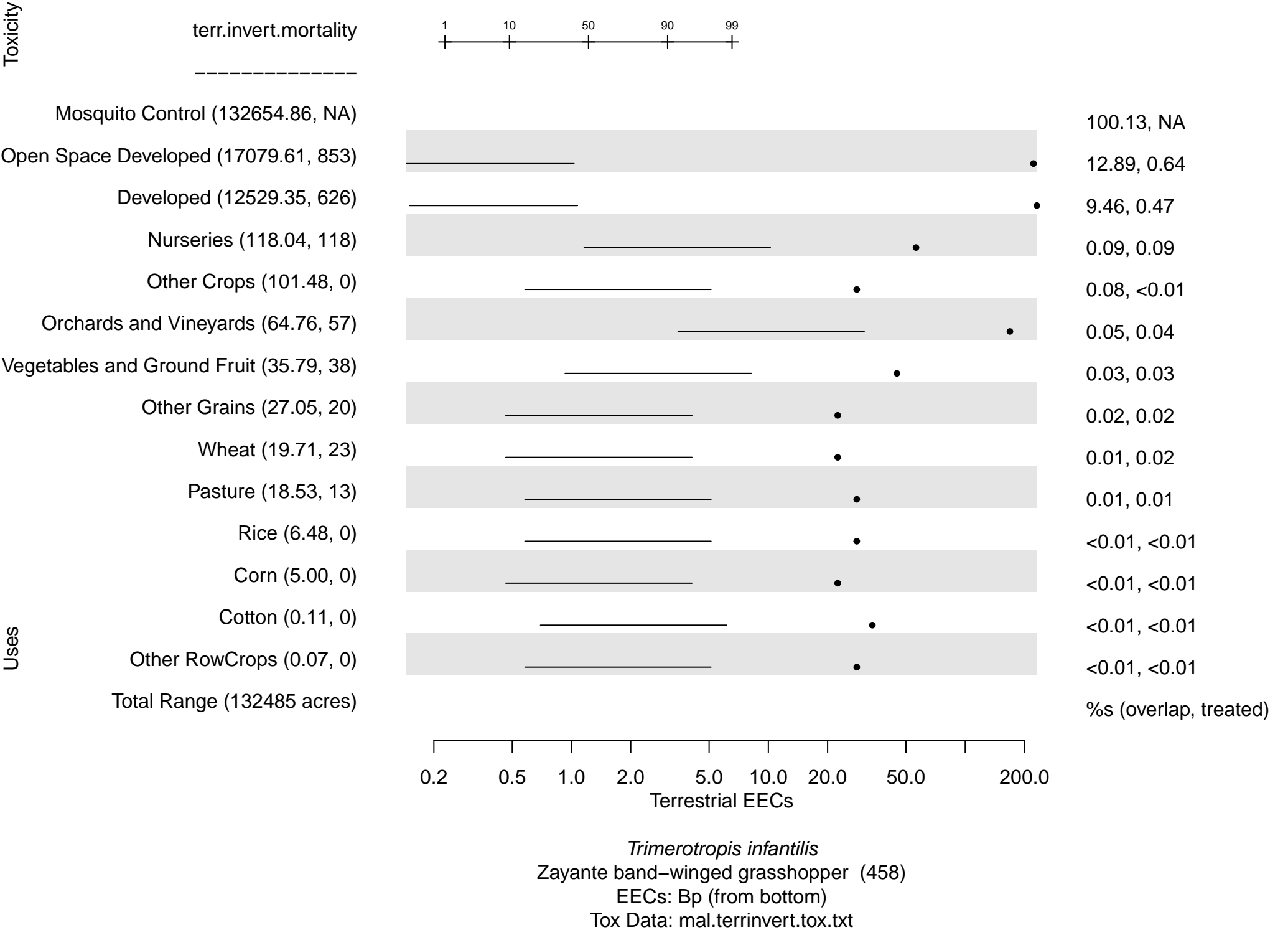
Terrestrial EECs

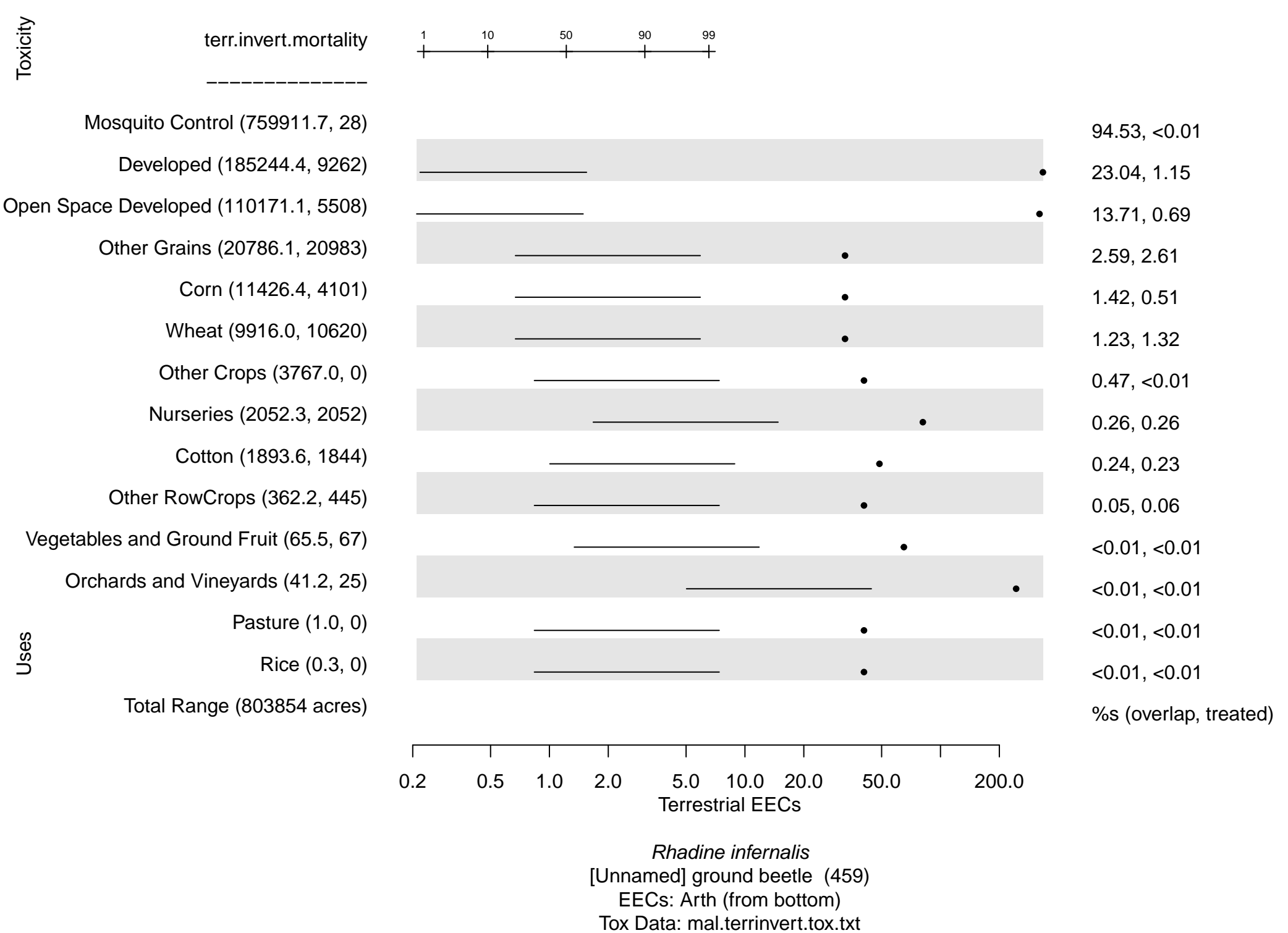
Polyphylla barbata
Mount Hermon June beetle (456)
EECs: S (from bottom)
Tox Data: mal.terrinvert.tox.txt

