Report from MinkSim

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Results from MinkSim

A variety of key figures and plots will be generated

Table of Contents

1. Litter size and reproduction results

Summary statistics

```
## Warning: dataframe contains replicate names
```

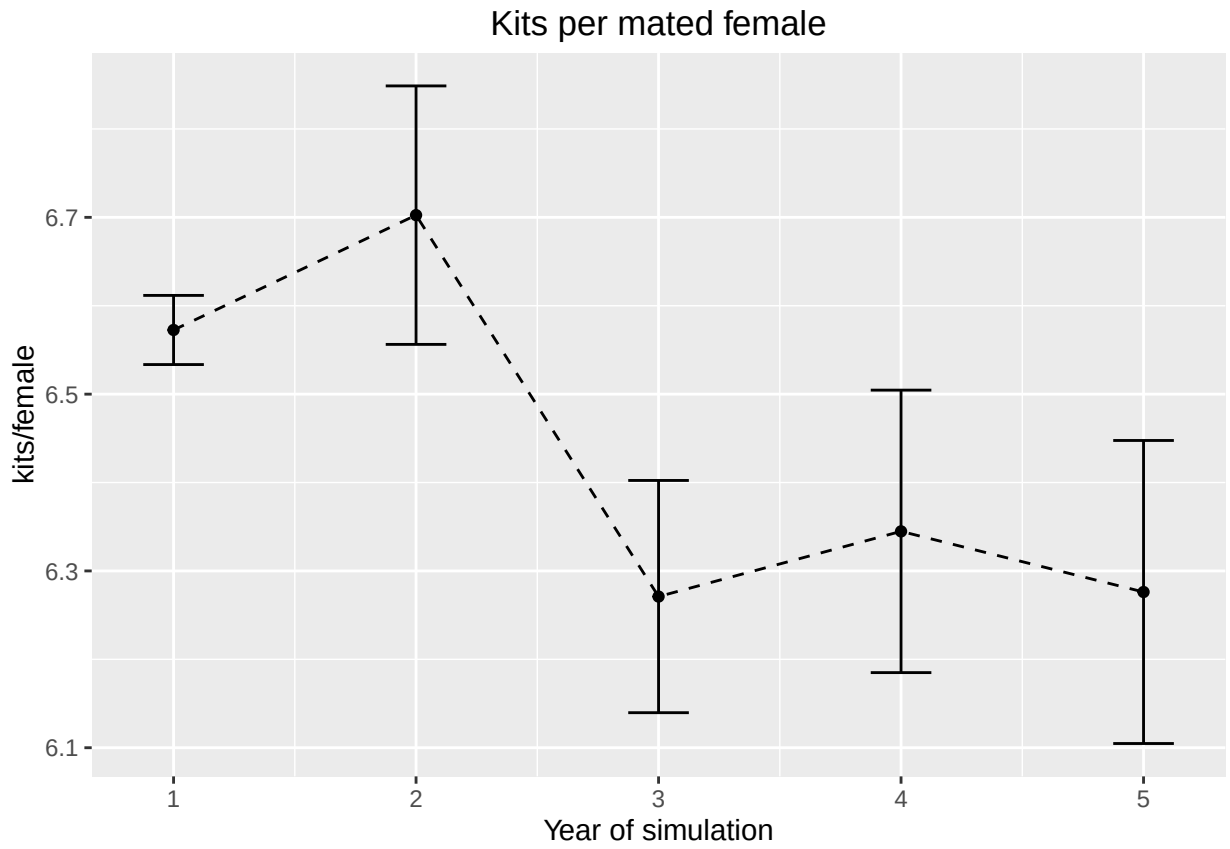
```
## Warning in matrix(c("Mated females", "Barren females%", "% kits w false
## sires", : data length [11] is not a sub-multiple or multiple of the number
## of rows [5]
```

Table 1: Key Figures

Mated females	1073
Barren females%	11.17
% kits w false sires	6.46
% females with same male 2	68.23
% females single-mated	3

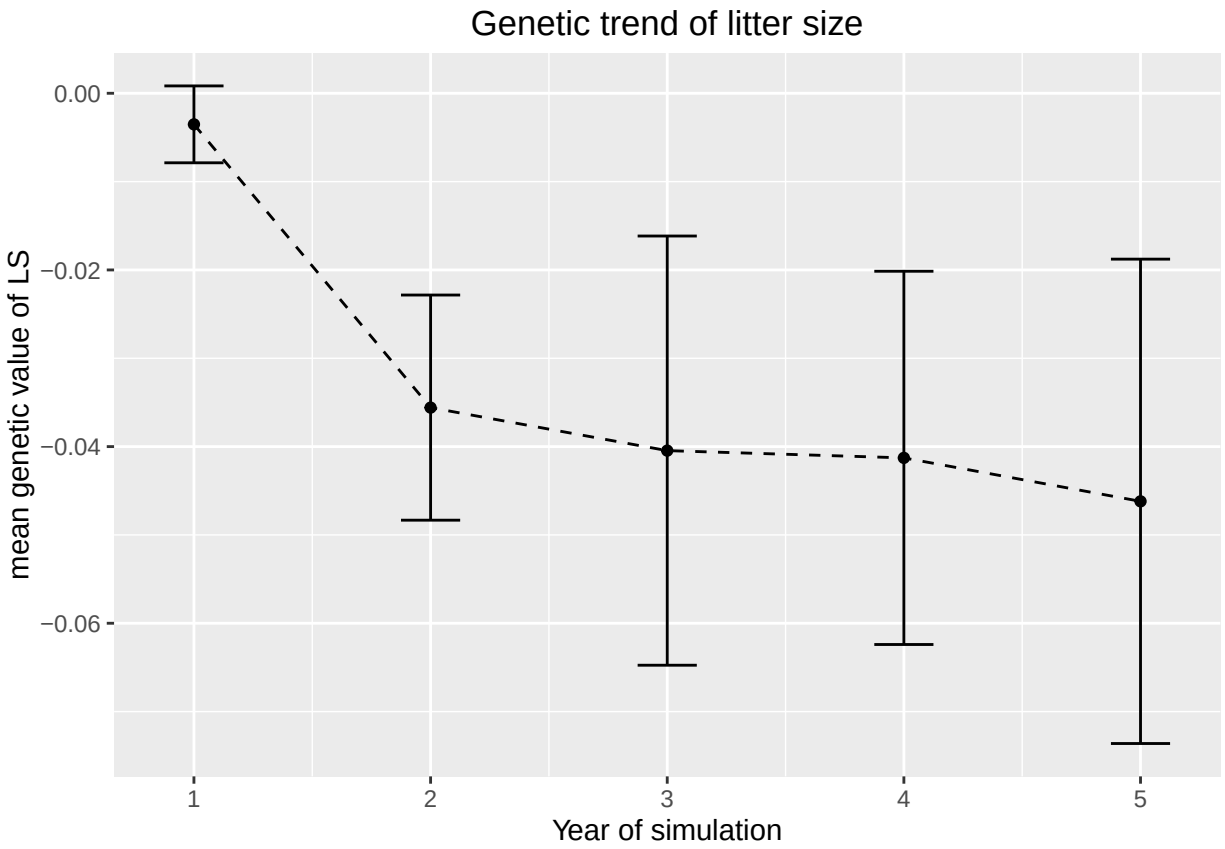
Litter size per mated female

This is defined as kits born alive. Bars show standard deviation of each replicate.



