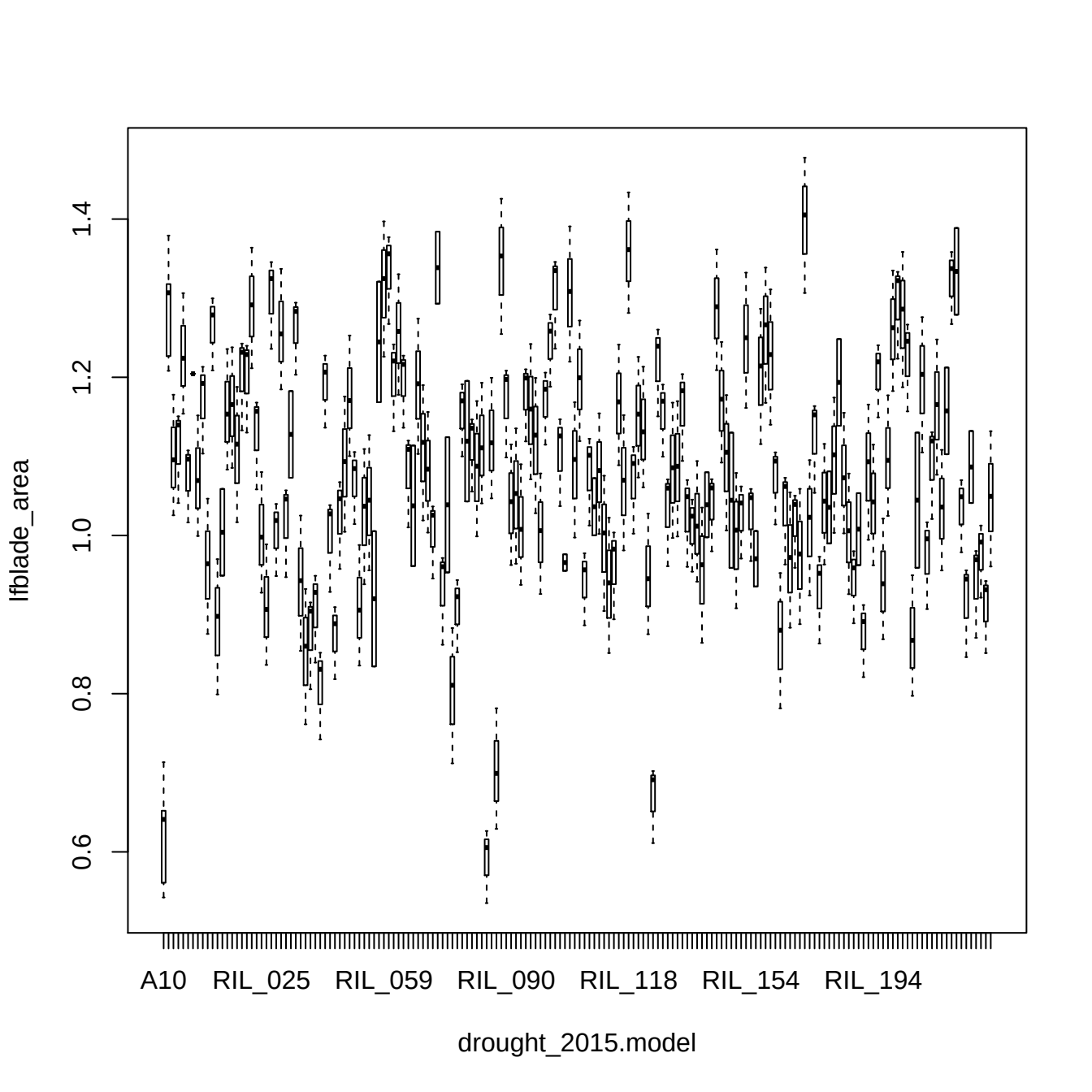
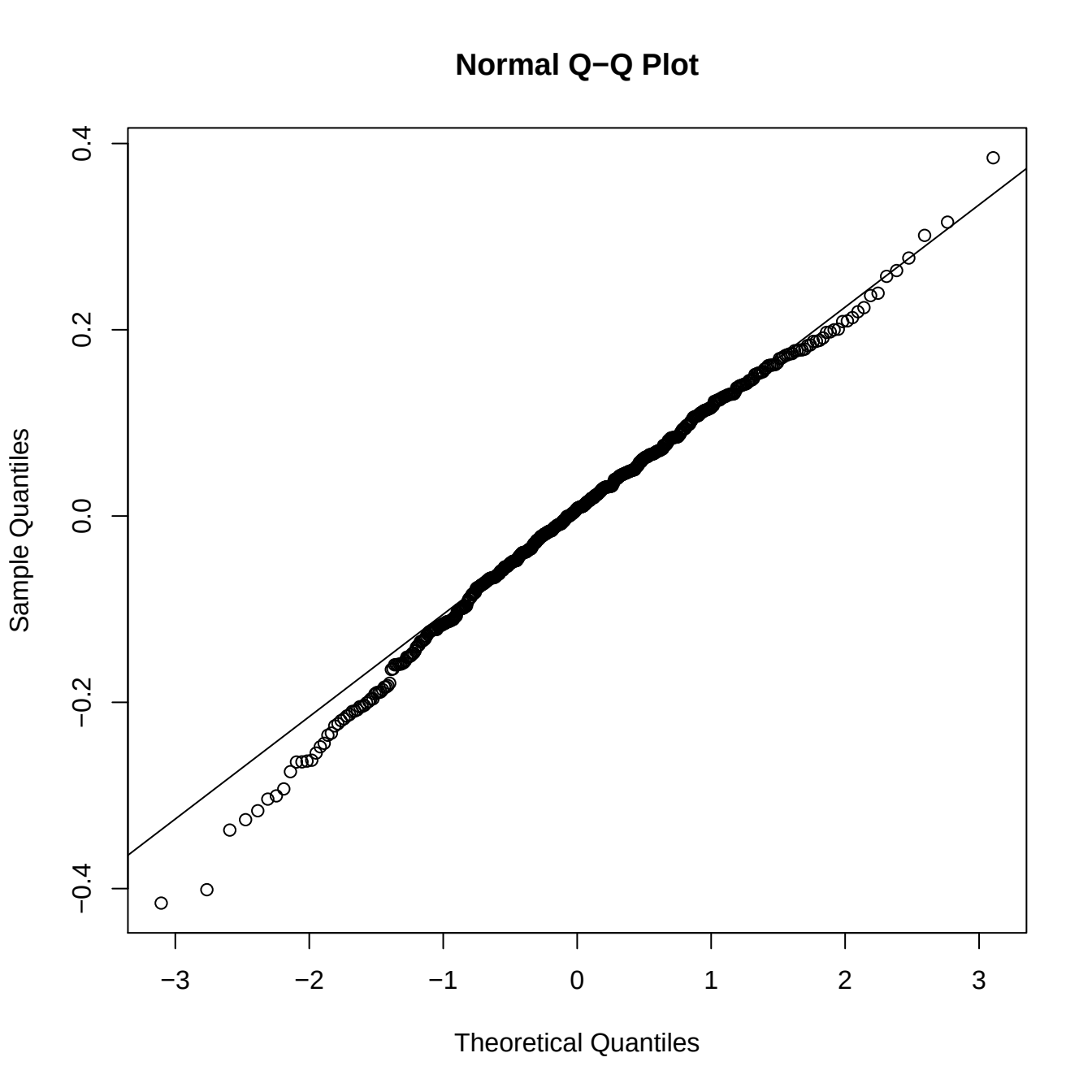
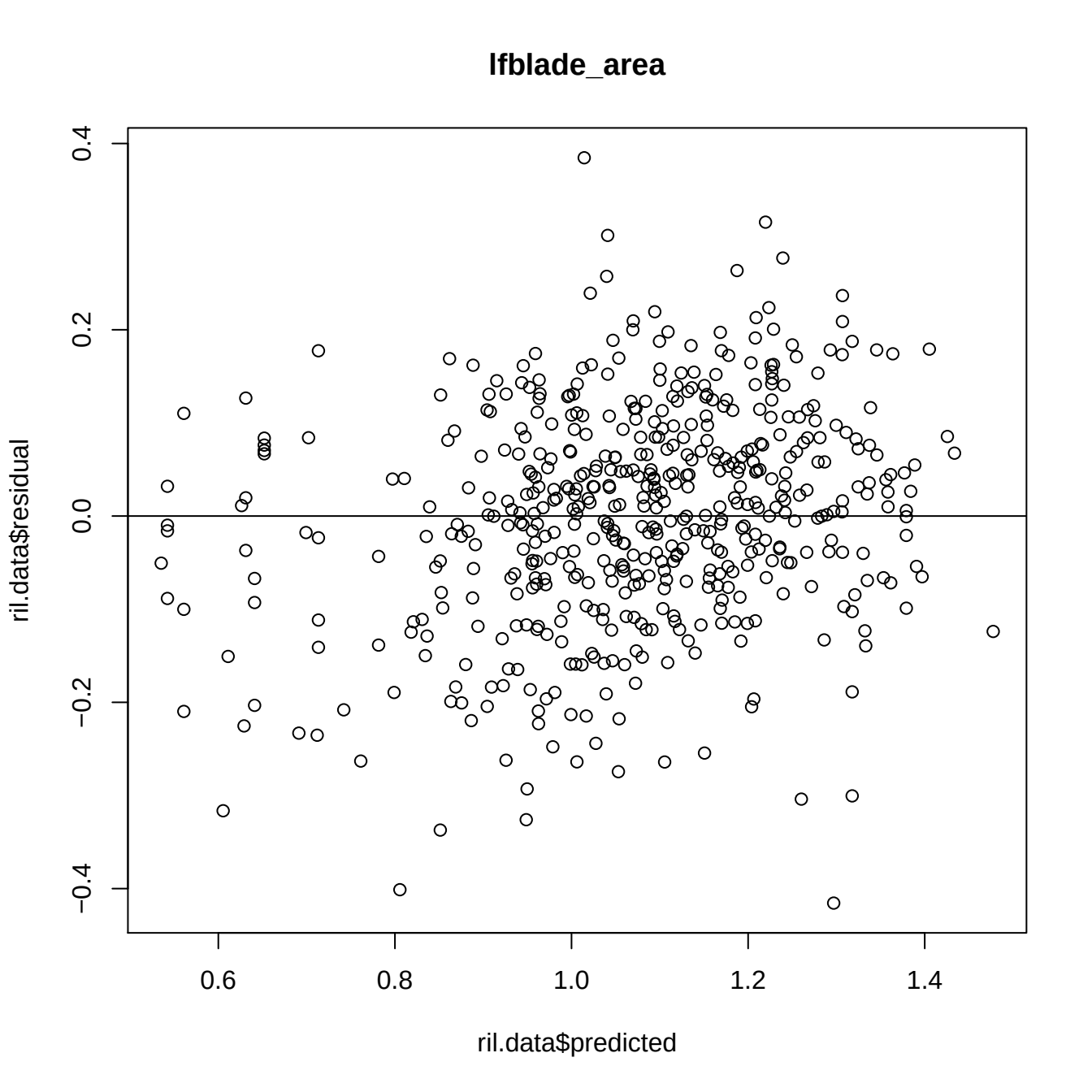
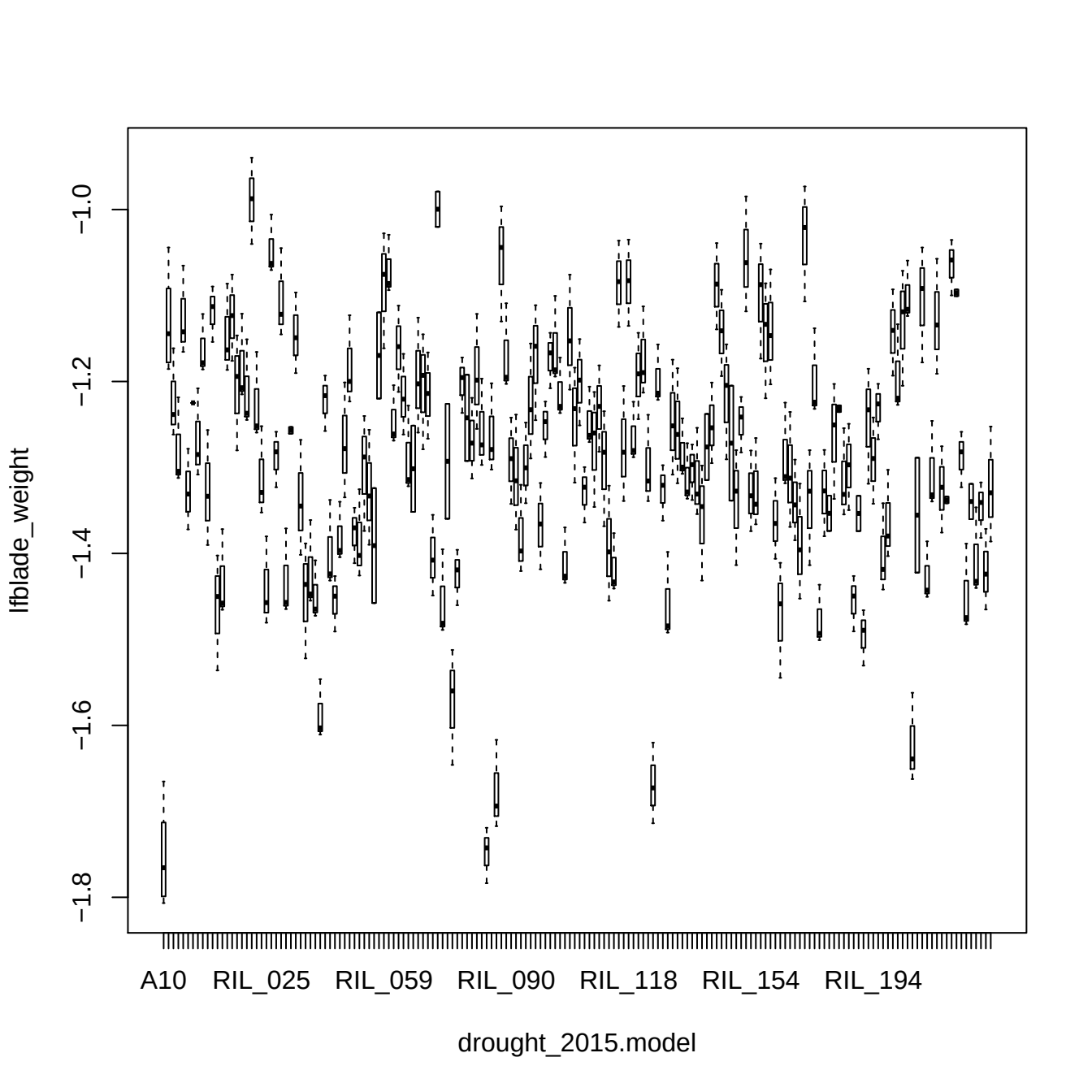
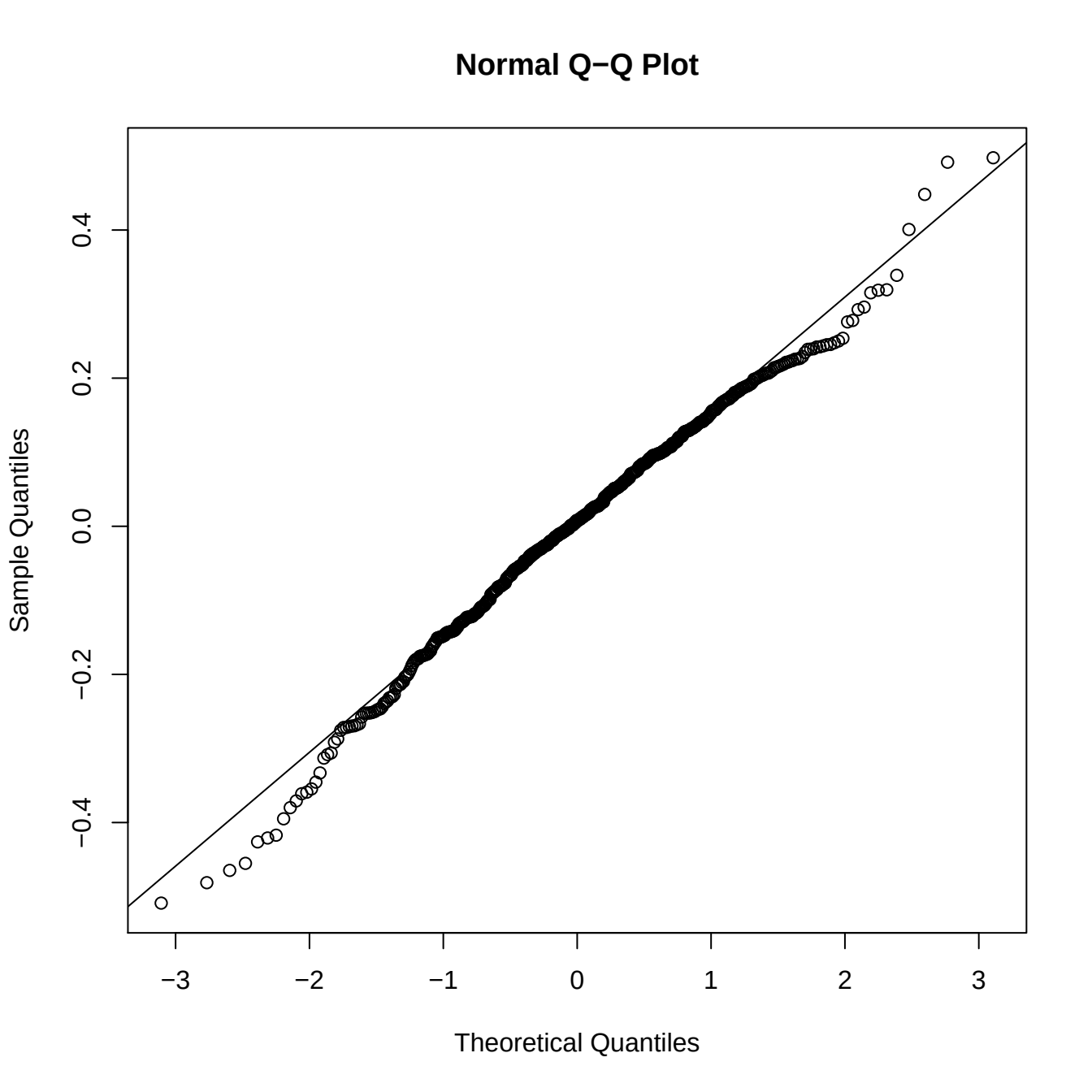
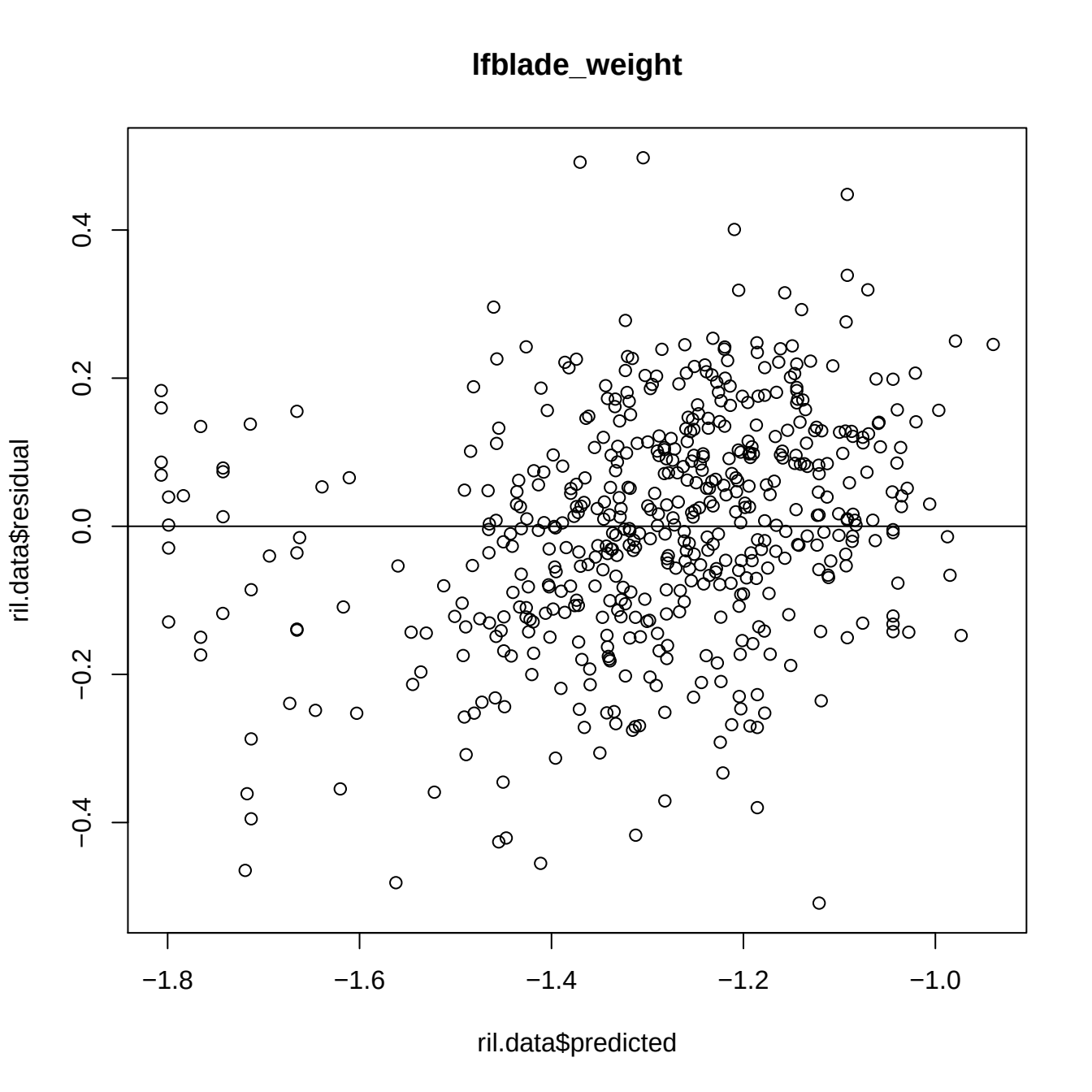

lfblade_area
0.6
0.8
1.0
1.2
1.4
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

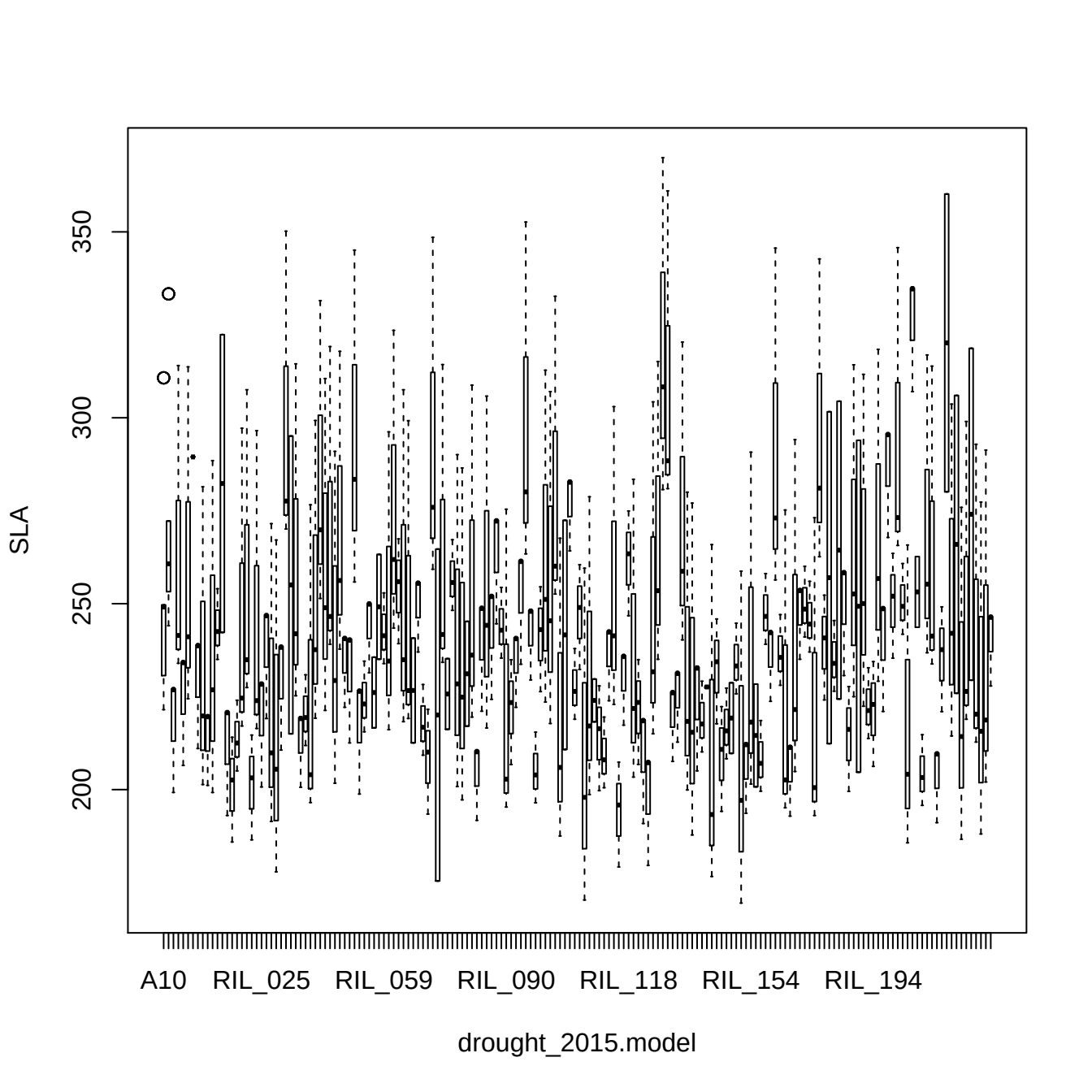

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.4
0.2
0.0
−0.2
−0.4
−3
−2
−1
0
1
2
3

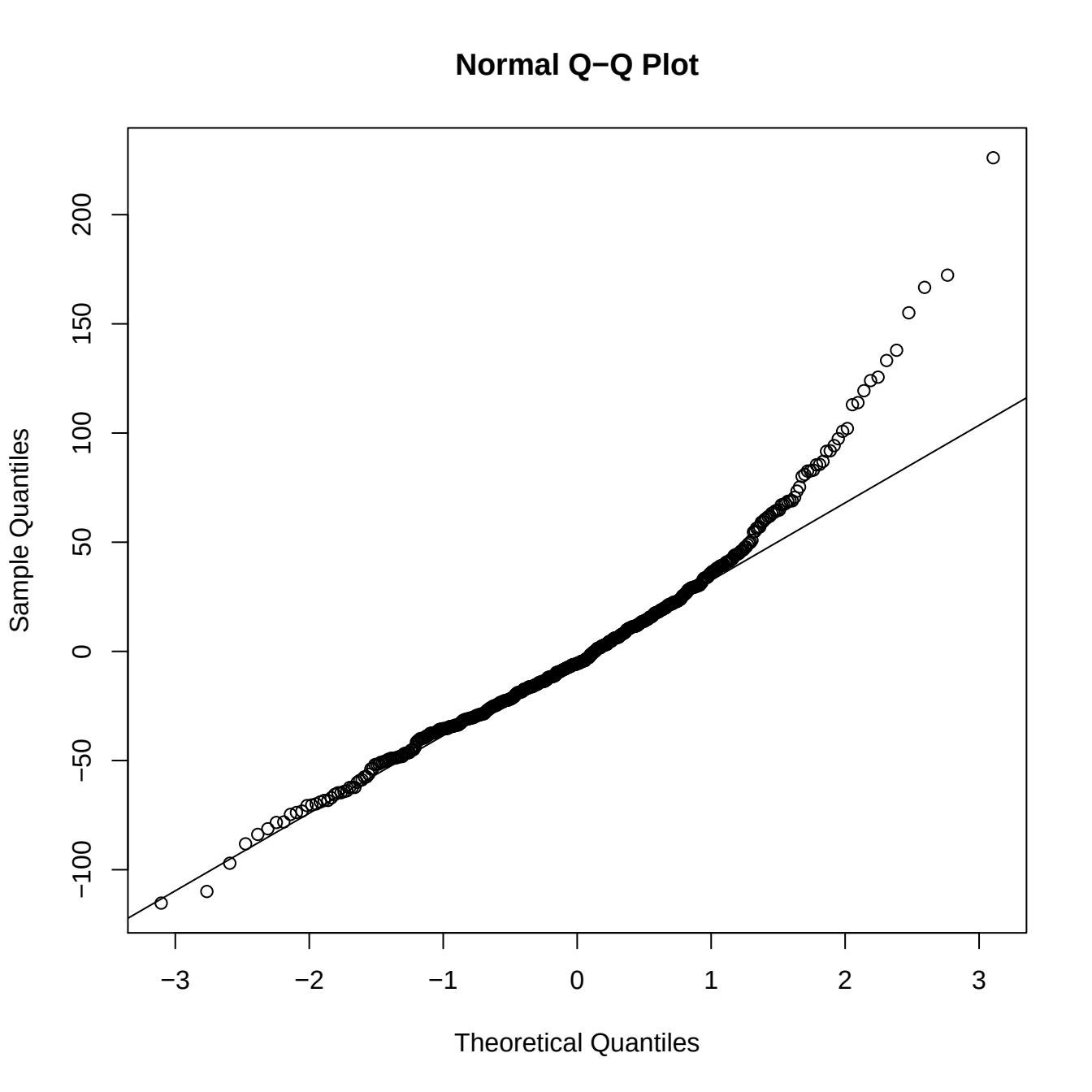

lfblade_area
ril.data$residual
0.4
0.2
0.0
−0.2
−0.4
0.6
0.8
1.0
1.2
1.4
ril.data$predicted

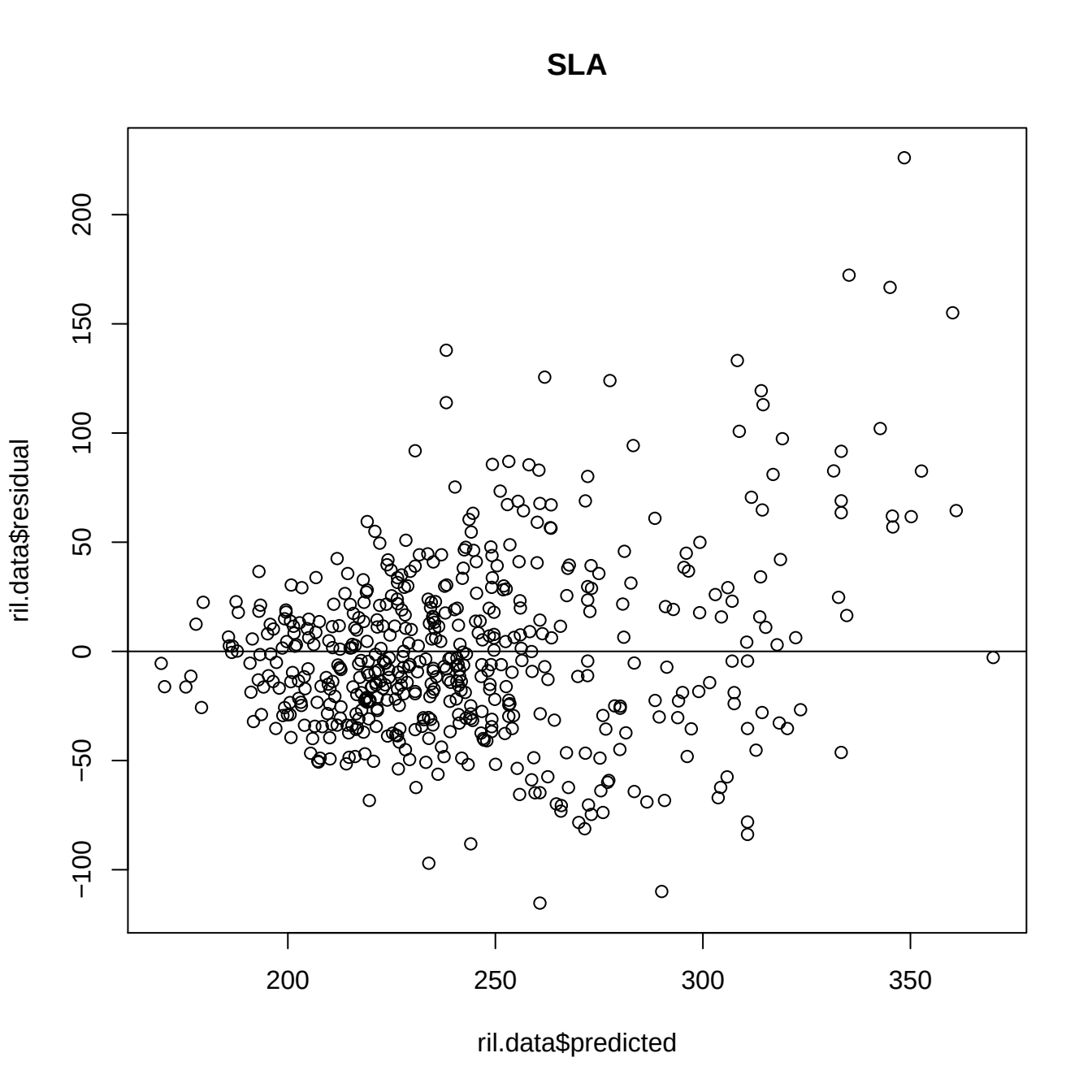

lfblade_weight
−1.0
−1.2
−1.4
−1.6
−1.8
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

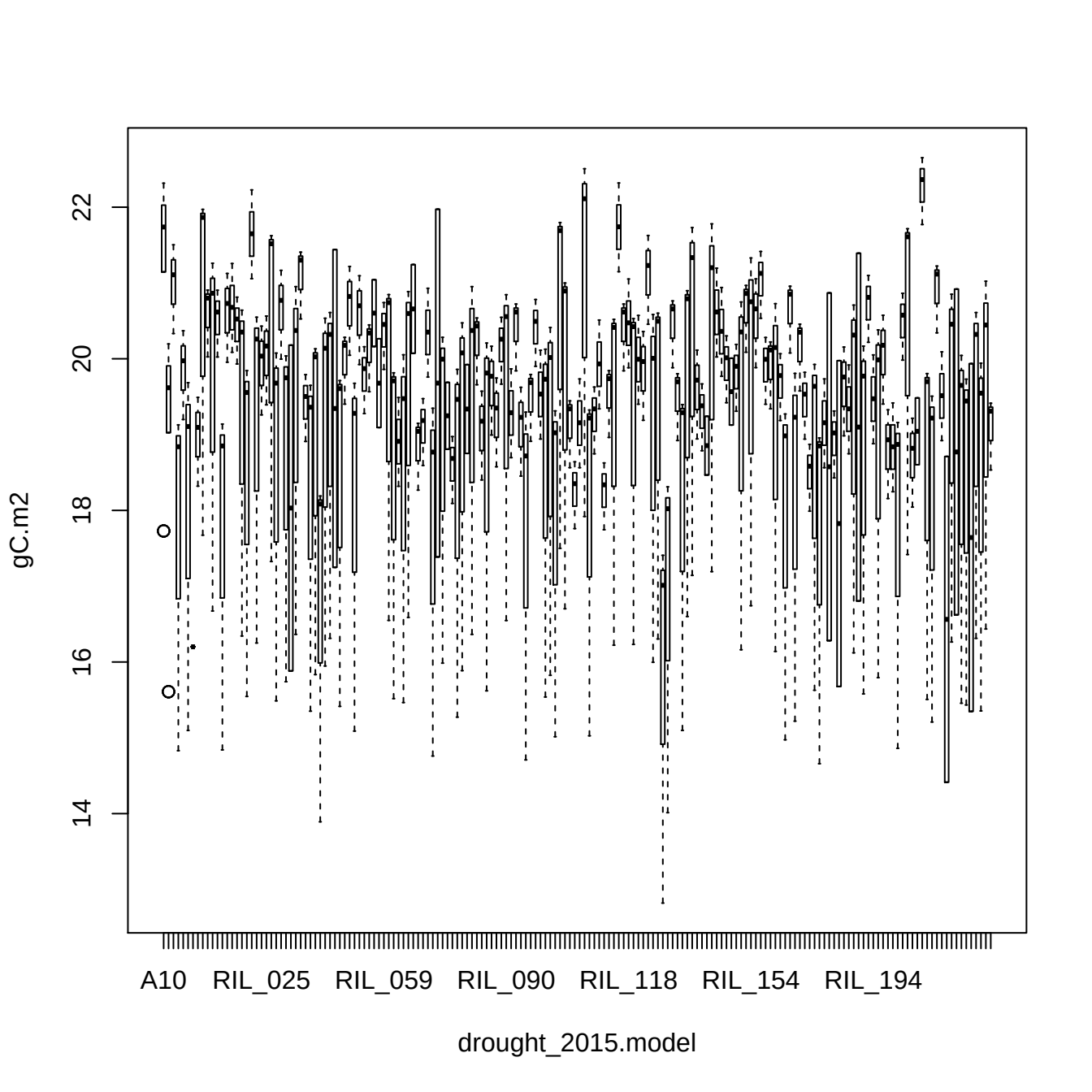

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.4
0.2
0.0
−0.2
−0.4
−3
−2
−1
0
1
2
3