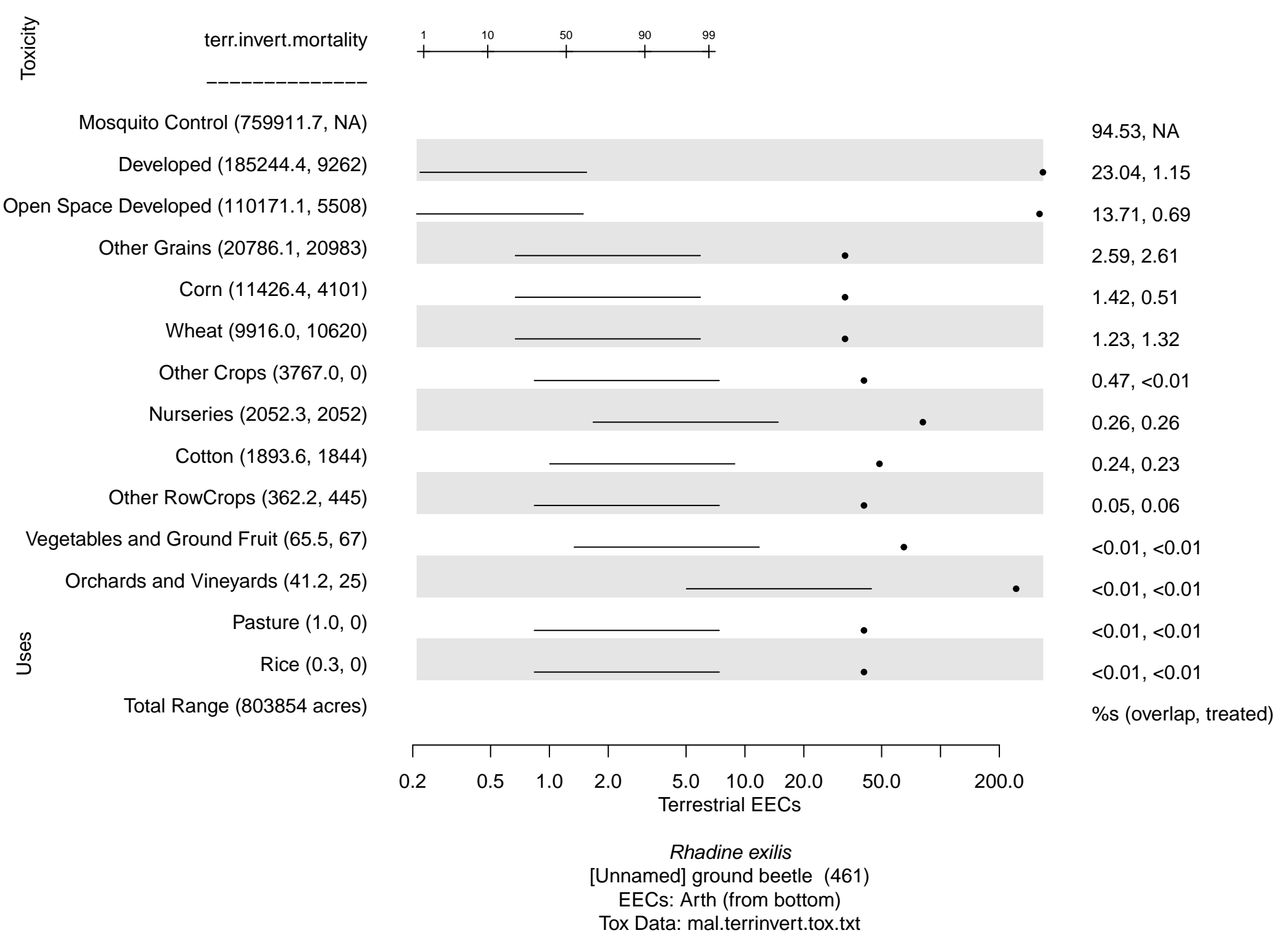
Toxicity

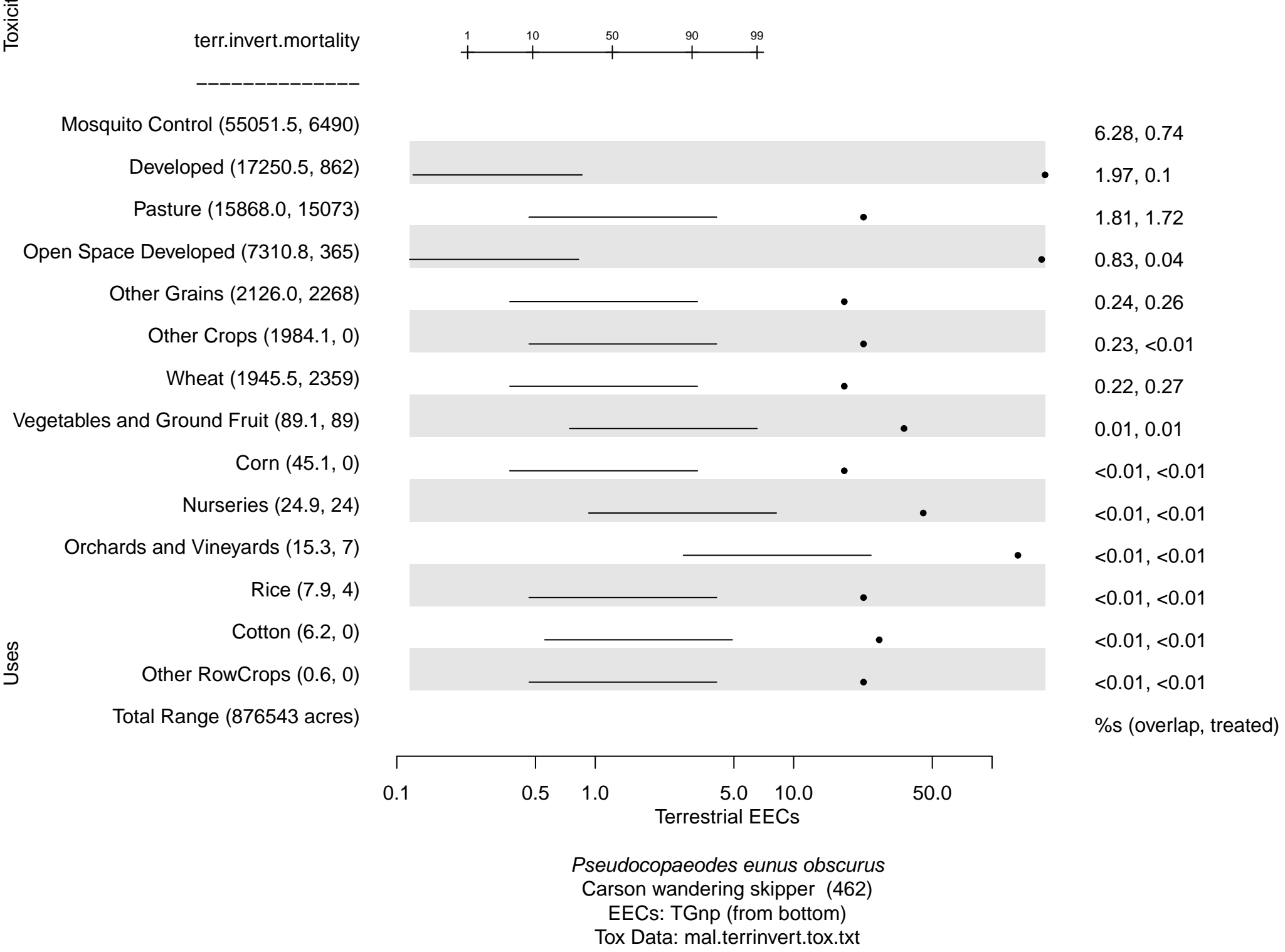
Uses











terr.invert.mortality



67.51, NA

15.12, 0.76

9.26, 0.46

0.06, 0.06

<0.01, <0.01

<0.01, <0.01

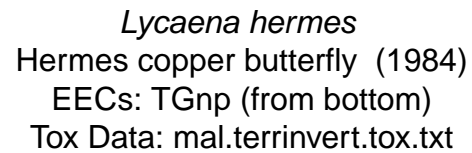
<0.01, <0.01