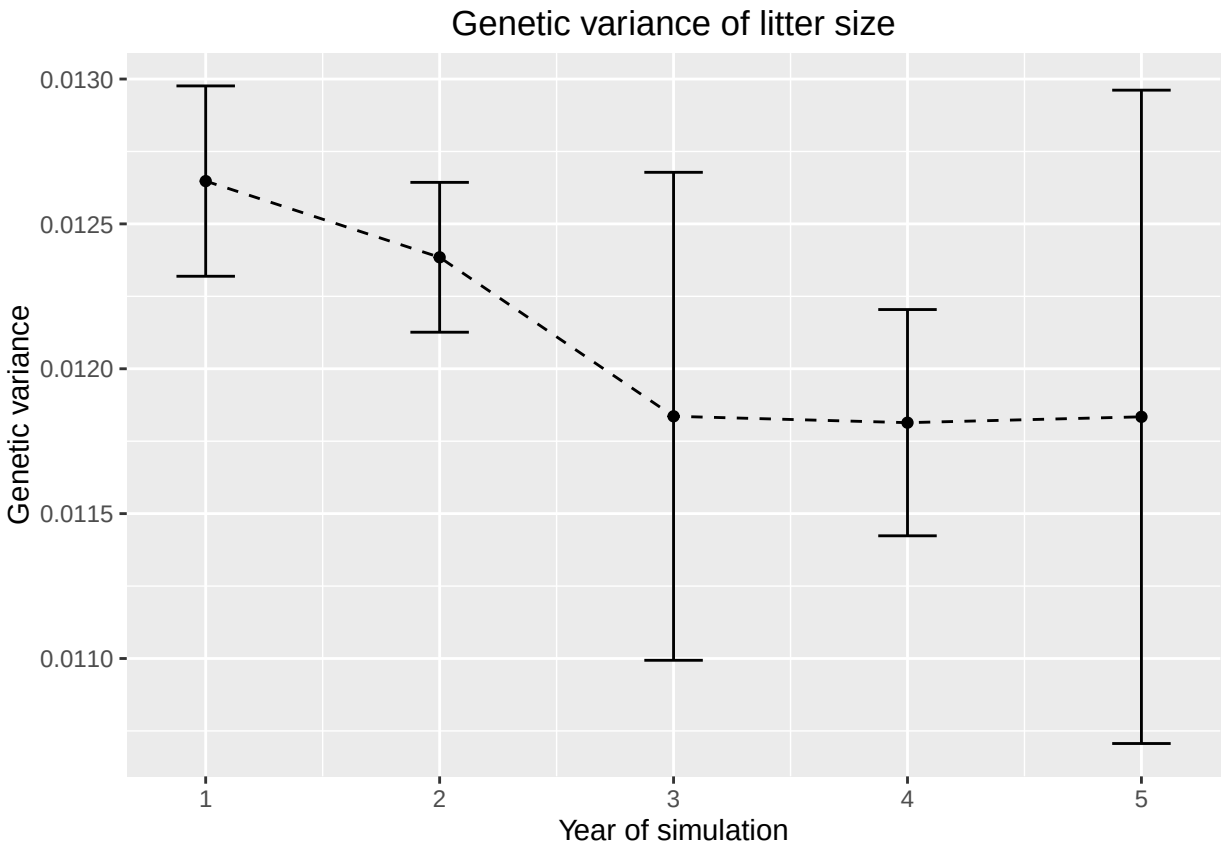
Genetic trend for litter size

Genetic trend of litter size within age cohort



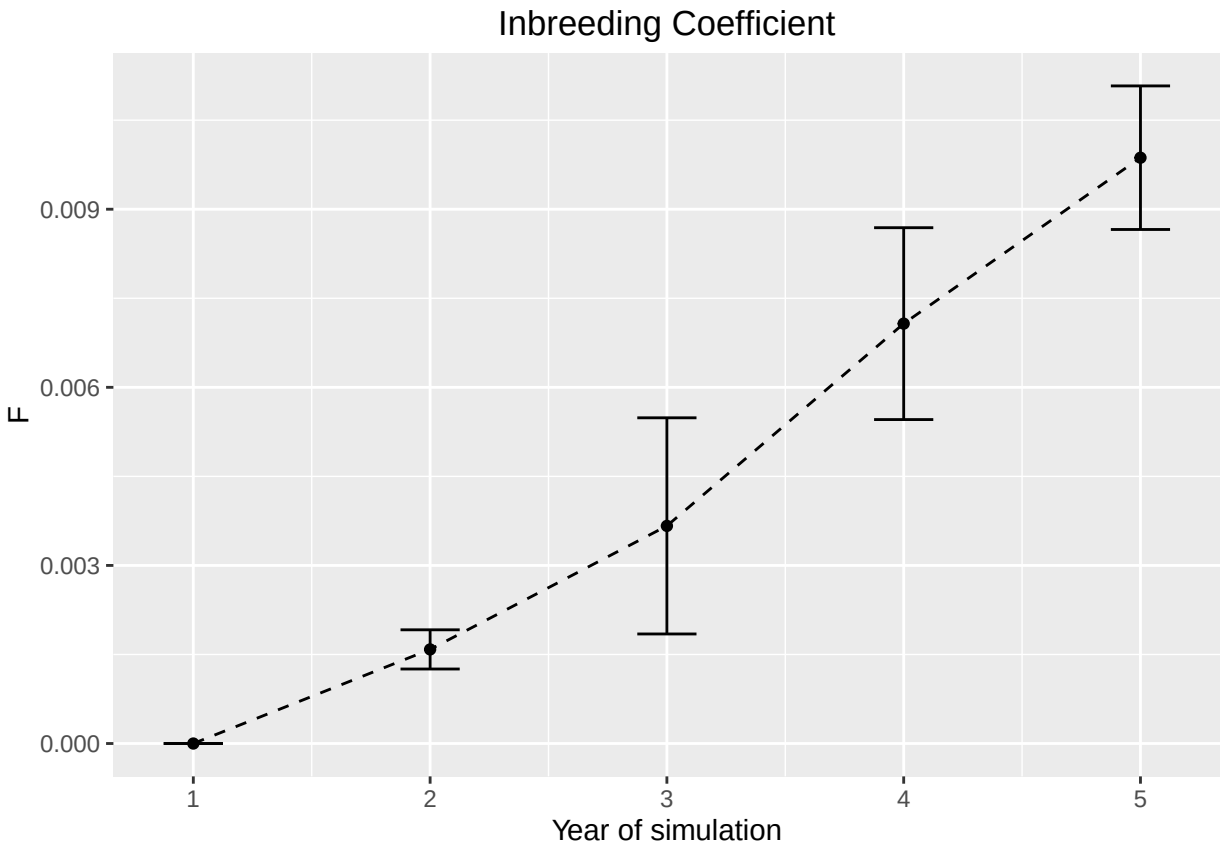
Genetic variance of litter size

Shows the trend in the genetic variance of litter size through the simulation. Theoretically it should slowly decrease over time. Increase indicates assortative mating or possible, a bug.



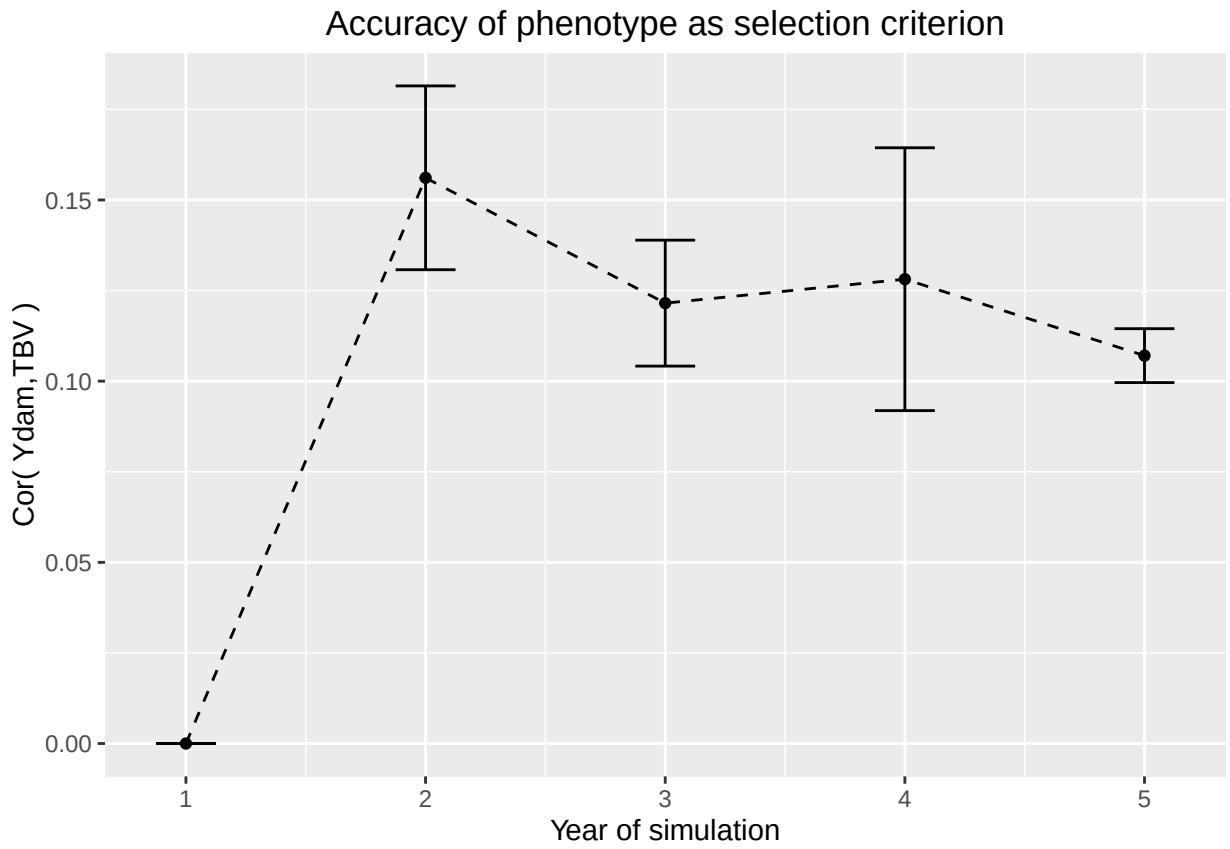
Inbreeding coefficient

Program tracks inbreeding through the simulation.