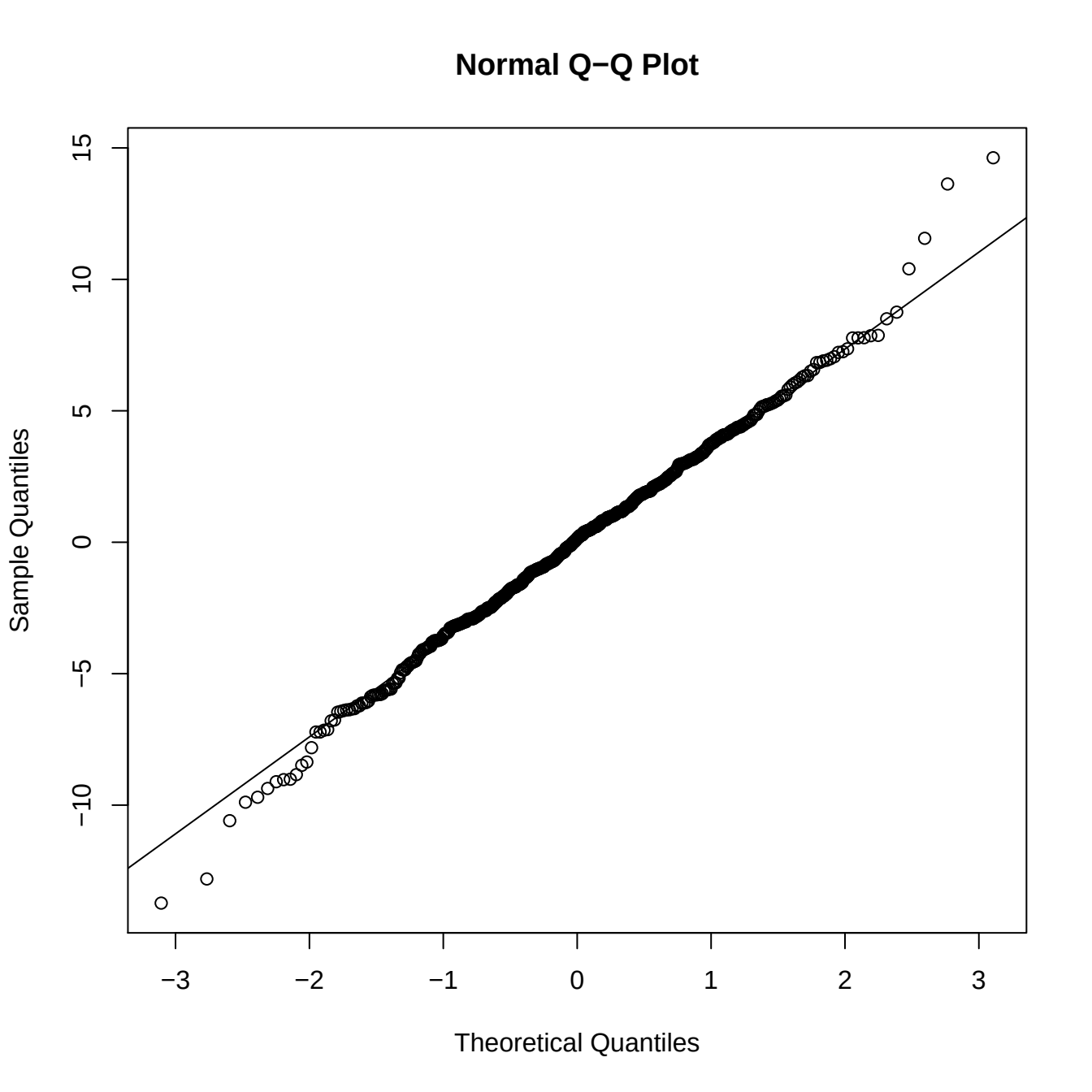

lfblade_weight
ril.data$residual
0.4
0.2
0.0
−0.2
−0.4
−1.8
−1.6
−1.4
−1.2
−1.0
ril.data$predicted

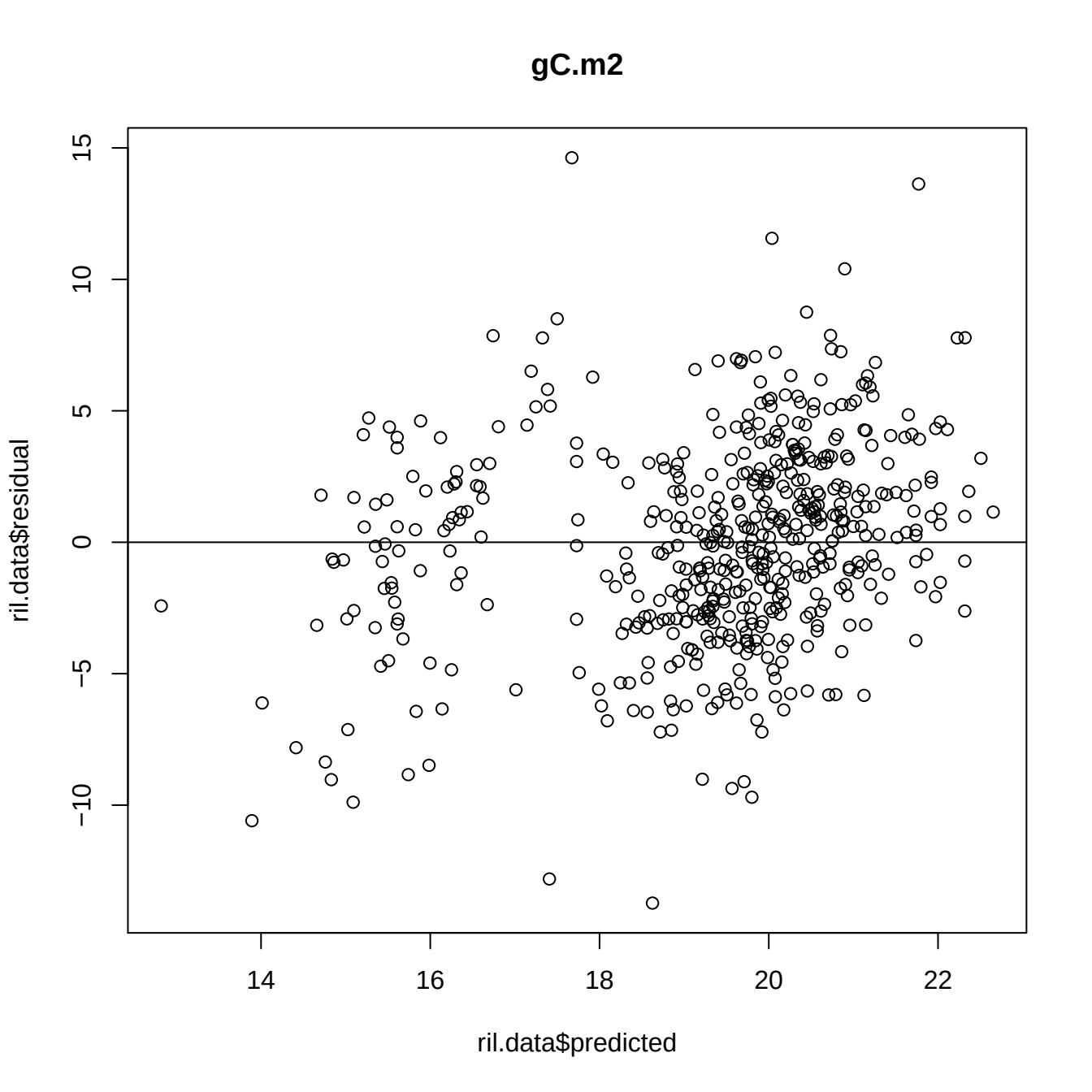

SLA
200
250
300
350
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

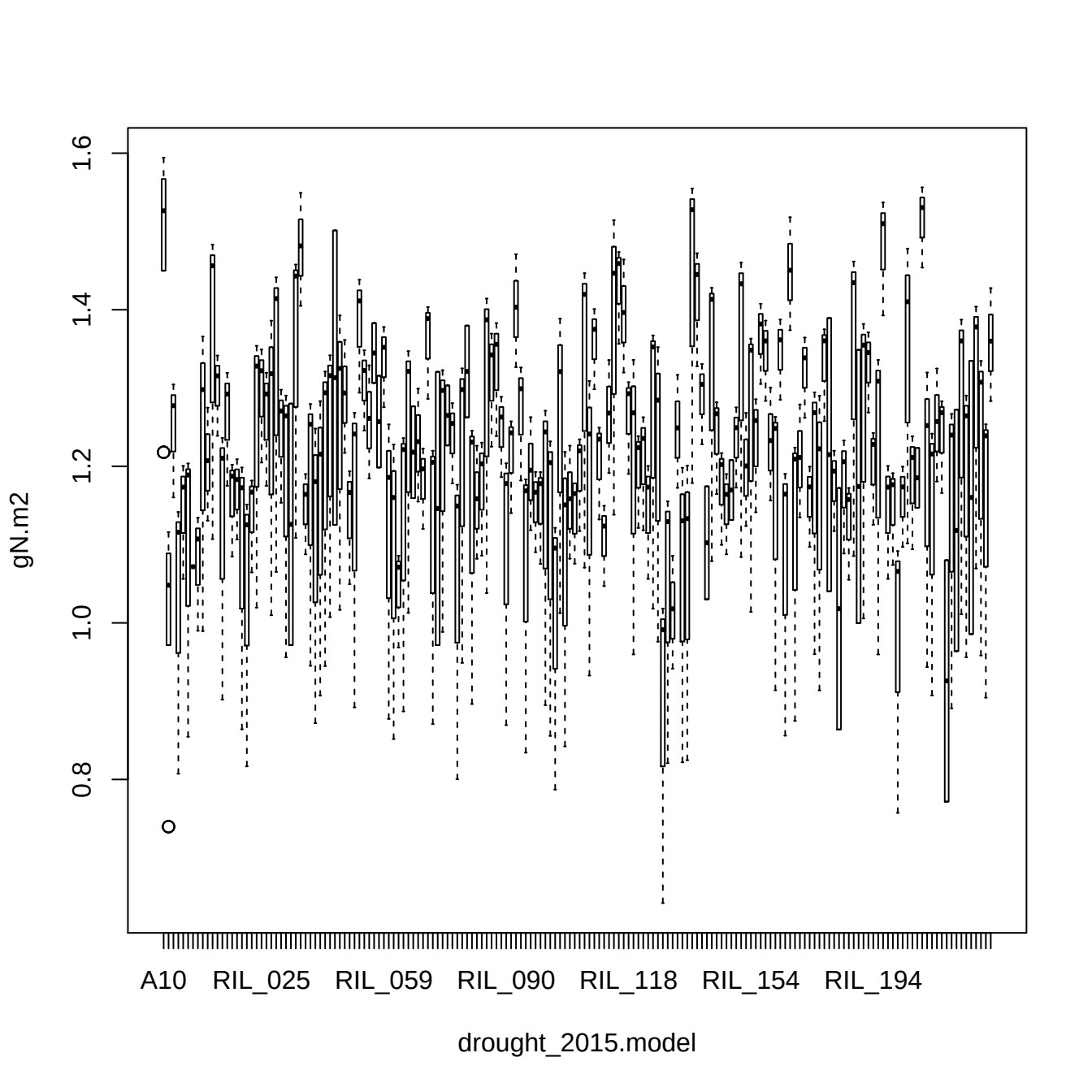

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
200
150
100
50
0
−50
−100
−3
−2
−1
0
1
2
3

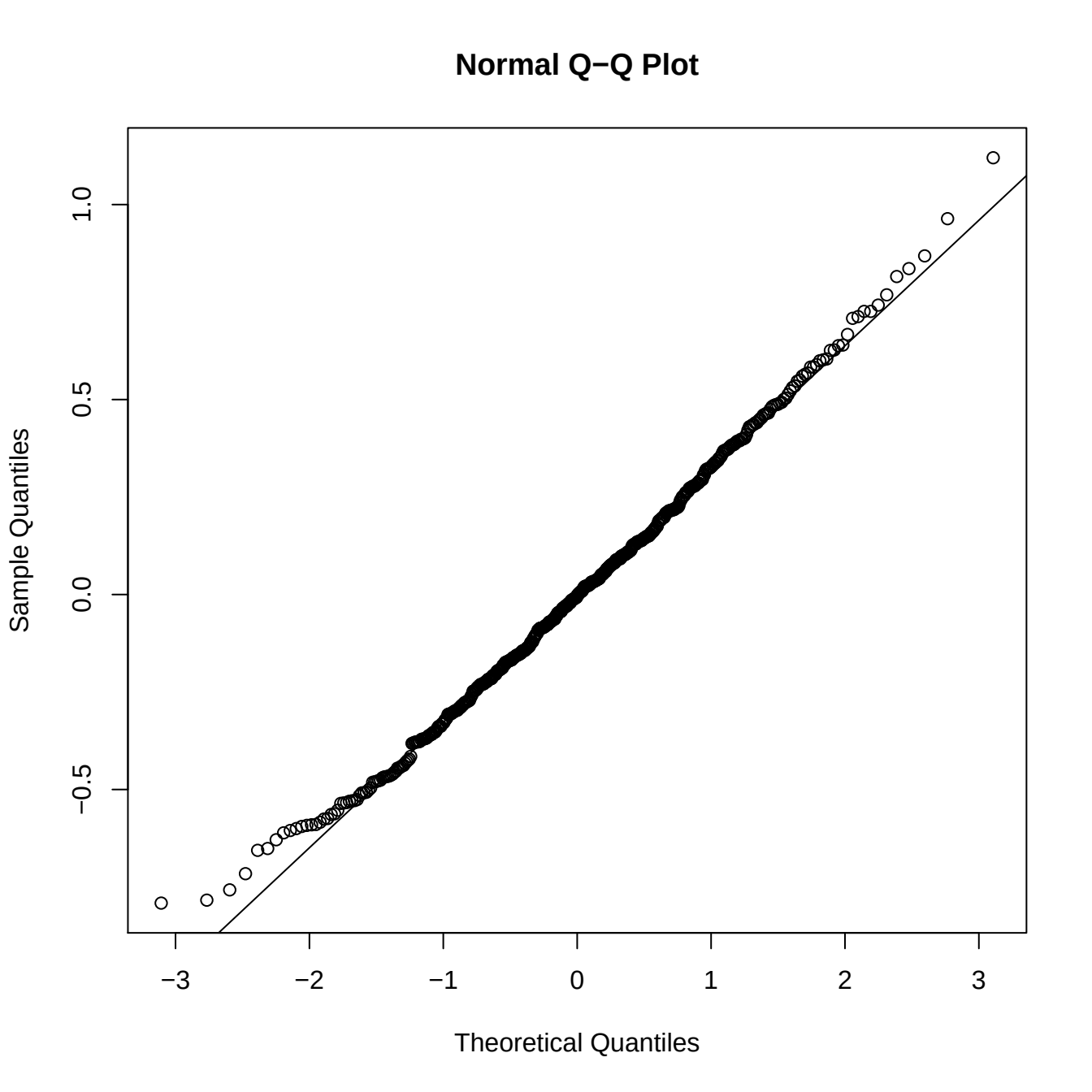

SLA
ril.data$residual
ril.data$predicted
200
150
100
50
0
−50
−100
200
250
300
350

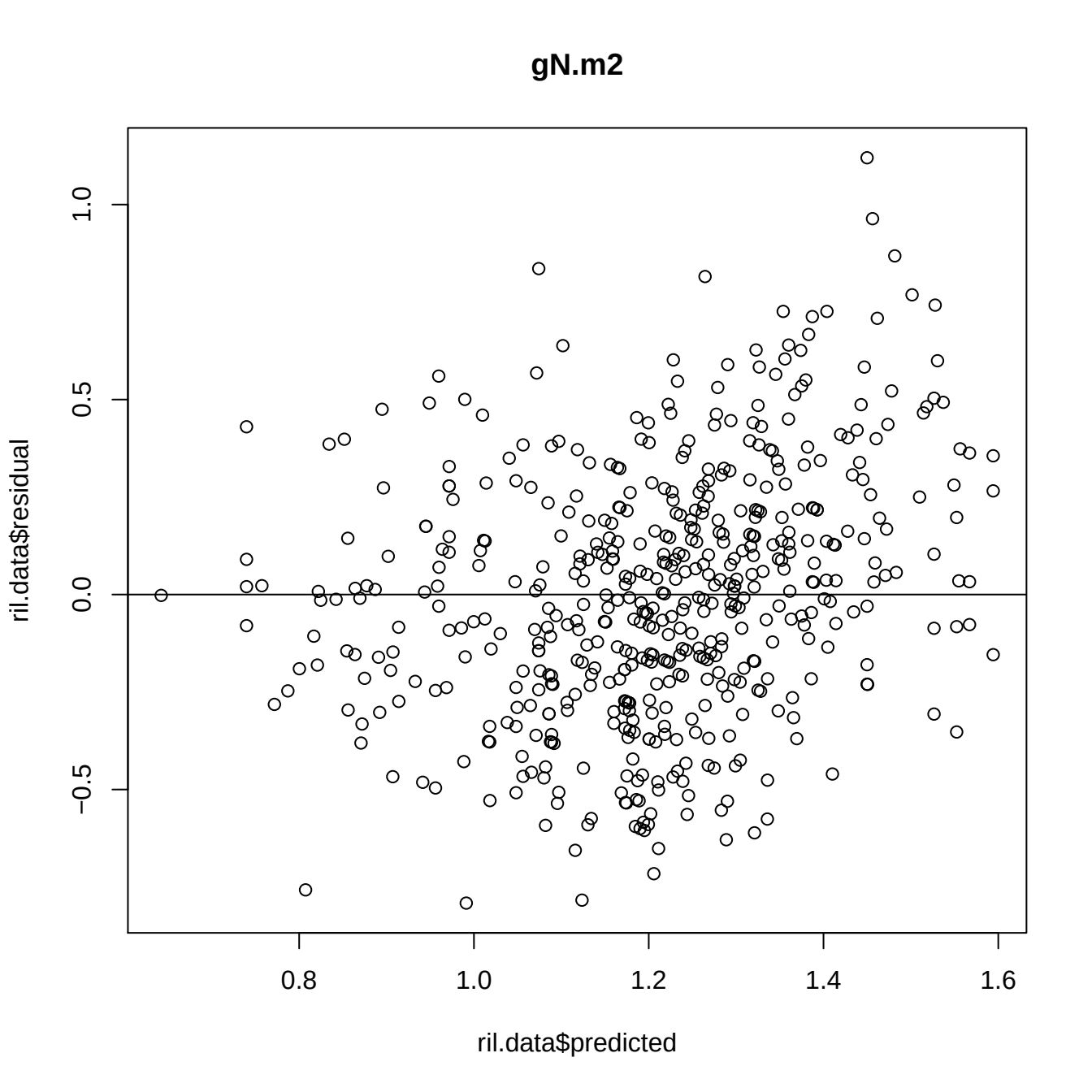

gC.m2
14
16
18
20
22
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

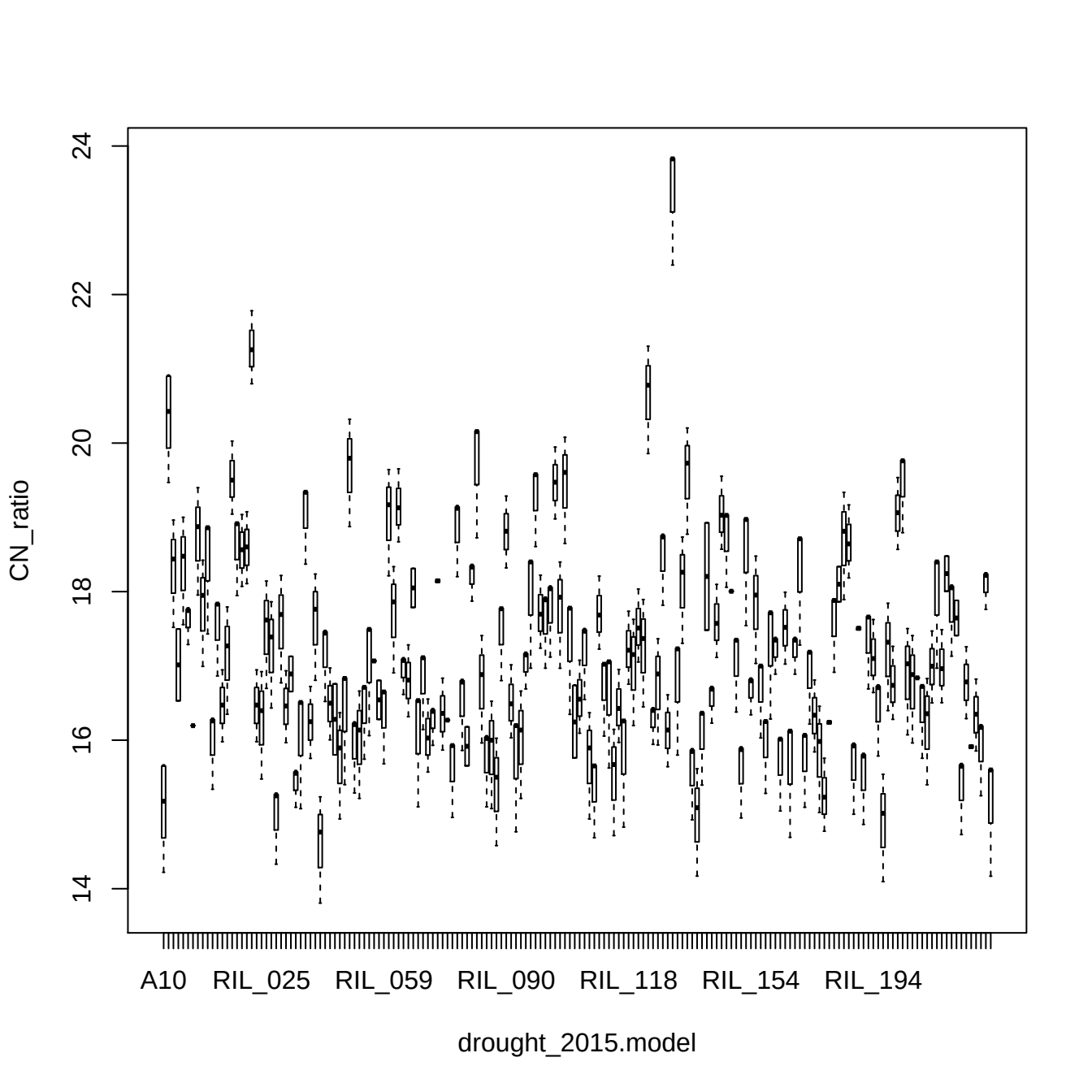

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
15
10
5
0
−5
−10
−3
−2
−1
0
1
2
3

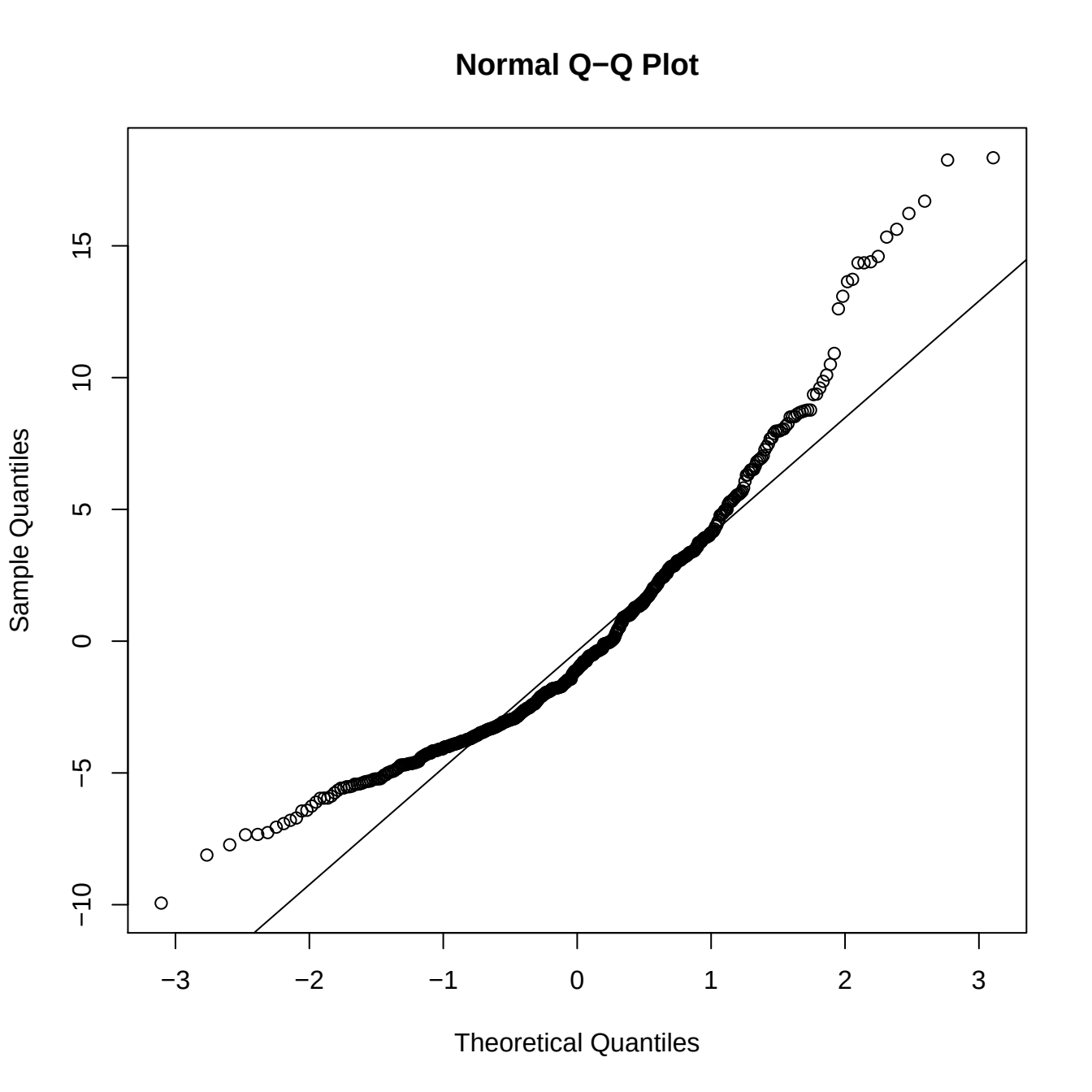

gC.m2
ril.data$residual
15
10
5
0
−5
−10
14
16
18
20
22
ril.data$predicted

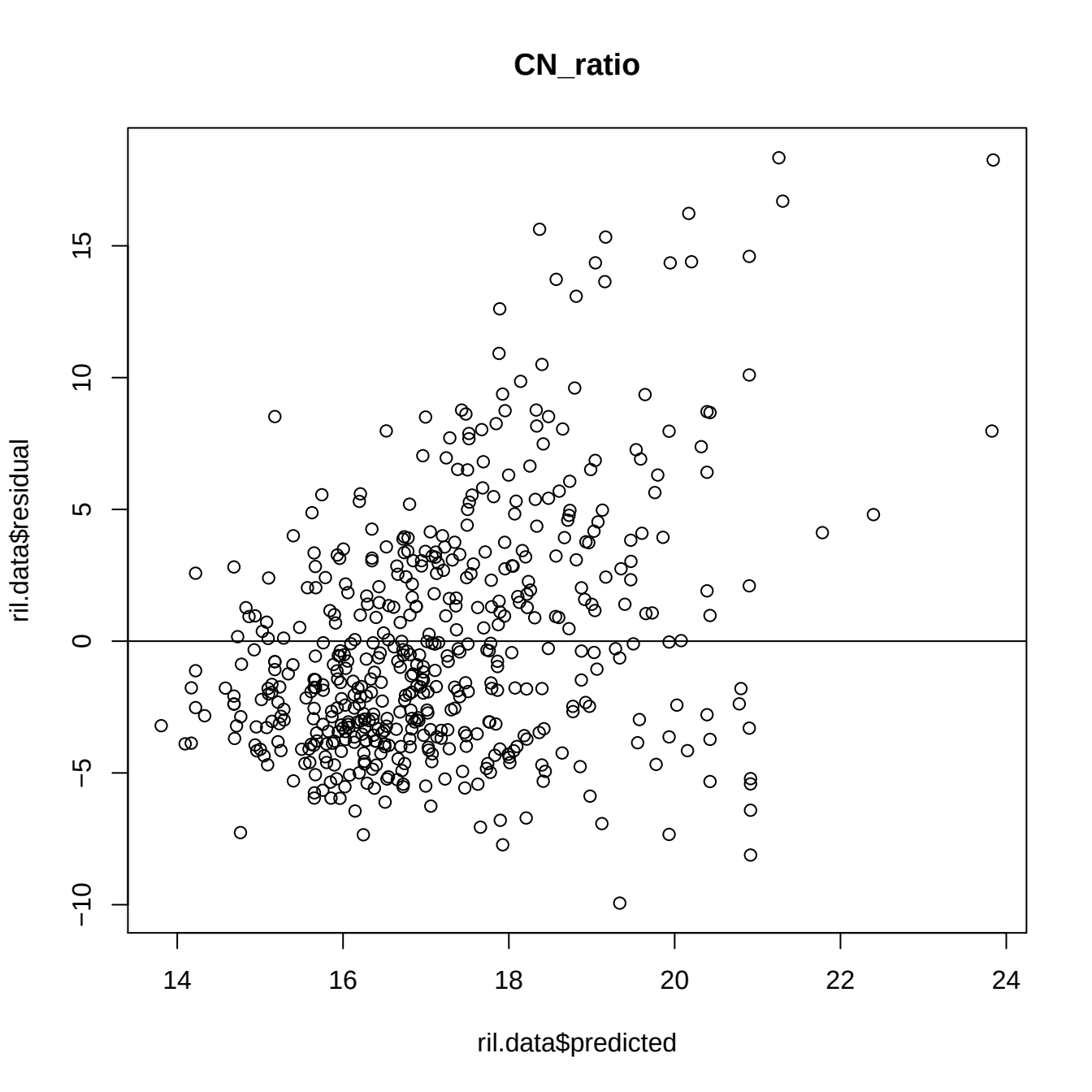

gN.m2
0.8
1.0
1.2
1.4
1.6
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

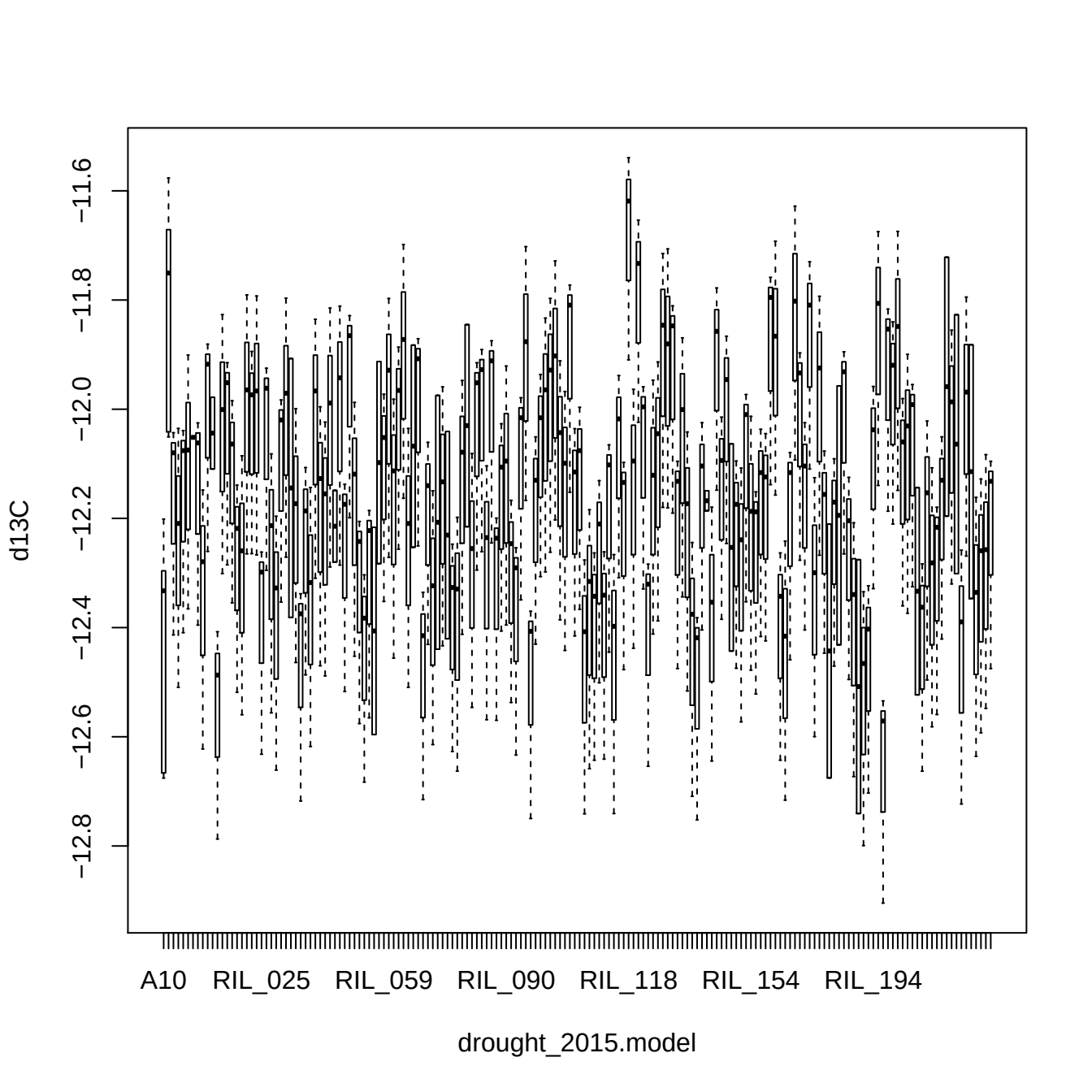

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
1.0
0.5
0.0
−0.5
−3
−2
−1
0
1
2
3