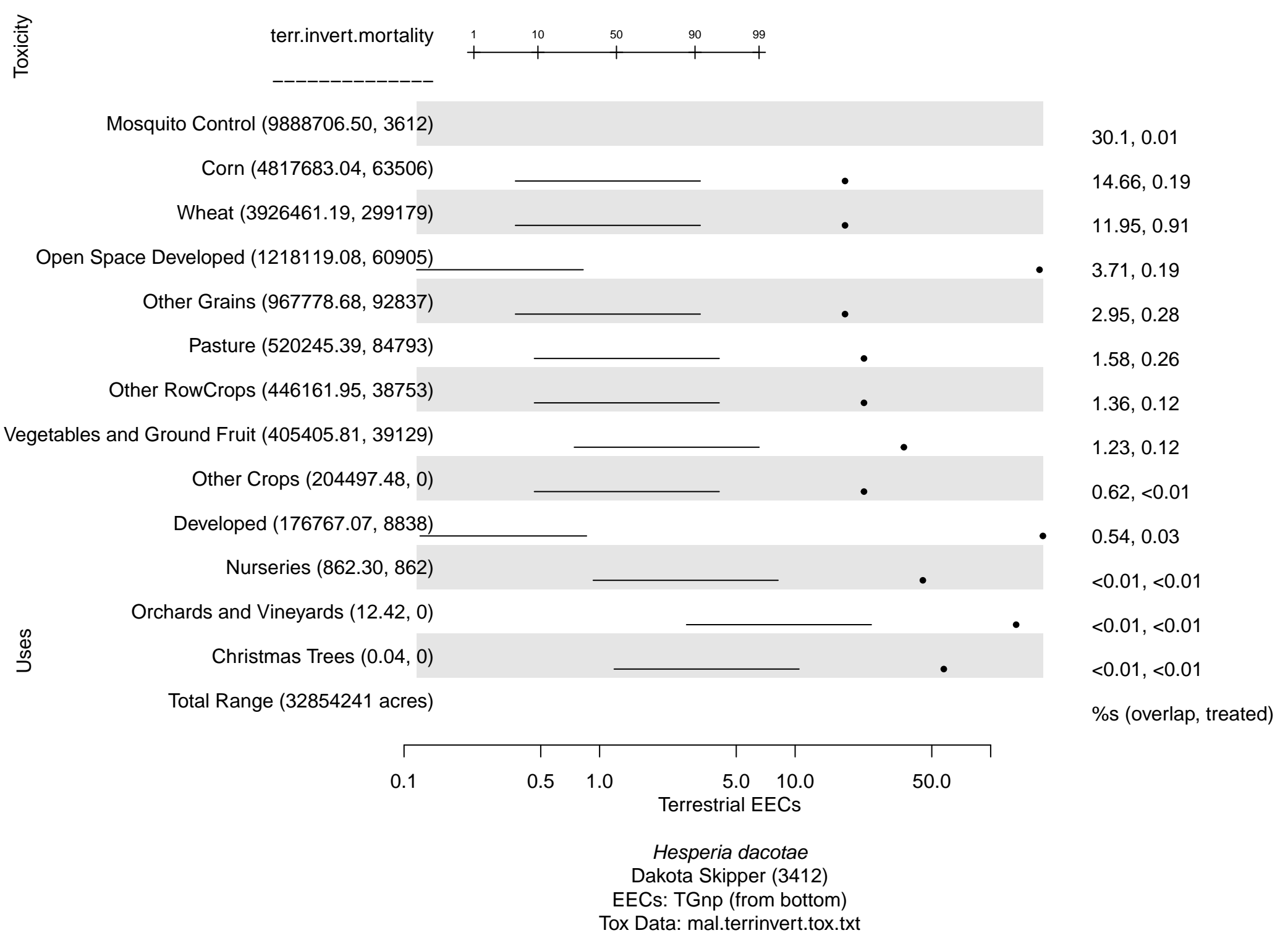
<0.01, <0.01

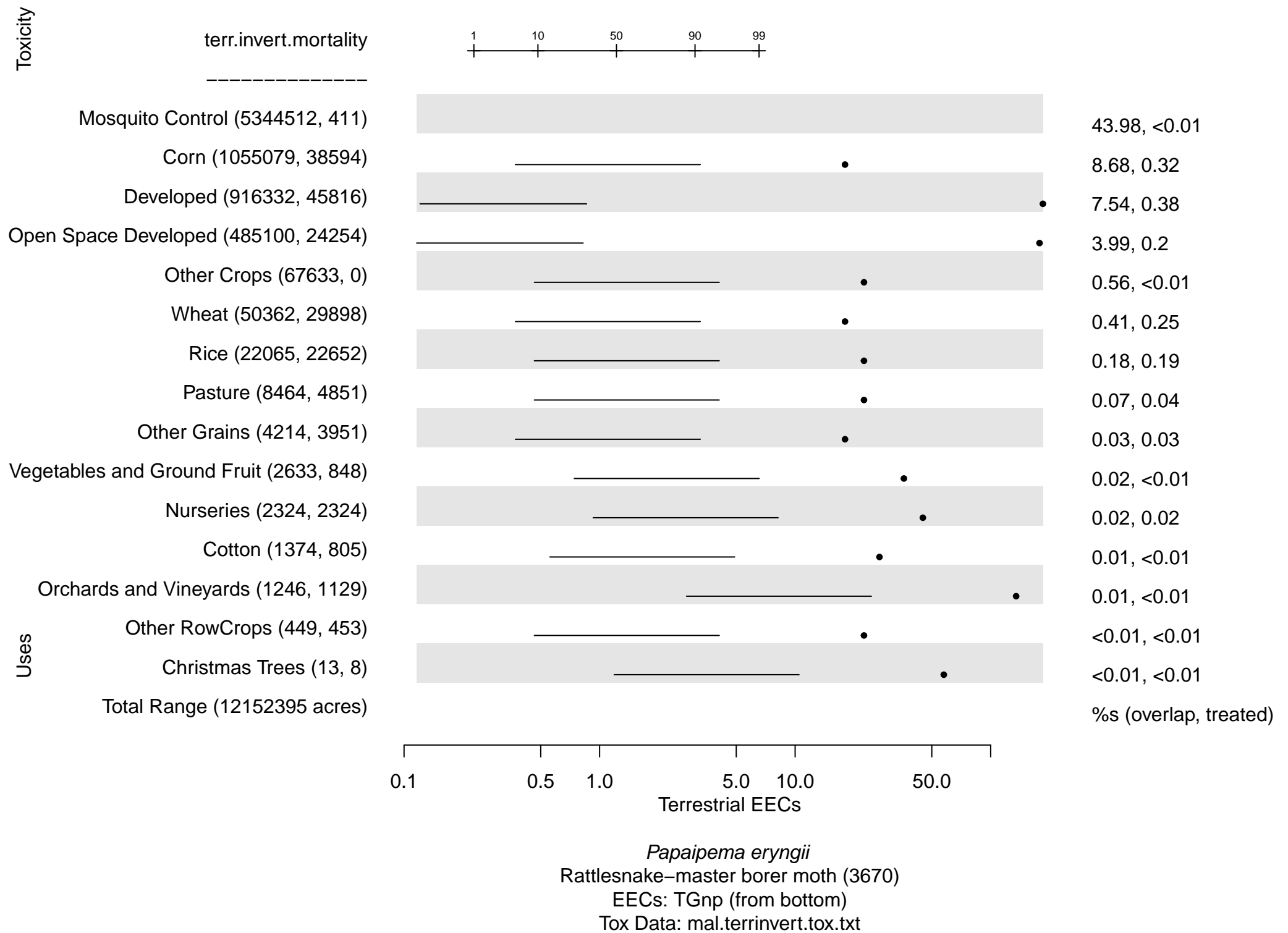
<0.01, <0.01

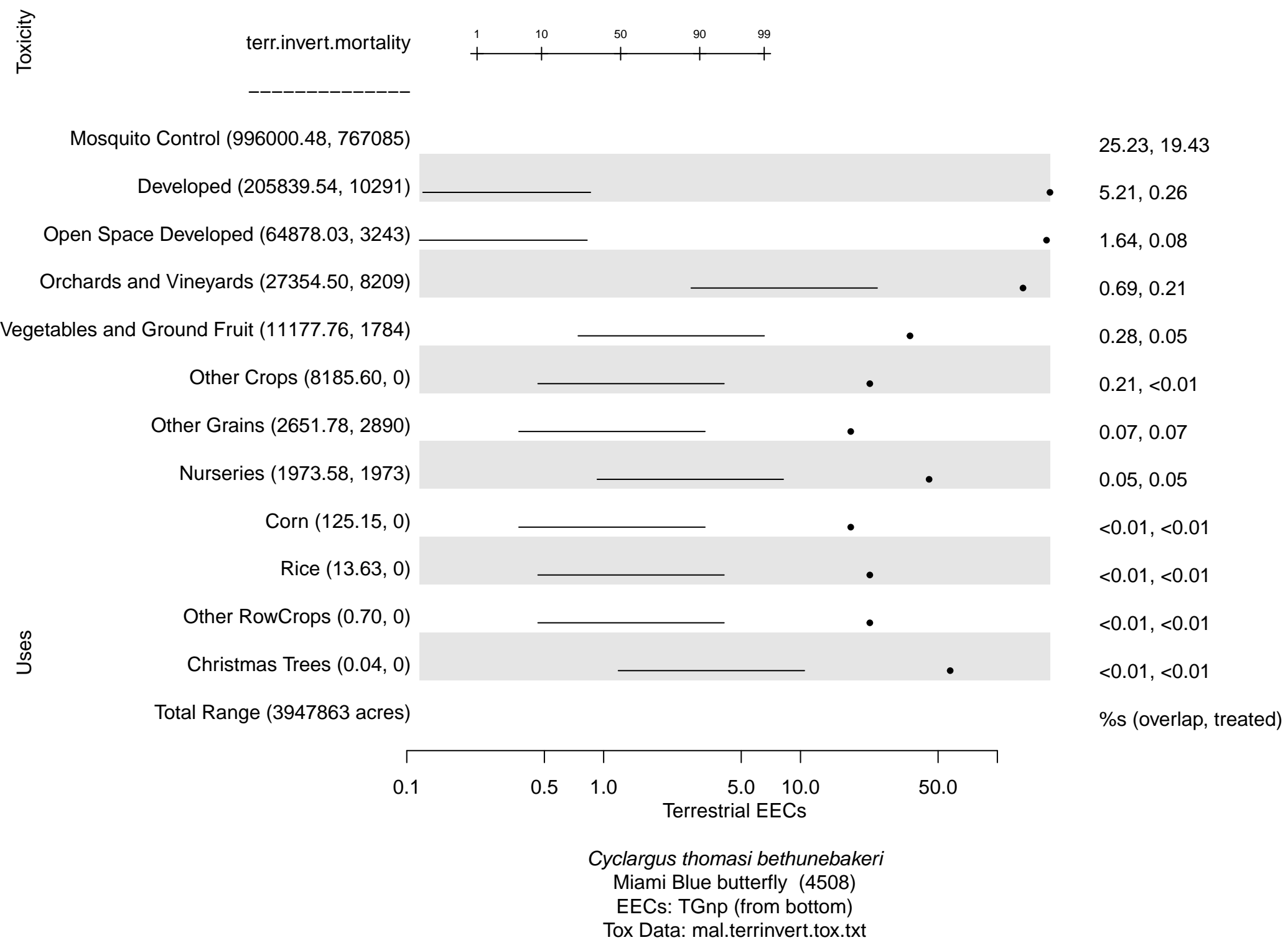
<0.01, <0.01

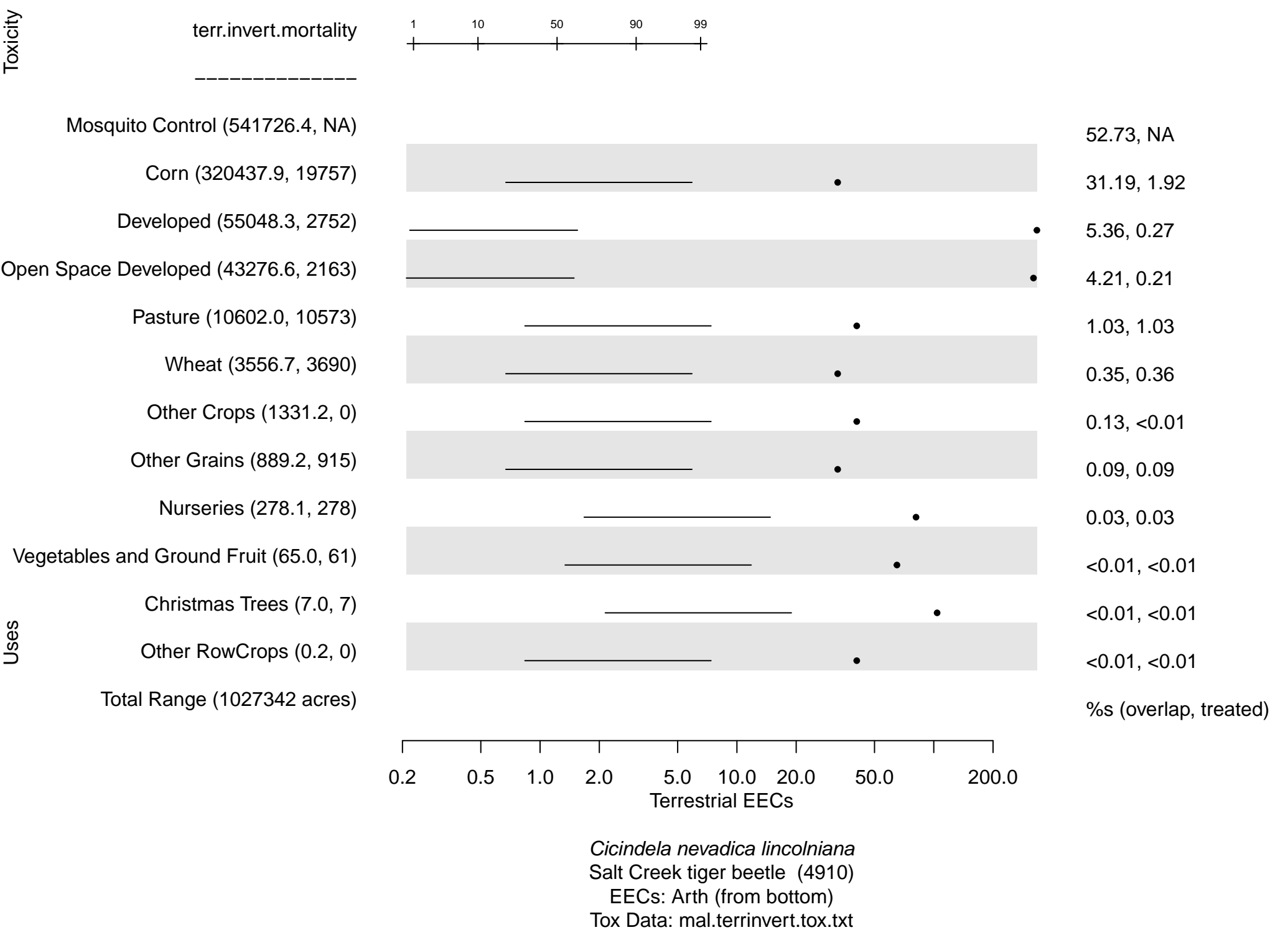
%s (overlap, treated)







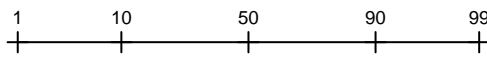