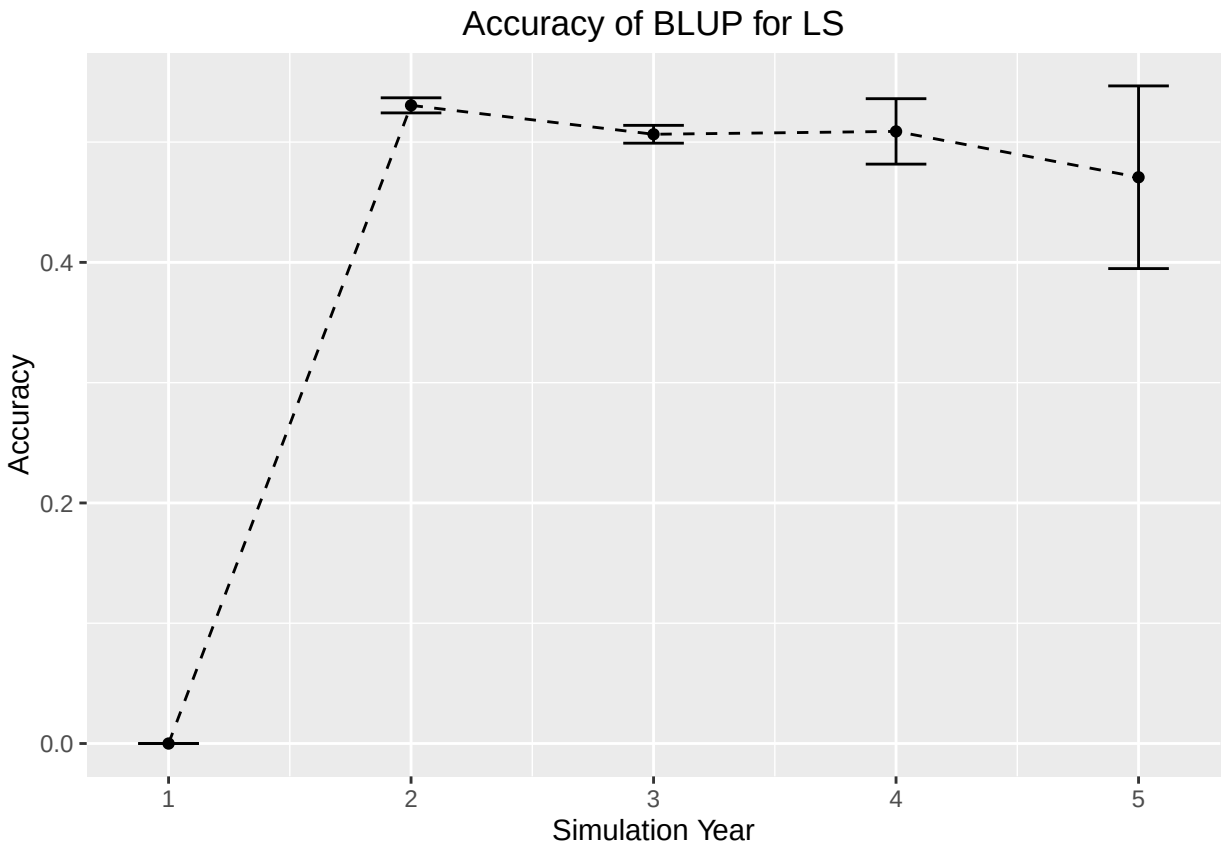
Accuracy of selection criterion

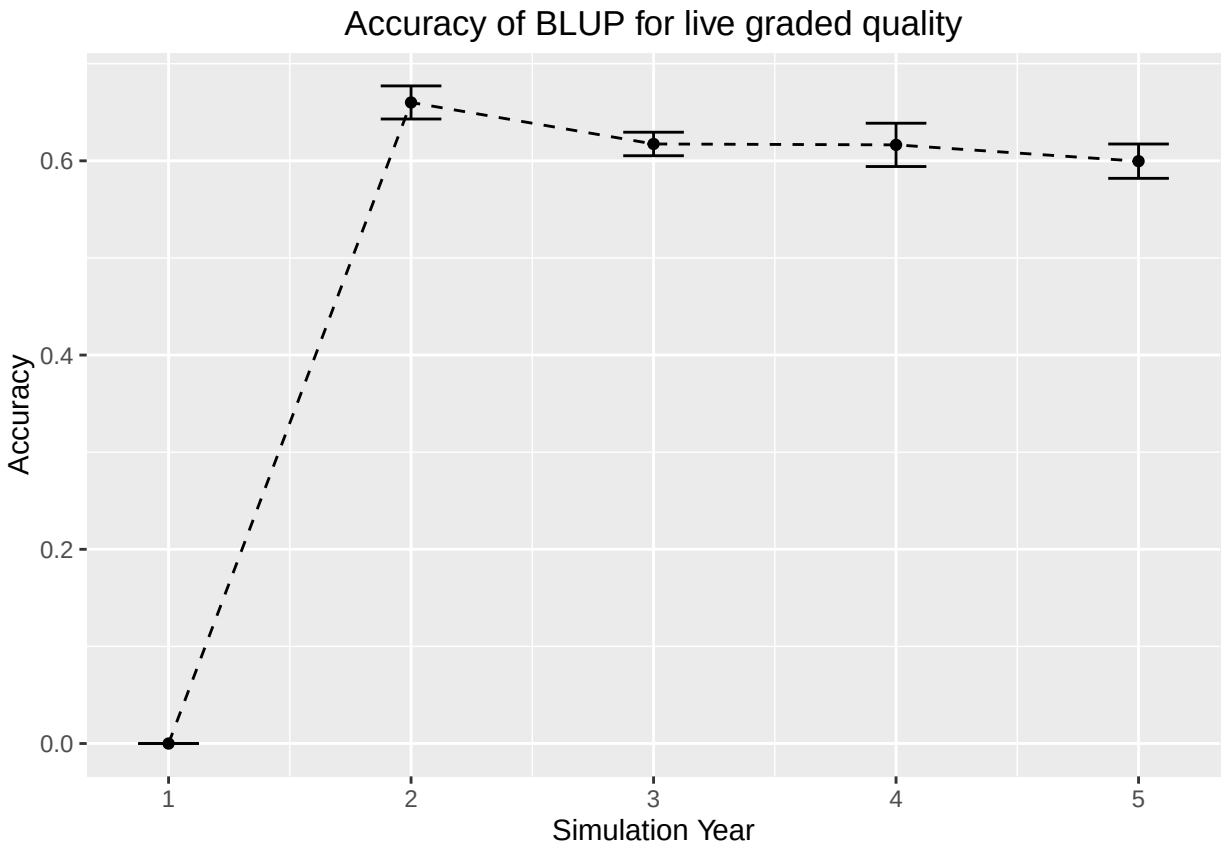
This is defined as the correlation between the phenotype of the kits dam to the true breeding value of the kit

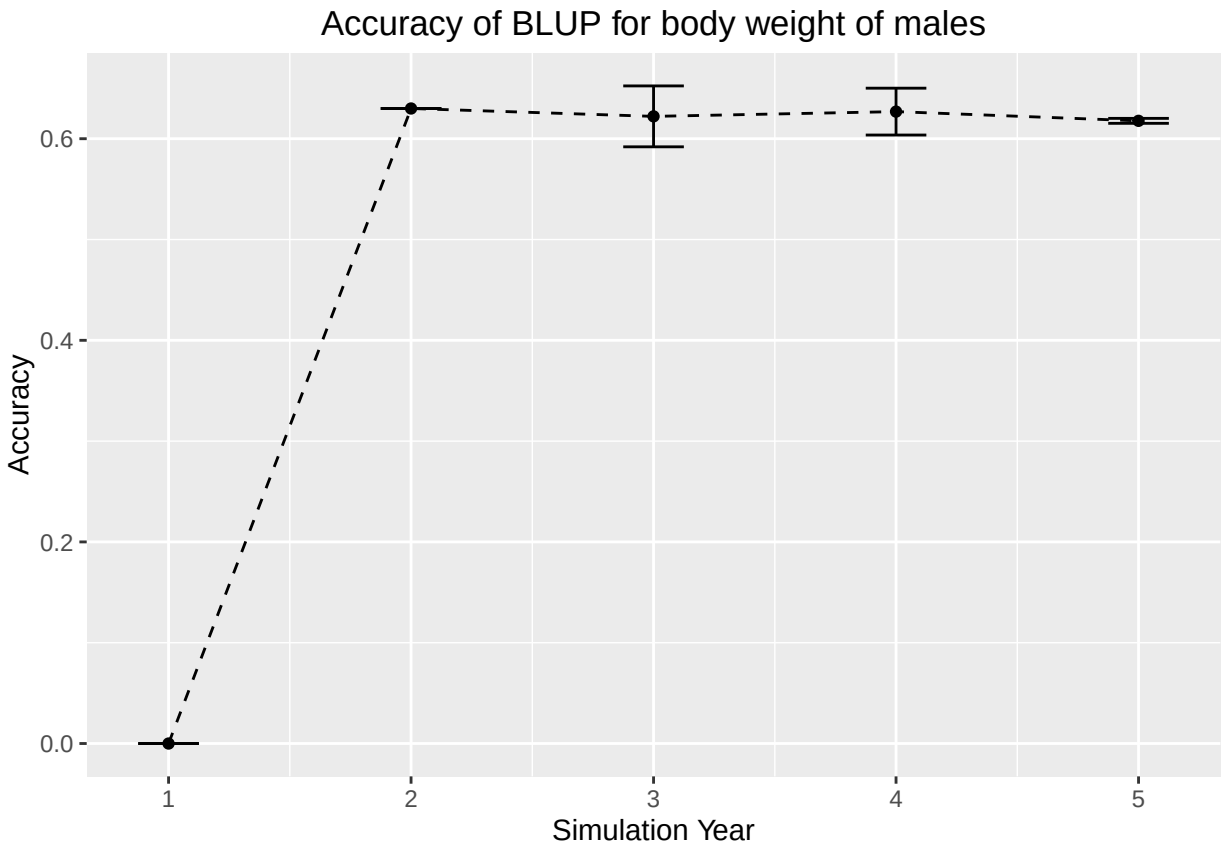


Accuracy of breeding values

This is defined as the correlation between the estimated breeding value and the true breeding value


Accuracy of BLUP for LS
Accuracy
0.0
0.2
0.4
1
2
3
4
5
Simulation Year

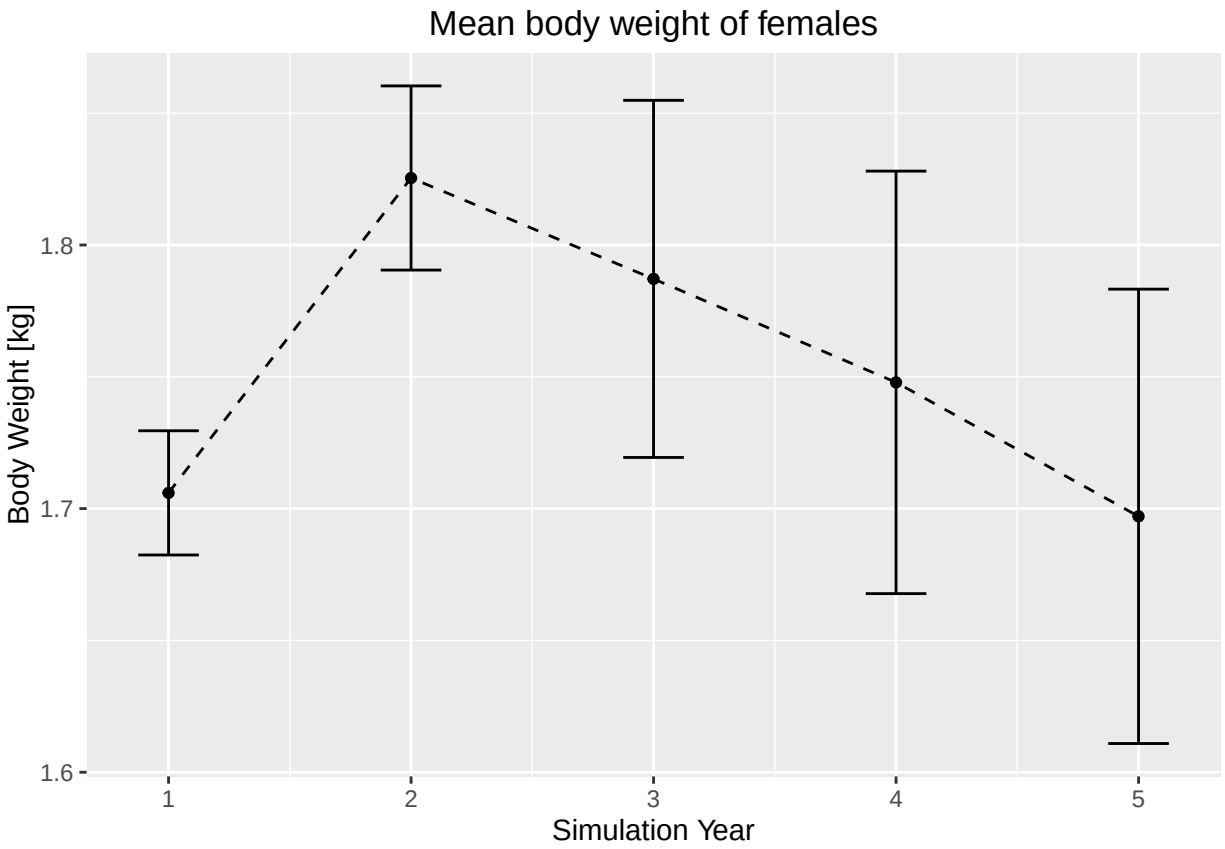

Accuracy of BLUP for live graded quality
Accuracy
0.0
0.2
0.4
0.6
1
2
3
4
5
Simulation Year