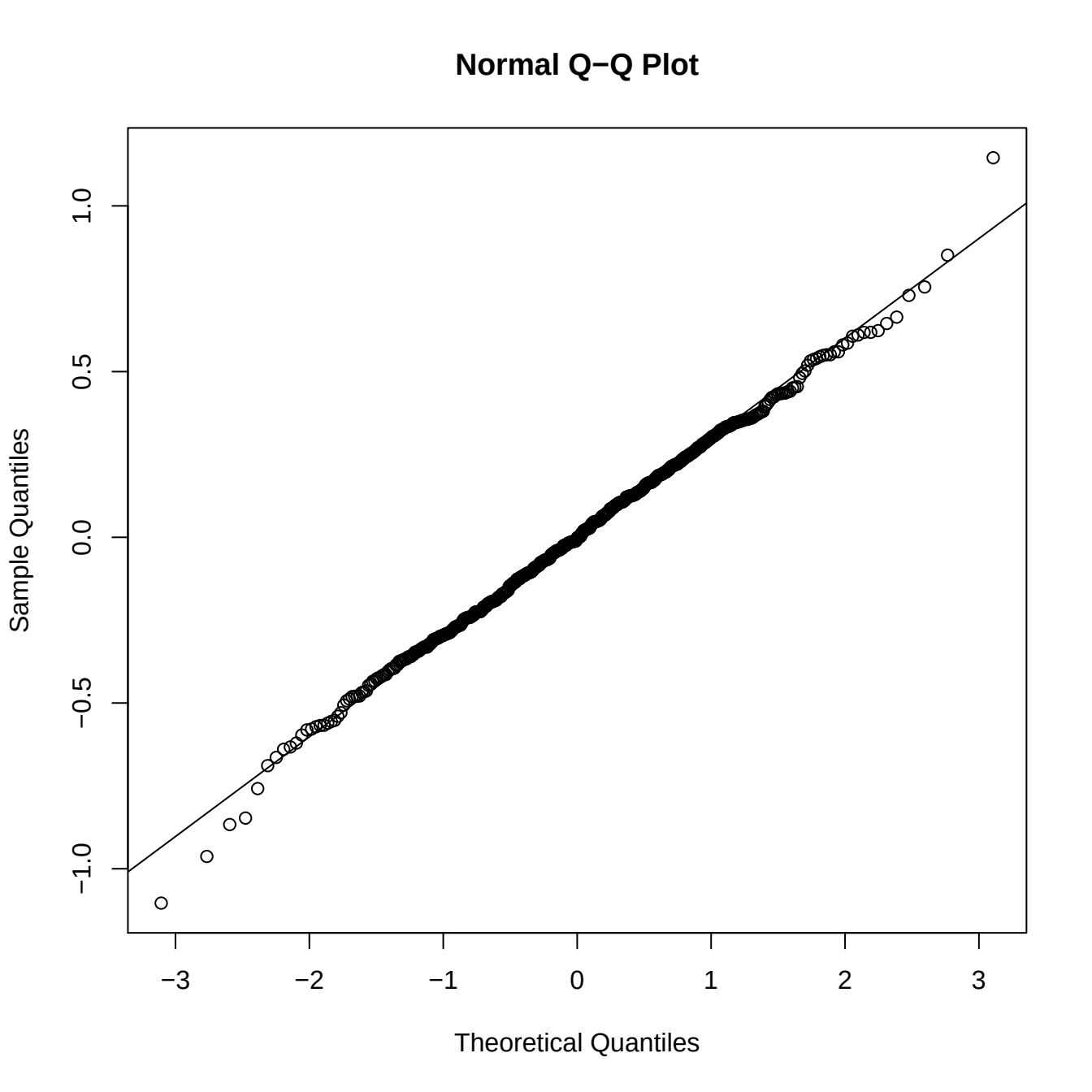

gN.m2
ril.data$residual
1.0
0.5
0.0
−0.5
0.8
1.0
1.2
1.4
1.6
ril.data$predicted

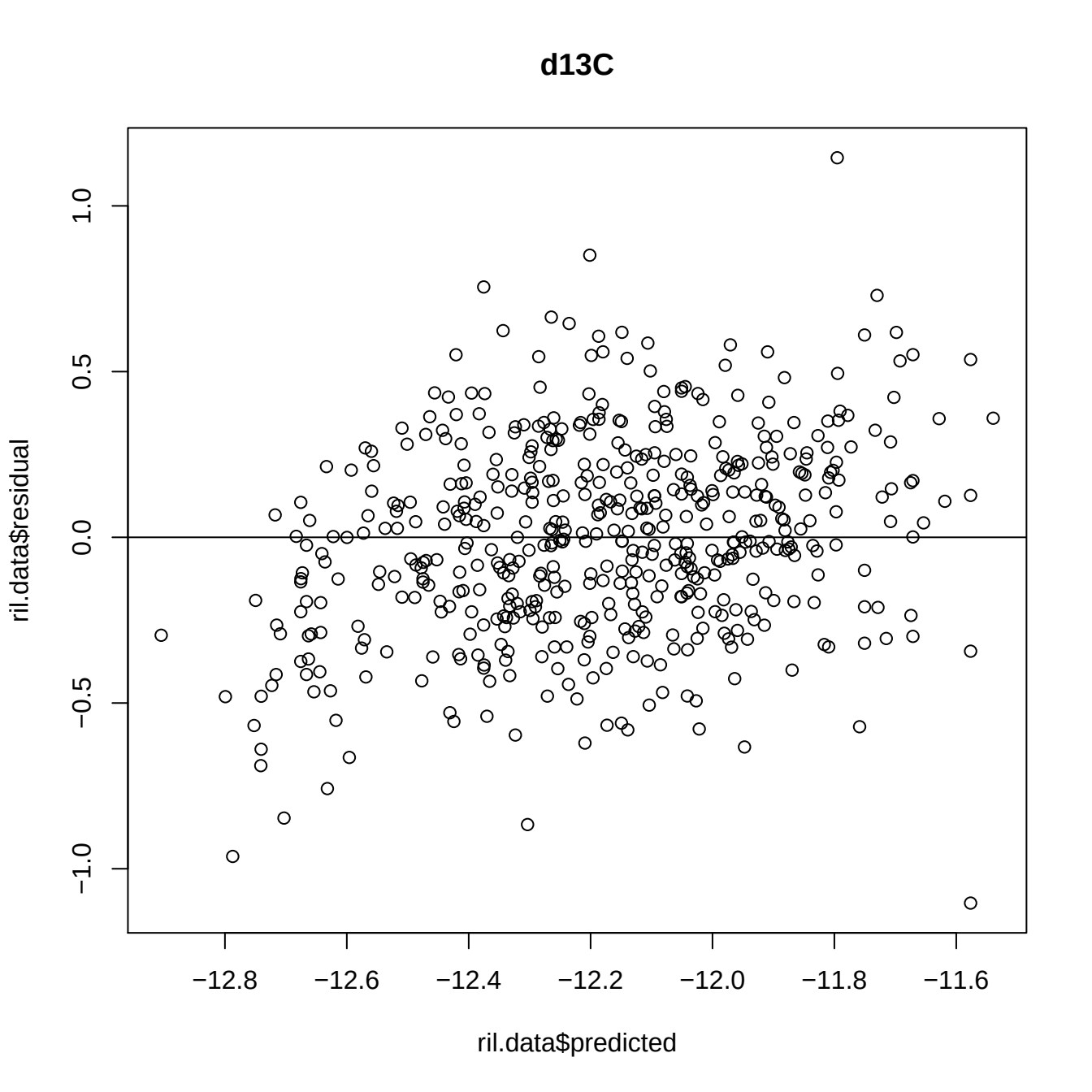

CN_ratio
14
16
18
20
22
24
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

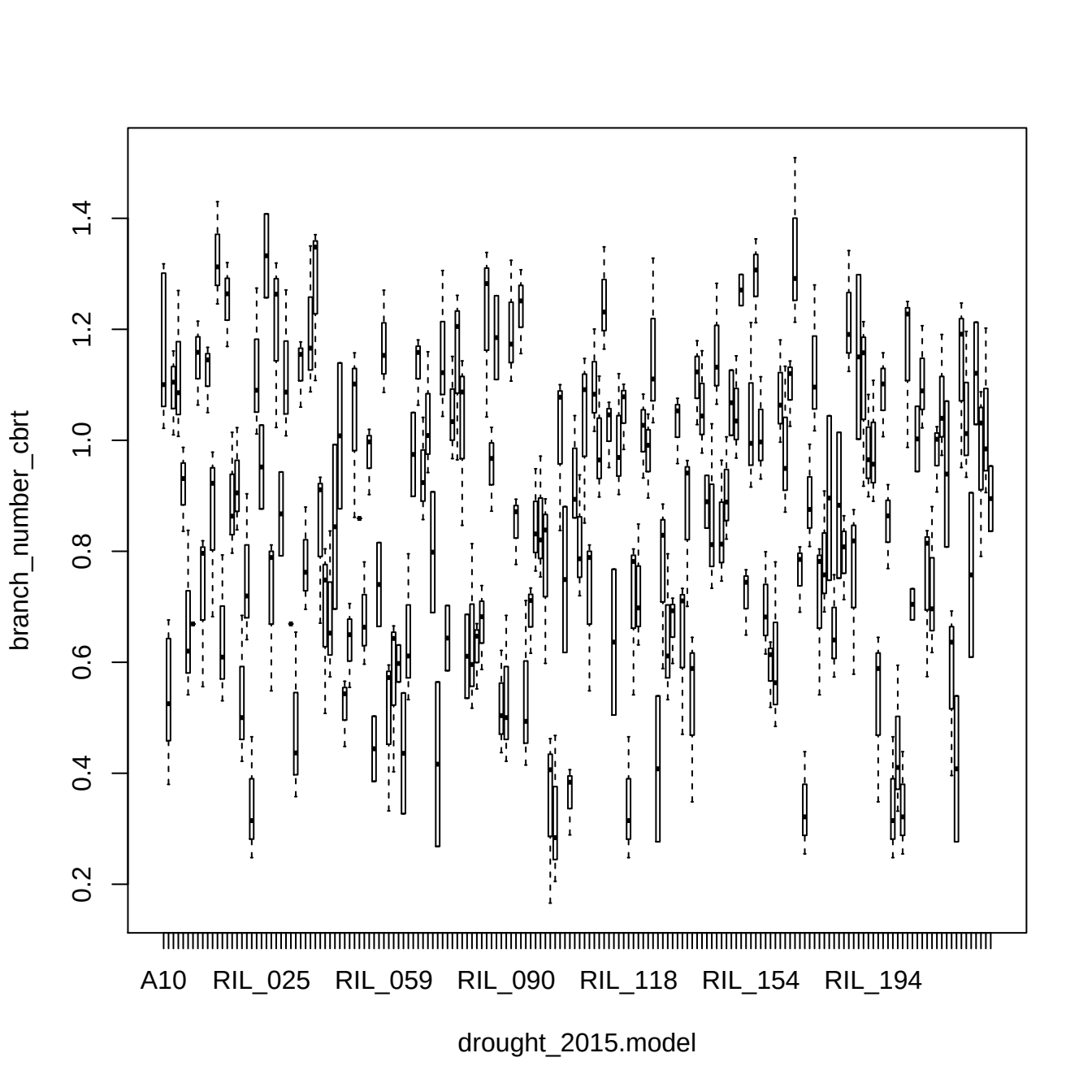

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
−10
−5
0
5
10
15
−3
−2
−1
0
1
2
3

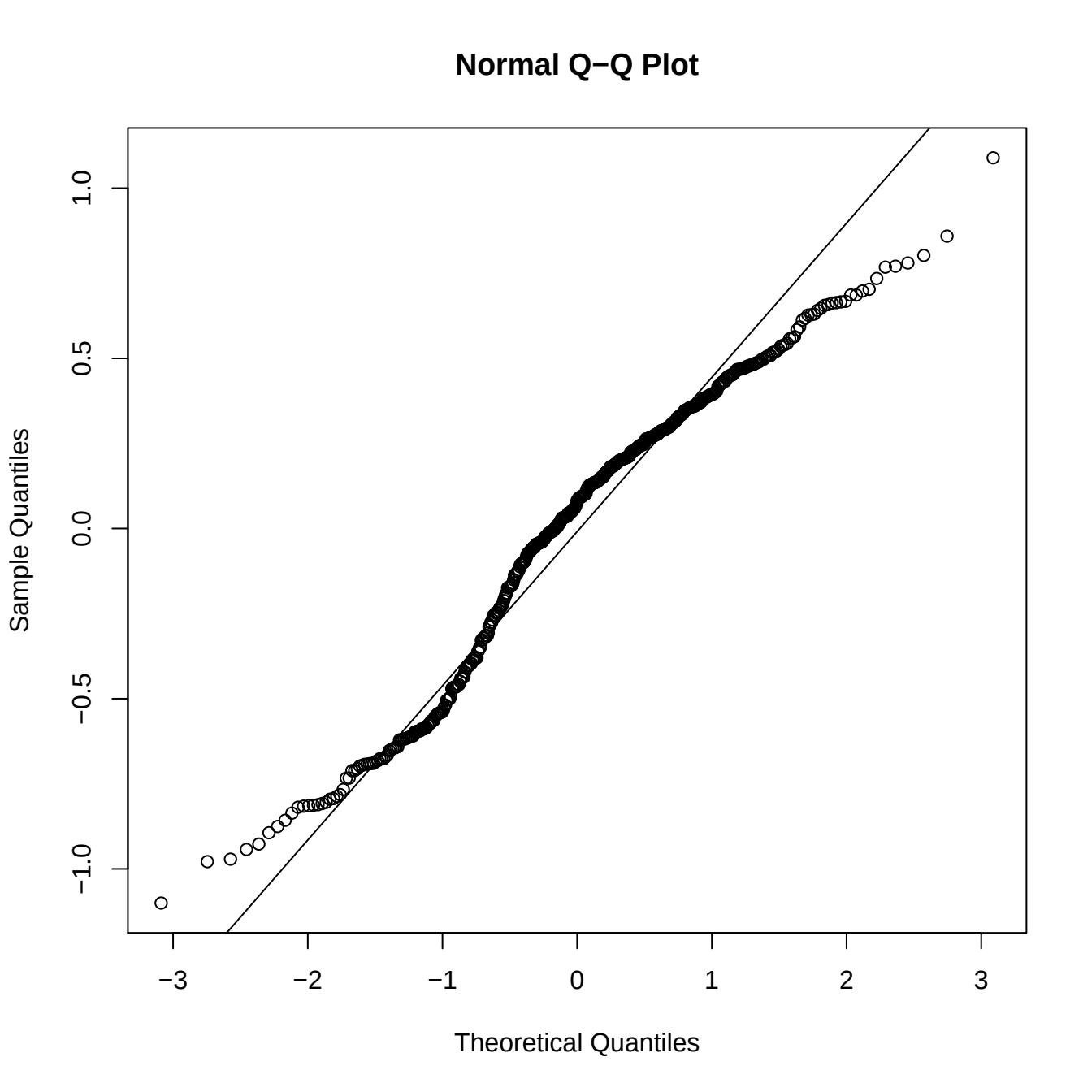

CN_ratio
ril.data$residual
ril.data$predicted
15
10
5
0
−5
−10
14
16
18
20
22
24

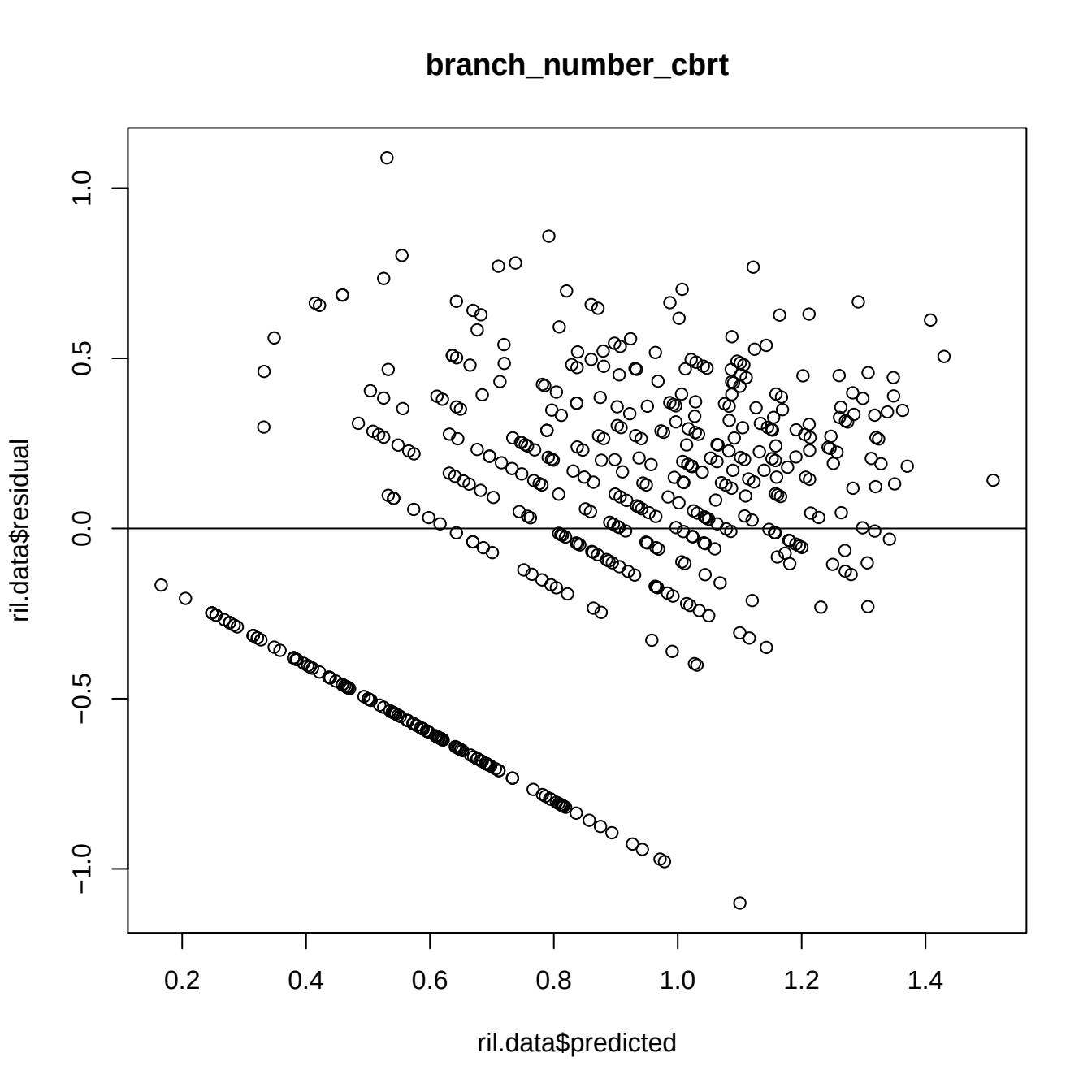

d13C
−11.6
−11.8
−12.0
−12.2
−12.4
−12.6
−12.8
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

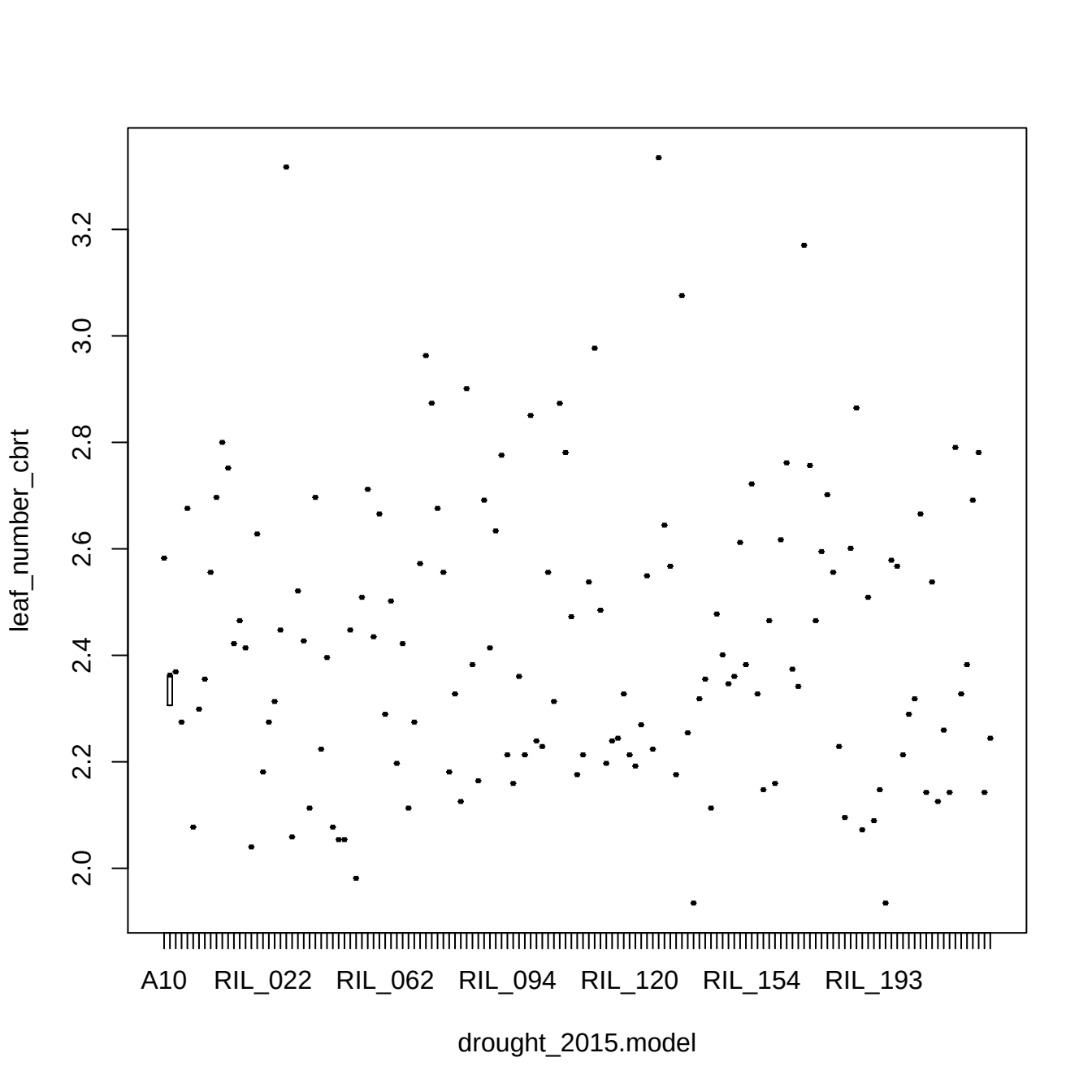

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
1.0
0.5
0.0
−0.5
−1.0
−3
−2
−1
0
1
2
3

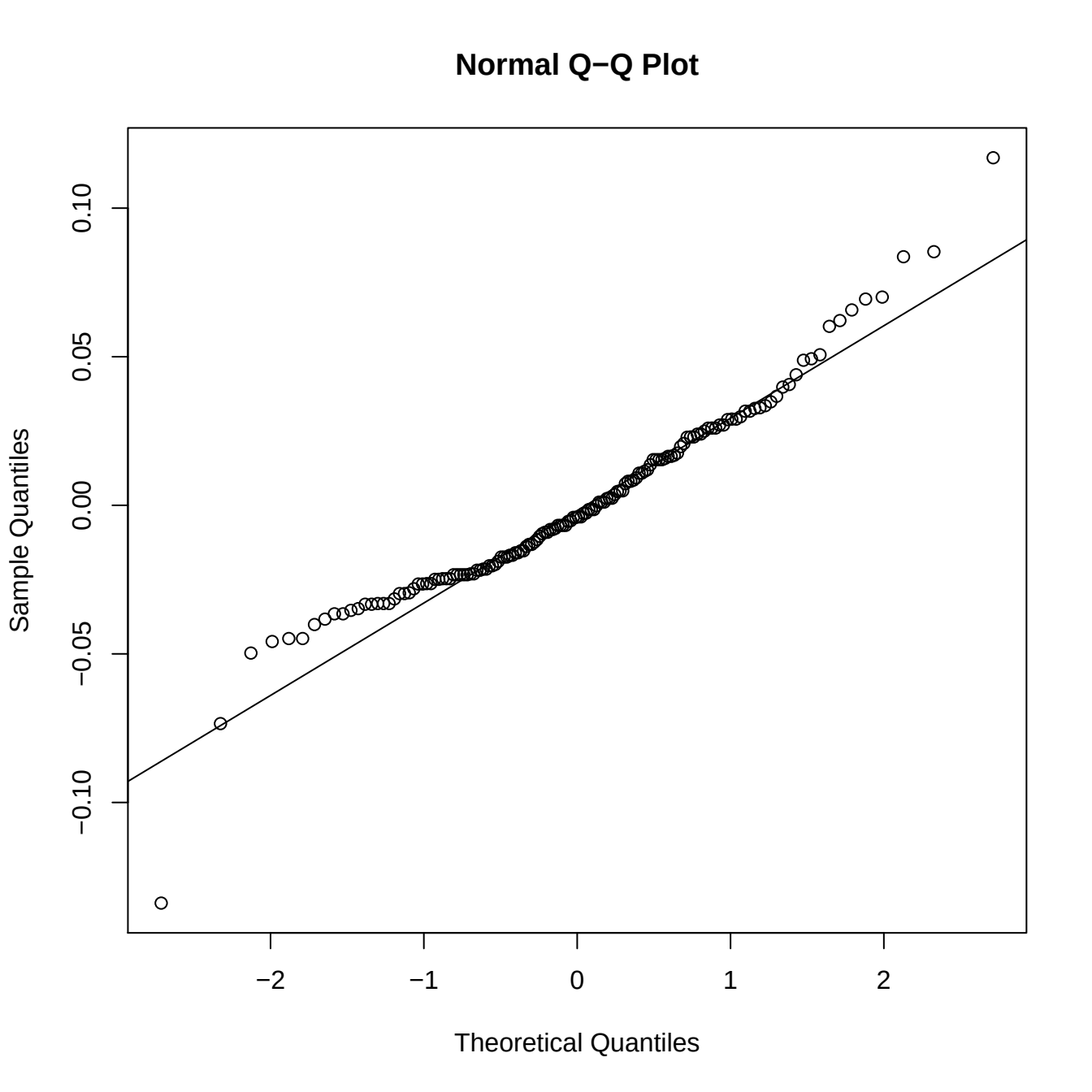

d13C
ril.data$residual
1.0
0.5
0.0
−0.5
−1.0
−12.8
−12.6
−12.4
−12.2
−12.0
−11.8
−11.6
ril.data$predicted

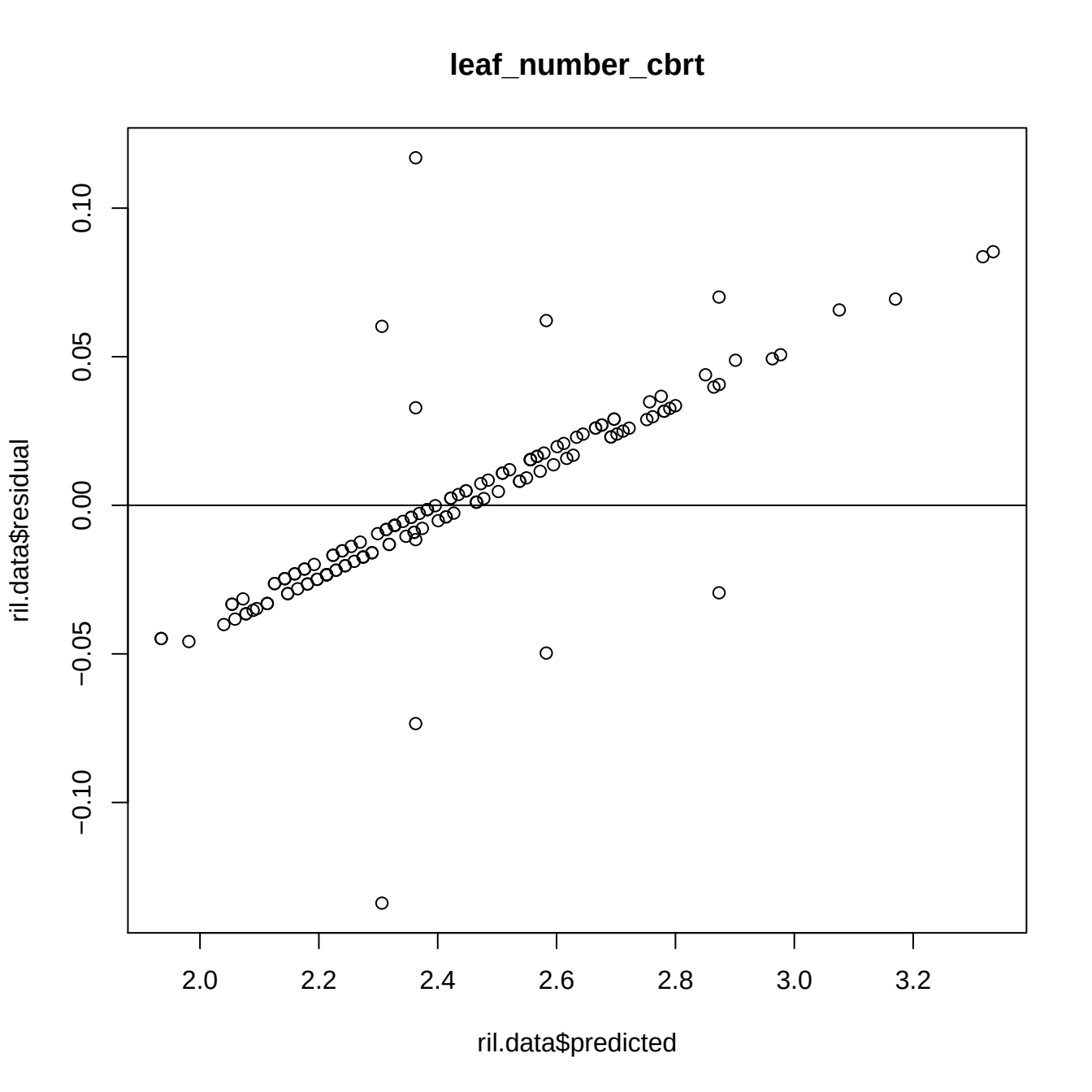

branch_number_cbrt
0.2
0.4
0.6
0.8
1.0
1.2
1.4
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

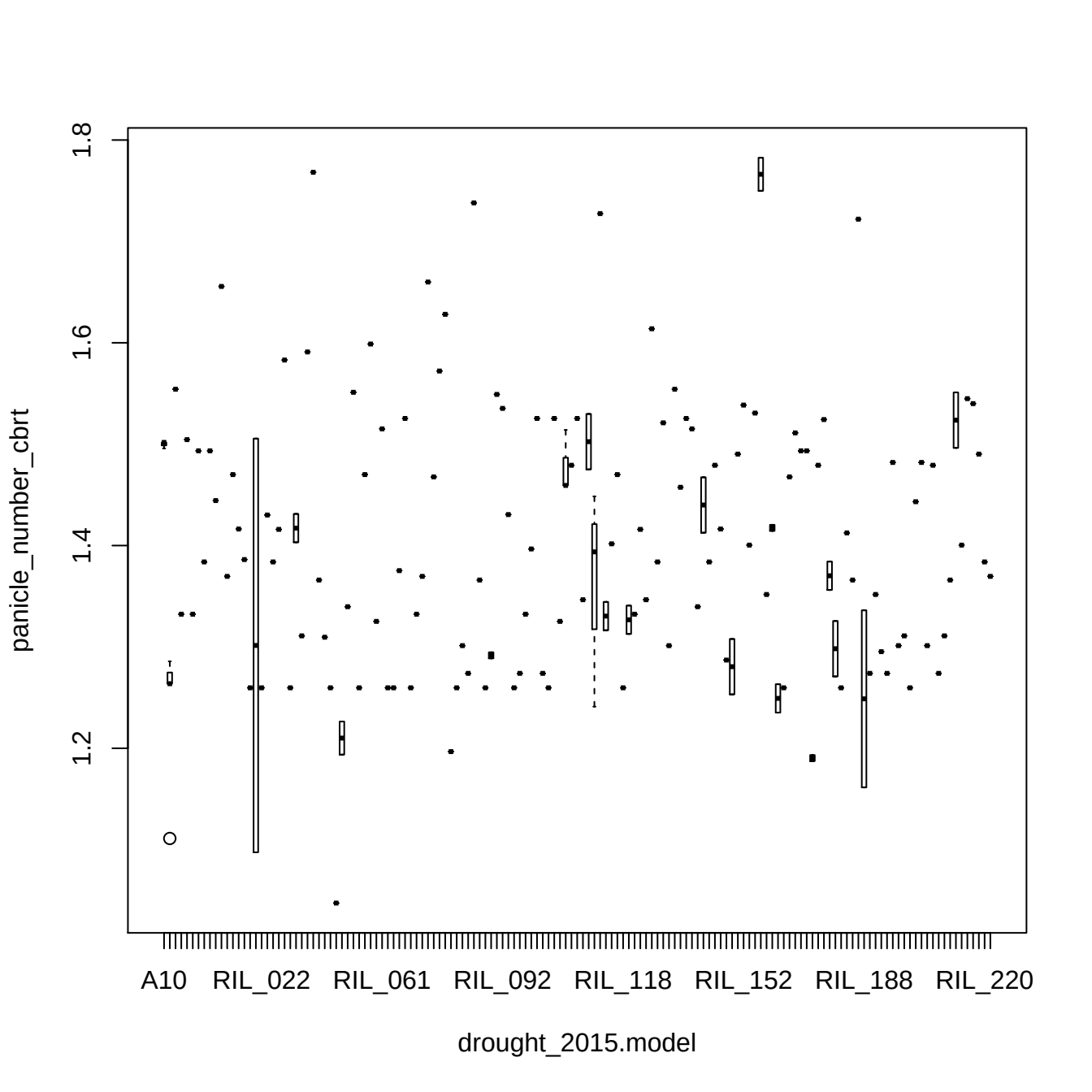

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
1.0
0.5
0.0
−0.5
−1.0
−3
−2
−1
0
1
2
3