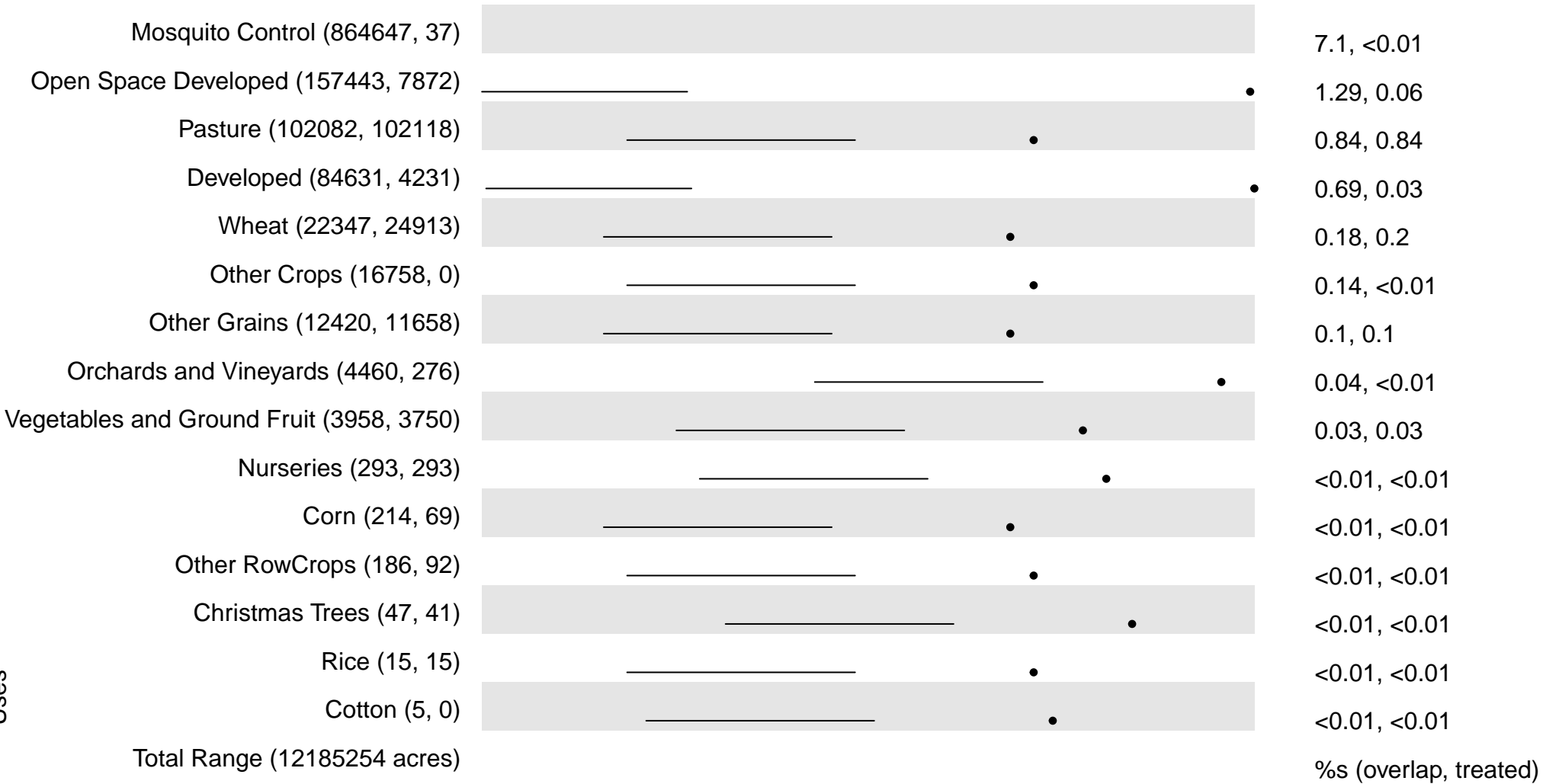


Toxicity

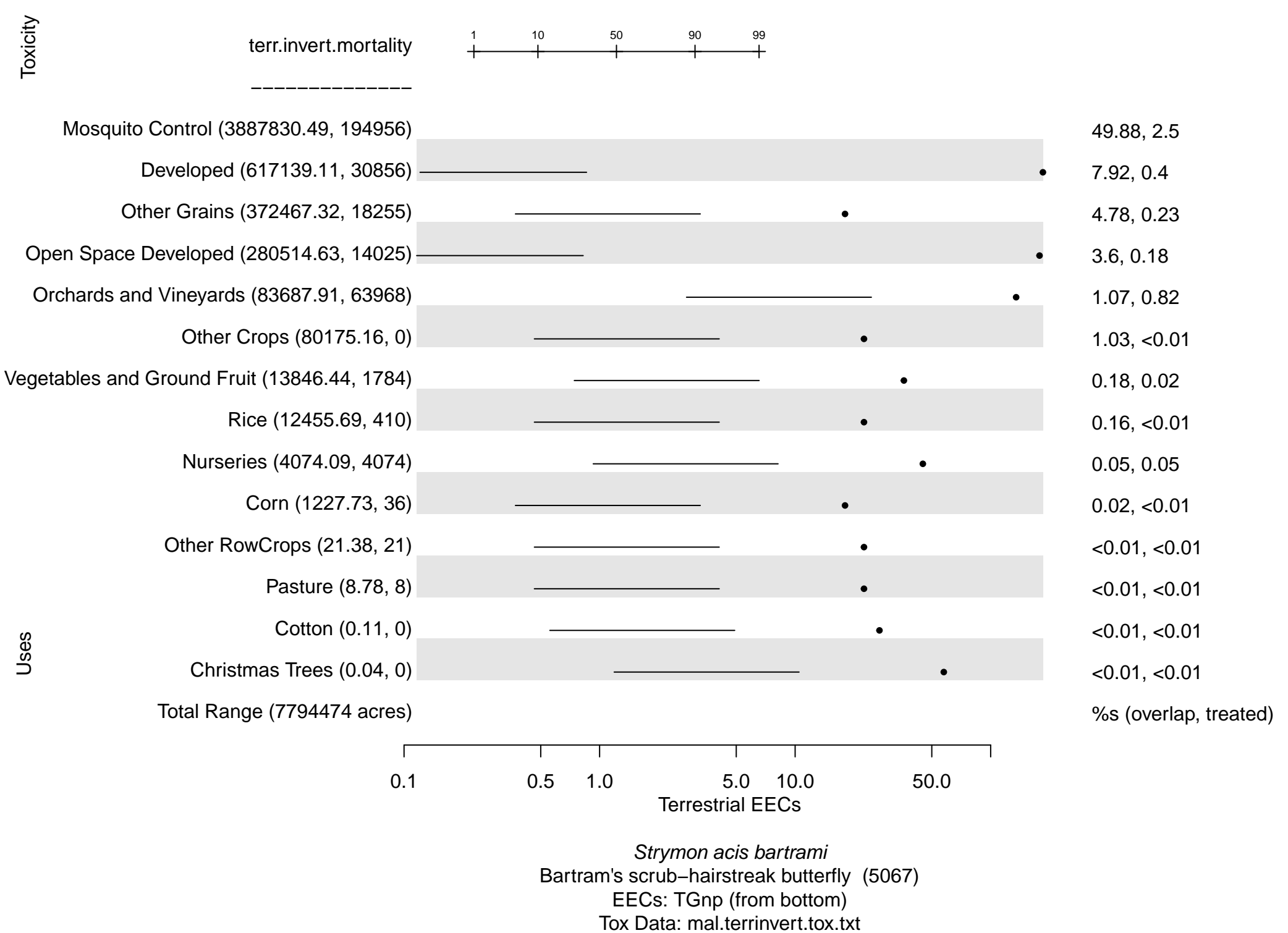
Uses

terr.invert.mortality



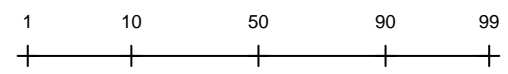


Bombus franklini
Franklin's bumble bee (5066)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt