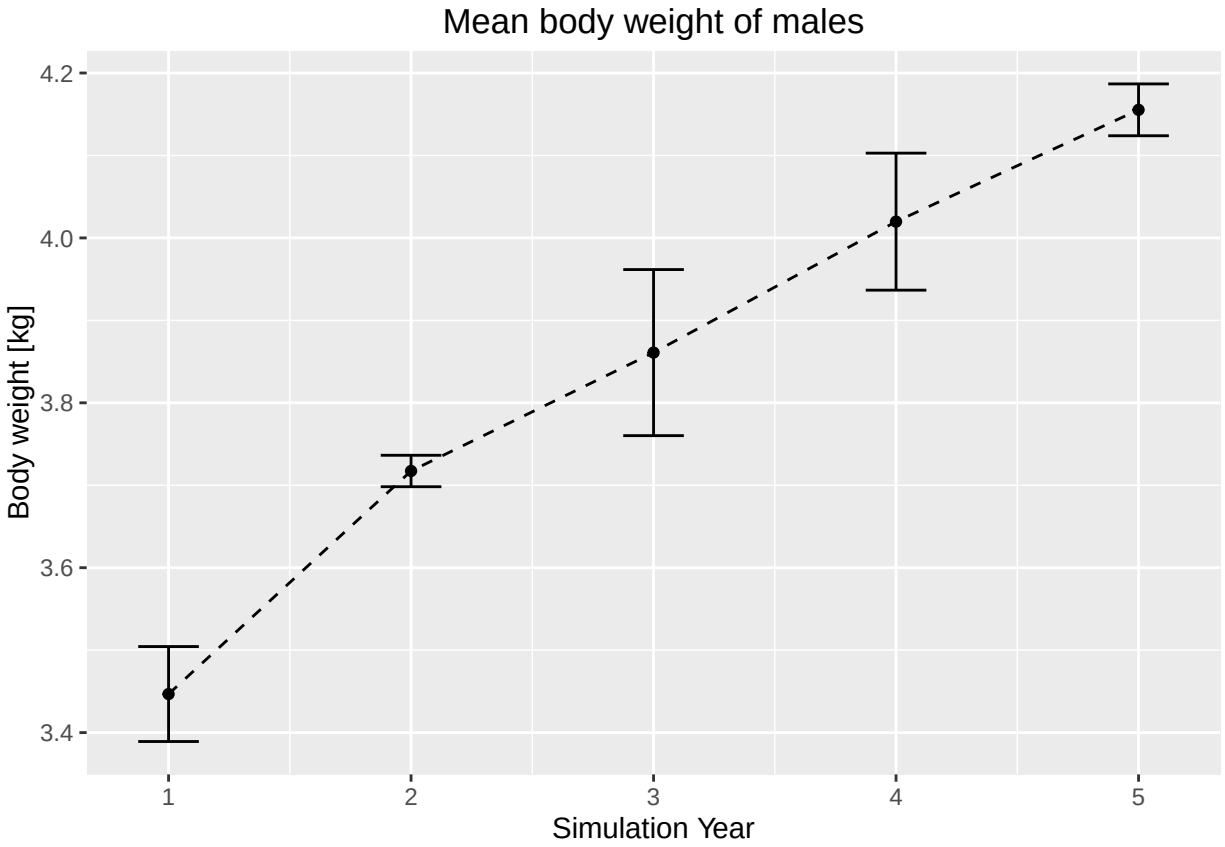
2. Body weight and skin length

Body weight of females

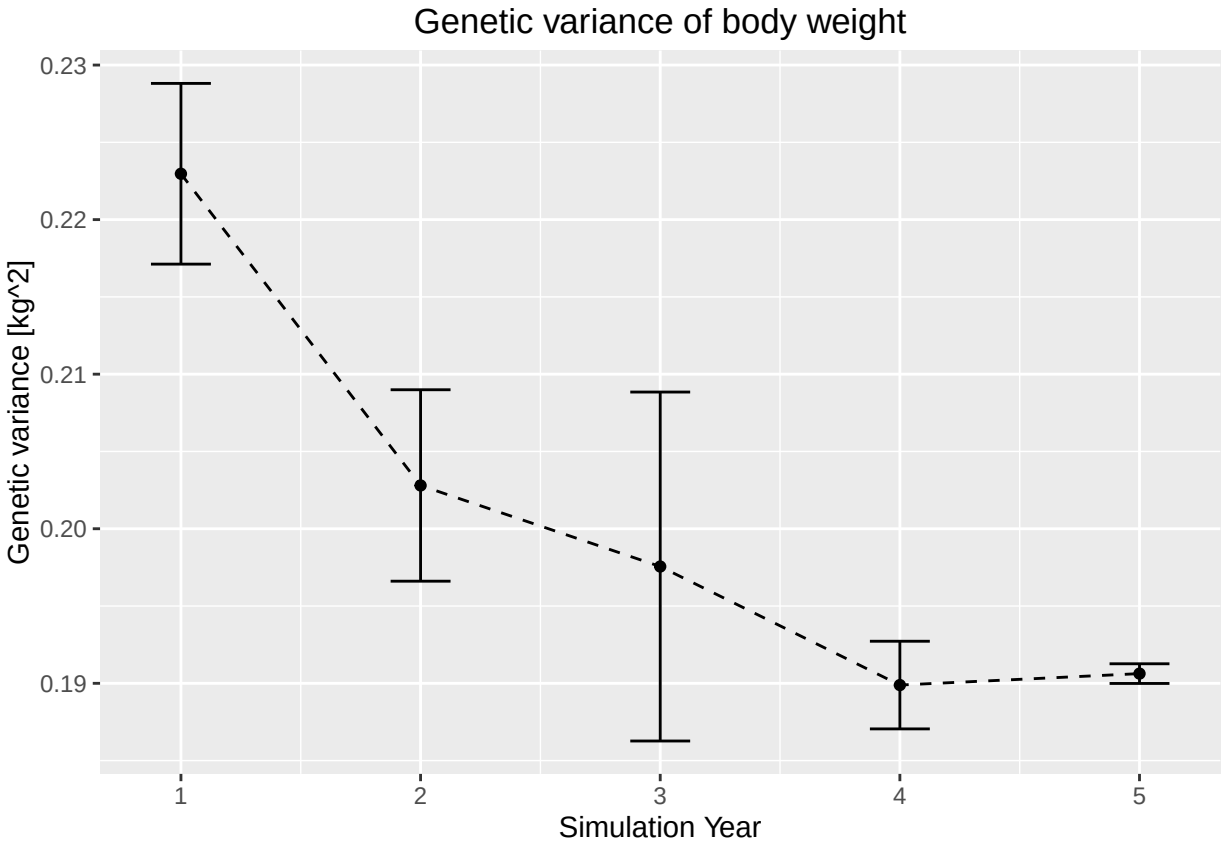
Body weight of females at 205 days of age, mean within age cohort.



Body weight of males Body weight of males at 205 days of age, mean within age cohort.

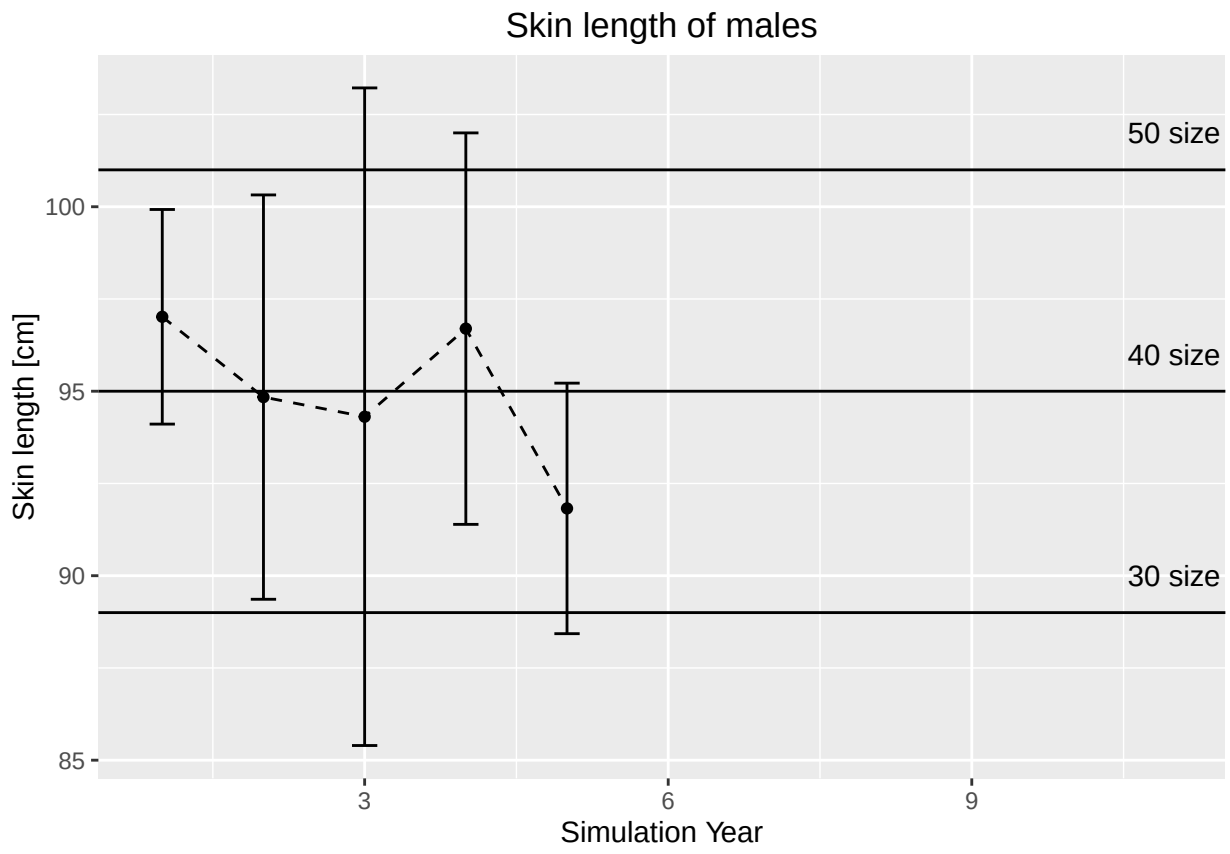

Mean body weight of males
Body weight [kg]
4.2
4.0
3.8
3.6
3.4
1
2
3
4
5
Simulation Year