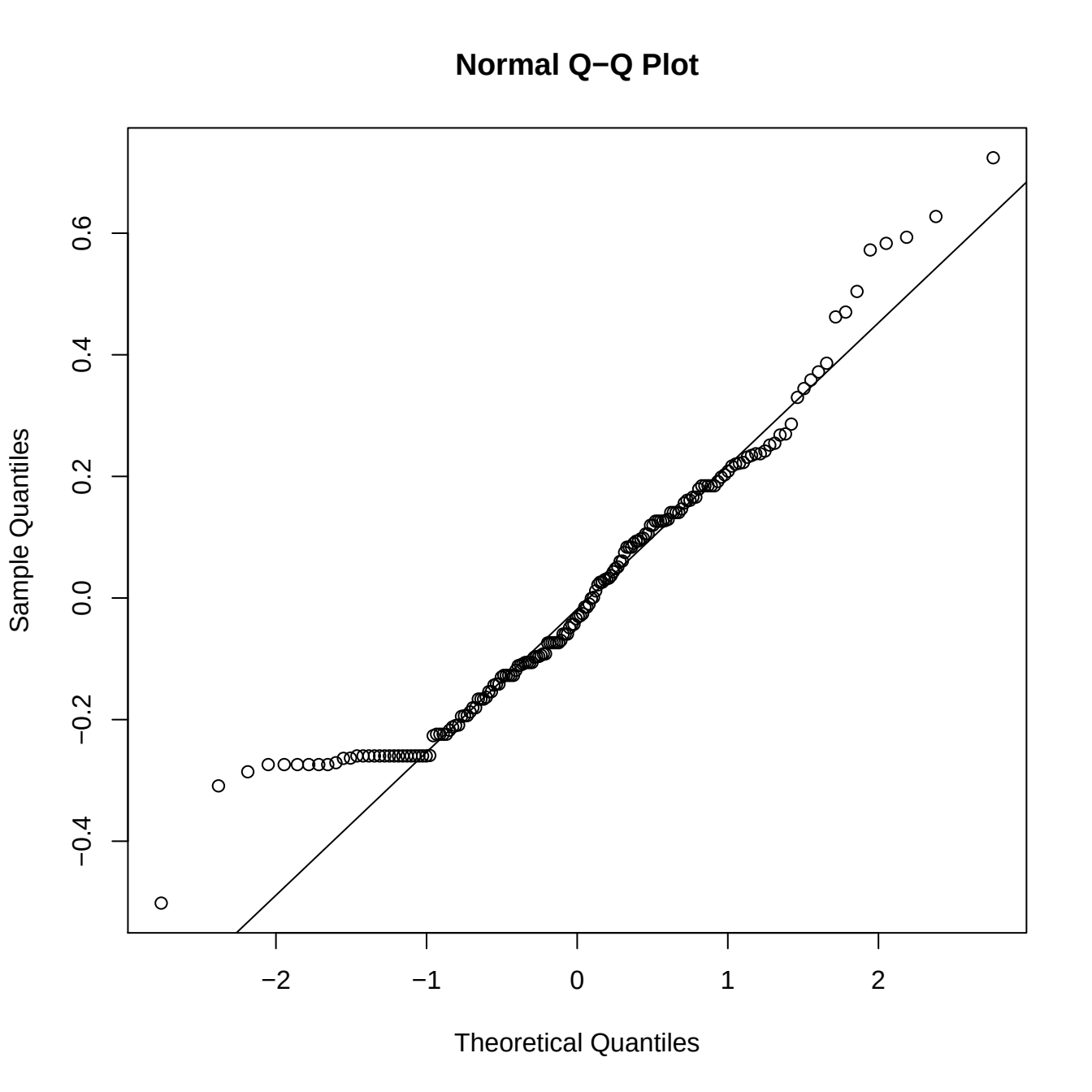

branch_number_cbrt
ril.data$residual
1.0
0.5
0.0
−0.5
−1.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
ril.data$predicted

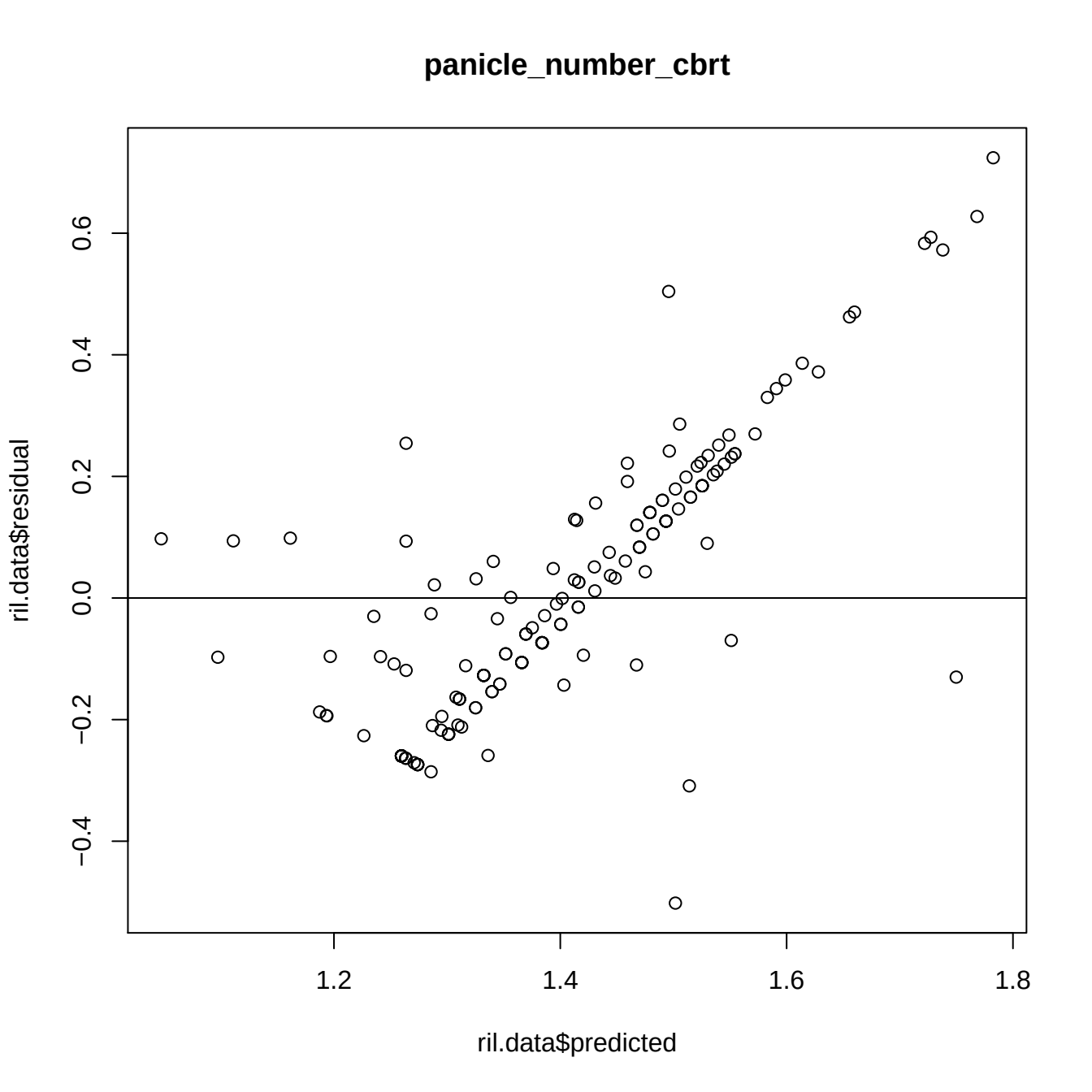

leaf_number_cbrt
2.0
2.2
2.4
2.6
2.8
3.0
3.2
A10
RIL_022
RIL_062
RIL_094
RIL_120
RIL_154
RIL_193
drought_2015.model

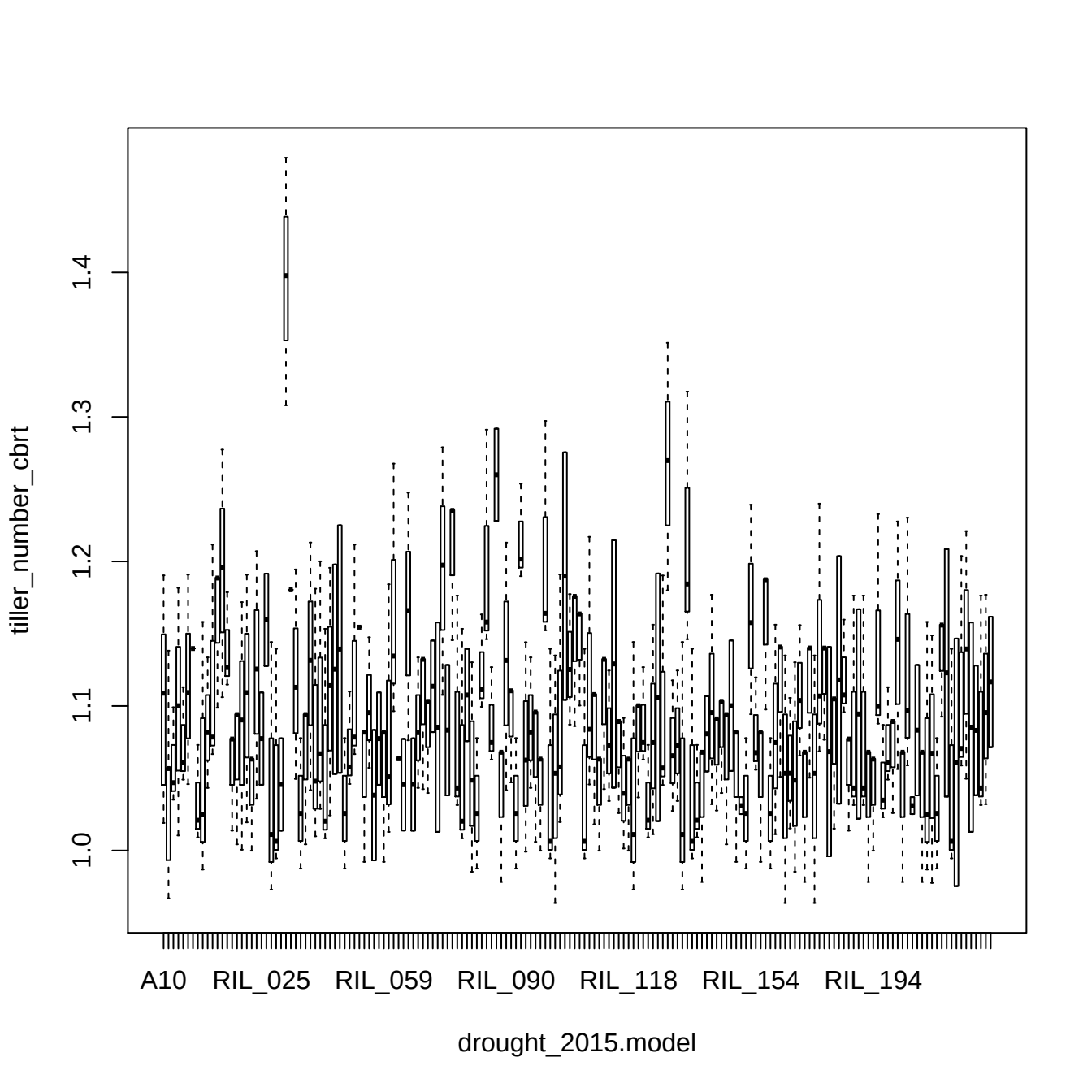

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.10
0.05
0.00
−0.05
−0.10
−2
−1
0
1
2

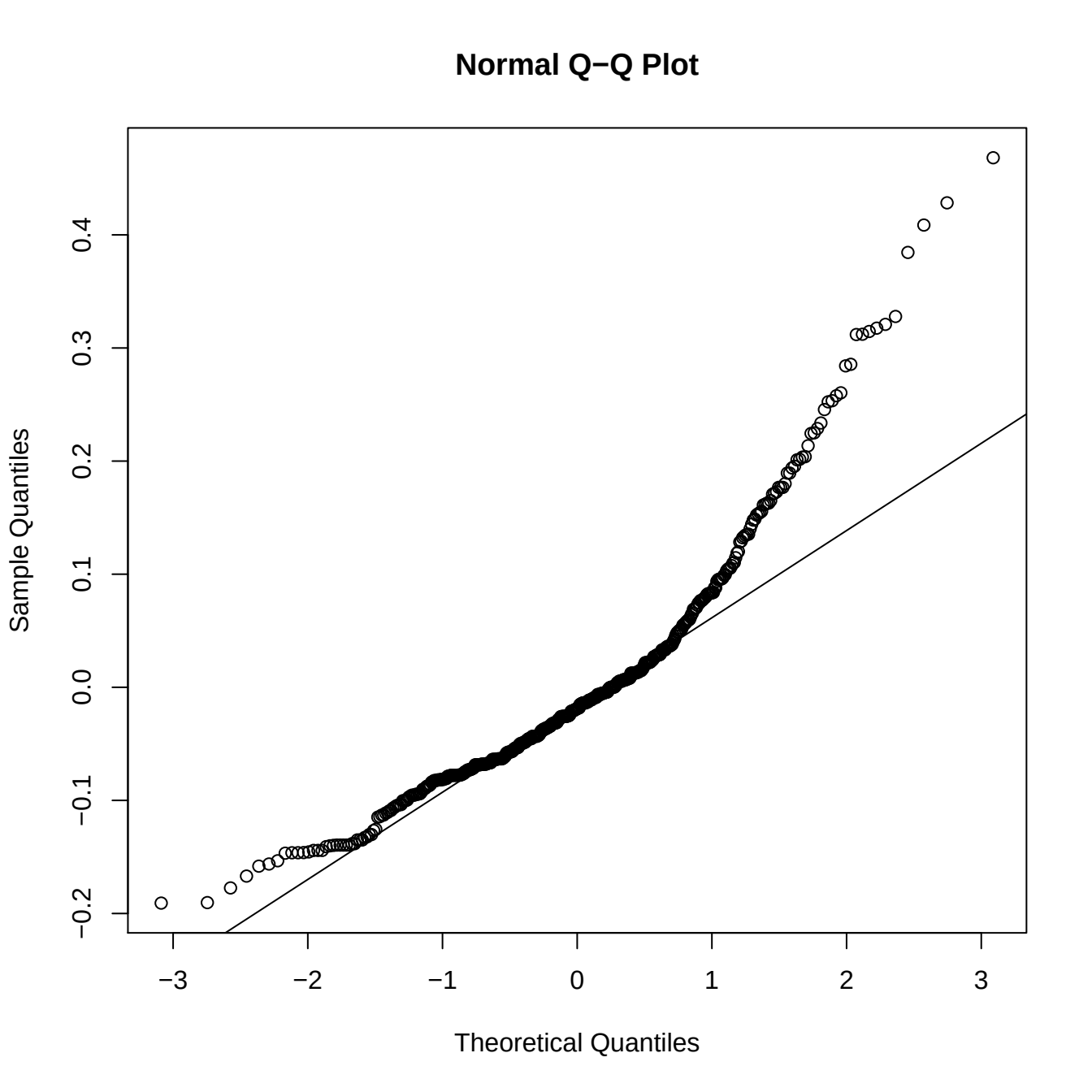

leaf_number_cbrt
ril.data$residual
0.10
0.05
0.00
−0.05
−0.10
2.0
2.2
2.4
2.6
2.8
3.0
3.2
ril.data$predicted

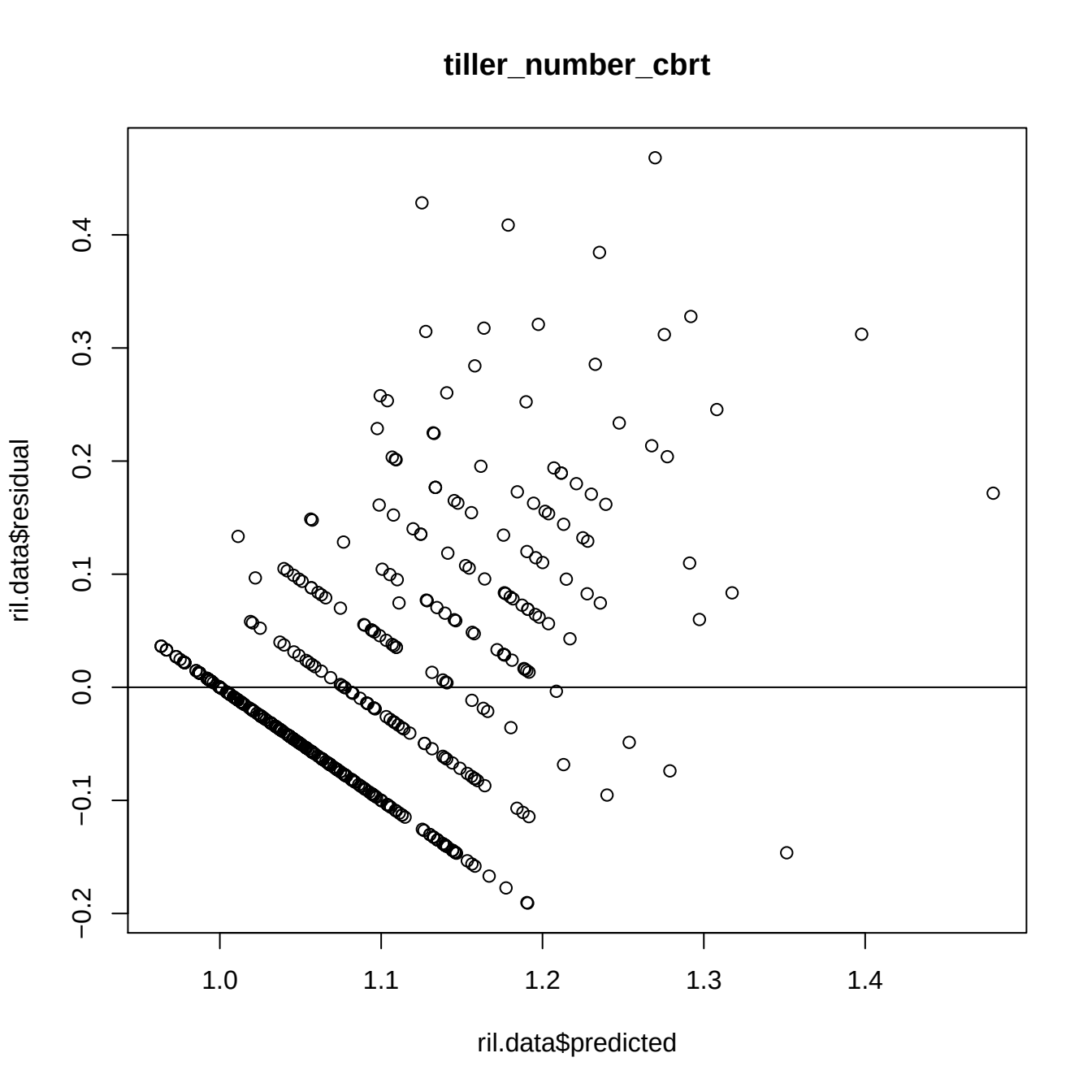

panicle_number_cbrt
1.2
1.4
1.6
1.8
A10
RIL_022
RIL_061
RIL_092
RIL_118
RIL_152
RIL_188
RIL_220
drought_2015.model

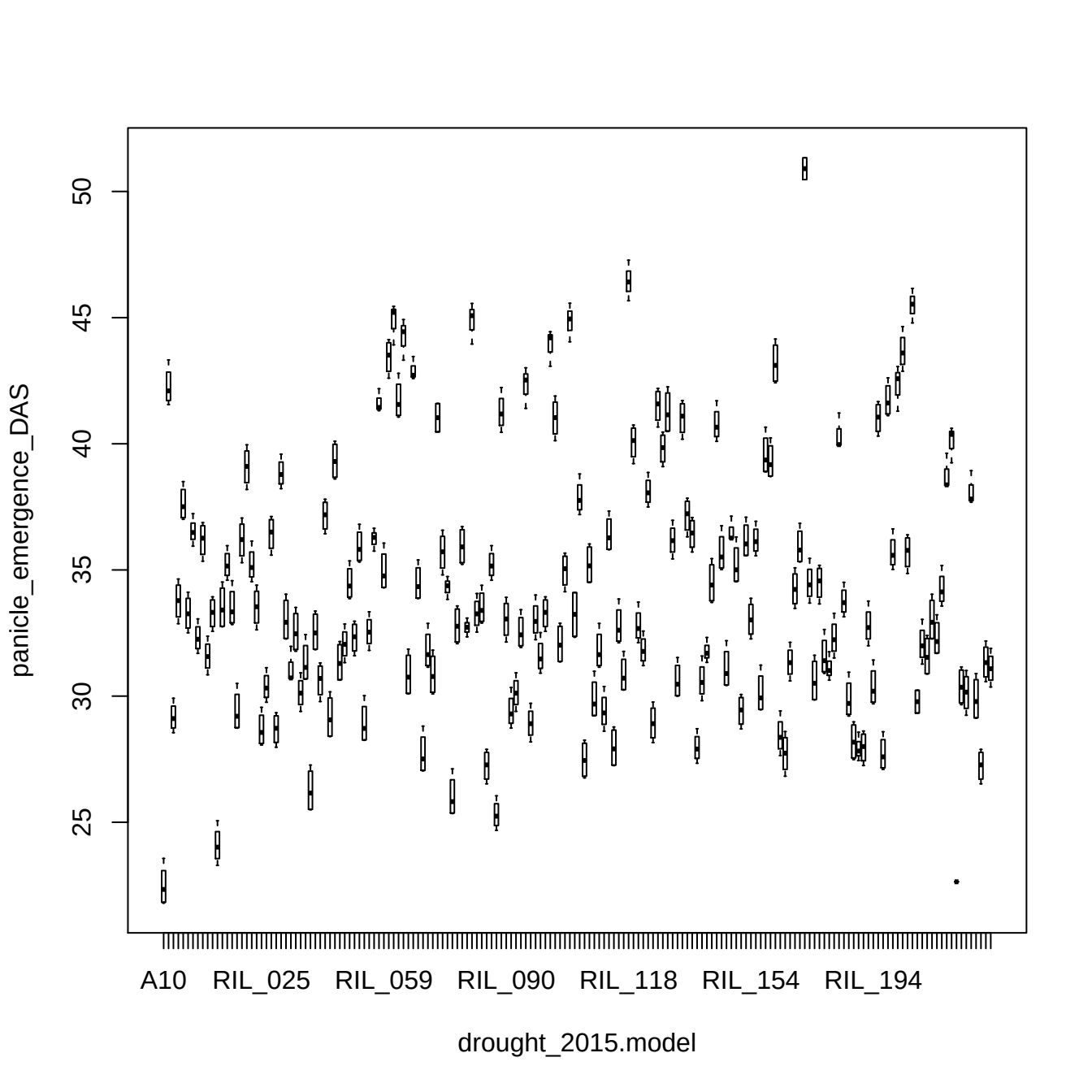

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.6
0.4
0.2
0.0
−0.2
−0.4
−2
−1
0
1
2

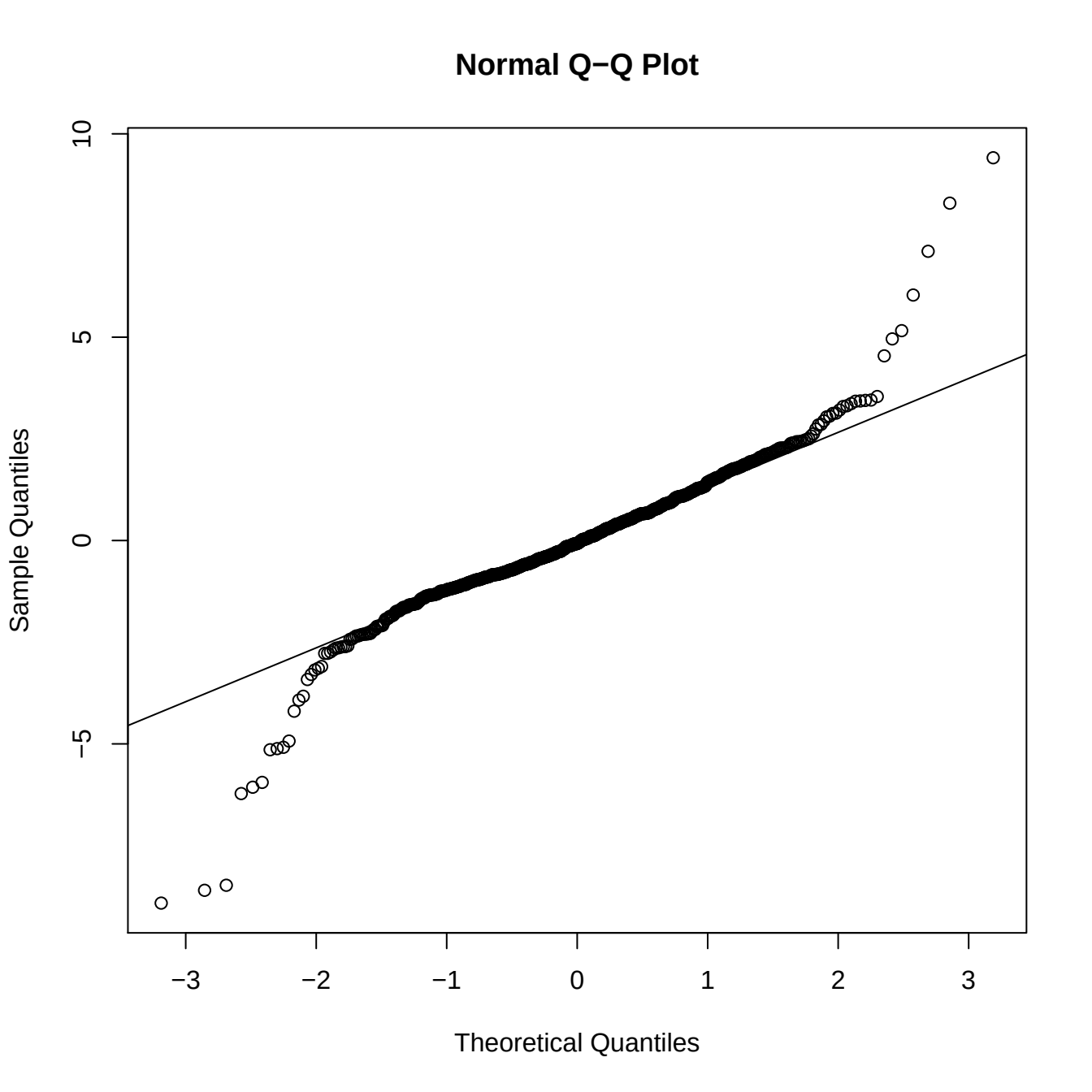

panicle_number_cbrt
ril.data$residual
0.6
0.4
0.2
0.0
−0.2
−0.4
1.2
1.4
1.6
1.8
ril.data$predicted

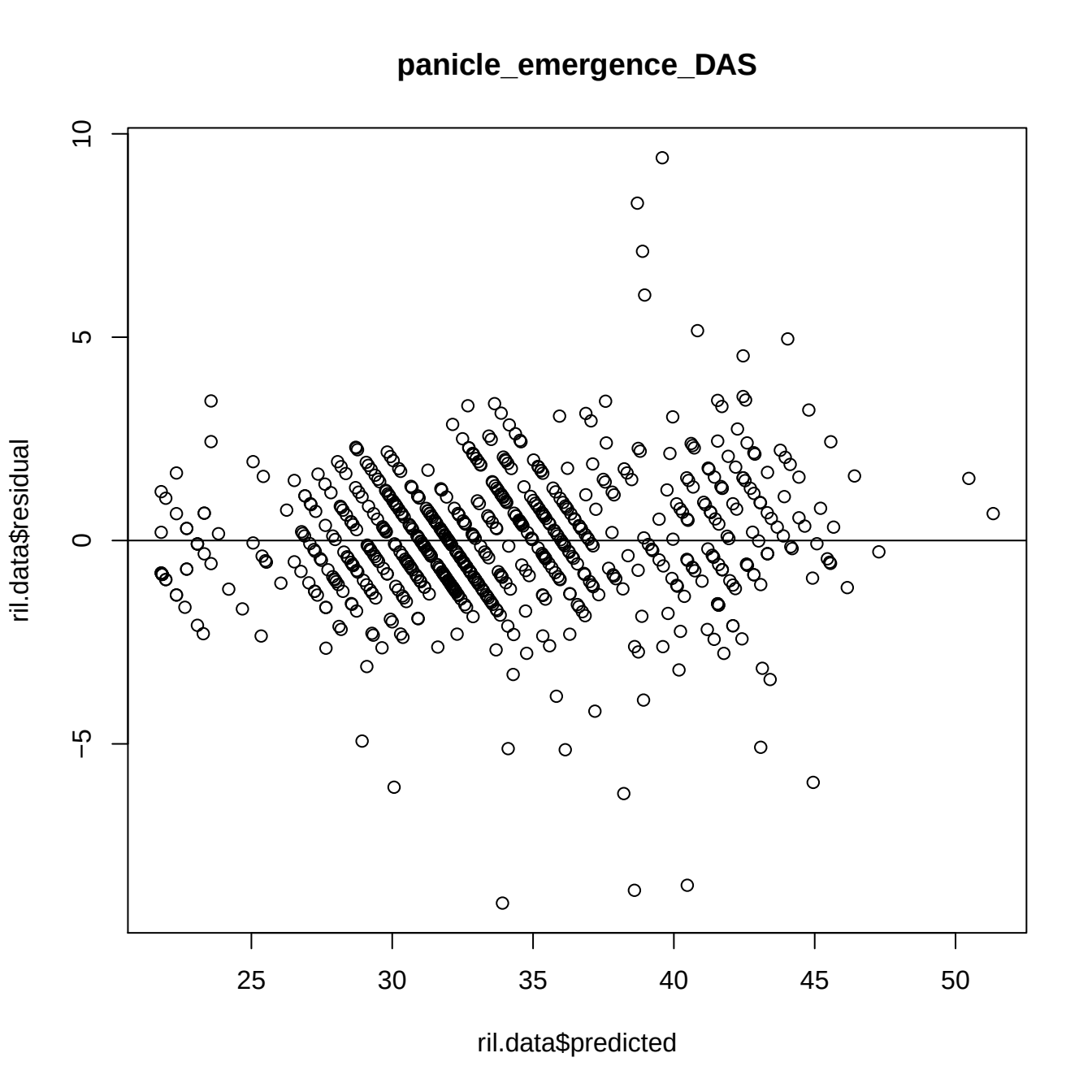

tiller_number_cbrt
1.0
1.1
1.2
1.3
1.4
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

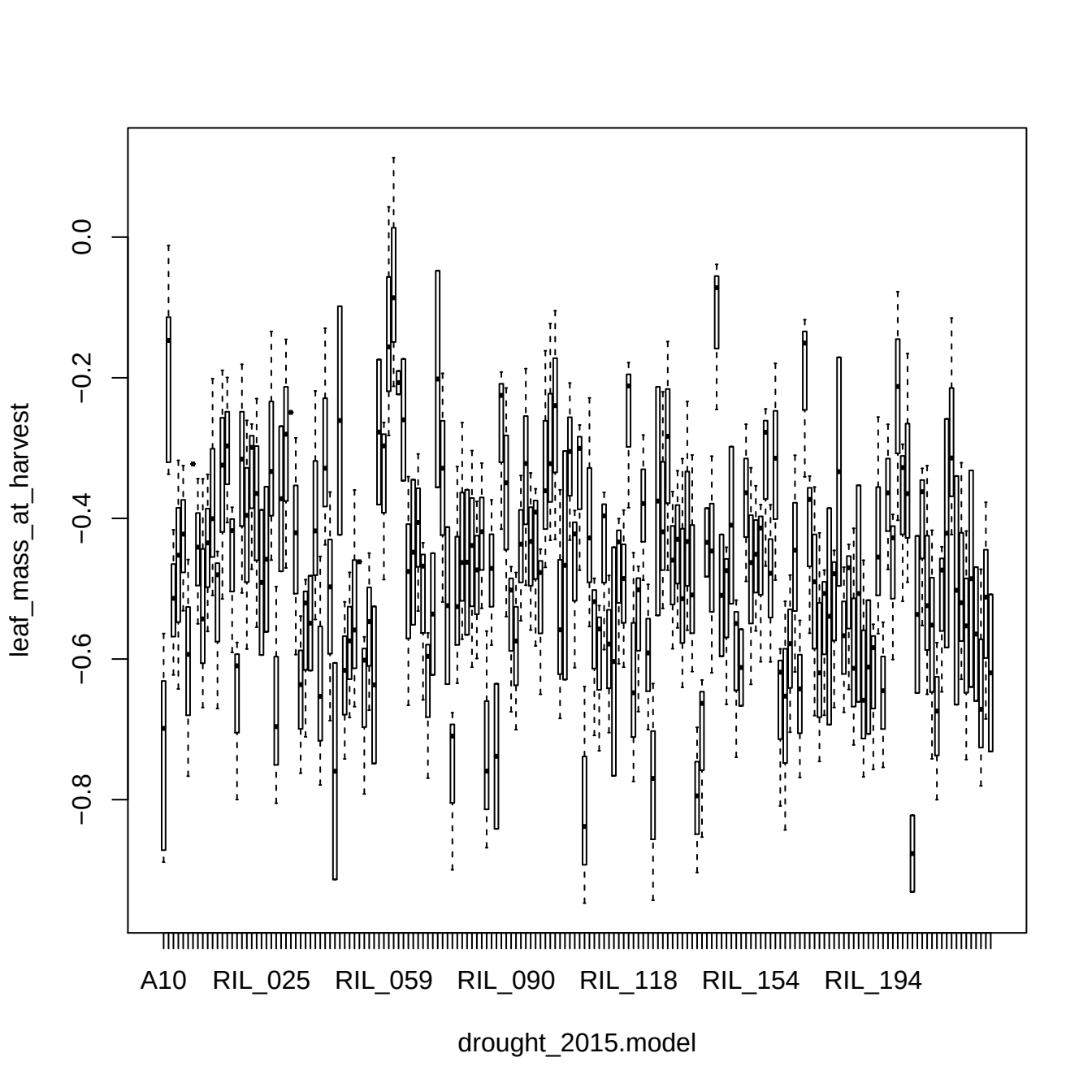

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
−0.2
−0.1
0.0
0.1
0.2
0.3
0.4
−3
−2
−1
0
1
2
3

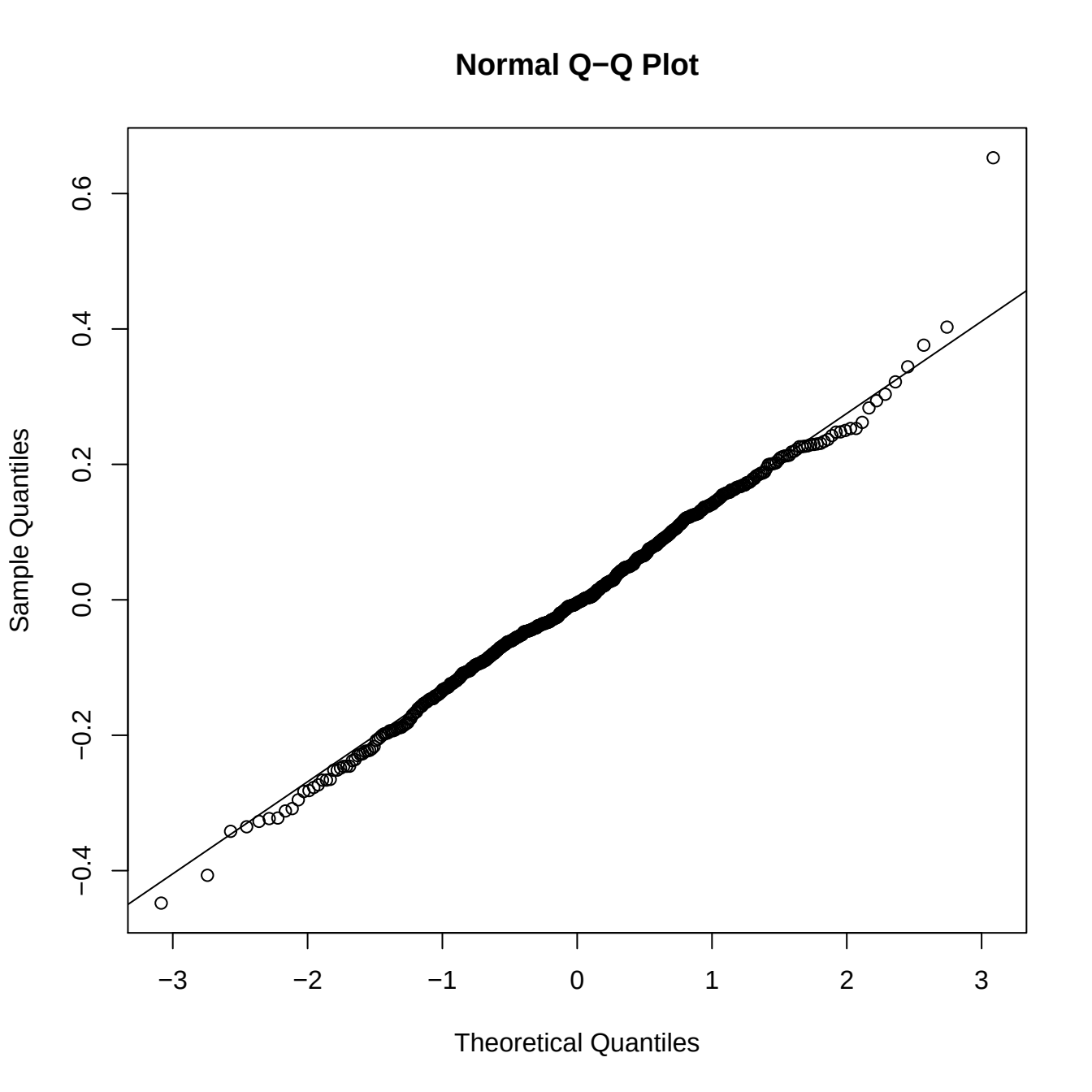

tiller_number_cbrt
ril.data$residual
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
1.0
1.1
1.2
1.3
1.4
ril.data$predicted