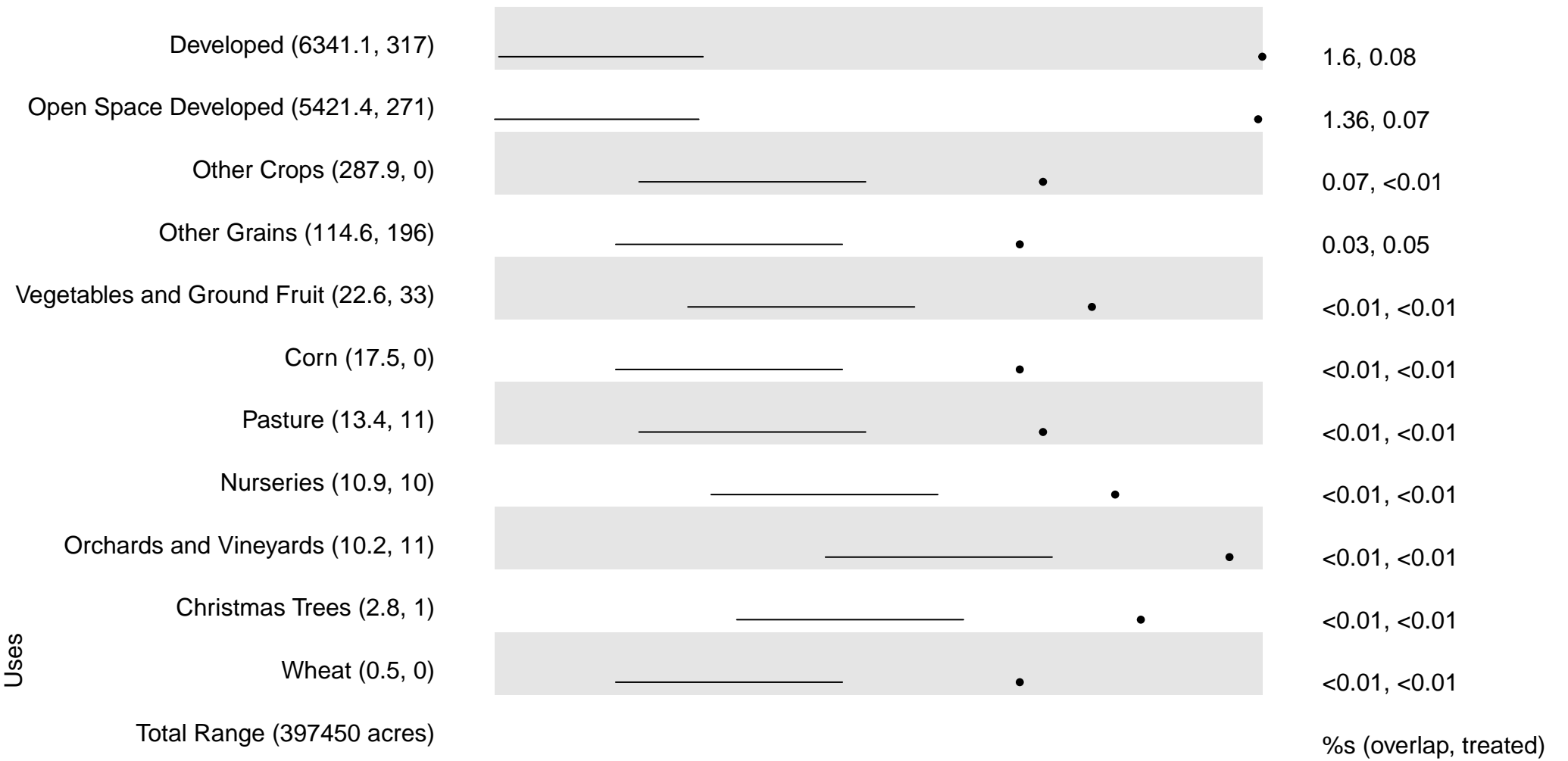


Toxicity

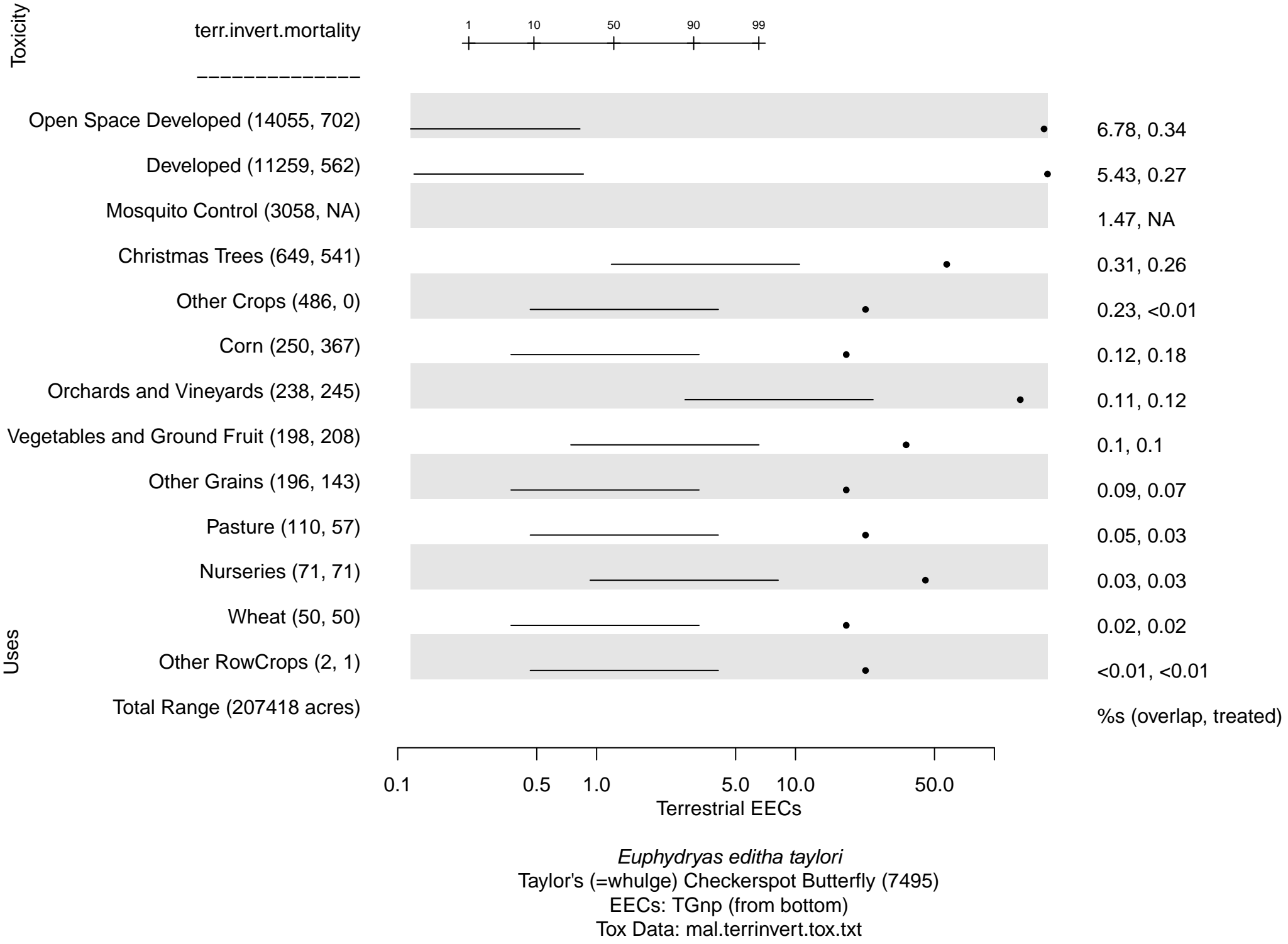
terr.invert.mortality

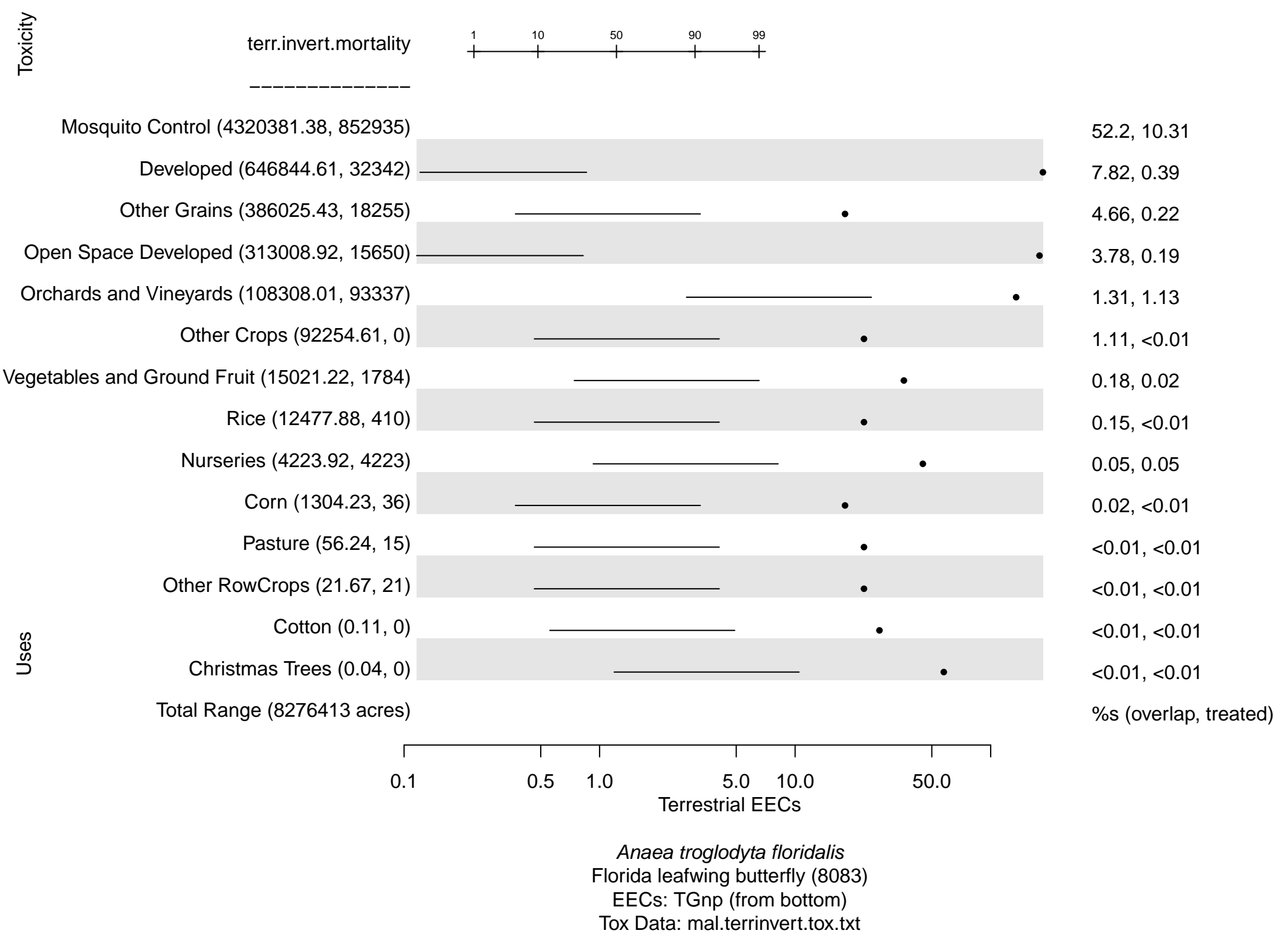


Uses



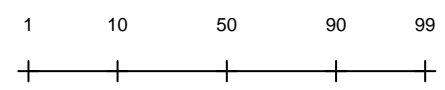
Euchloe ausonides insulanus
Island marble butterfly (5610)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt





Toxicity

terr.invert.mortality



Mosquito Control (8966.25, NA)

45.19, NA

Developed (3638.68, 181)

18.34, 0.92

Open Space Developed (963.93, 48)

4.86, 0.24

Other Crops (1.93, 0)

<0.01, <0.01

Orchards and Vineyards (1.48, 1)

<0.01, <0.01

Vegetables and Ground Fruit (0.59, 0)

<0.01, <0.01

Wheat (0.31, 0)

<0.01, <0.01

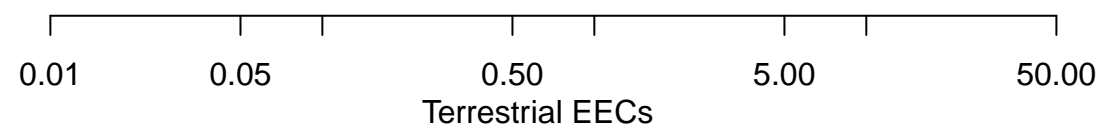