Genetic variance of body weight



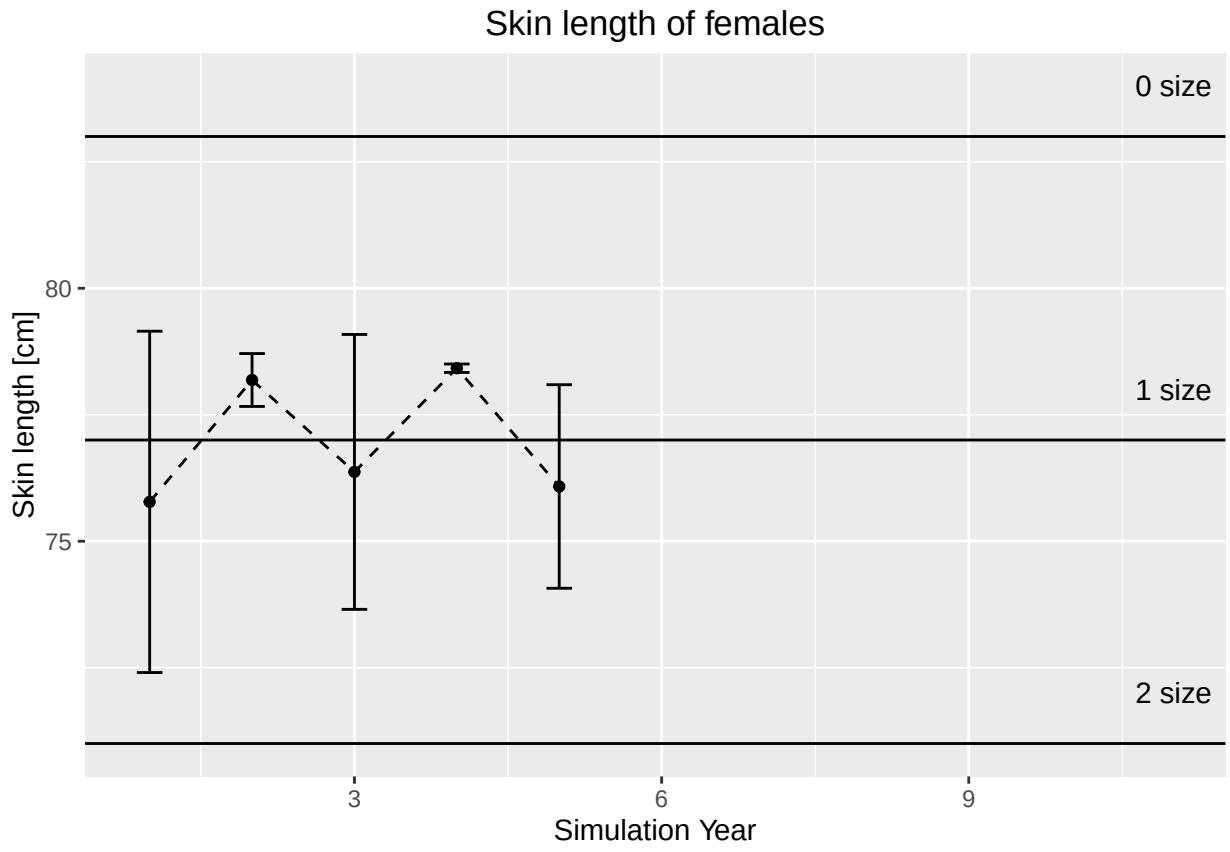
Skin length phenotype, male skins

This shows the development in average skin length, note that this is within age cohort and includes all animals, even those not pelted



Skin length phenotype, female skins

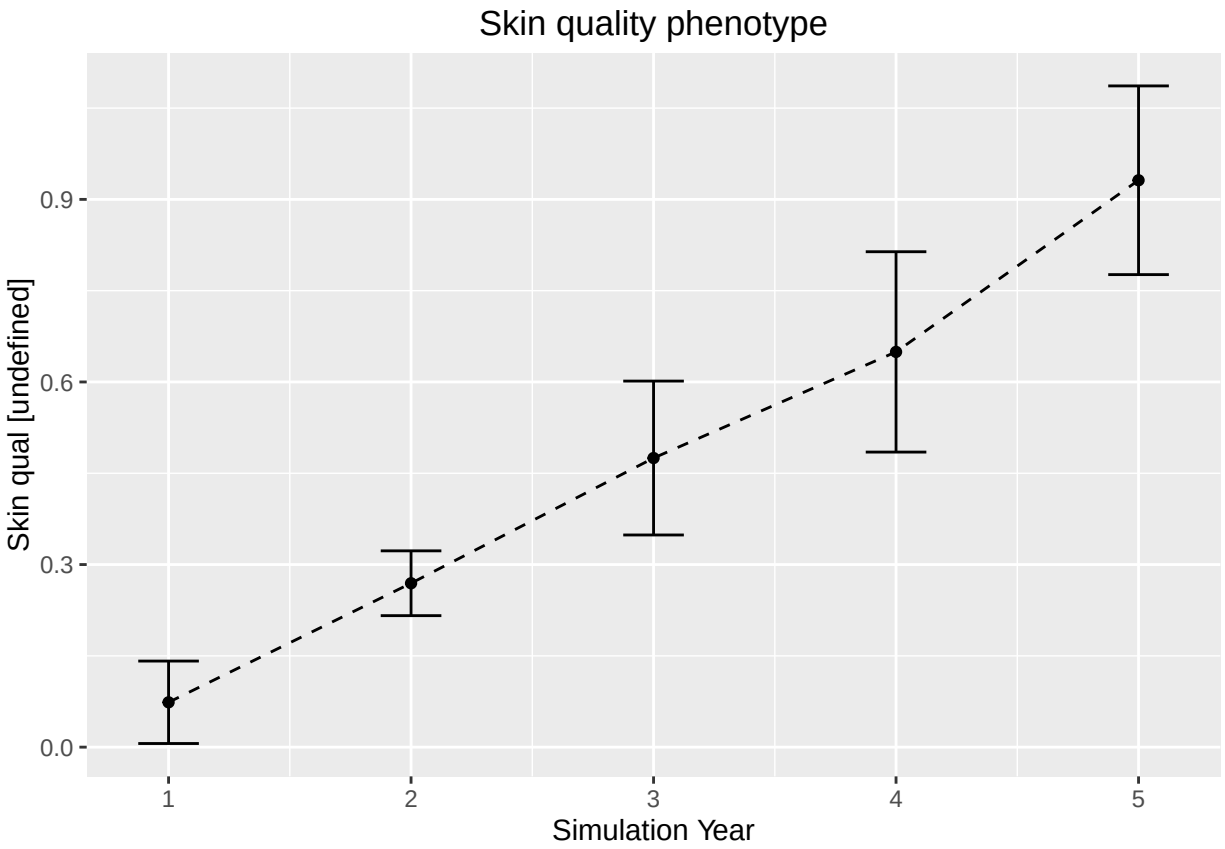
This shows the development in average skin length, note that this is within age cohort and includes all animals, even those not pelted



3. Skin quality and live graded quality

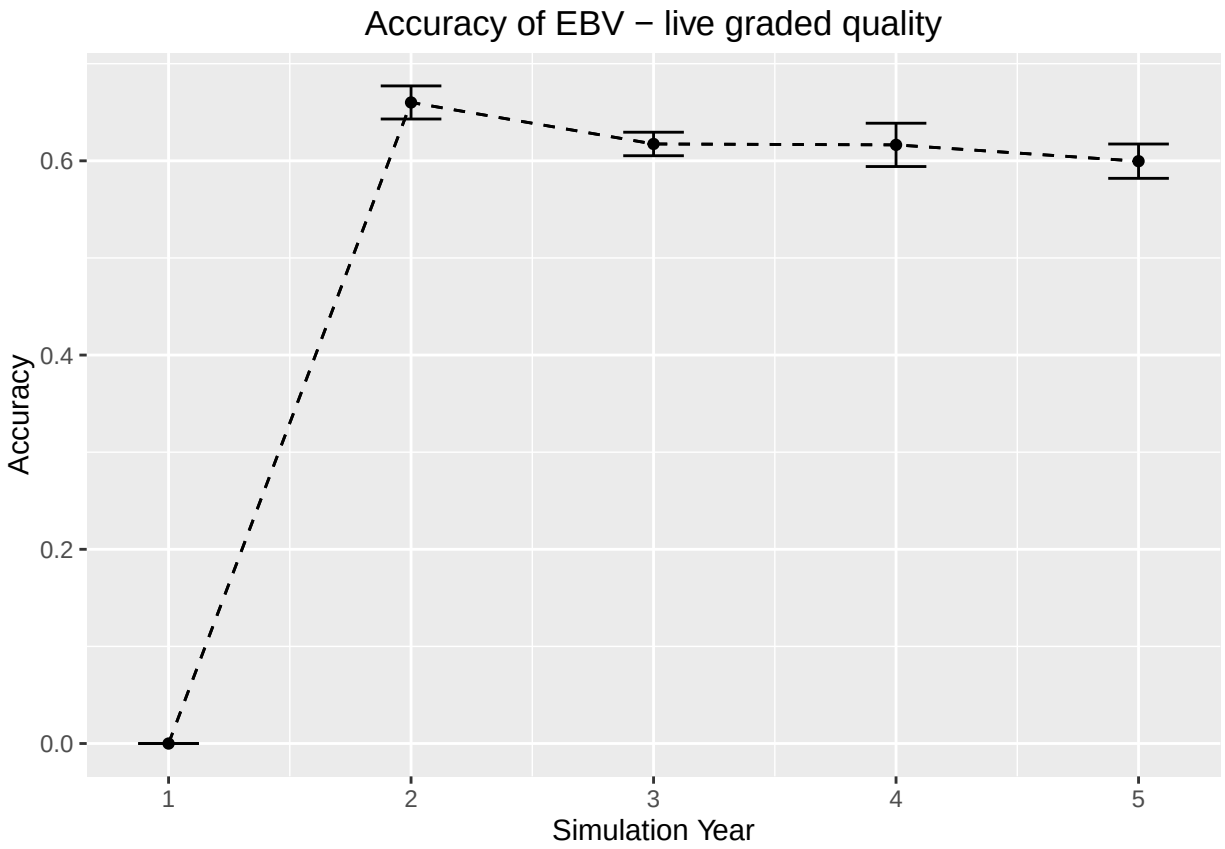
Average quality of skins

Note that the unit here is difficult to interpret. It is in phenotypic units, i.e. includes both environment and genetic part. Defined to start as the average distribution of skins in 2015 from Norway, Sweden, Denmark and Iceland. Quality of all other skins sold are fixed.