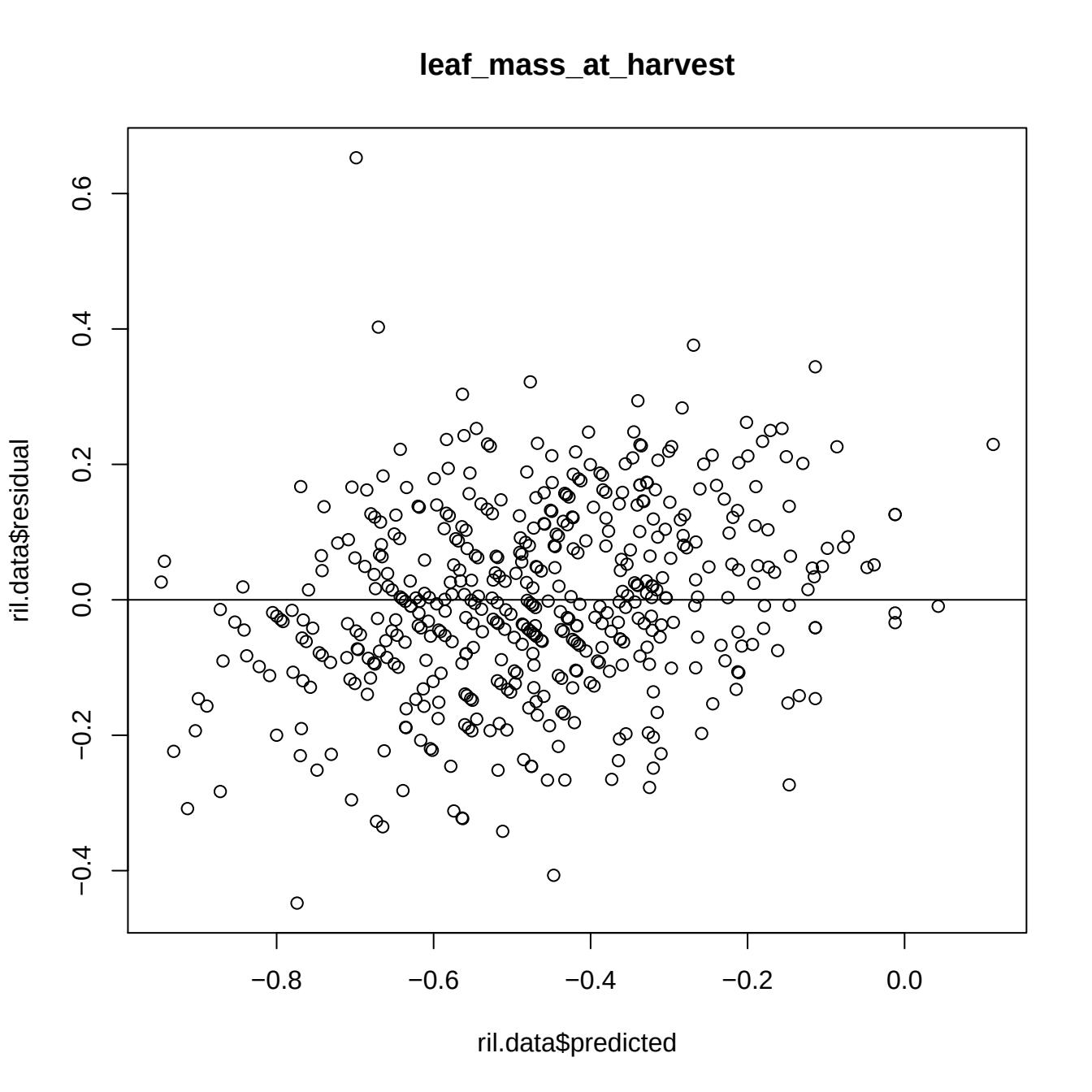

panicle_emergence_DAS
25
30
35
40
45
50
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

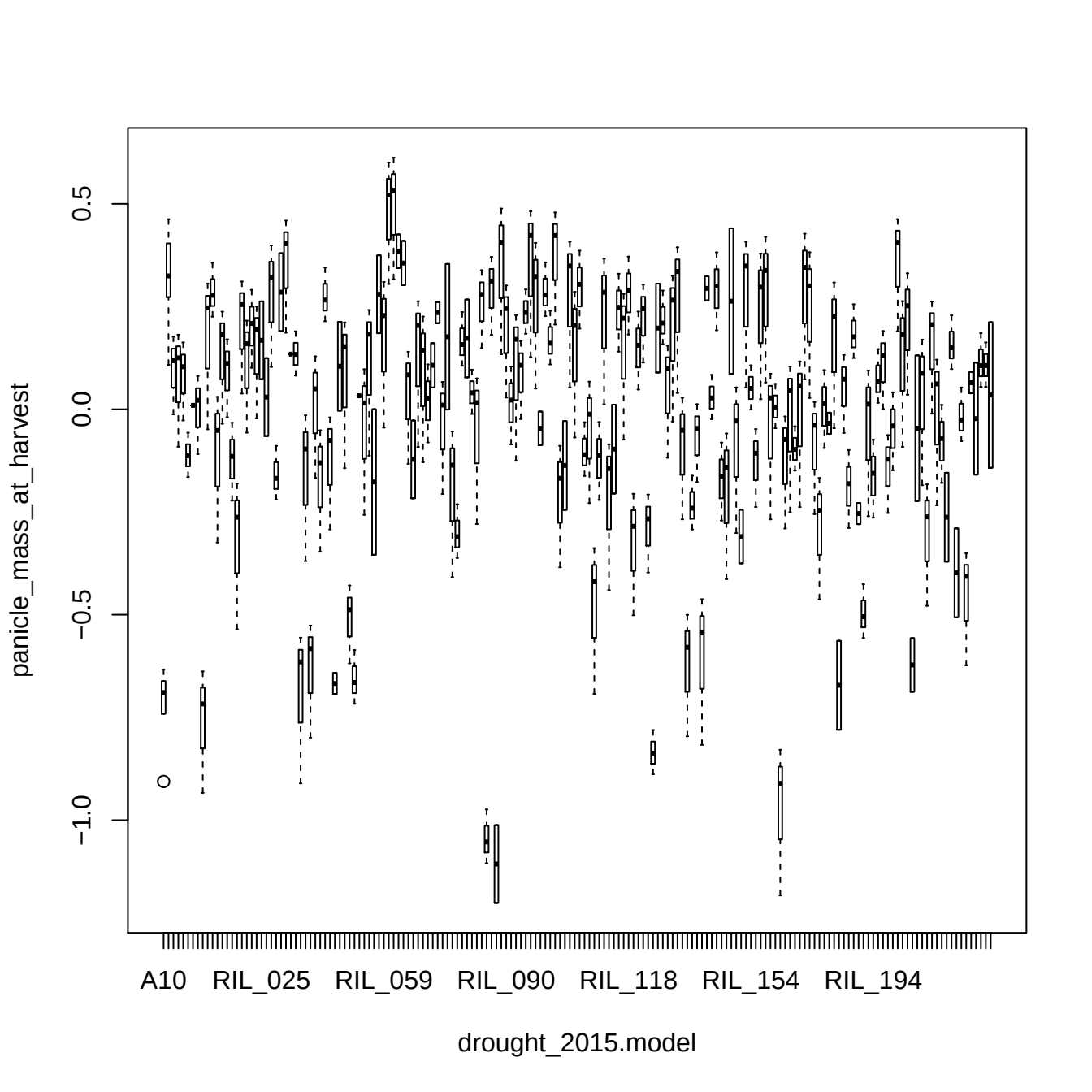

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
10
5
0
−5
−3
−2
−1
0
1
2
3

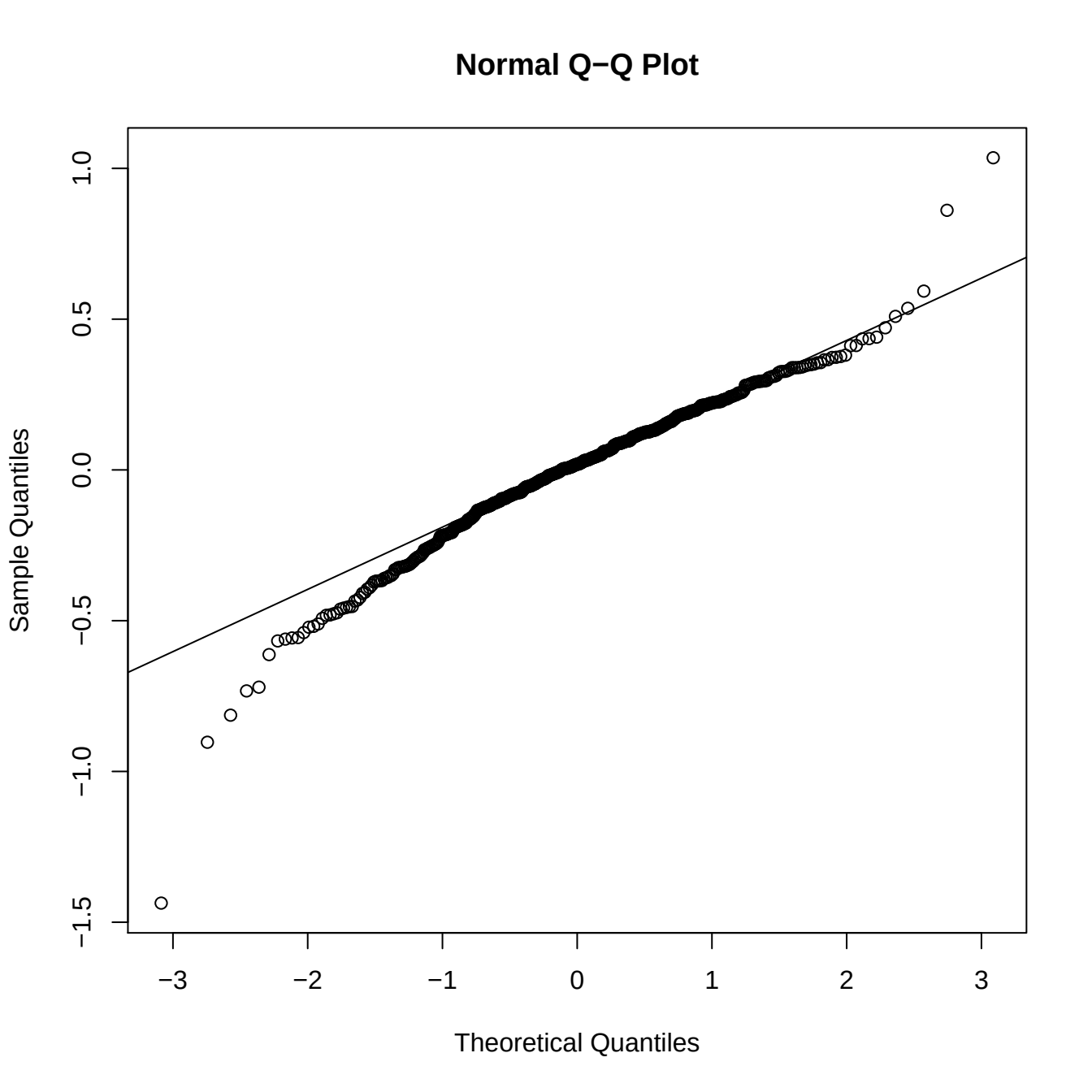

panicle_emergence_DAS
ril.data$residual
ril.data$predicted
10
5
0
−5
25
30
35
40
45
50

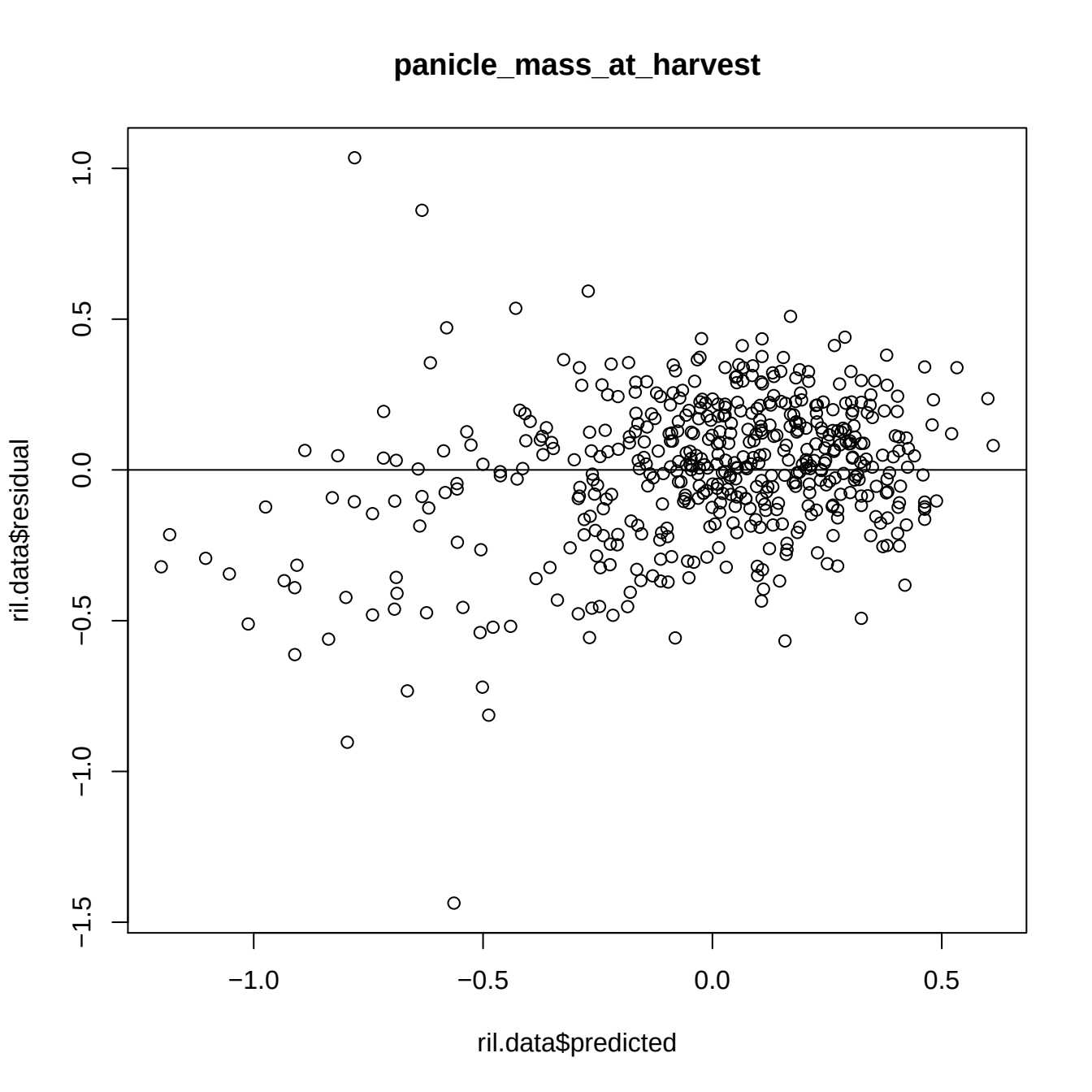

leaf_mass_at_harvest
0.0
−0.2
−0.4
−0.6
−0.8
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

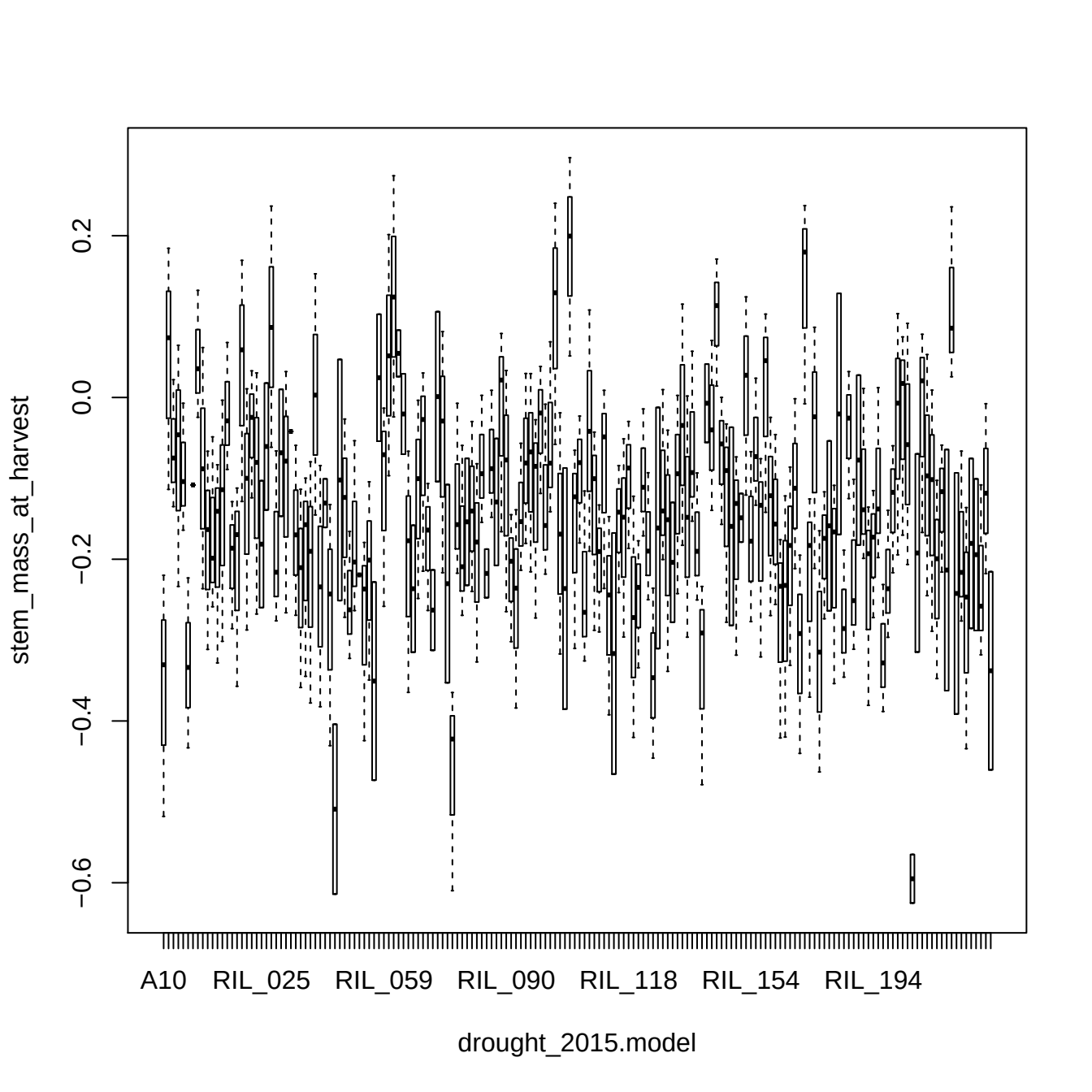

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.6
0.4
0.2
0.0
−0.2
−0.4
−3
−2
−1
0
1
2
3

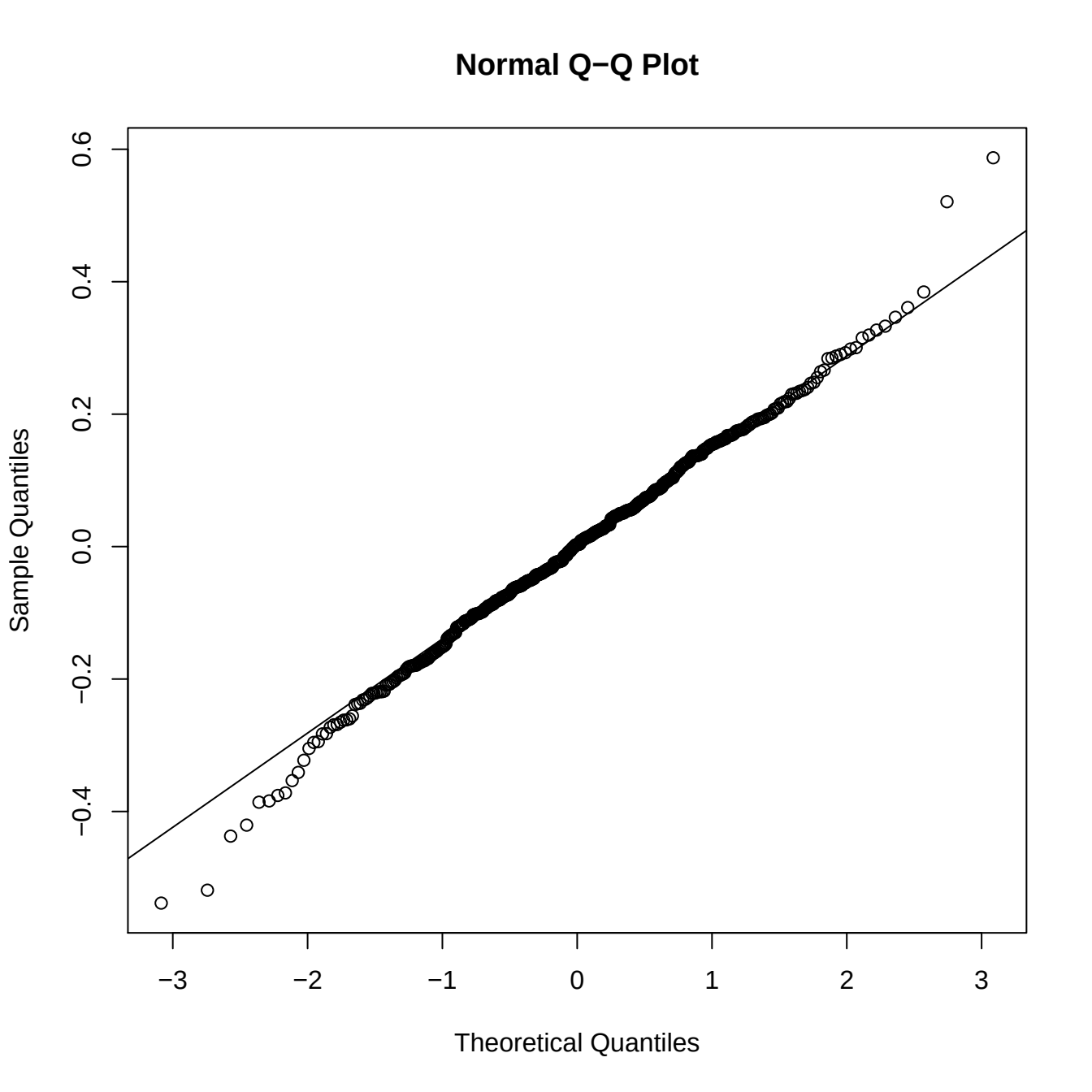

leaf_mass_at_harvest
ril.data$residual
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.8
−0.6
−0.4
−0.2
0.0
ril.data$predicted

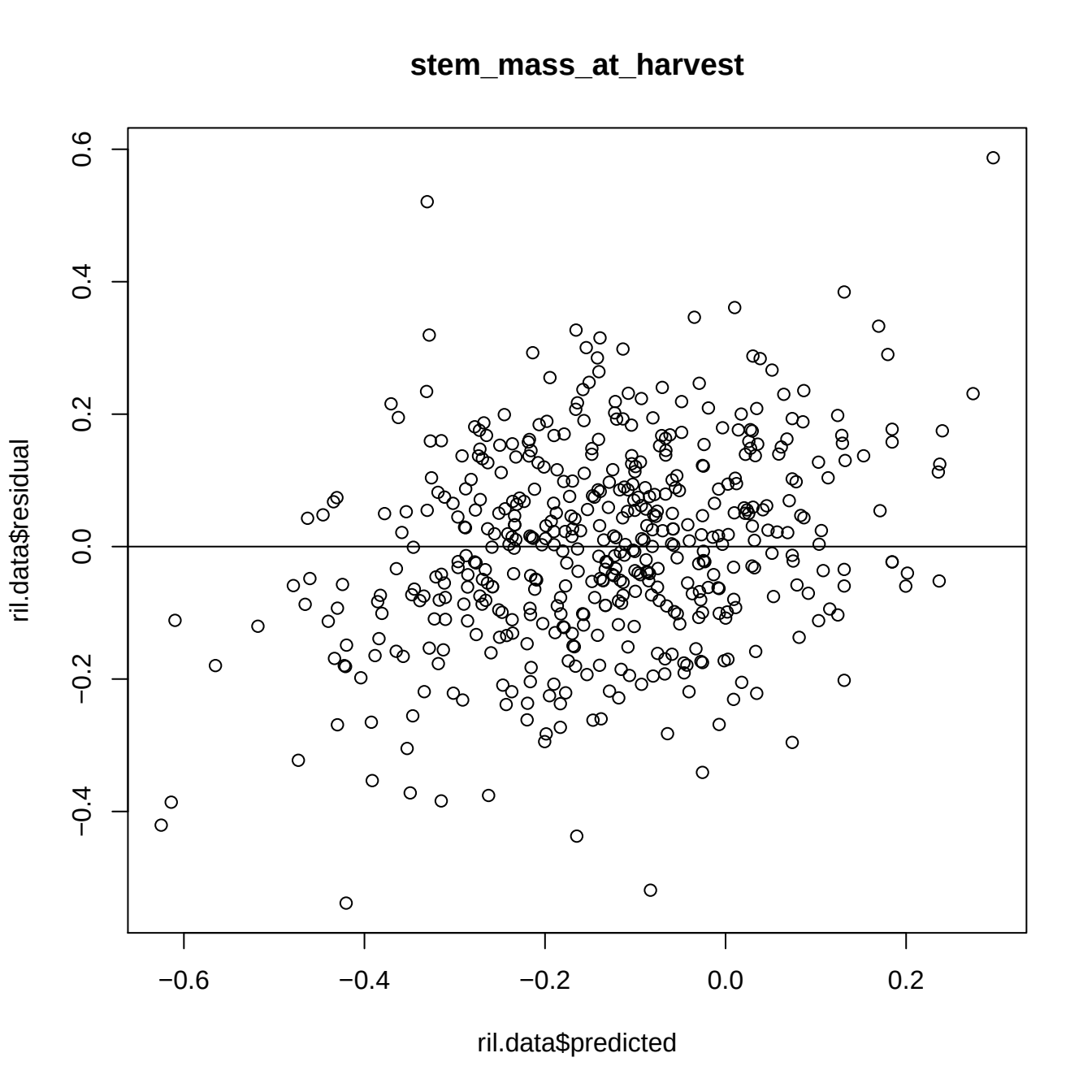

panicle_mass_at_harvest
0.5
0.0
−0.5
−1.0
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

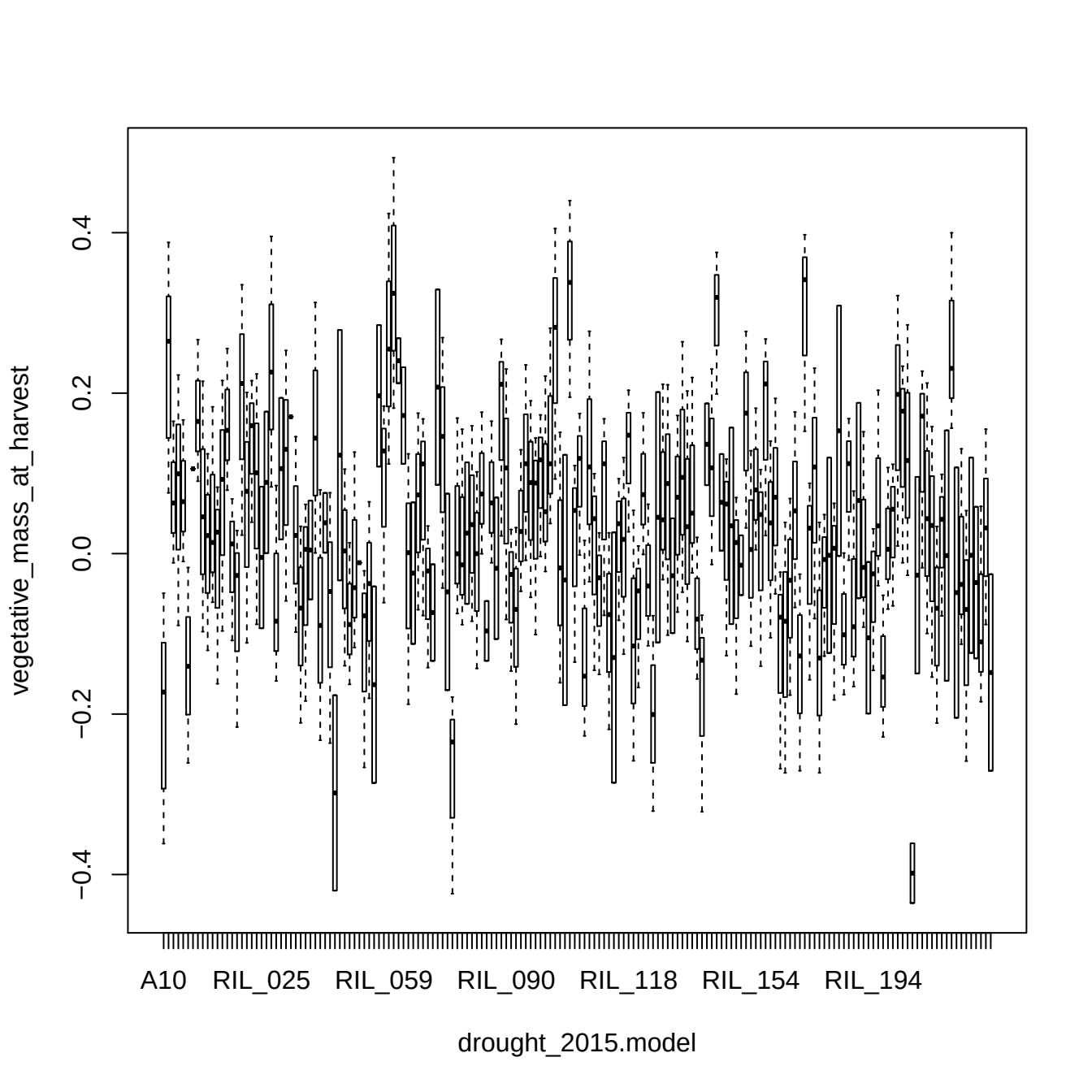

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
1.0
0.5
0.0
−0.5
−1.0
−1.5
−3
−2
−1
0
1
2
3

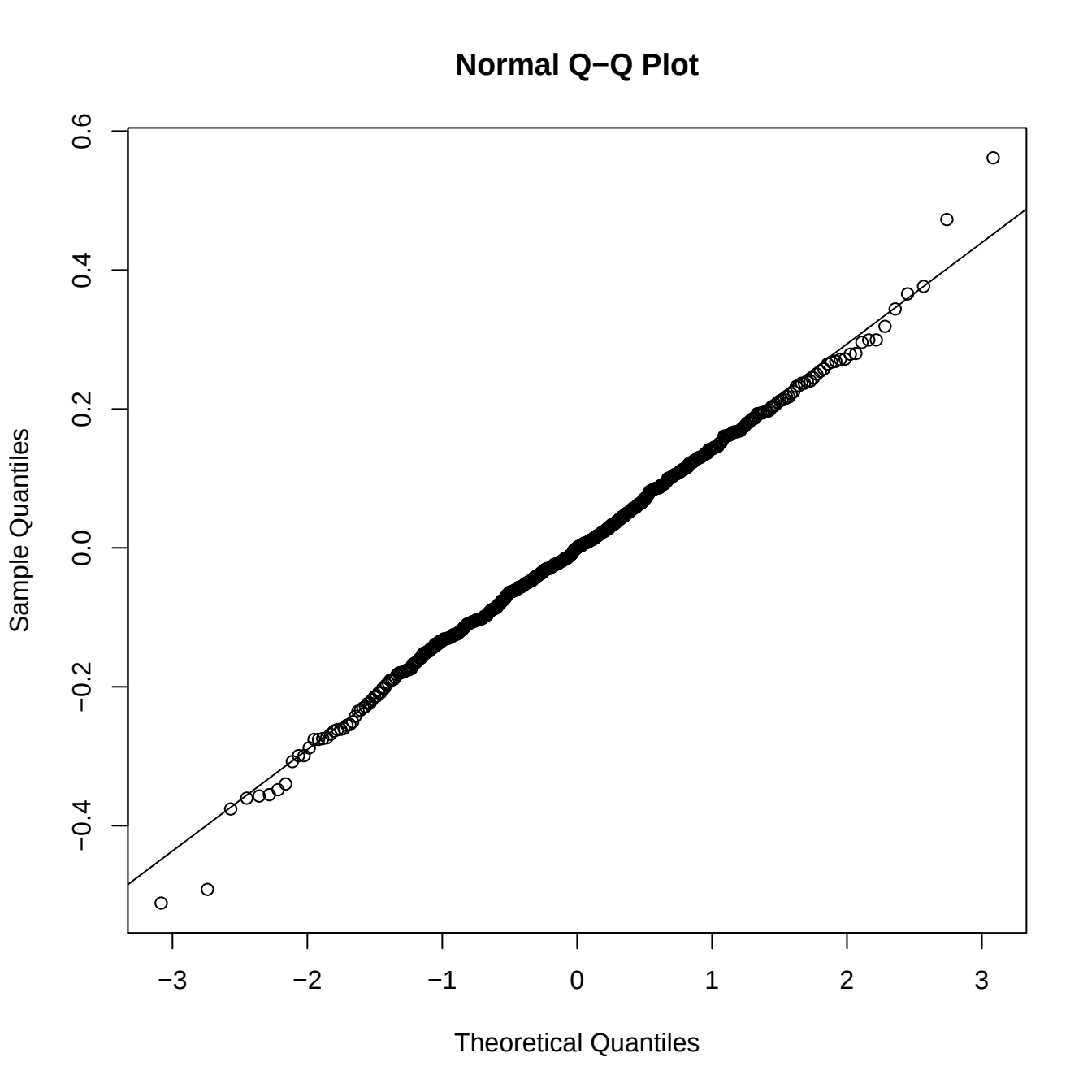

panicle_mass_at_harvest
ril.data$residual
ril.data$predicted
1.0
0.5
0.0
−0.5
−1.0
−1.5
−1.0
−0.5
0.0
0.5