Pasture (0.04, 0)

<0.01, <0.01

Total Range (19842 acres)

%s (overlap, treated)

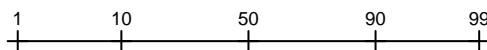
Uses

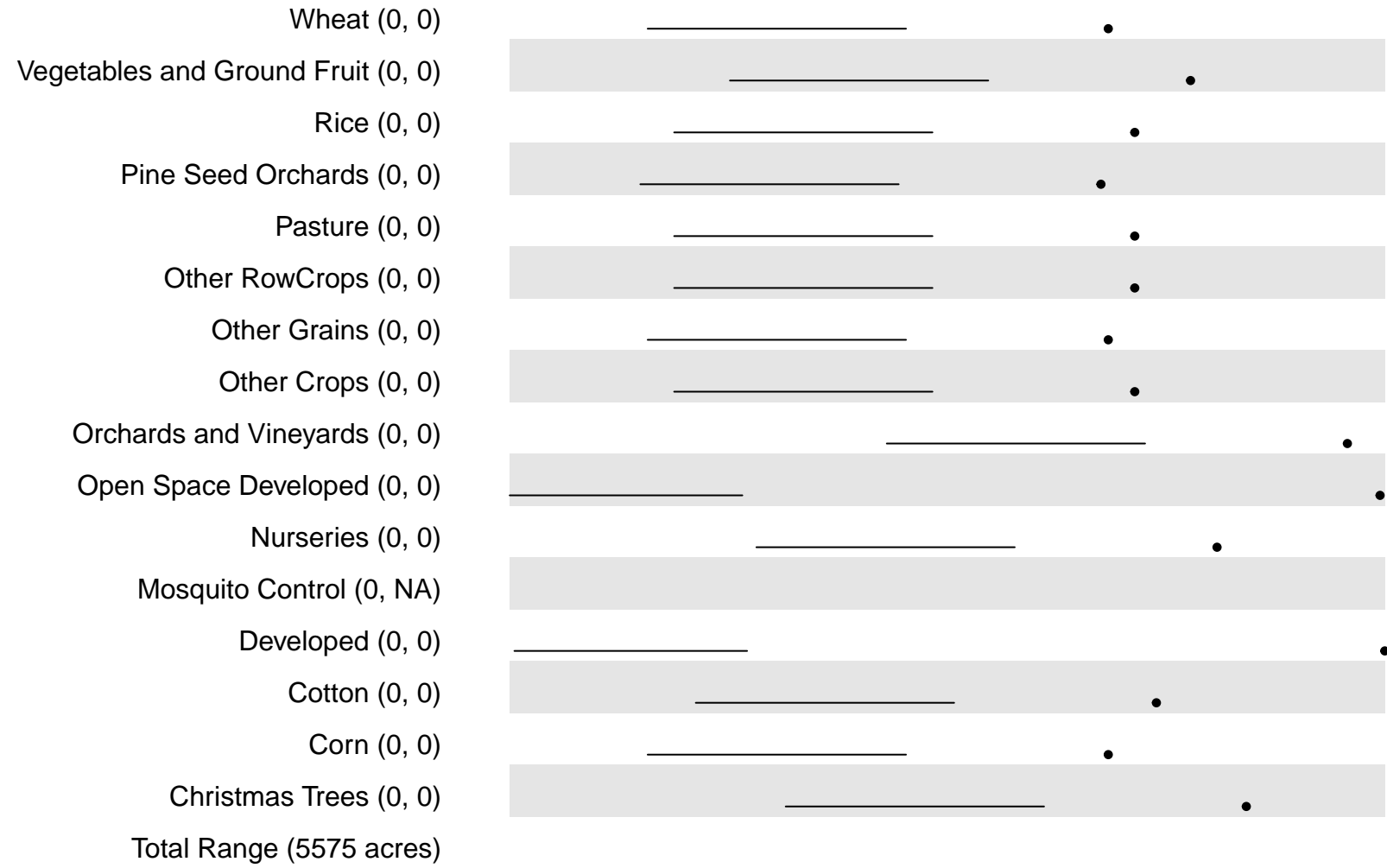


Dinacoma caseyi
Casey's June beetle (8503)
EECs: S (from bottom)
Tox Data: mal.terrinvert.tox.txt

Toxicity

terr.invert.mortality





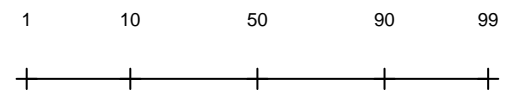
Uses



Plebejus shasta charlestonensis
Mount Charleston blue butterfly (9001)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt

Toxicity

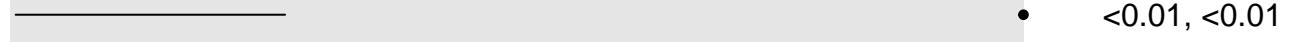
terr.invert.mortality



Open Space Developed (31.2, 1)



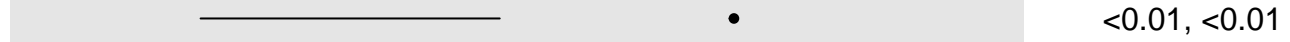
Developed (4.8, 0)



Wheat (2.5, 1)