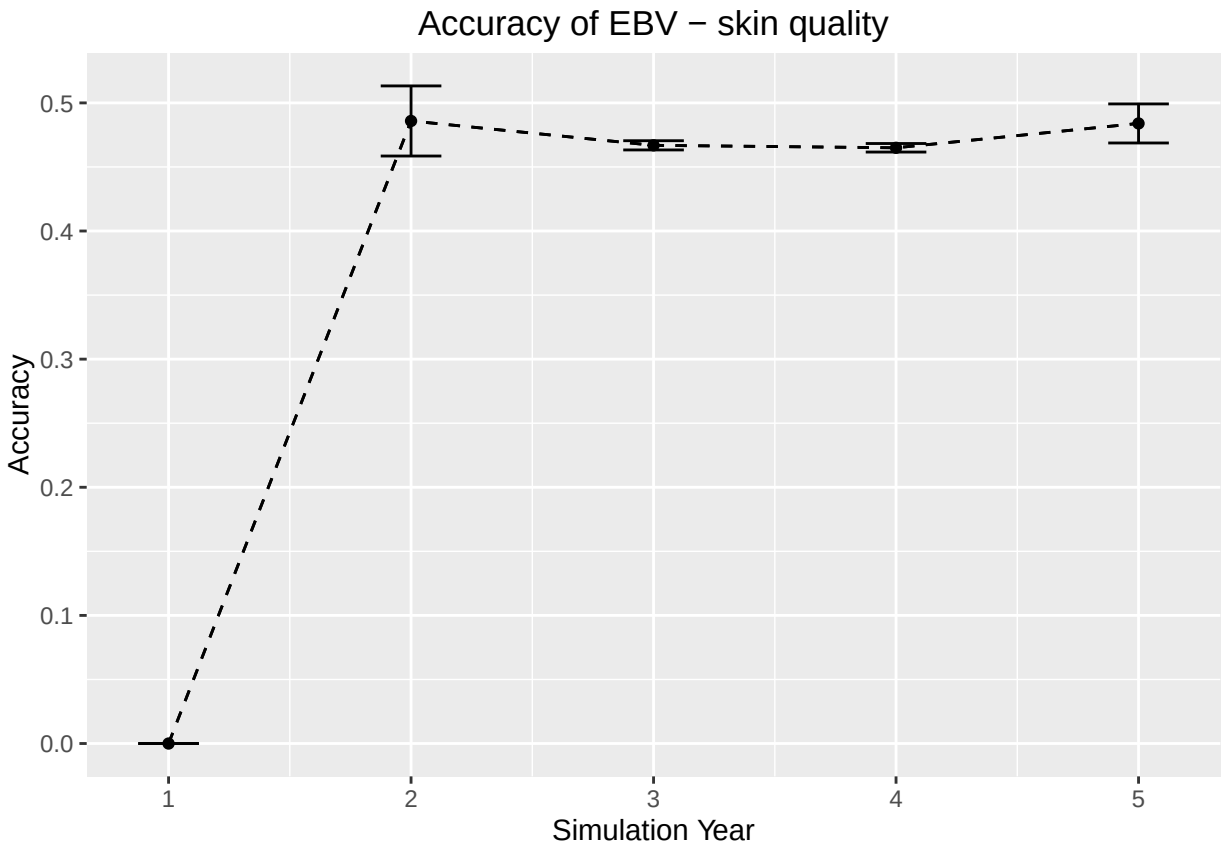
Accuracy of EBV of quality - live graded quality

Defined as the correlation between EBV and TBV of live graded quality. This is the correlation to the continous phenotype, not the live graded score(discrete variable).



Accuracy of EBV of quality - skin quality

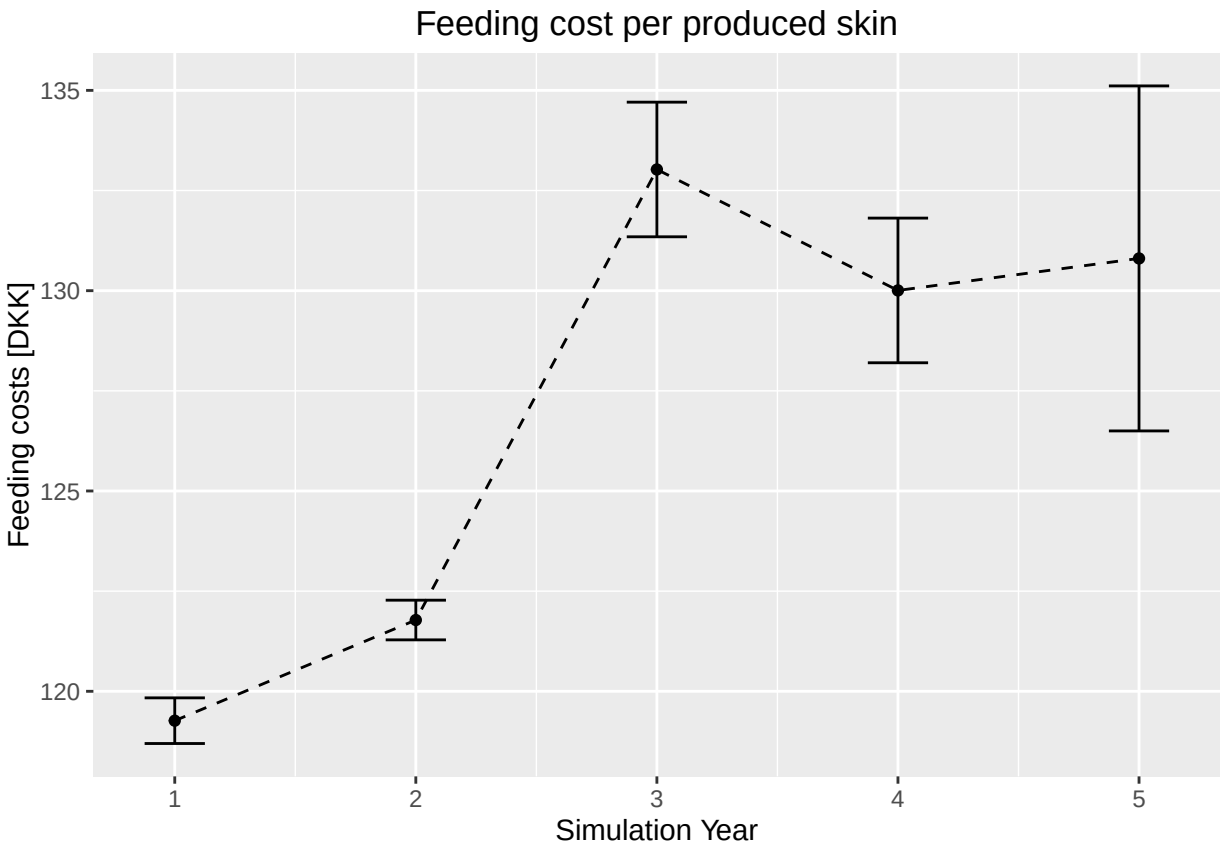
Defined as the correlation between EBV and TBV of live graded quality. This is the correlation to the continous phenotype, not the live graded score(discrete variable).



4. Feed costs

Feed costs per produced skin

Note that this is a beta version with all the feeding costs, minus the amount kits eat in weeks 6-9

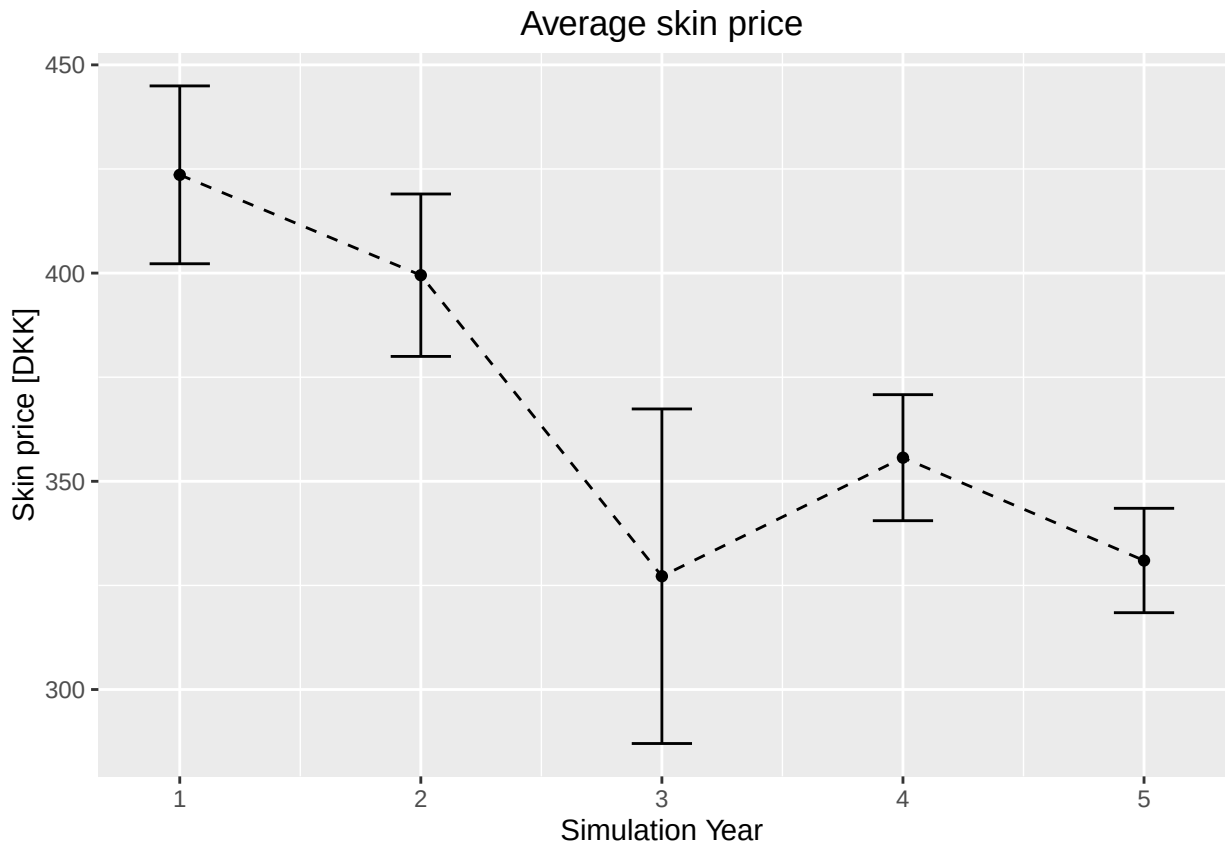


5. Economics

Here i will put in economical analyses of the runs, given some assumptions. I want to include margin pr farm, pr female and pr skin