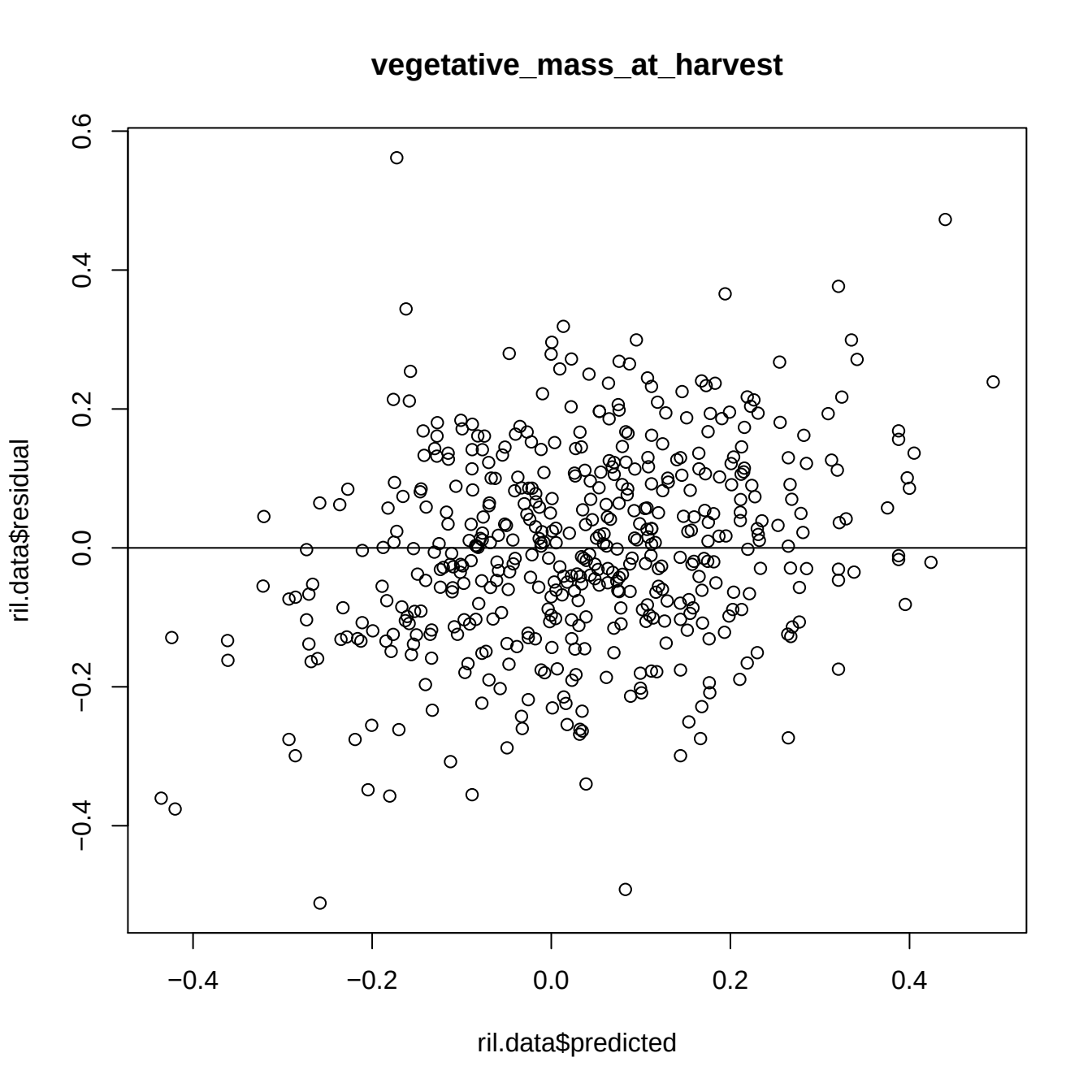

stem_mass_at_harvest
0.2
0.0
−0.2
−0.4
−0.6
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

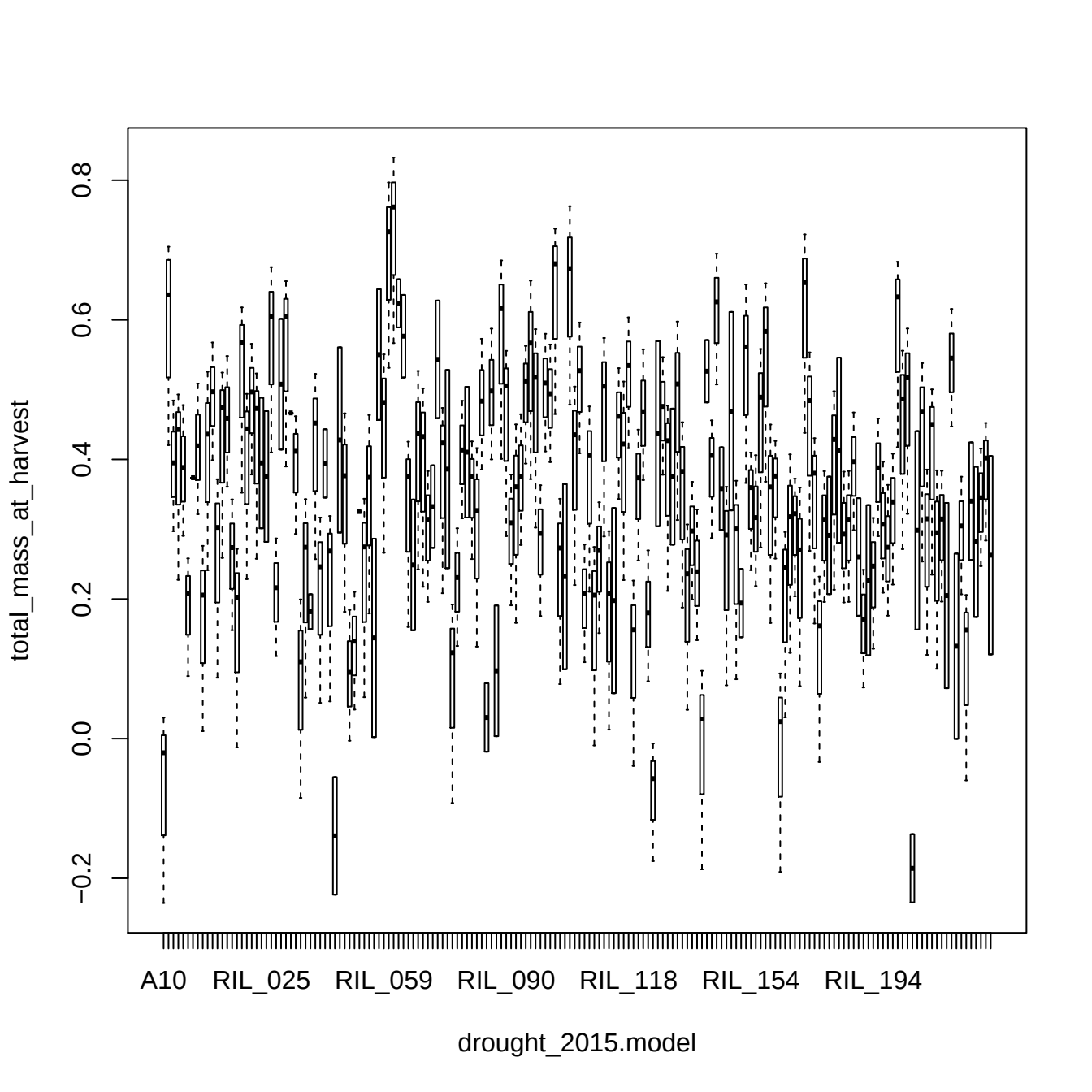

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.6
0.4
0.2
0.0
−0.2
−0.4
−3
−2
−1
0
1
2
3

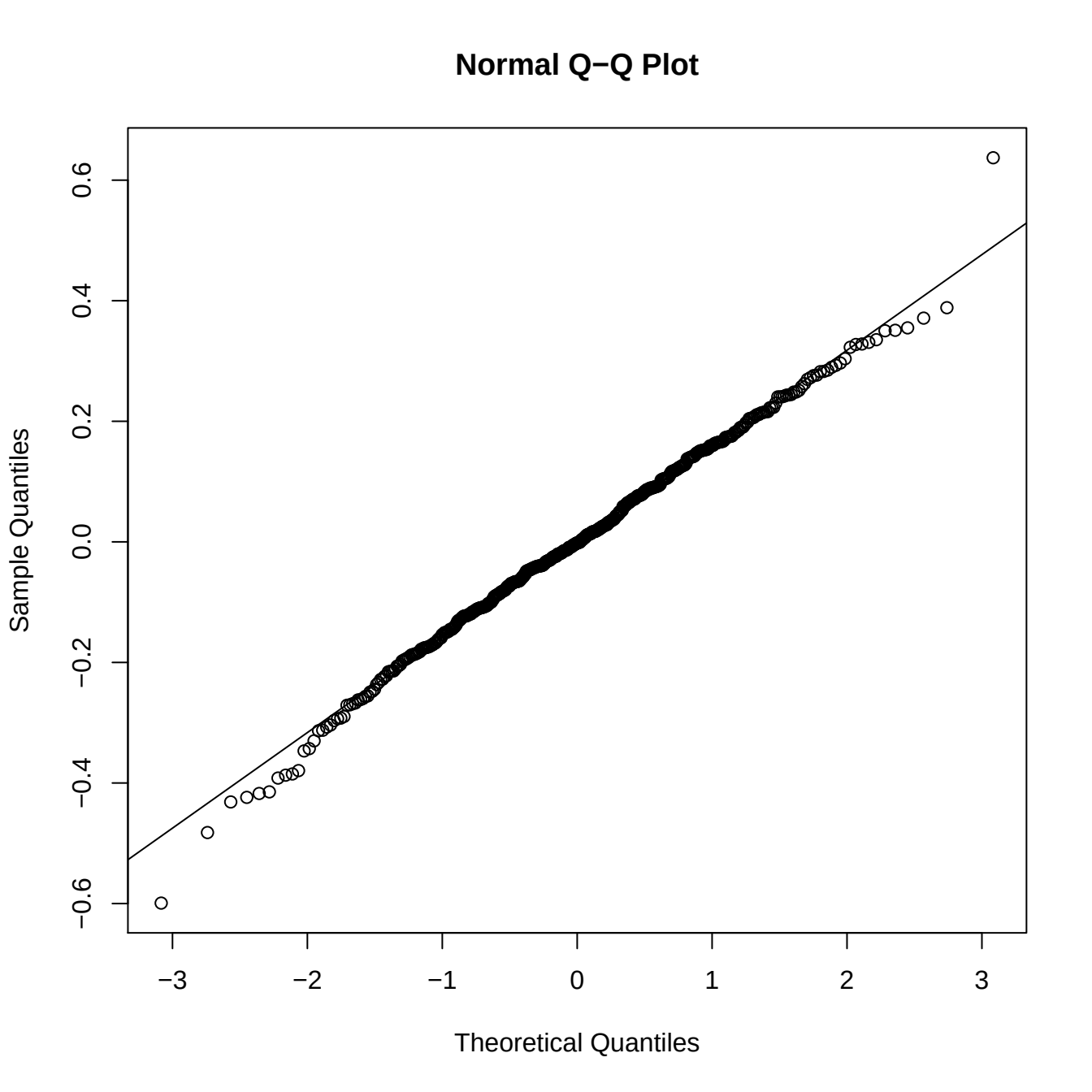

stem_mass_at_harvest
ril.data$residual
ril.data$predicted
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
−0.4
−0.2
0.0
0.2

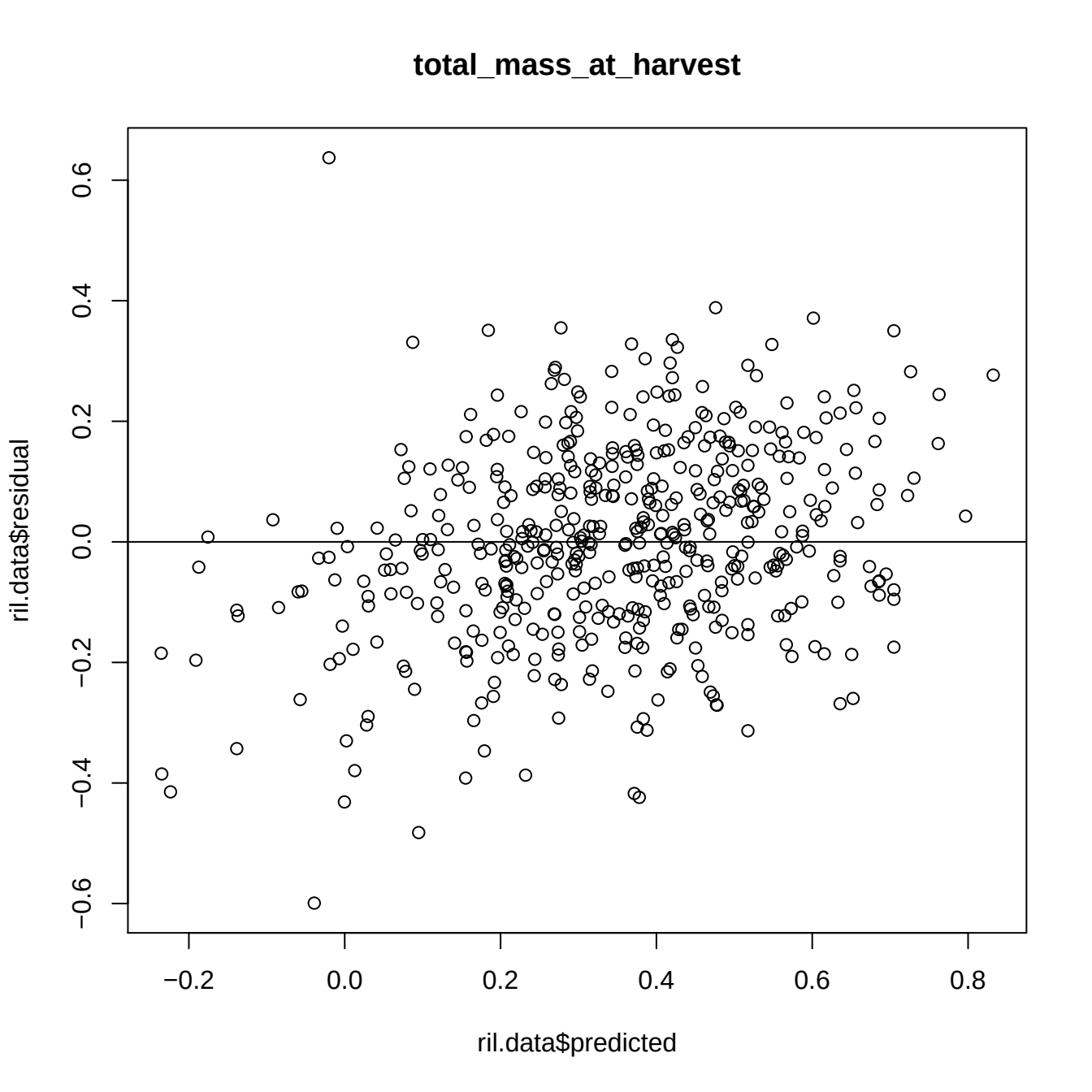

vegetative_mass_at_harvest
0.4
0.2
0.0
−0.2
−0.4
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

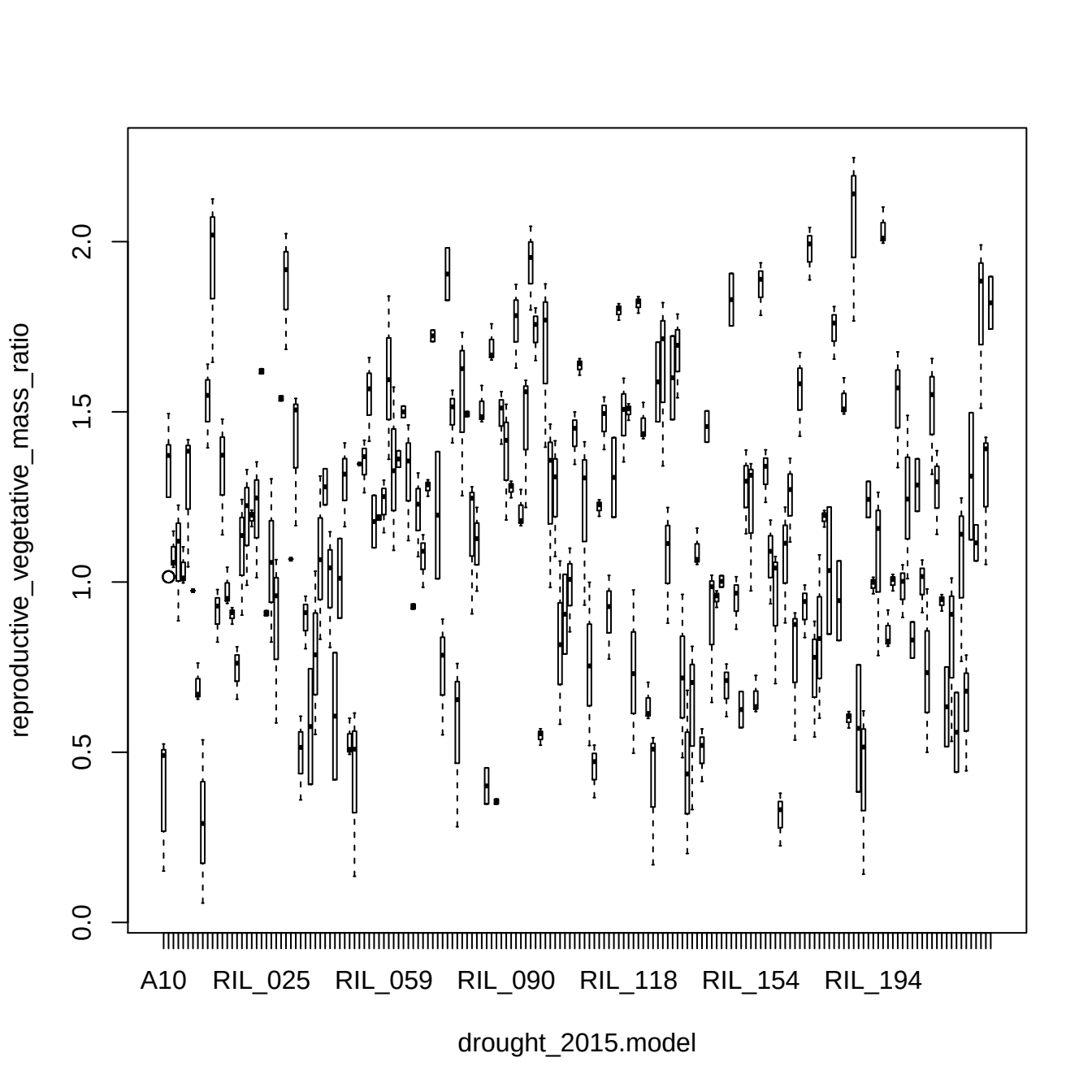

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.6
0.4
0.2
0.0
−0.2
−0.4
−3
−2
−1
0
1
2
3

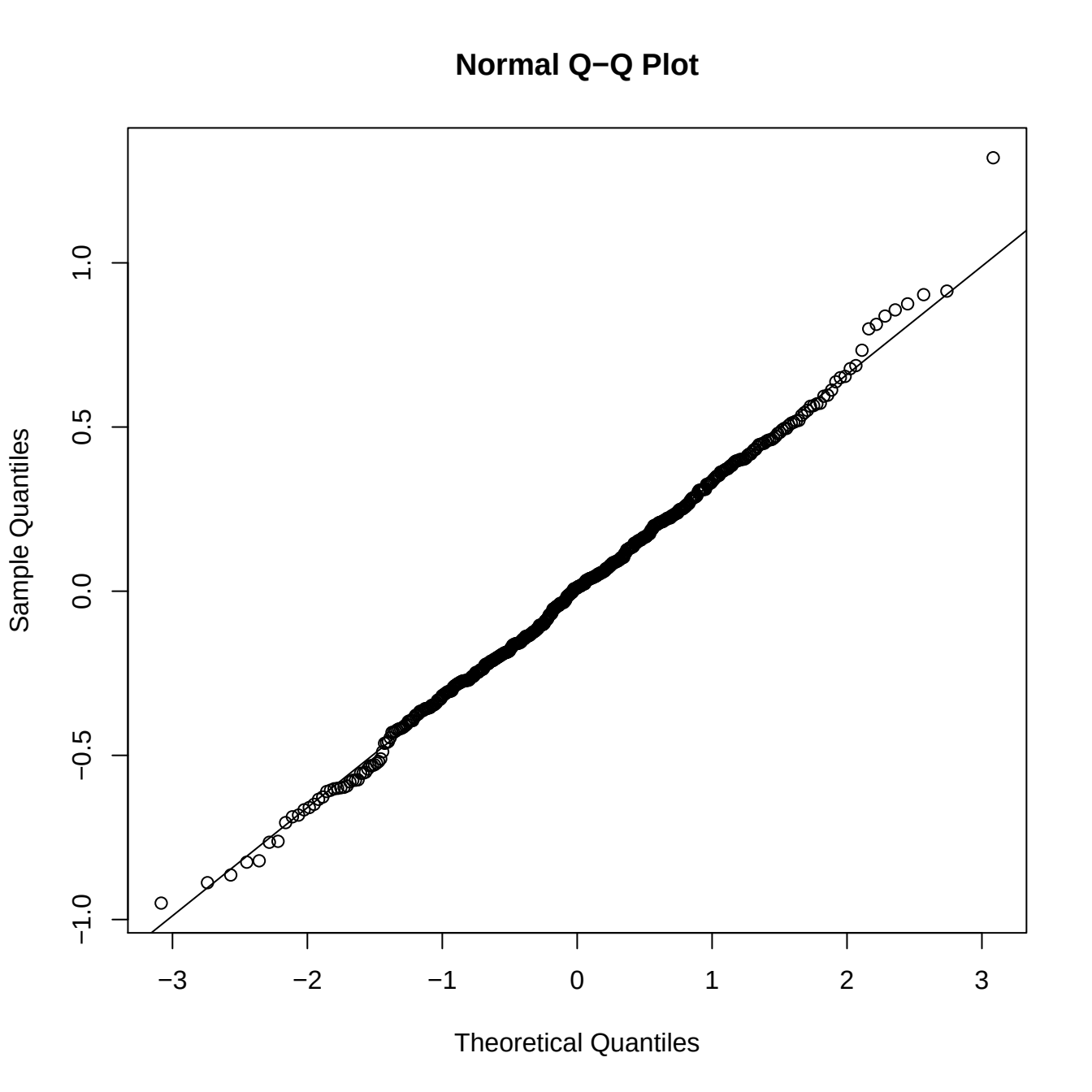

vegetative_mass_at_harvest
ril.data$residual
ril.data$predicted
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.4
−0.2
0.0
0.2
0.4

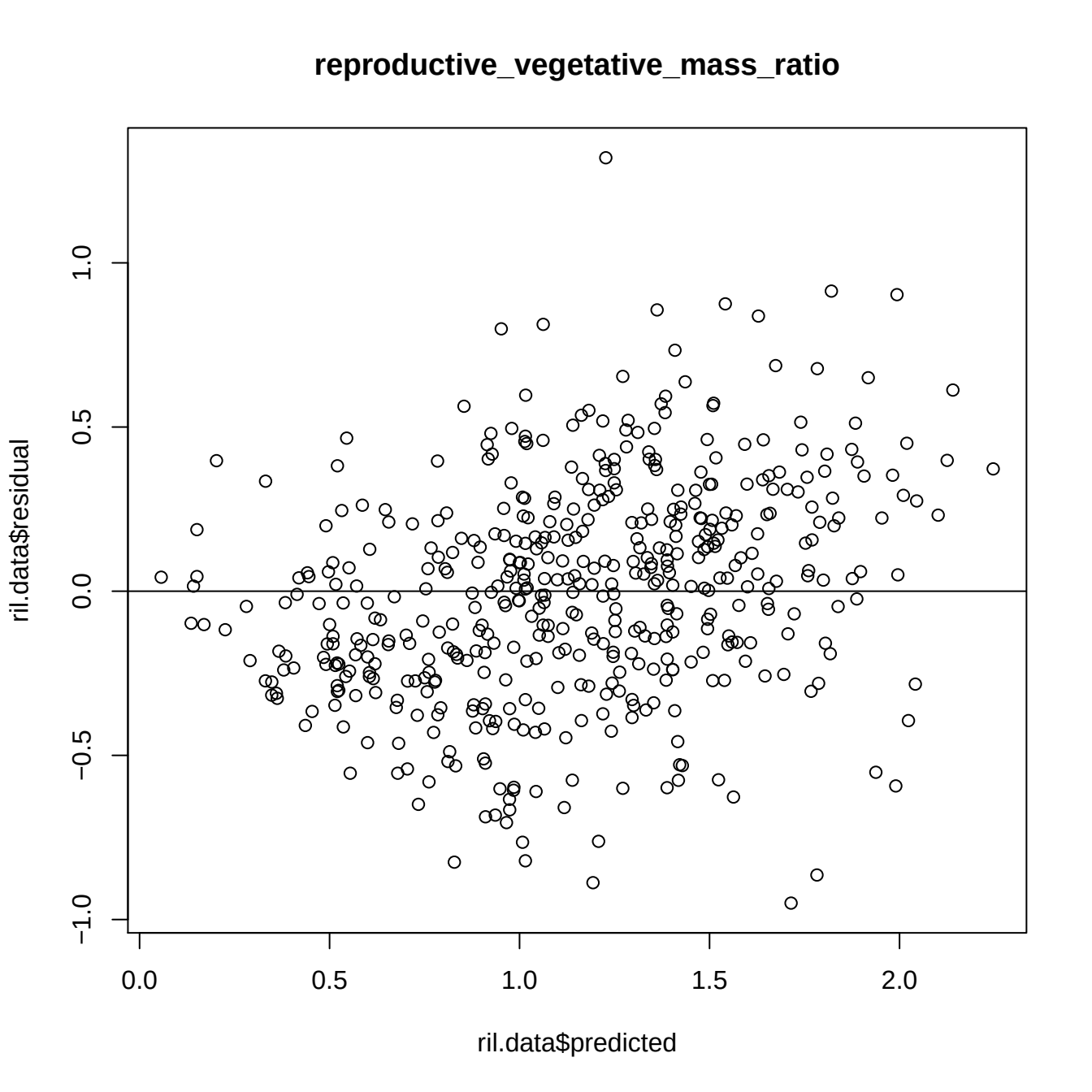

total_mass_at_harvest
0.8
0.6
0.4
0.2
0.0
−0.2
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

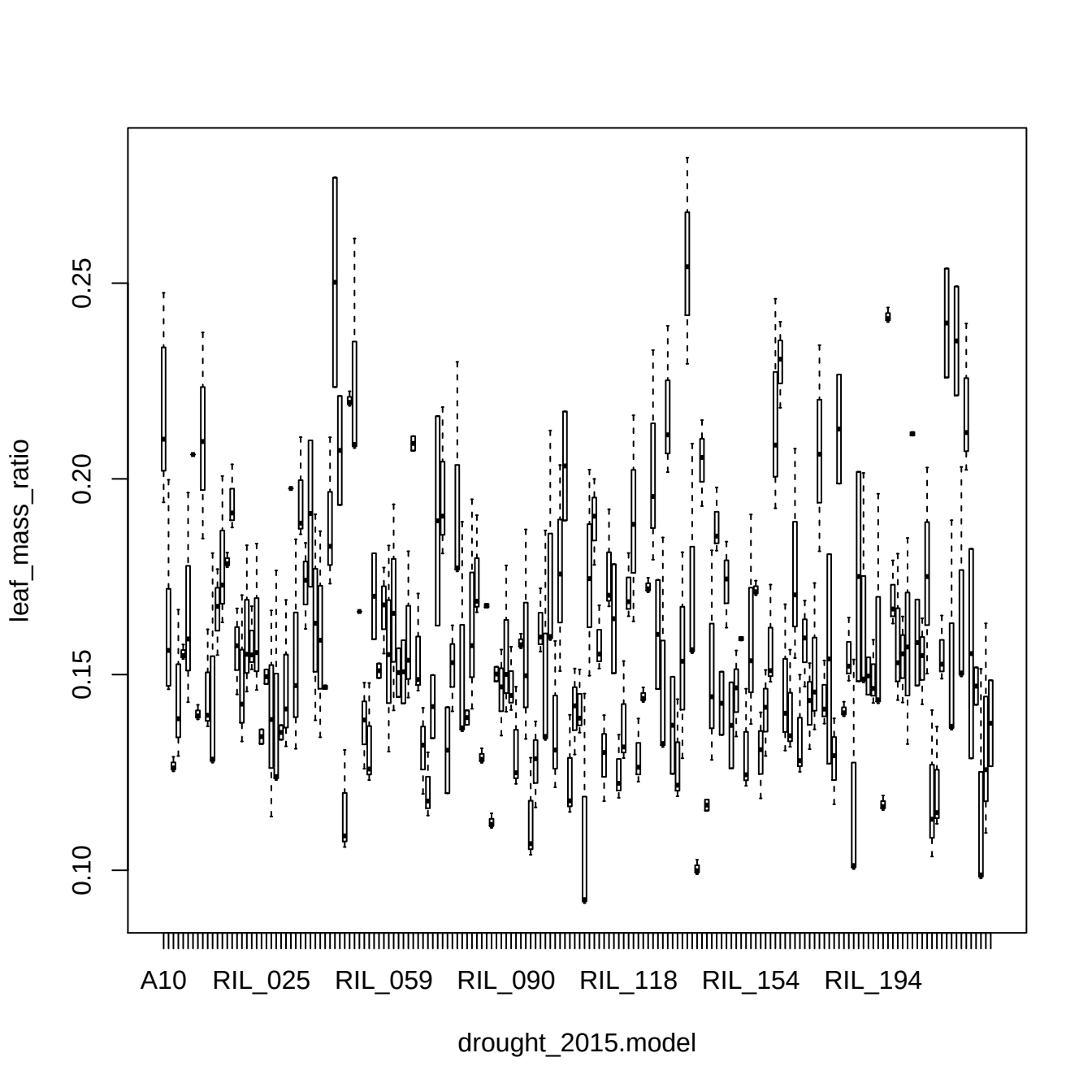

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
−0.6
−0.4
0.0
0.2
0.4
0.6
−3
−2
−1
0
1
2
3

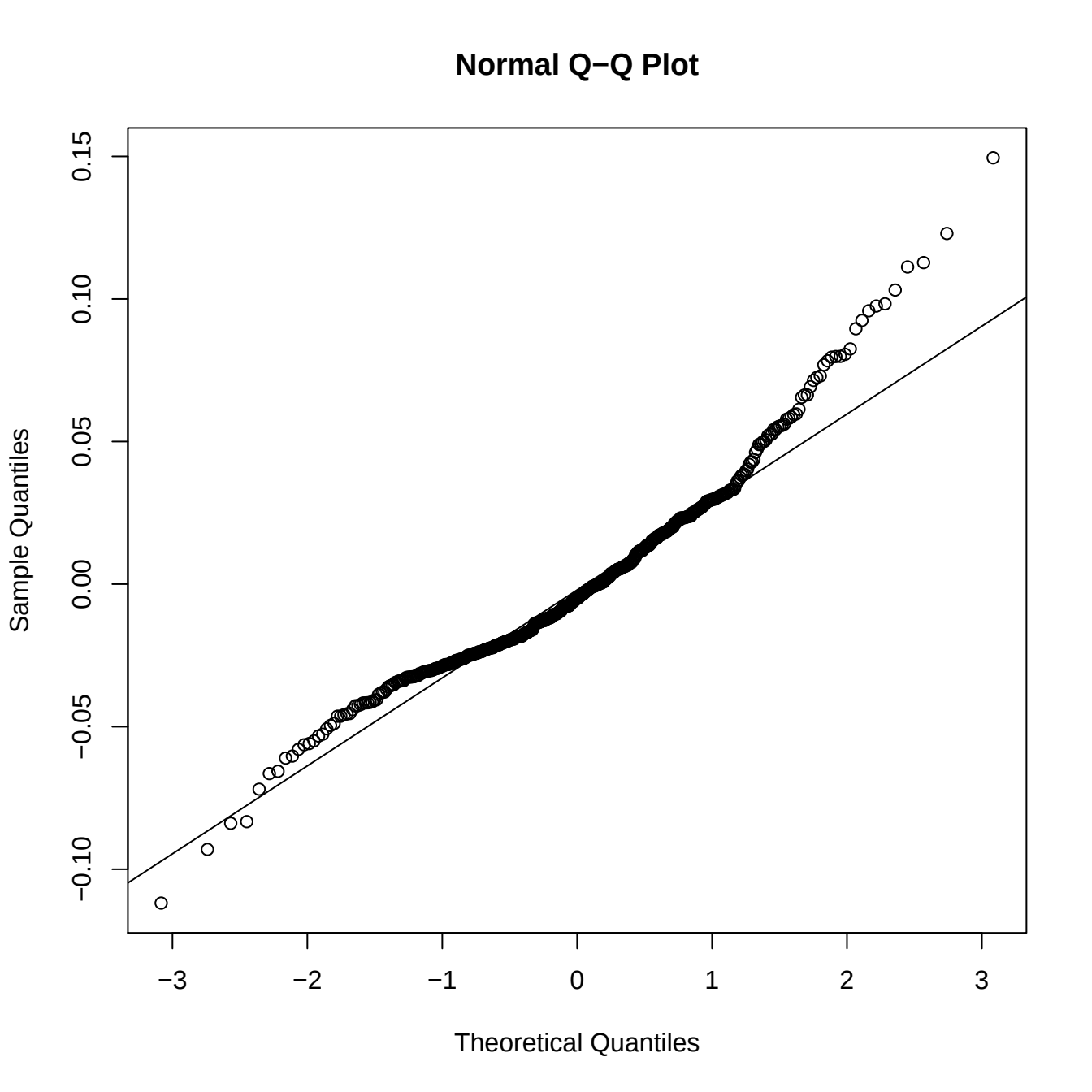

total_mass_at_harvest
ril.data$residual
ril.data$predicted
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
−0.2
0.0
0.2
0.4
0.6
0.8