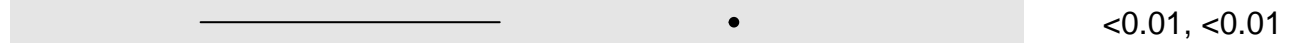
Pasture (0.7, 0)



Other Grains (0.4, 0)

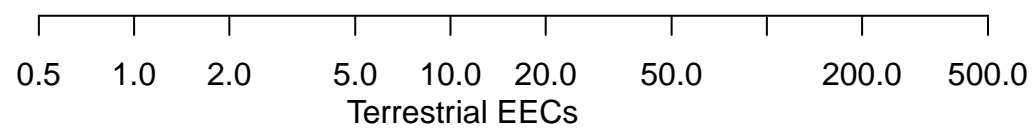


Other Crops (0.3, 0)



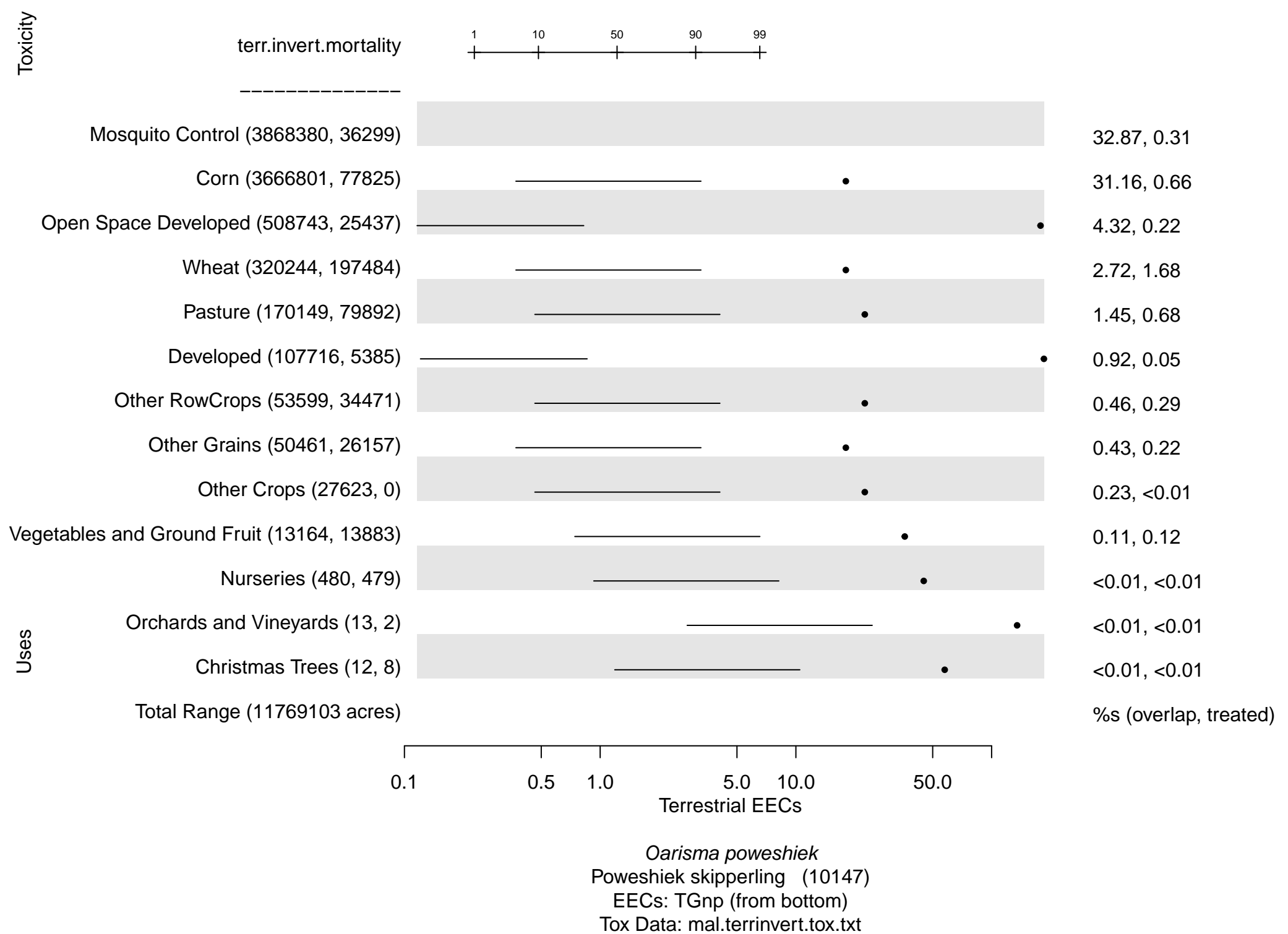
Total Range (55499 acres)

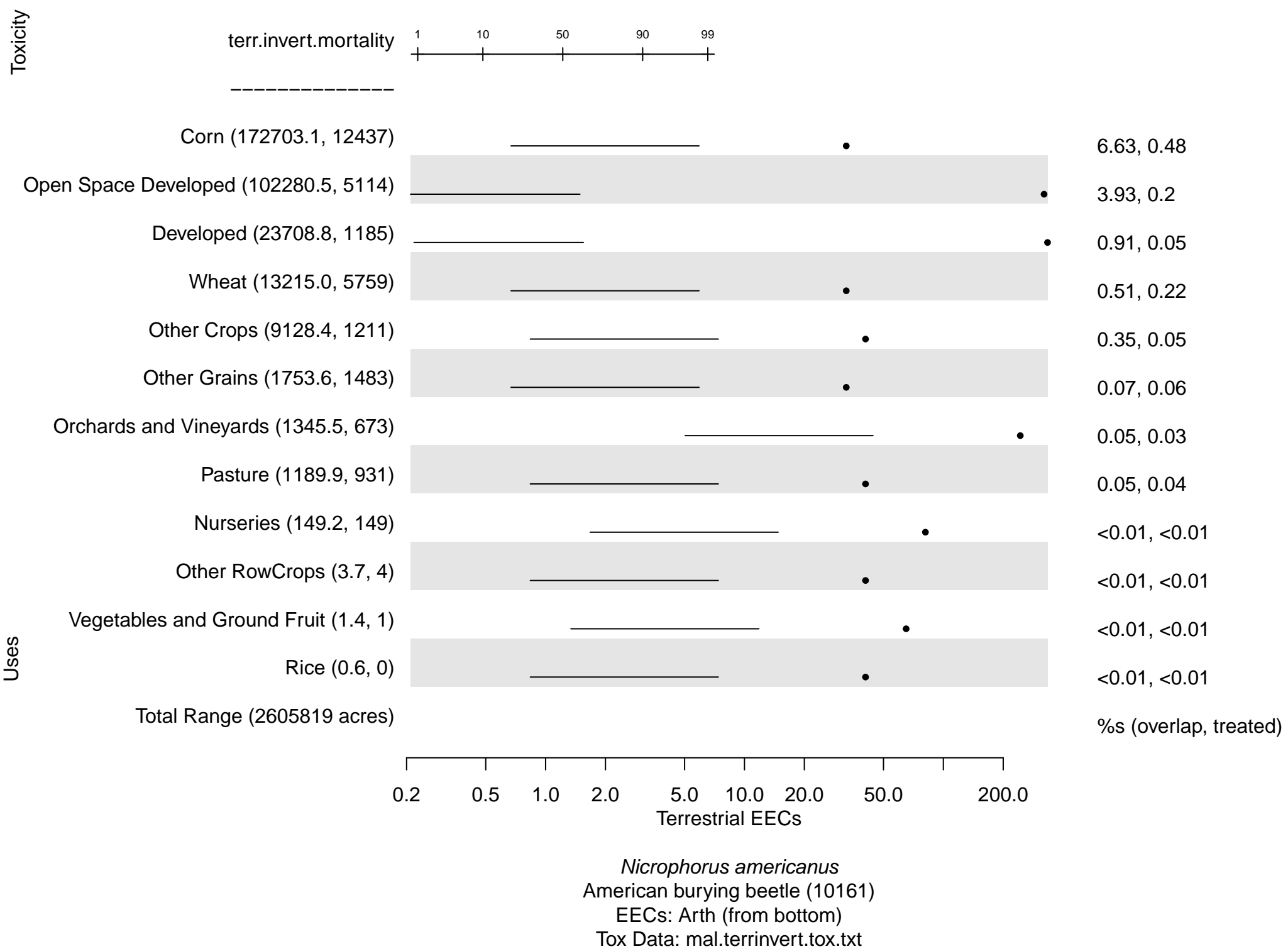
%s (overlap, treated)