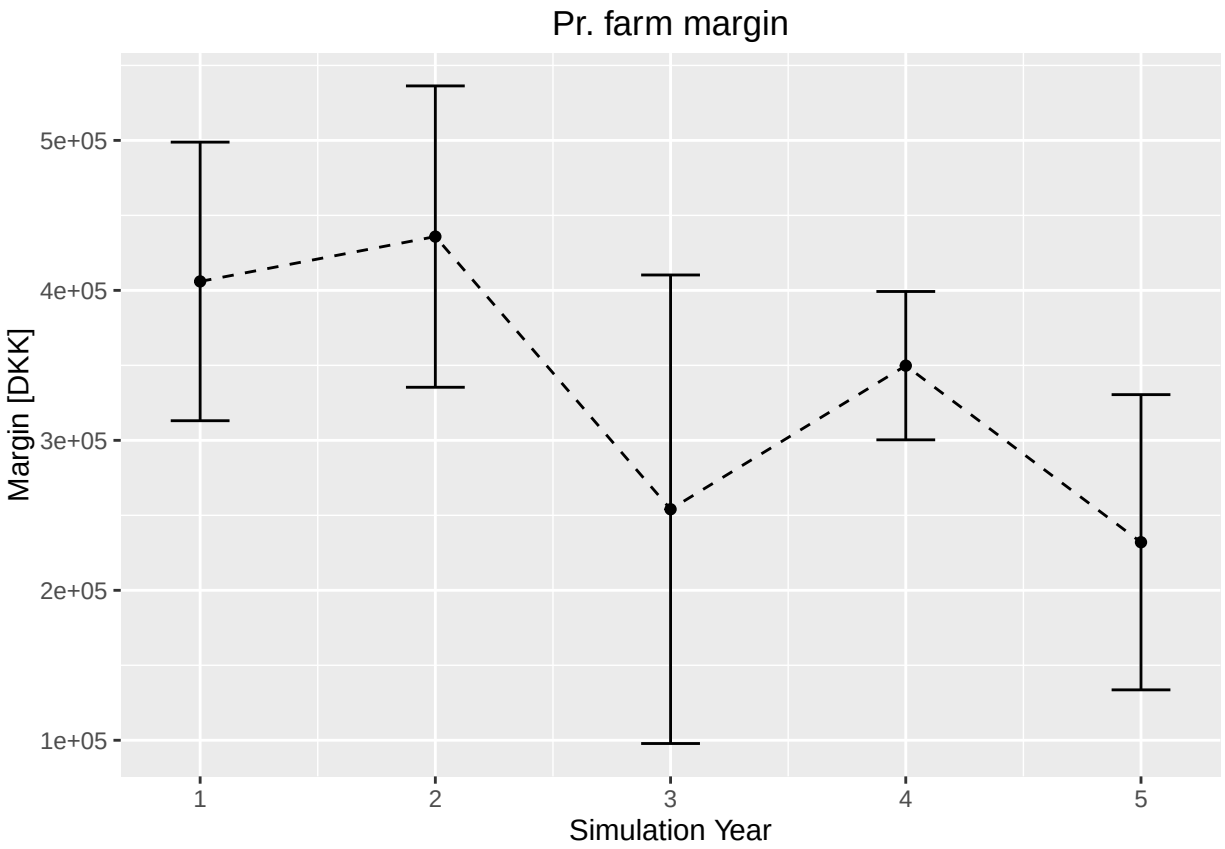
Average skin price across farm

Here is the raw average of sold skins. It is important to keep in mind that there is a bias upwards in this price when the litter size drops as proportionally fewer female skins will be sold.

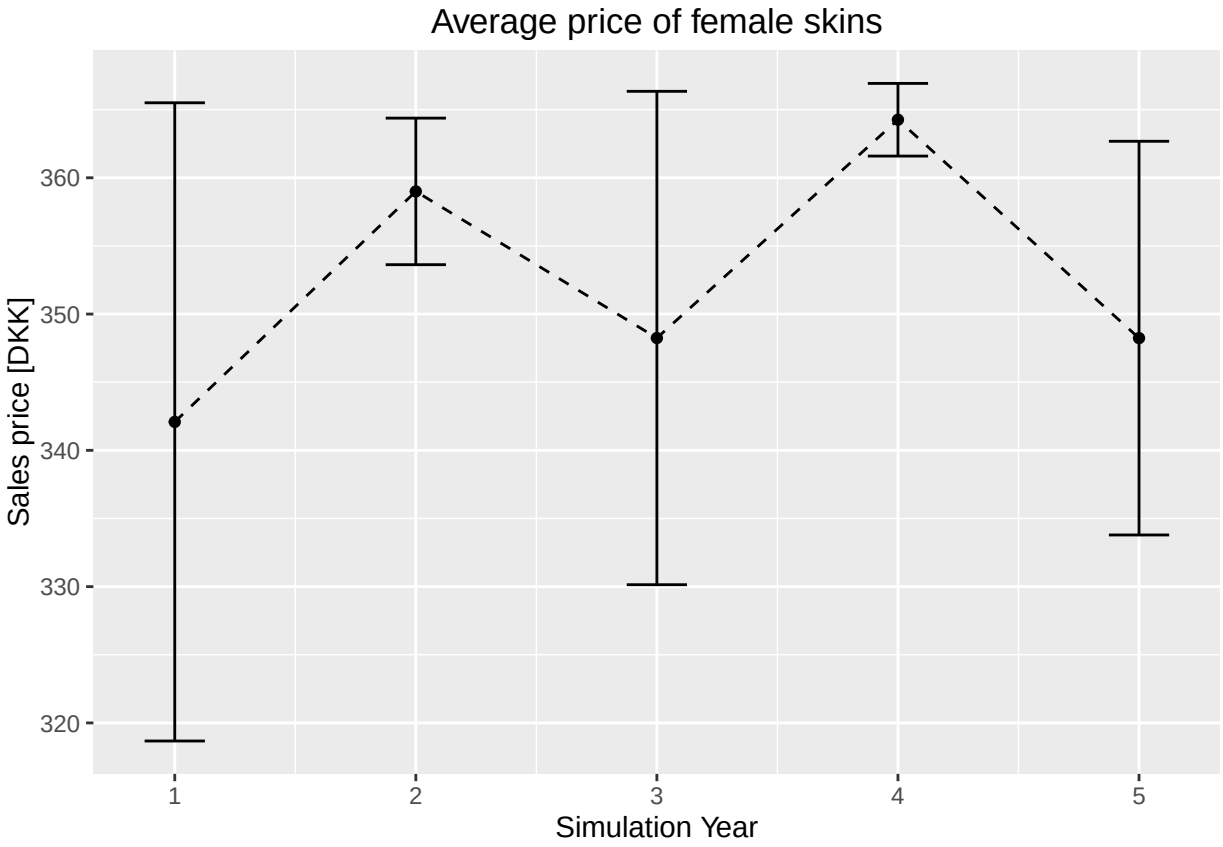


Margin per farm pr year

This is calculated as income from skins minus the variable costs, currently the variable costs are rather simplistic and need to be redone in a more elegant manner.

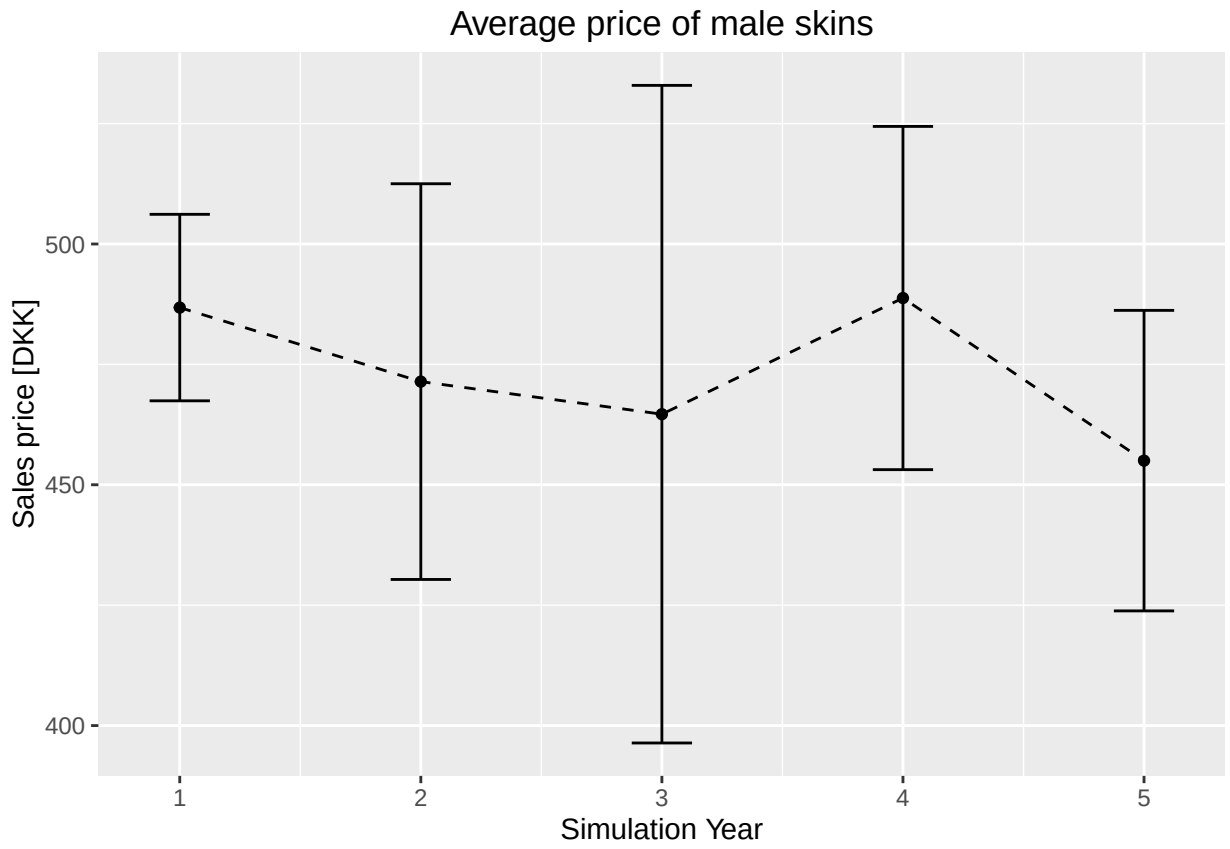

Pr. farm margin
Margin [DKK]
5e+05
4e+05
3e+05
2e+05
1e+05
1
2
3
4
5
Simulation Year