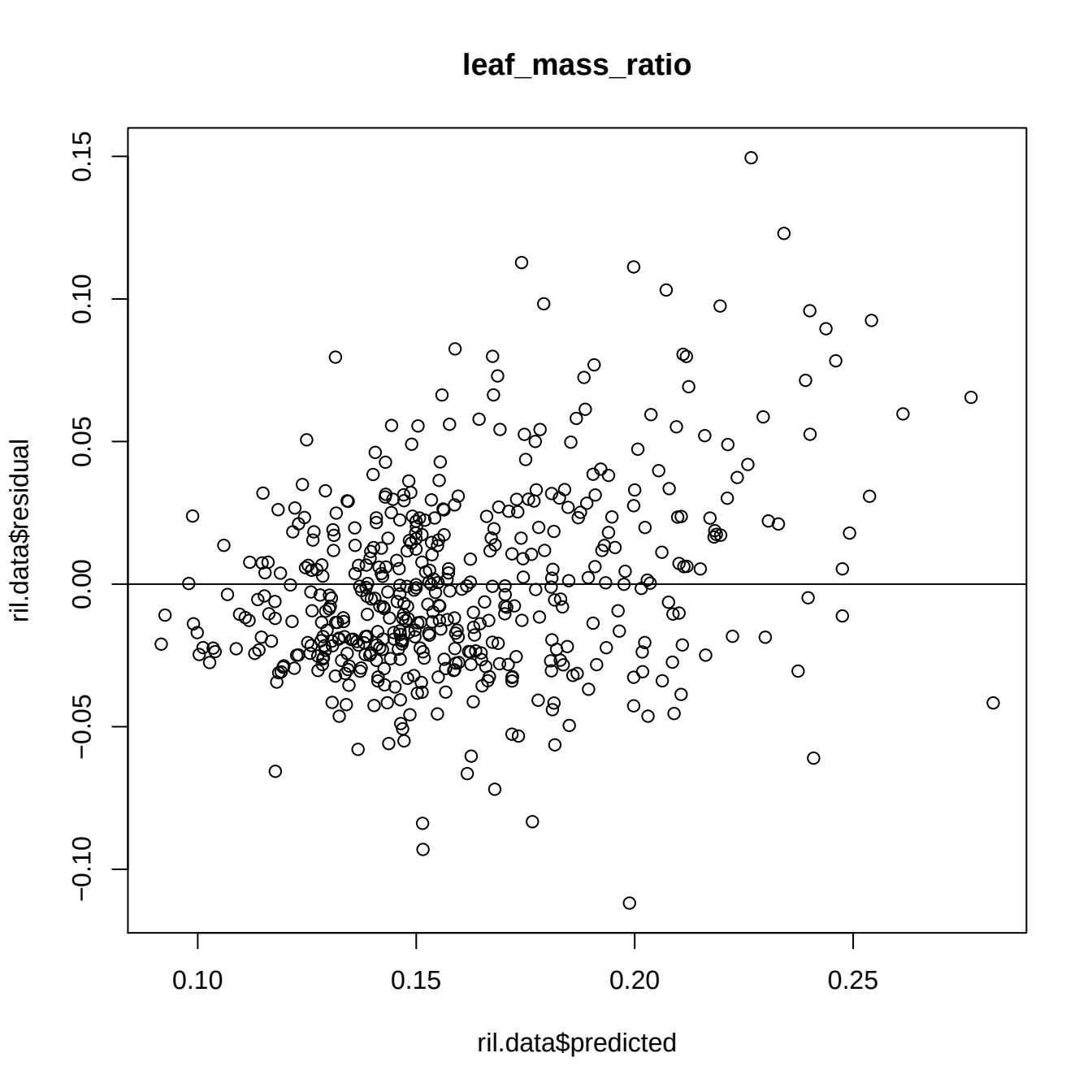

reproductive_vegetative_mass_ratio
0.0
0.5
1.0
1.5
2.0
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

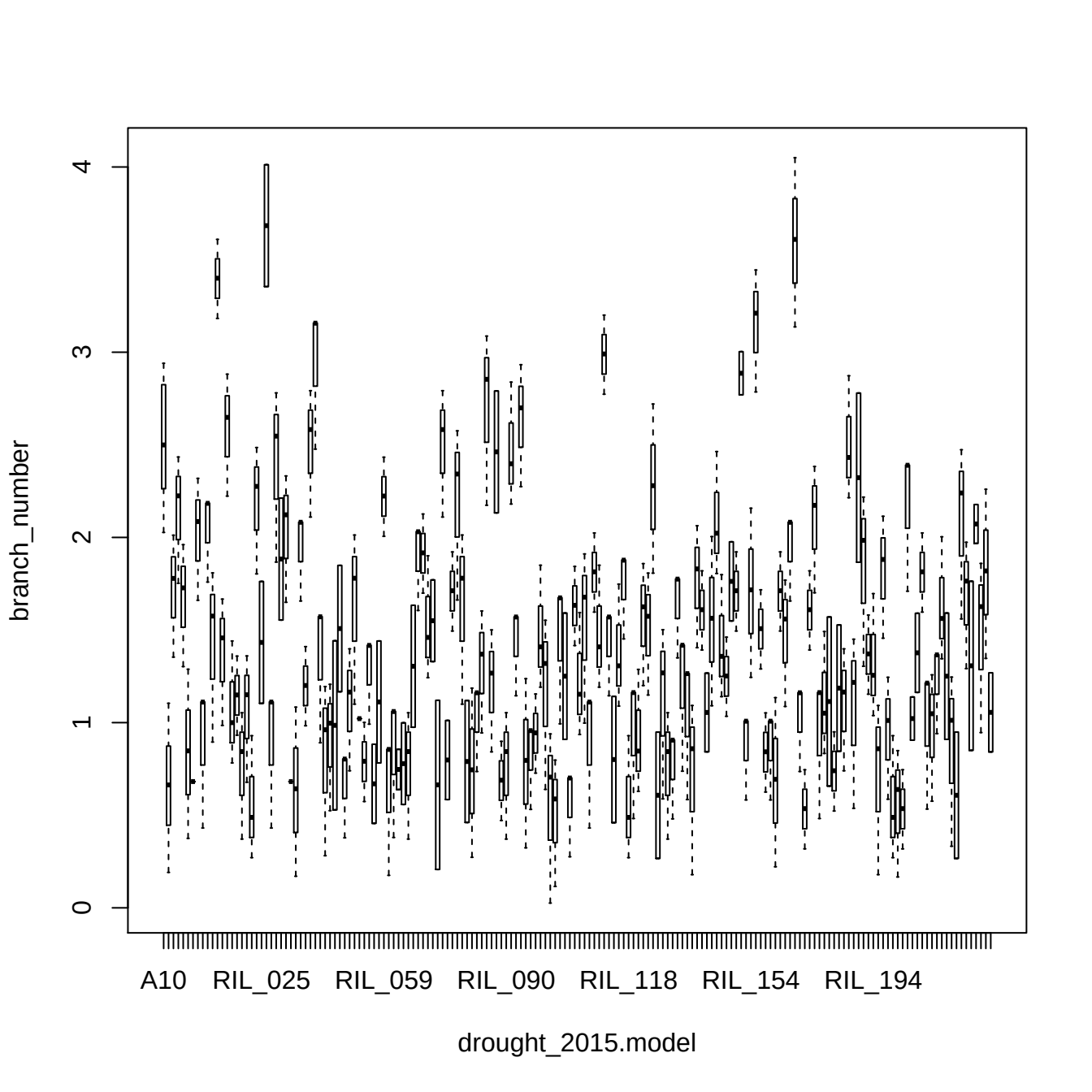

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
−1.0
−0.5
0.0
0.5
1.0
−3
−2
−1
0
1
2
3

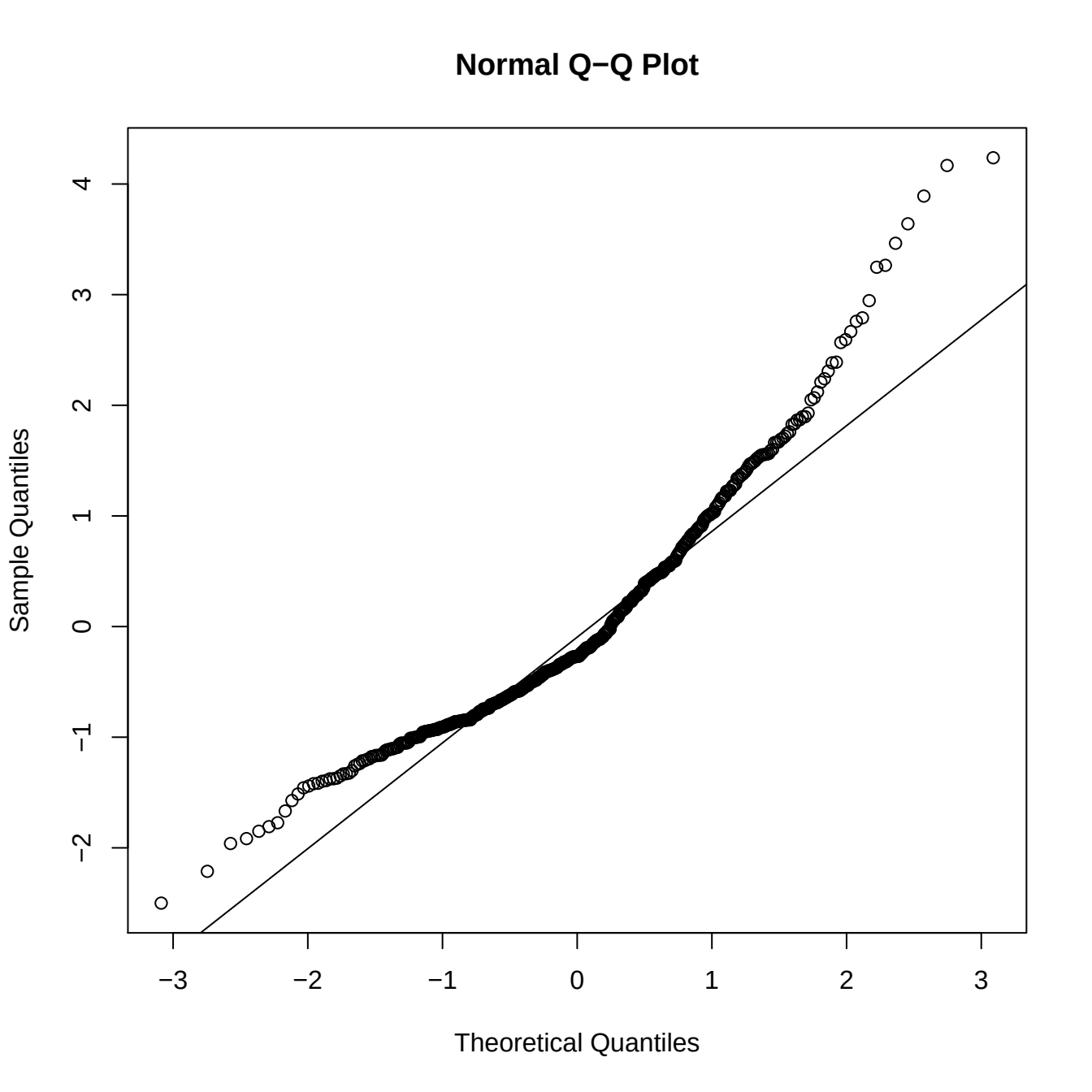

reproductive_vegetative_mass_ratio
ril.data$residual
ril.data$predicted
1.0
0.5
0.0
−0.5
−1.0
0.0
0.5
1.0
1.5
2.0

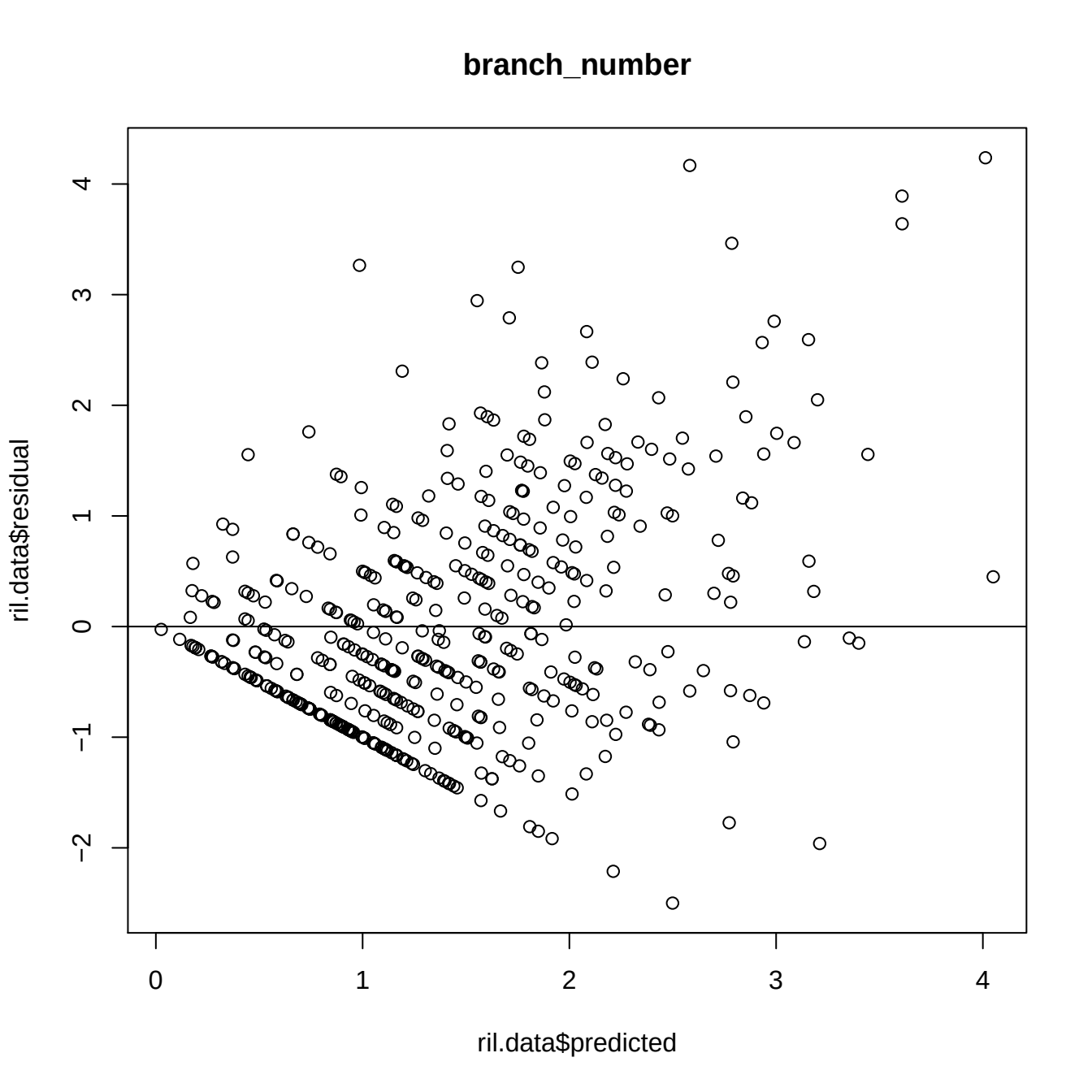

leaf_mass_ratio
0.10
0.15
0.20
0.25
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

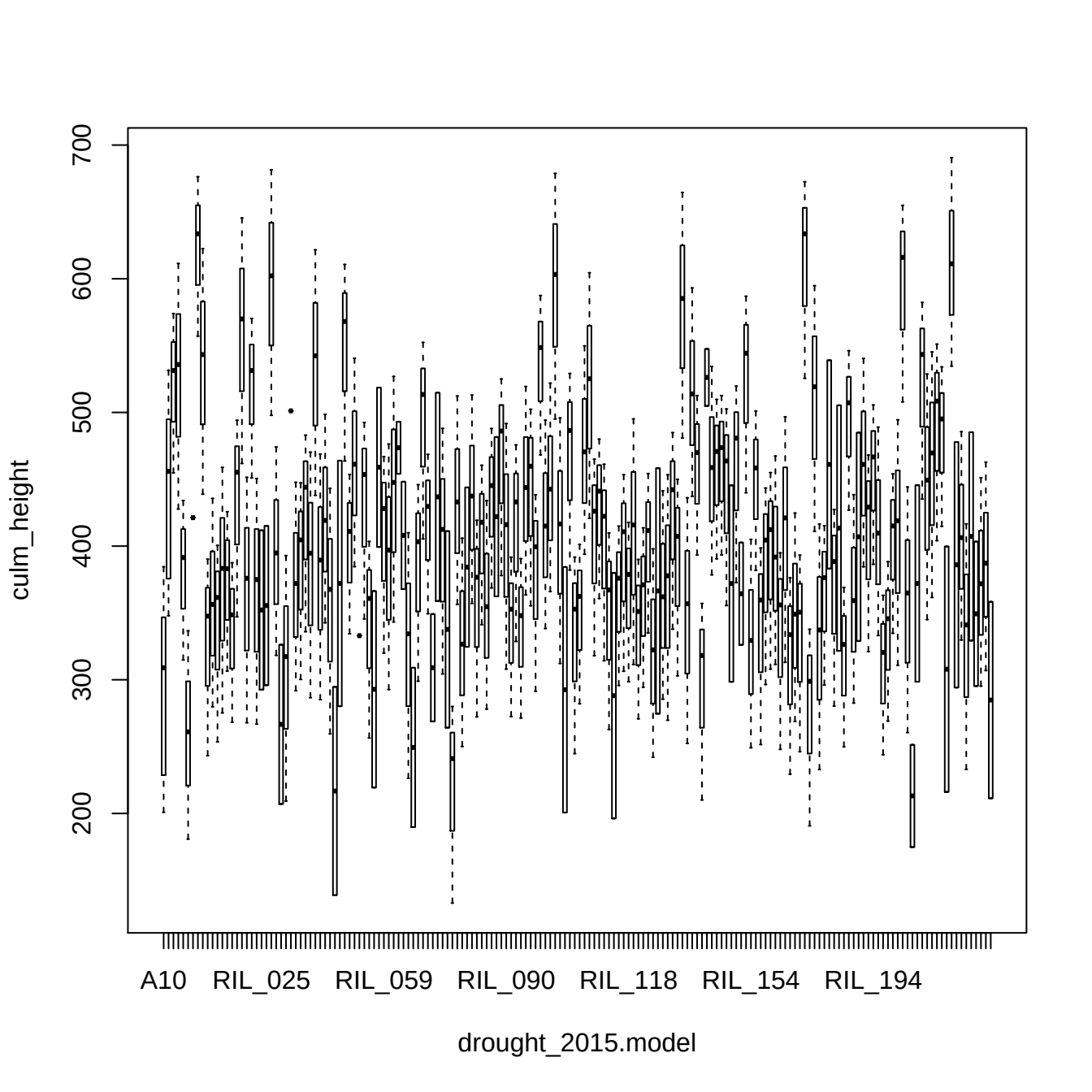

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.15
0.10
0.05
0.00
−0.05
−0.10
−3
−2
−1
0
1
2
3

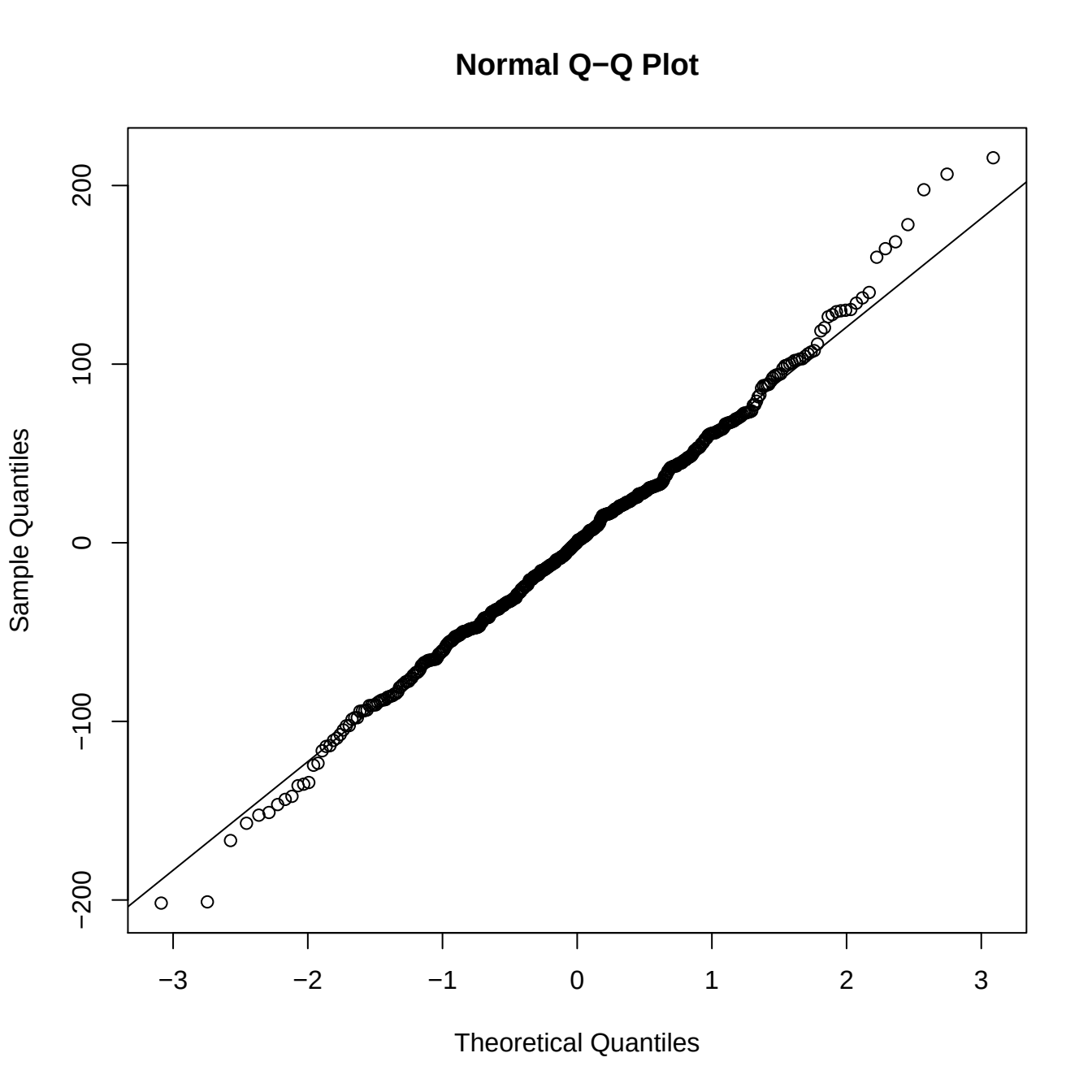

leaf_mass_ratio
ril.data$residual
0.15
0.10
0.05
0.00
−0.05
−0.10
0.10
0.15
0.20
0.25
ril.data$predicted

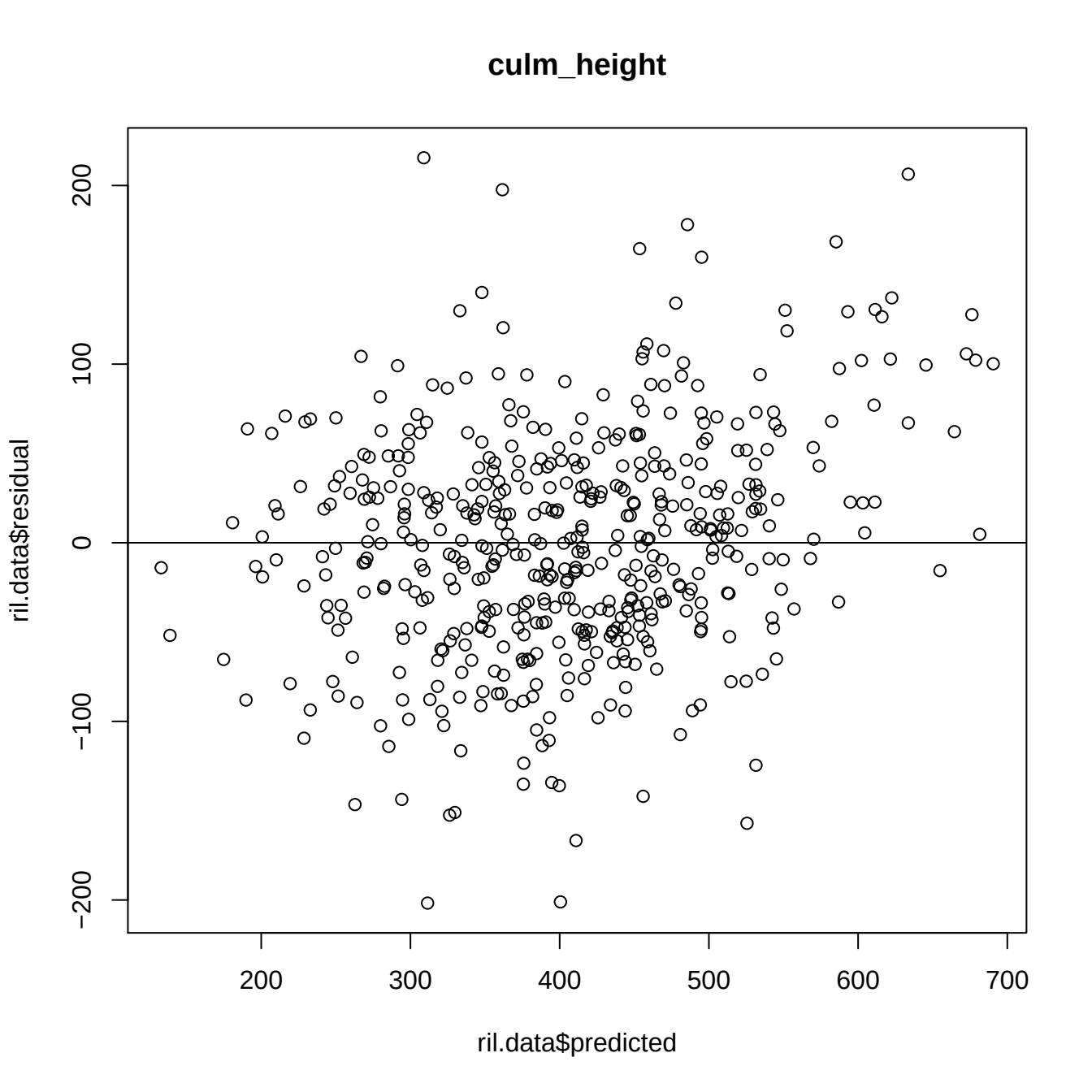

branch_number
0
1
2
3
4
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

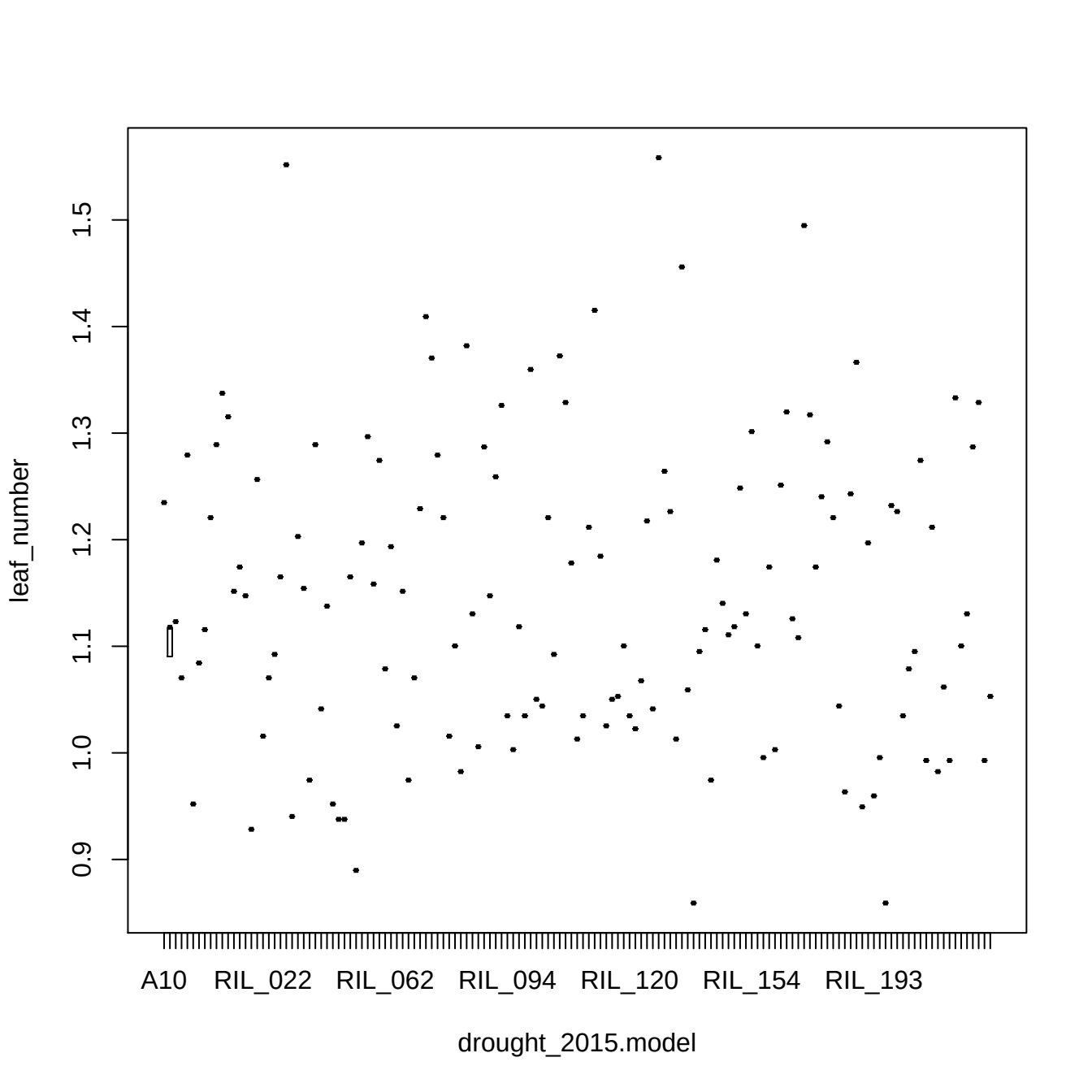

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
−3
−2
−1
0
1
2
3
4

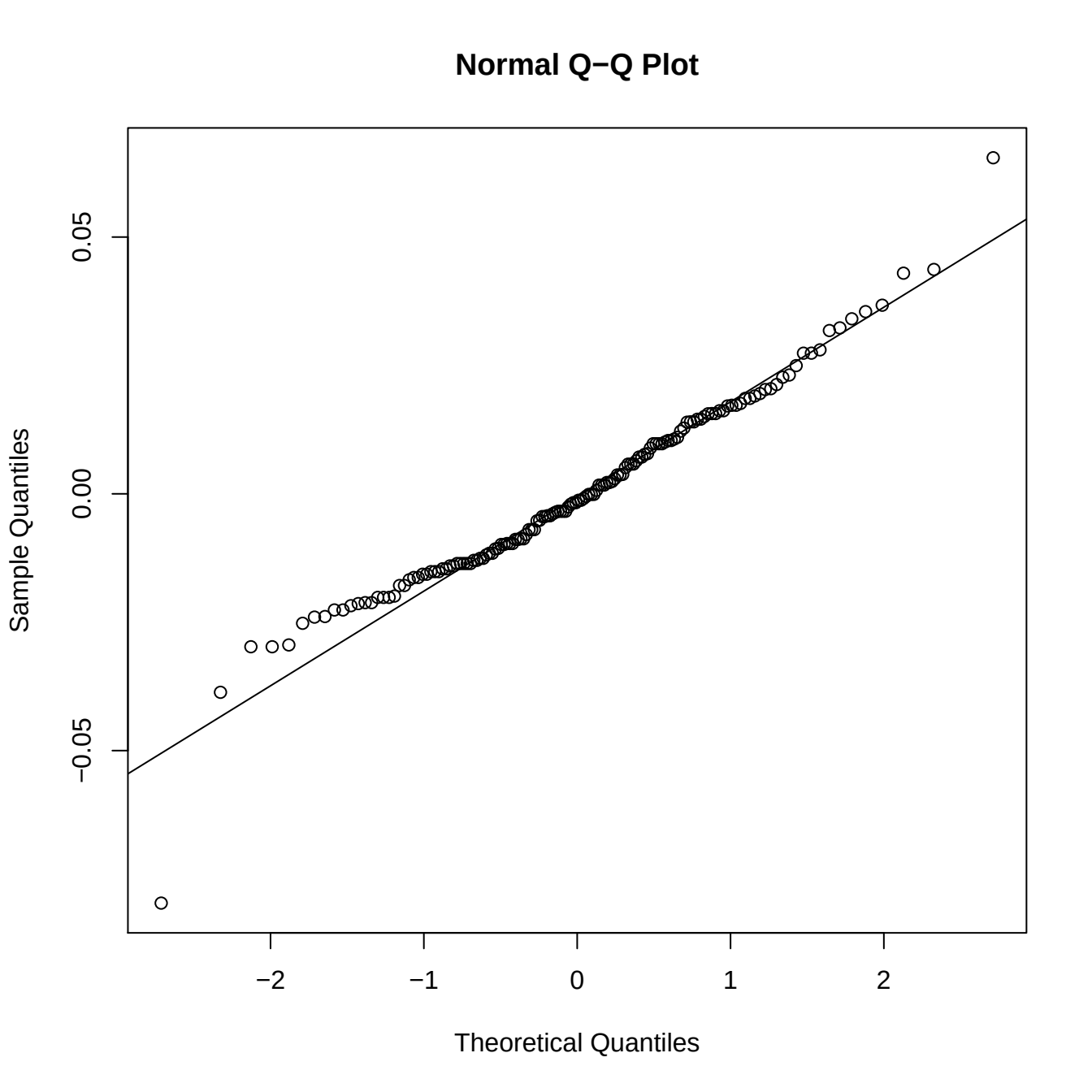

branch_number
ril.data$residual
ril.data$predicted
4
3
2
1
0
−1
−2
0
1
2
3
4

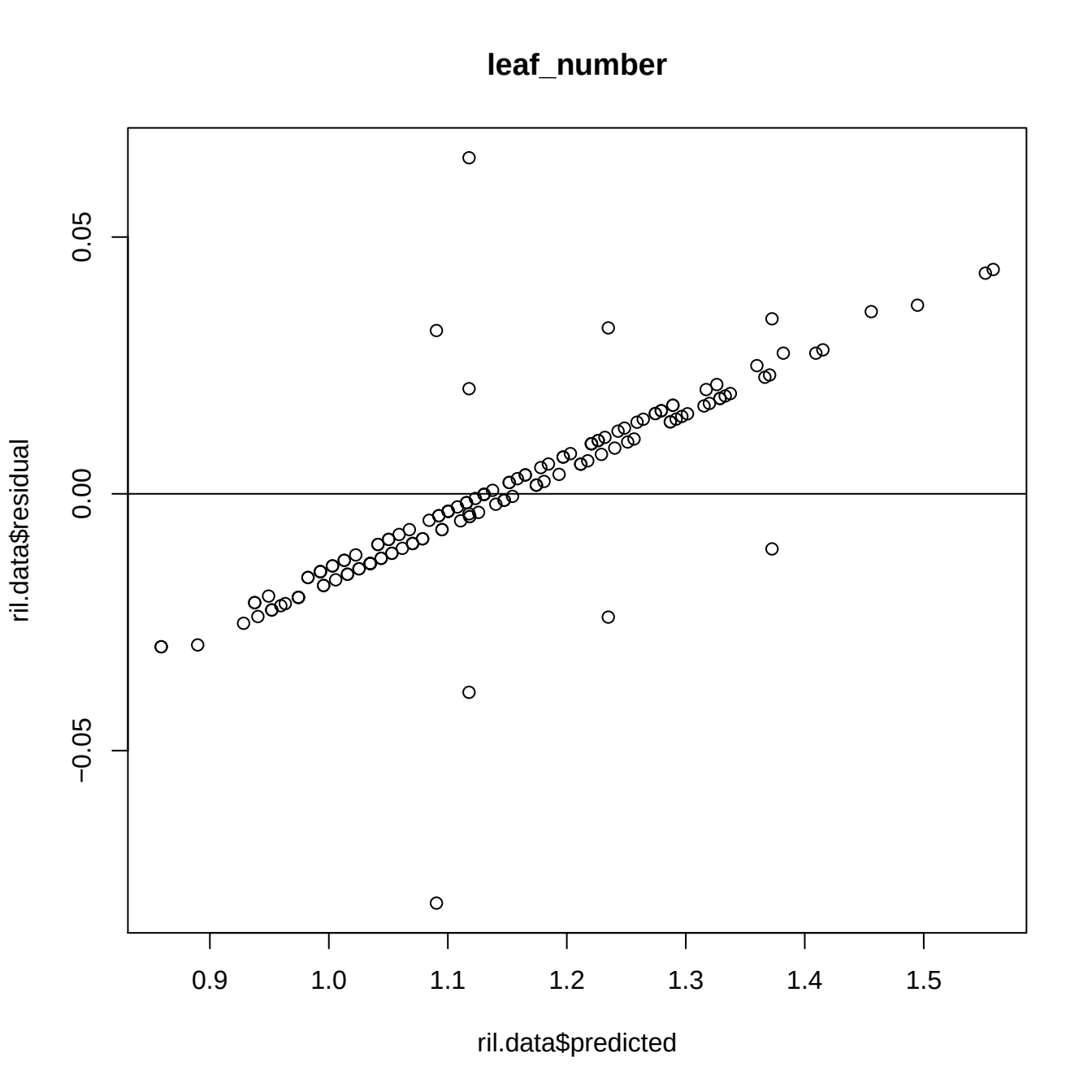

culm_height
700
600
500
400
300
200
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model