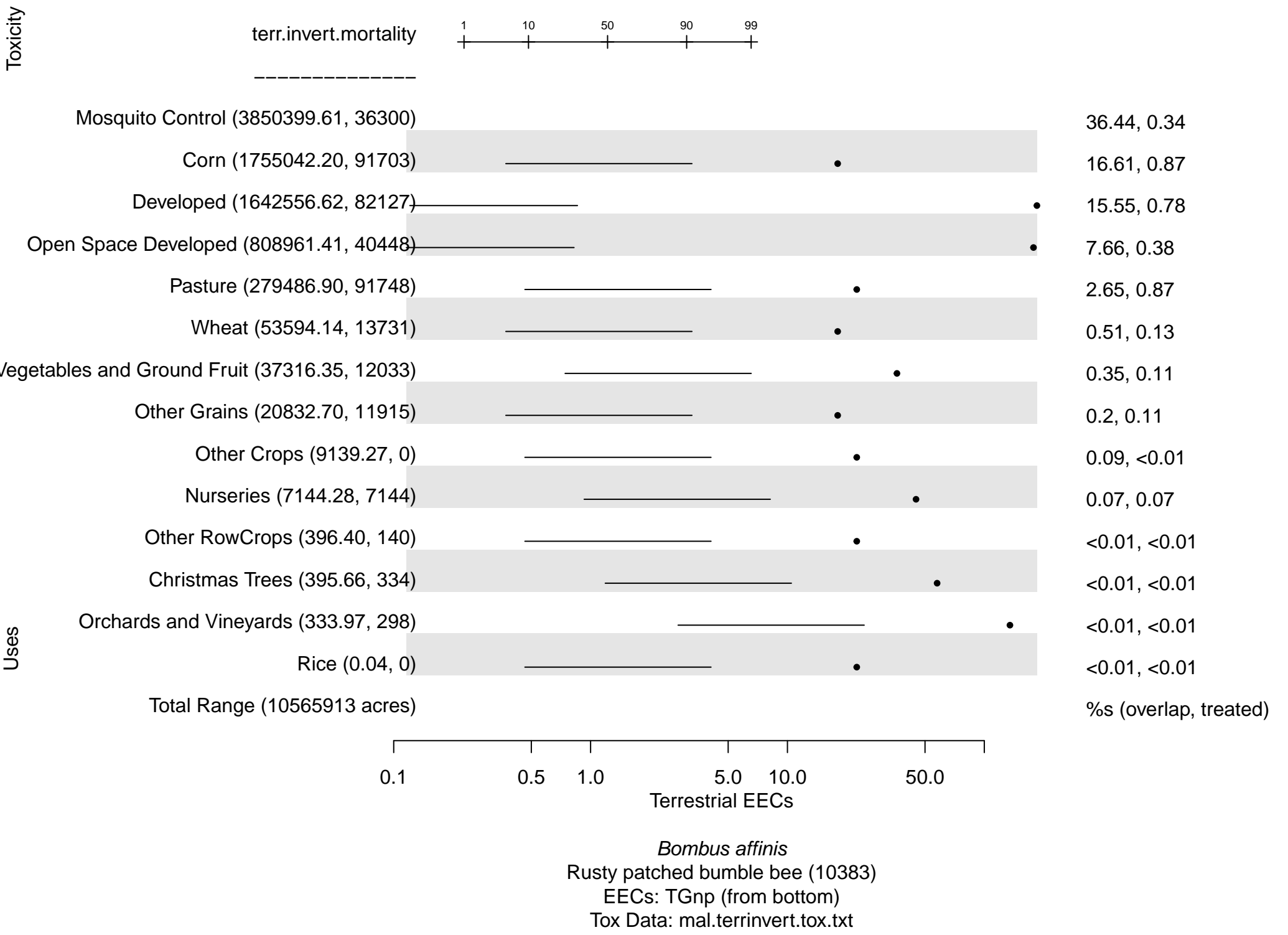


Zapada glacier
Western glacier stonefly (10123)
EECs: SG (from bottom)
Tox Data: mal.terrinvert.tox.txt

Uses

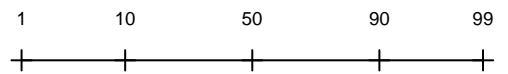




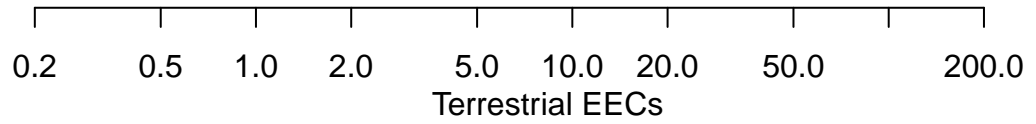
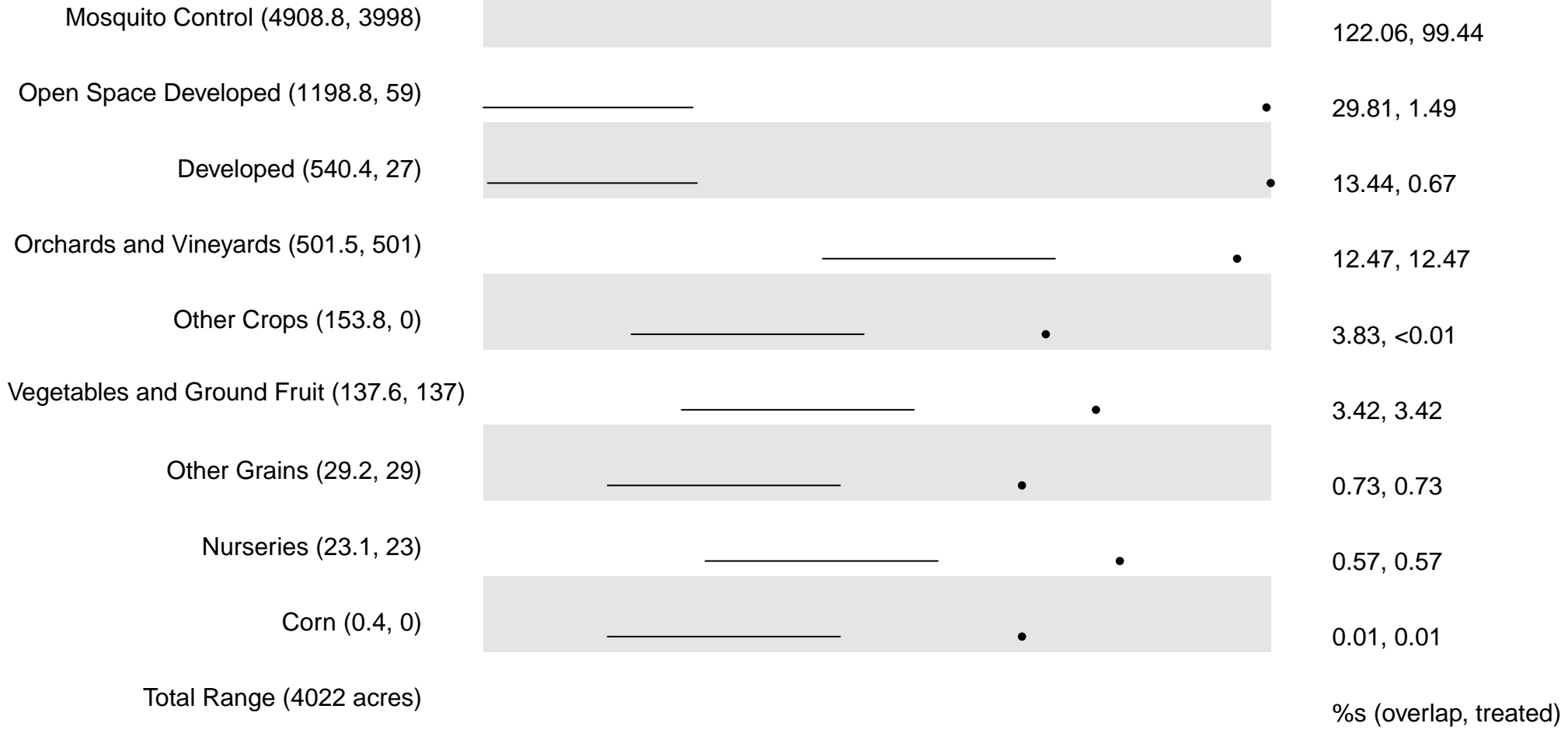


Toxicity

insect.mortality



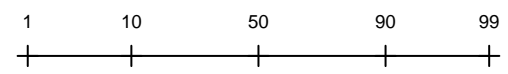
Uses



Cicindelidia floridana
Miami tiger beetle (10909)
EECs: Arth (from bottom)
Tox Data: mal.insect.tox.txt

Toxicity

terr.invert.mortality



Open Space Developed (6422.2, 321)



7.23, 0.36

Developed (803.4, 40)



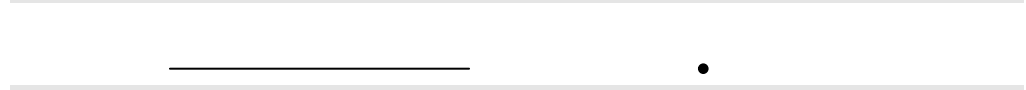
0.9, 0.05

Other Crops (5.7, 0)



<0.01, <0.01

Corn (5.6, 6)



<0.01, <0.01

Vegetables and Ground Fruit (3.6, 4)



<0.01, <0.01

Christmas Trees (2.4, 2)



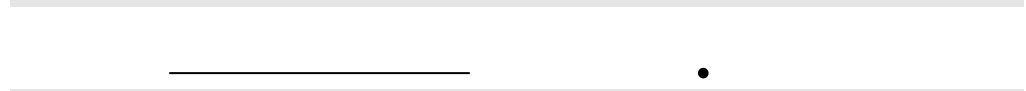
<0.01, <0.01

Pasture (2.4, 2)



<0.01, <0.01

Other Grains (1.9, 3)



<0.01, <0.01

Other RowCrops (1.0, 1)



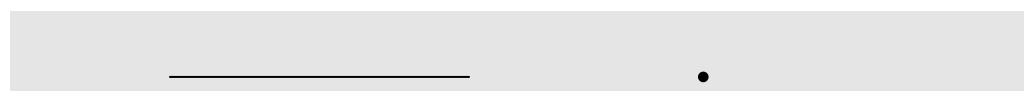
<0.01, <0.01

Orchards and Vineyards (1.0, 1)



<0.01, <0.01

Wheat (0.4, 0)



<0.01, <0.01

Total Range (88861 acres)

%s (overlap, treated)

Uses



Speyeria zerene hippolyta
Oregon silverspot butterfly (11398)
EECs: TGnp (from bottom)
Tox Data: mal.terrinvert.tox.txt