Average price of female skins



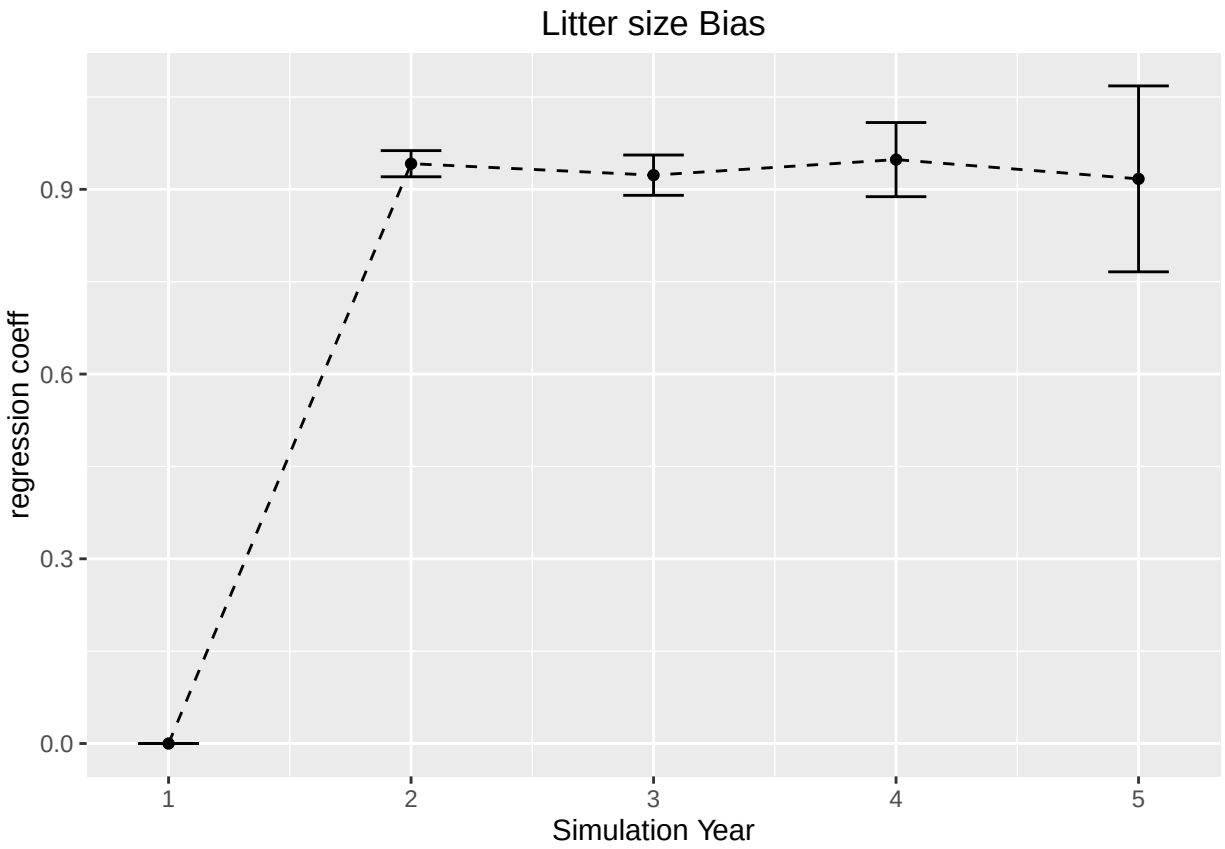
Average price of male skins

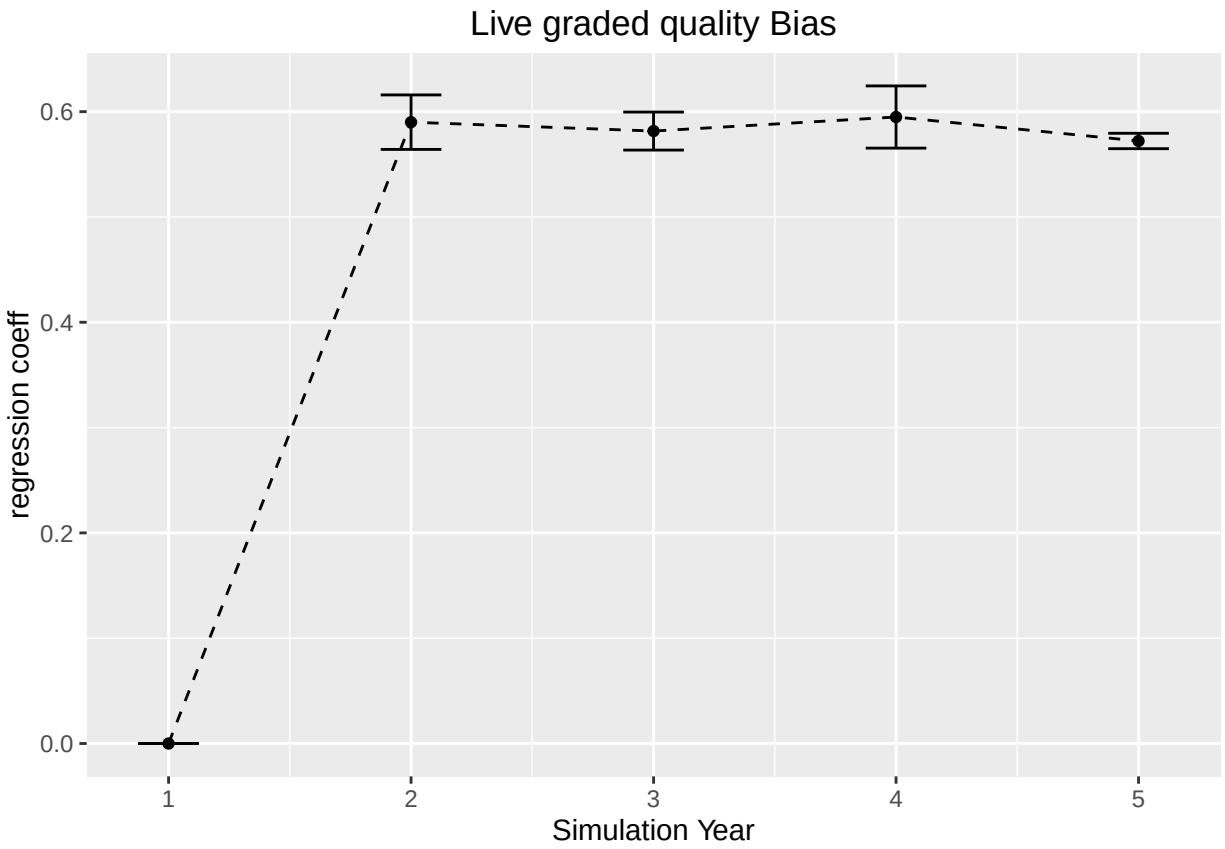
Average price of female skins

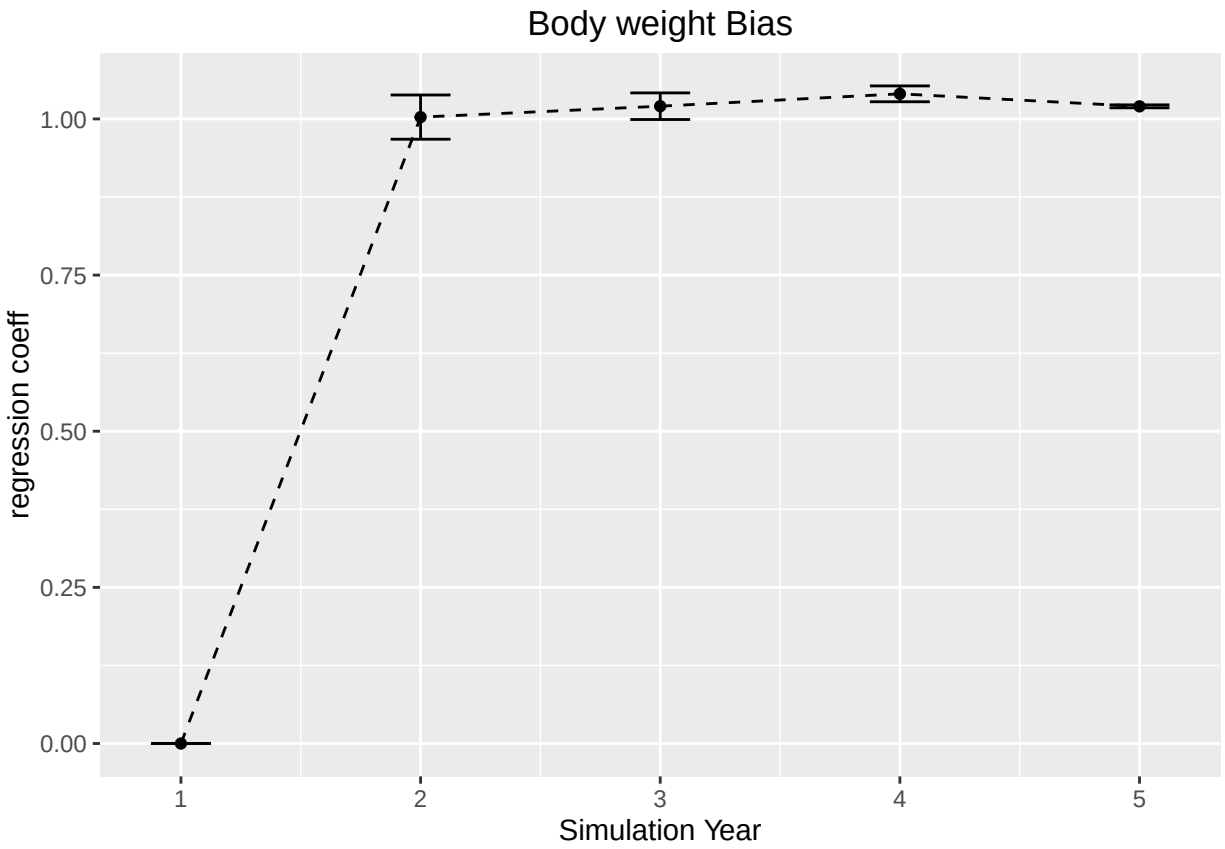


Bias in EBV's

This is calculated as a regression on the True breeding value of animals against the estimated breeding value. For unbiased EBV's the value should be around 1


Litter size Bias
regression coeff
0.0
0.3
0.6
0.9
1
2
3
4
5
Simulation Year


Live graded quality Bias
regression coeff
0.6
0.4
0.2
0.0
1
2
3
4
5
Simulation Year


Body weight Bias
regression coeff
1.00
0.75
0.50
0.25
0.00
1
2
3
4
5
Simulation Year