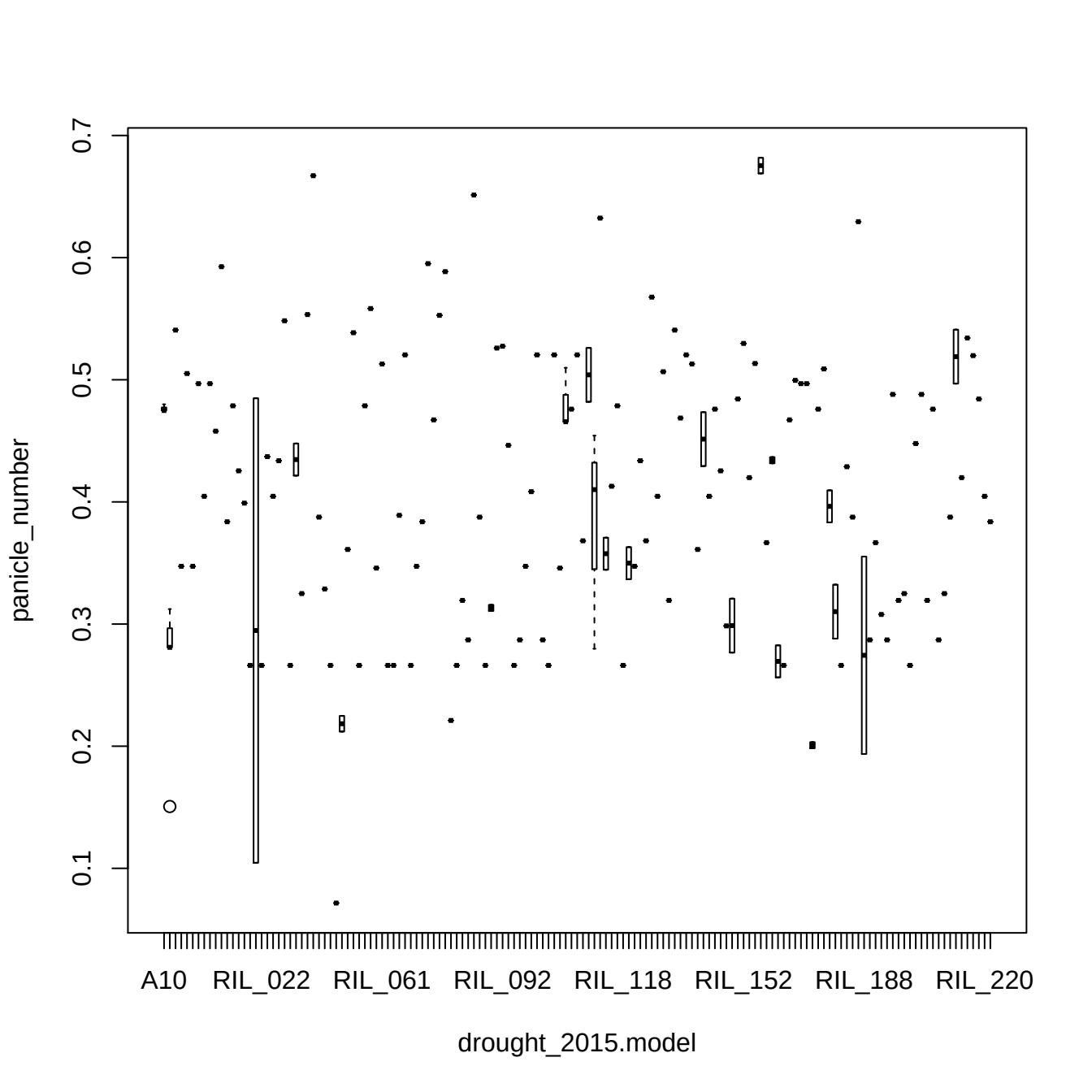

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
200
100
0
−100
−200
−3
−2
−1
0
1
2
3

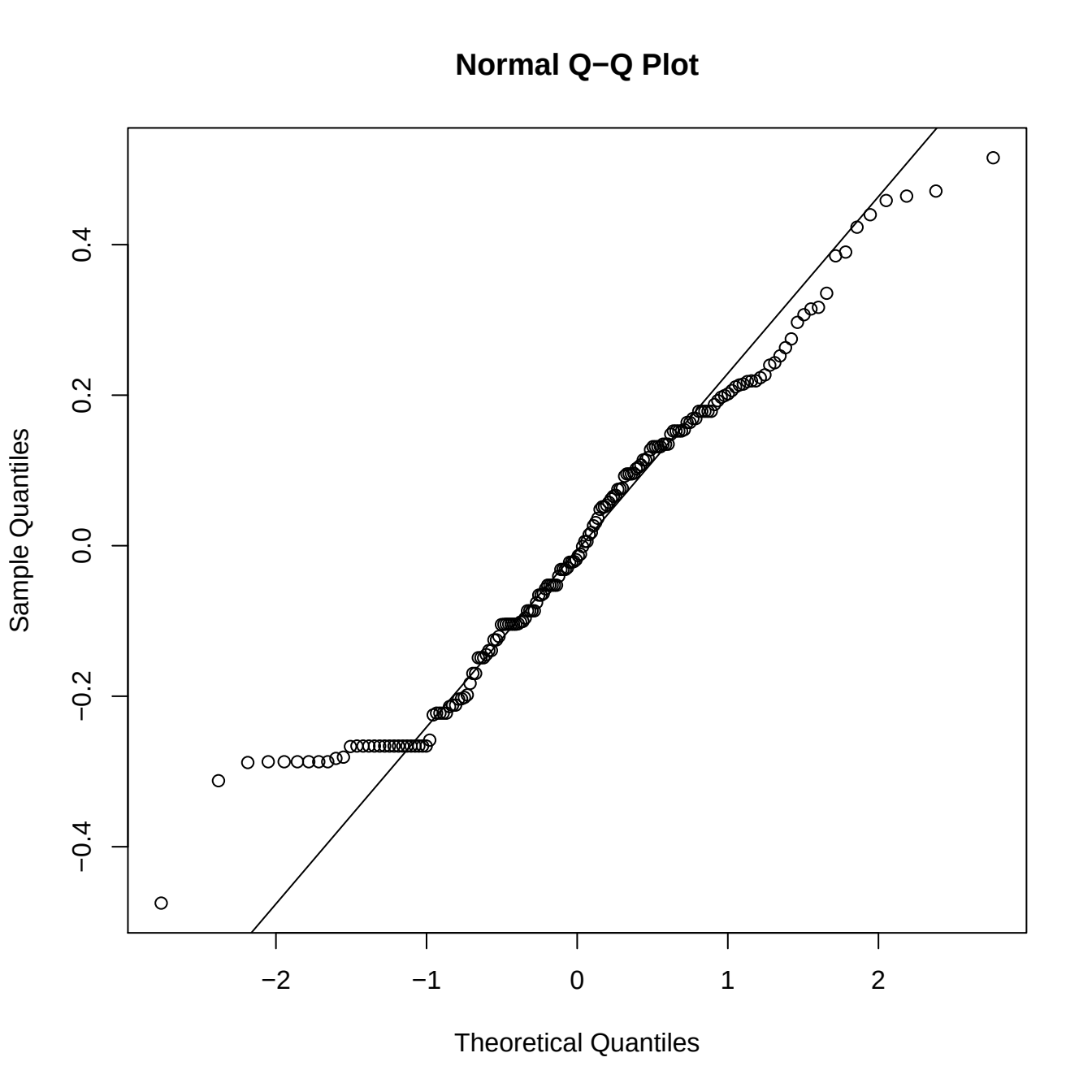

culm_height
ril.data$residual
200
100
0
−100
−200
200
300
400
500
600
700
ril.data$predicted

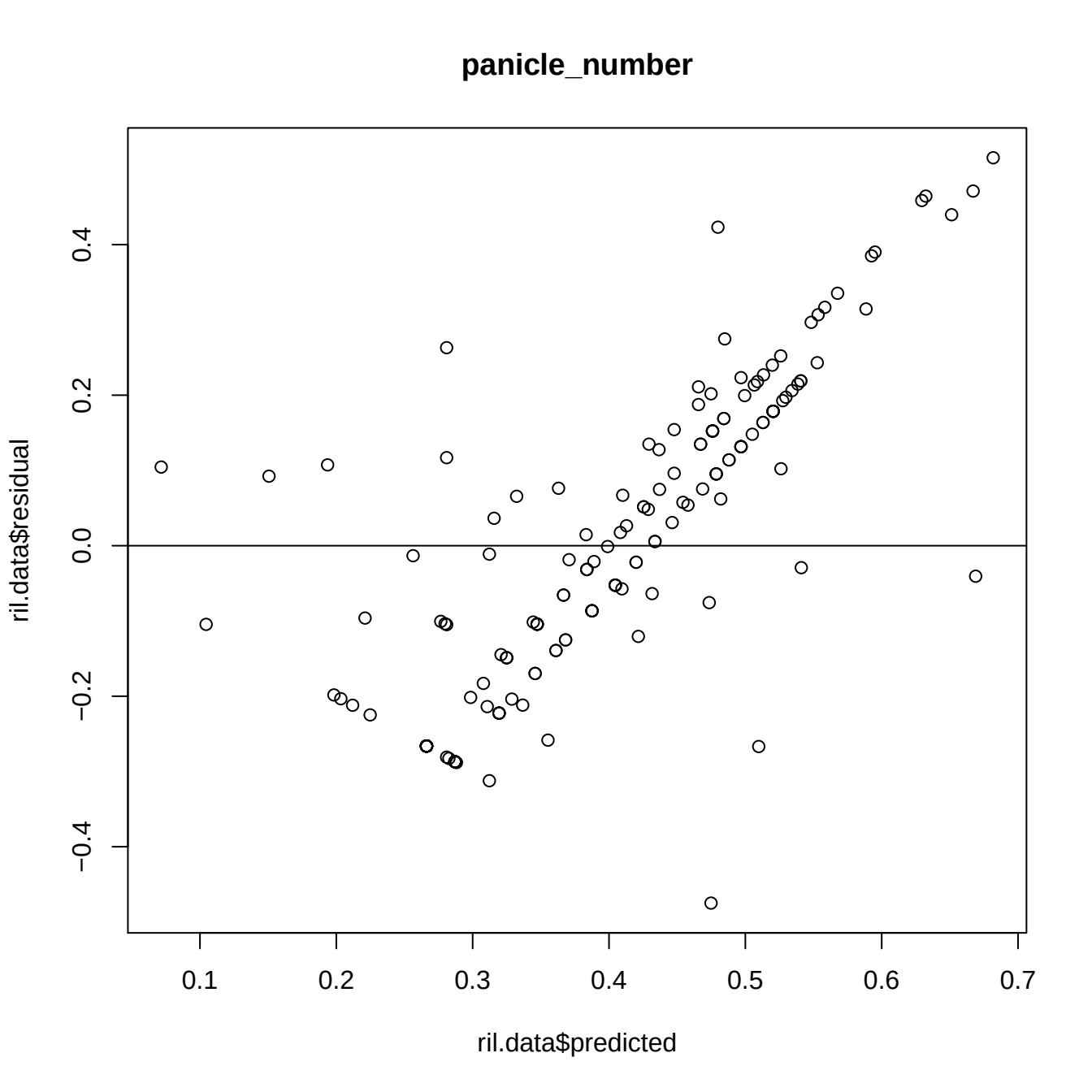

leaf_number
0.9
1.0
1.1
1.2
1.3
1.4
1.5
A10
RIL_022
RIL_062
RIL_094
RIL_120
RIL_154
RIL_193
drought_2015.model

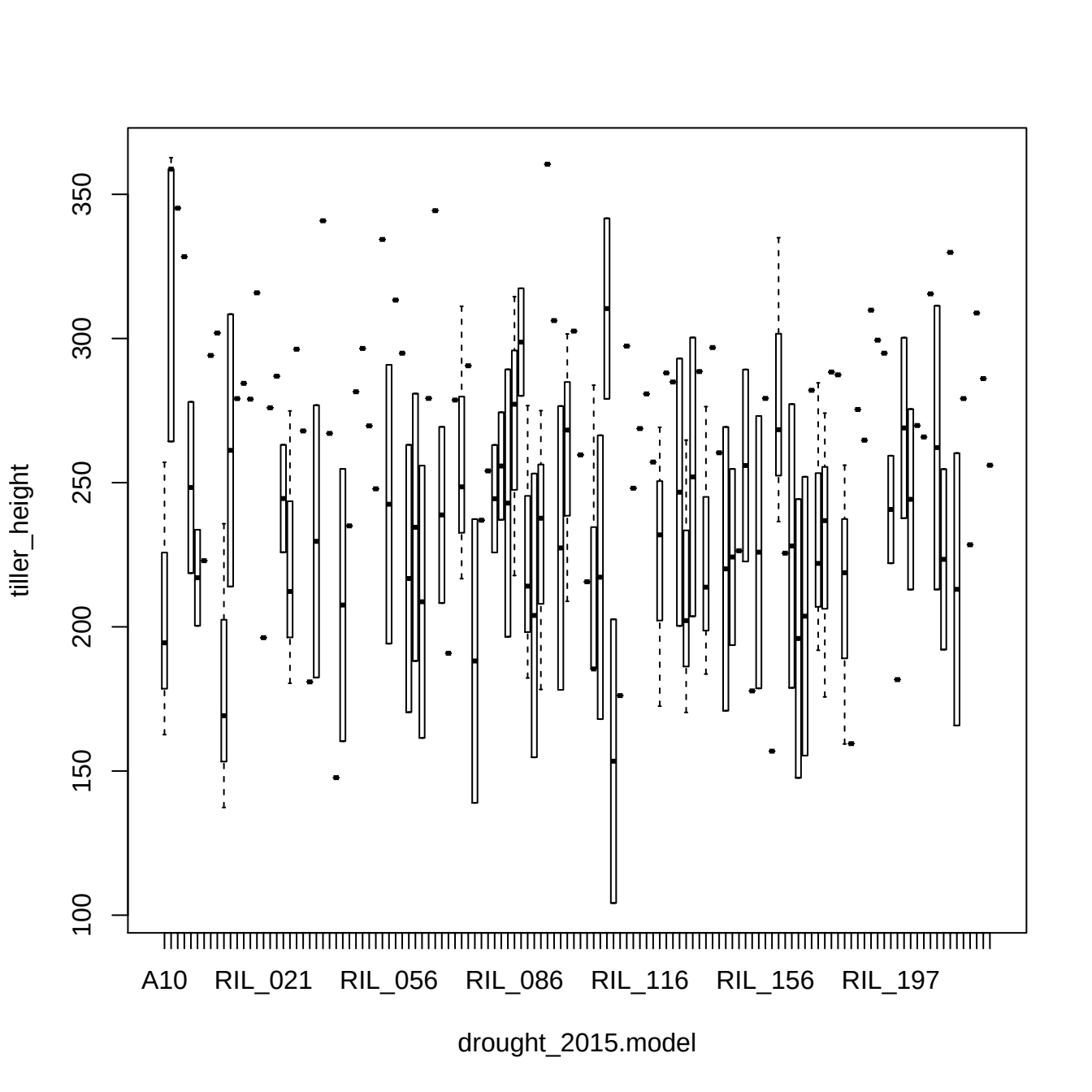

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.05
0.00
−0.05
−2
−1
0
1
2

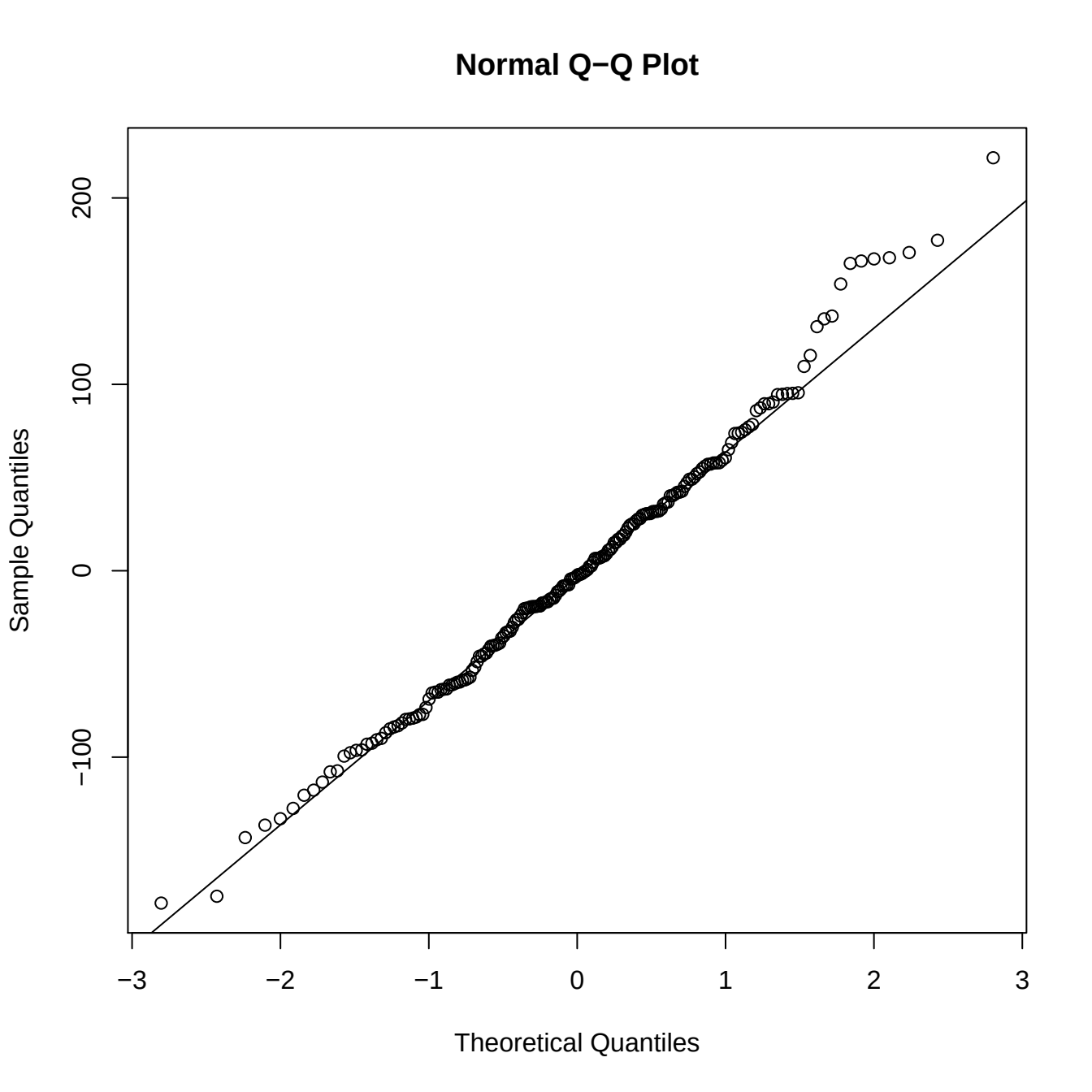

leaf_number
0.05
0.00
−0.05
ril.data$residual
0.9
1.0
1.1
1.2
1.3
1.4
1.5
ril.data$predicted

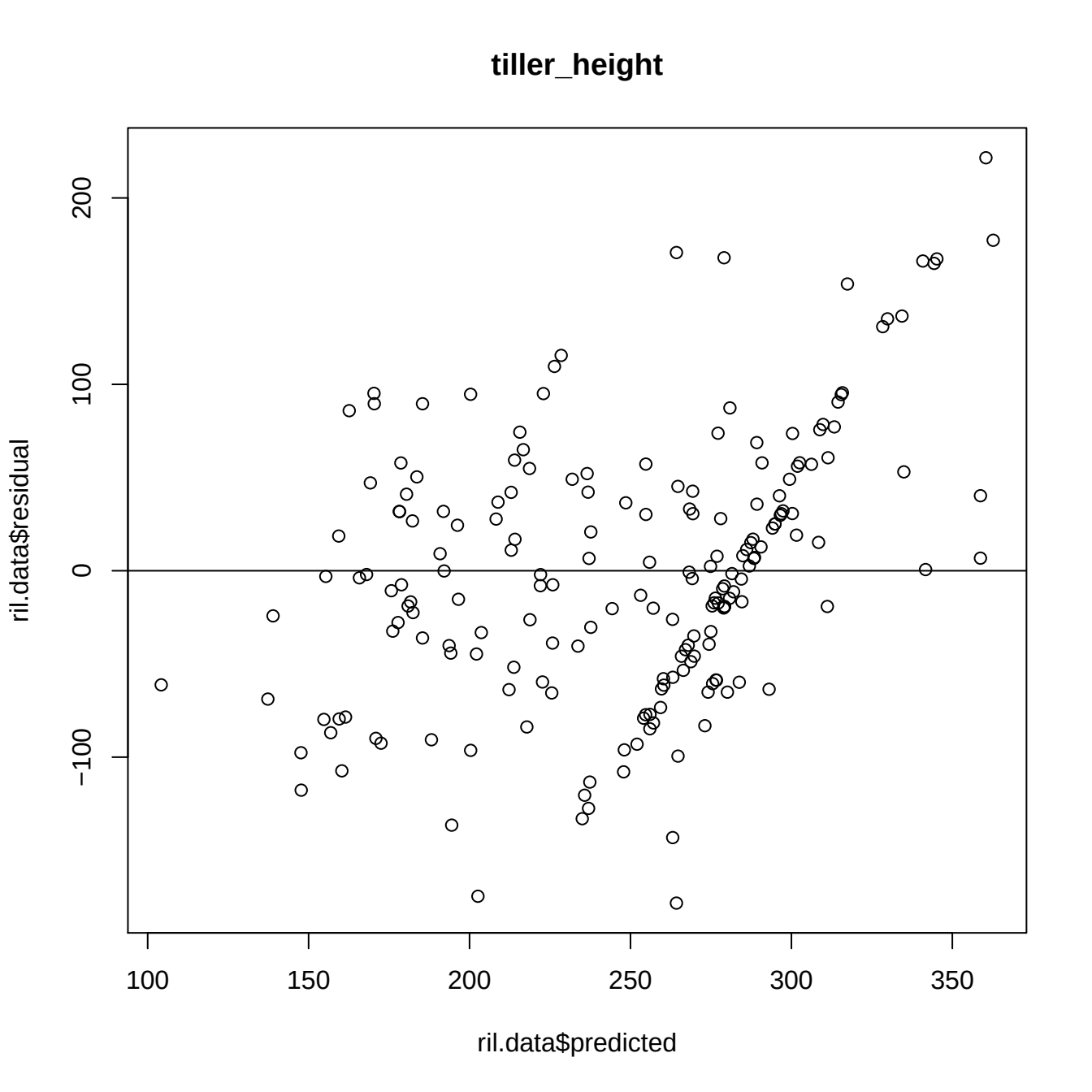

panicle_number
0.1
0.2
0.3
0.4
0.5
0.6
0.7
A10
RIL_022
RIL_061
RIL_092
RIL_118
RIL_152
RIL_188
RIL_220
drought_2015.model

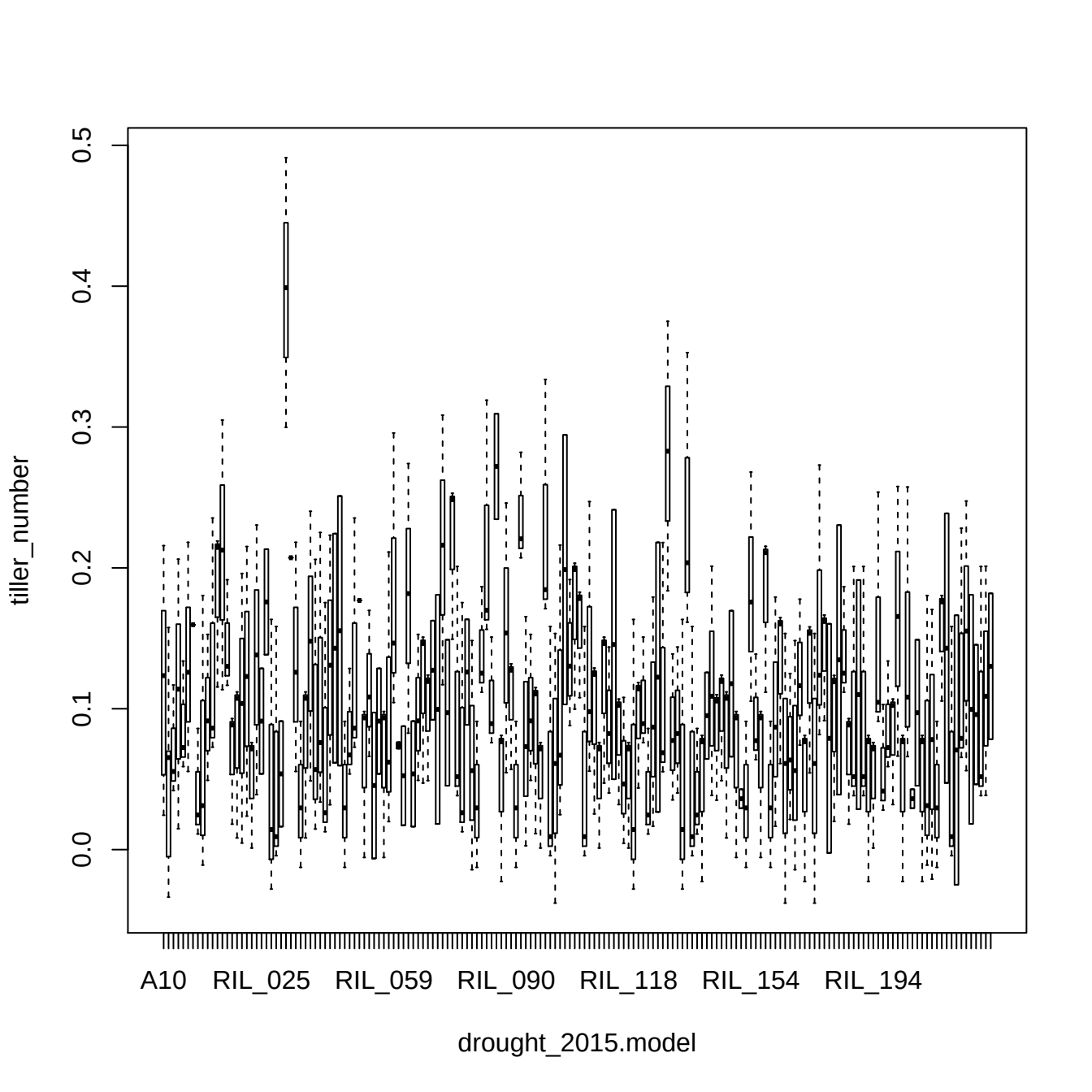

Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.4
0.2
0.0
−0.2
−0.4
−2
−1
0
1
2

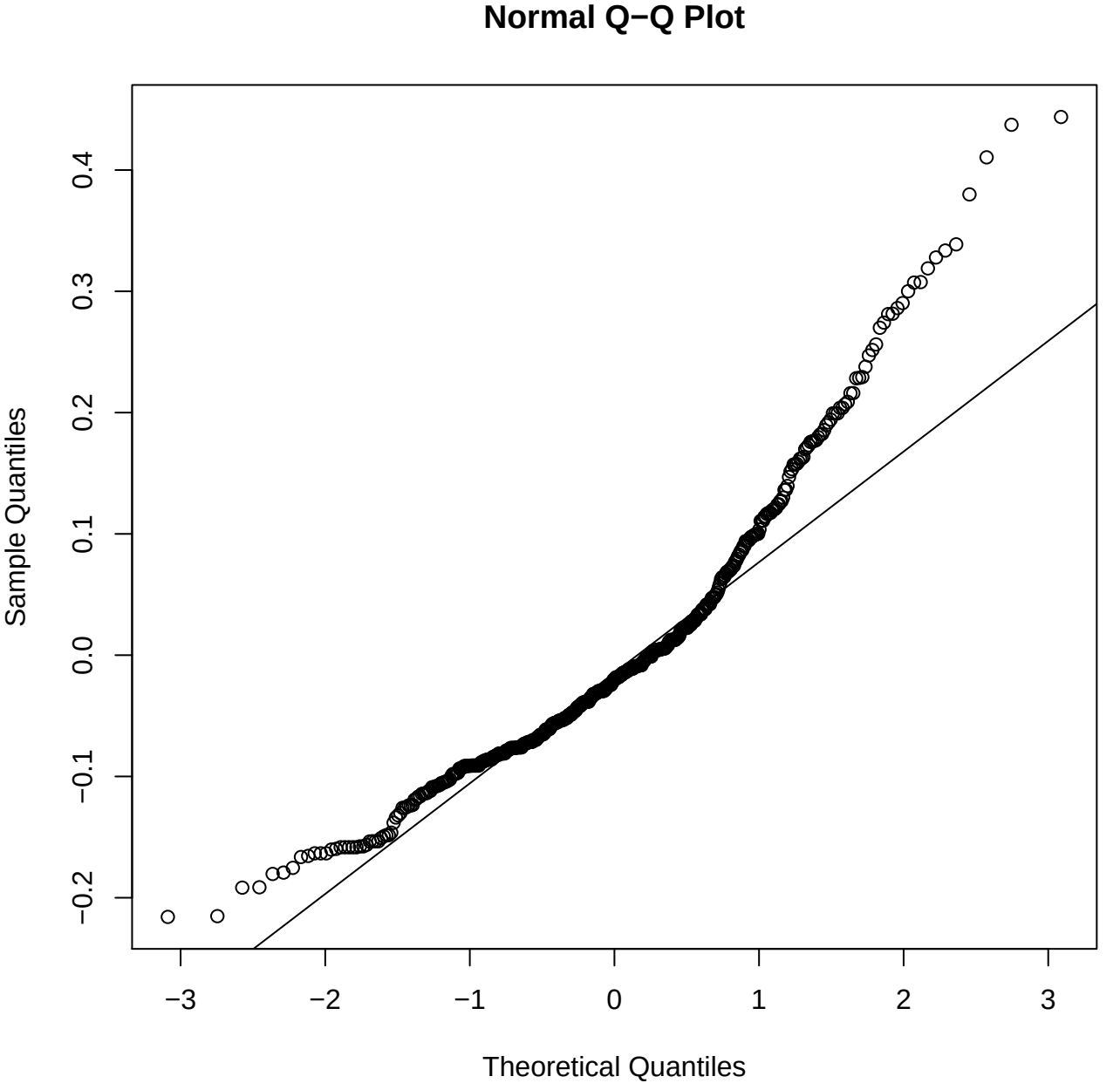

panicle_number
ril.data$residual
0.4
0.2
0.0
−0.2
−0.4
0.1
0.2
0.3
0.4
0.5
0.6
0.7
ril.data$predicted

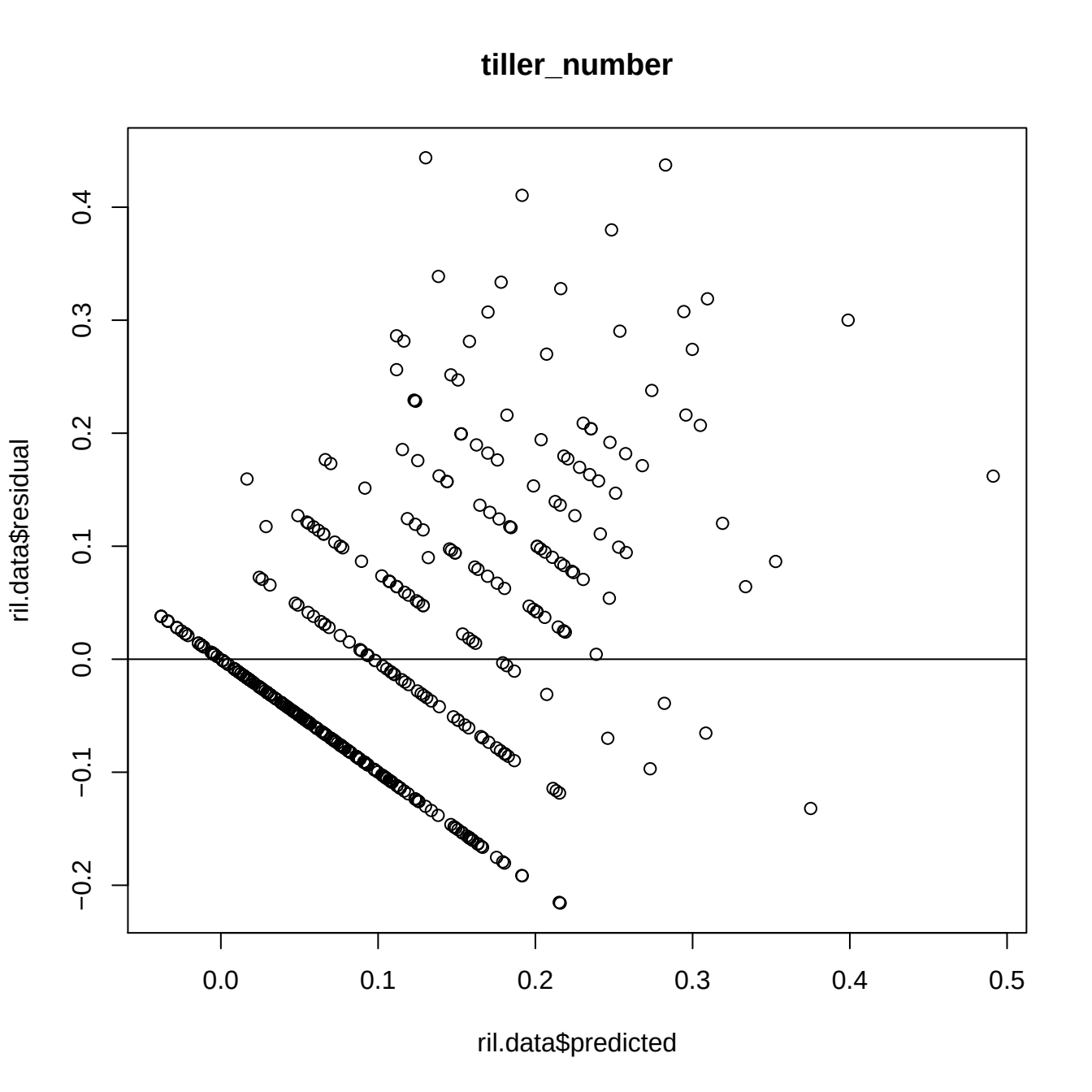

tiller_height
100
150
200
250
300
350
A10
RIL_021
RIL_056
RIL_086
RIL_116
RIL_156
RIL_197
drought_2015.model


Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
200
100
0
−100
−3
−2
−1
0
1
2
3


tiller_height
ril.data$residual
200
100
0
−100
100
150
200
250
300
350
ril.data$predicted


tiller_number
0.0
0.1
0.2
0.3
0.4
0.5
A10
RIL_025
RIL_059
RIL_090
RIL_118
RIL_154
RIL_194
drought_2015.model


Normal Q−Q Plot
Sample Quantiles
Theoretical Quantiles
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
−3
−2
−1
0
1
2
3


tiller_number
ril.data$residual
ril.data$predicted
0.4
0.3
0.2
0.1
0.0
−0.1
−0.2
0.0
0.1
0.2
0.3
0.4
0.5