Questions

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Formating rules

- Questions That is how you format questions.
  - Answers That is how you format answers.

Questions / Answers

- Why do breeding values not have a unit? In this video they have a unit: https://www.youtube.com/watch?v=_JxcTELevoc.
  - They have a unit, when the trait has a unit. (But not always shown)
- How do you calculate the total breeding value at the moment?
  - The total breeding value is not existing yet.
- How big is the basis population at the moment. How could I find out myself?
  - Defined, should be stable and not influence differences of Breeding values. Like in geography you use the sea level for measuring altitudes (Problem bridge building in different countries). But has to be adapted, to not have too high numbers.
- How should I format the glossary so you could help me to get rid of my mistakes?
  - Tag "?" inside.
- How do you validate your data?
  - You make a frame where the values should fit to exclude outliers.
- Why do you do the breeding valuation separateley for Calves (KV) and Heifers (MT) and seperateley for each breed?
  - Because you slaughter them at different ages where different genes are in action. It has political/economic reason that you either breed heifers or calves.
- At the moment you are breeding carcass conformation to C, carcass weight to maximum and carcass fat coverage to maximum, don't you?
  - Not actually breeding, but the maximum of breeding values also means the maximum of the trait.
- Should I call Fettabdeckung carcass fat or carcass fat coverage?
  - carcass fat
- The big disadvantage of the introduction of carcass fat as a breeding value is, that current animals can not be compared to past animals, isnt' it?
  - No there is no disadvantage. You could calculate the new model also for the past breeding values.
- The big advantage of the introduction of carcass fat coverage as a breeding value is, that breeders can now breed organised towards more carcass fat coverage, which has generally declined over years, isn't it?
  - No, the big advantage is, that you have a predictor trait for early maturity. Fat is usually created after the building up of proteins in a body. And it is important for good payment. So it can be easily linked to early maturity.
- For Calves (KV) carcass fat coverage negativeley correlates with conformation, for beef it is the opposite, how can this be?
  - The correlations mentioned are that small that the are not worthy to interpret.
- Is the accuracy of breeding values the same as the certainty of breeding values?
  - The accuracy is defined by Bestimmtheitsmass. Certainty can mean the same but may be context dependent.
- What is ASR F&E? Found in notice of meeting 16.5.

  - It is the umbrella association of all cattle breeding associations. It is superordinate to Mutterkuh Schweiz.
- Somehow I could never really understand what the degrees of freedom means. Could you please give me a simple explanation?
  - You either count the number of observations or the number of rest effects minus the possibilities of grouping in fixed effects? Could be clarified.
- Is it a good idea to look at breeding methods of other animal species to compare it to beef cattle?
  - Later it can be useful to look at the breeding program of growing pig, because they are ahead of the cattle breeders.
- Can you give an example for each why you choose a variable to be a random effect or a fixed effect?
  -
- At the Strickhhof I heard that early maturity could also be linked to sexual maturity. Do you think it is worth to look for more informations in this topic?
  - Yes it could be interesting too look e.g. at the differences of steers (not much testosterone) and bulls.
- Could you say that conformation is important, because it gives you information about the proportion of meat and fat to bones and other slaughter by-products?
  -
- What are Schaufeln?
  - Schaufeln are Teeth of cattle to estimate their age.
- What is the purpose of genetic groups?
  -
- What are variance components?
  - Variables that explain the variance over a population? E.G. genetics, farm.
- What is a selection path?
  -
- Can you recommend me a paper that highlights the importance of early maturity and carcass fat?
  - Hospenthal Thesis.
- How would you translate Rind to English. Is it heifer or young bull?
  - Heifer = young female, young bull = young male
- Are at the moment carcass weight and carcass conformation corrected for age at slaughter when calculated as Breeding value?
  -
- In English I will call Frühreife not early maturity but rate of maturation, do you agree?
  - No, rate of maturation describes the process until an animal is mature. However we are not interested to breed for that. The only thing we are interested in is that the animals should be maturer as early as possible, no matter how. (Maybe we have to look at it later when we create the index)
- Should I fill in the CHTAX tables for carcass conformation and carcass fat and carcass category? Not very good quality and more distracting than helpful, I think.
  - Yes, you should fill in the CHTAX tables in the way of Andrea Hospenthal. The pricing table should also be included.
- Should I transform the Skript File into a Bookdown file? Somehow committing with Git does not work anymore when combined.
  -
- Where can I find the files for the genetic trend figures?
  - https://www.mutterkuh.ch/de/documents/herdebuch Herdebuchbericht 2017, page 37 or the presentation of Remo Ackermann http://www.swiss-limousin.ch/media/pdf/2017_01_31-Limousintag_Remo_Ackermann.pdf .
- How can I include a figure of a reference into my markup file? E.G. Fig. 21.3 Thonney.
  - You can include a figure with the command "knitr::include_graphics()". You can write the file name into the brackets and the file has to be deposited in the same folder as the markup file.
- How can you create a nice table in R markdown?
  - You can create a R chunk. There you use the function data.frame and with c() you define you

columns top down. With the function “colnames(name of the data.frame)” you define the column names from left to rigth. Then you use the function “kable()”. But why do you have always do library(knitr)?

- How can you include R result in the text of R markdown?
  - The R chunk needs to be above and can be hid with “echo = FALSE”. The you take the defined variables as results into the text with (press two times shift + ^) “. In those quotation marks you fill in “r Variable name”.
- How do I create a R chunk?
  - With “alt” + “cmd” + “i” you can create a r chunk.
- How do I produce the back slash like this ?
  - With the combination “alt” + “shift” + “7”.
- How can I produce curly brackets {}?
  - “alt” + 8 and 9.
- How do I sign variables?
  - You do “_{sign}“
- Should I always use the latech $$ writing when writing variables? I think it would be clearer.
  -
- Are character and trait synonyms?
  - Yes almost synonyms.
- How do I write and interpret the summation symbol big sigma?
  - You write it like this: $\sum_{i=1}^{n}$
- How do I write square roots?
  - You write it like this: $\sqrt{b^2 - 4ac}$
- How do I write matrices?
  - You write it like this:

$$\mathbf{X} = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}$$

- How do I write tables?
  -

```
data.frame(Kalb =c(1,2,3,5,3),
    Geschlecht =c("M","F","F","M","M"),
    Vater =c(1,3,1,4,3),
    Mutter =c(NA,2,2,5,6),
    WWG =c(4.5,2.9,3.9,3.5,5.0))
```

```
##   Kalb Geschlecht Vater Mutter WWG
## 1    1          M     1     NA 4.5
## 2    2          F     3      2 2.9
## 3    3          F     1      2 3.9
## 4    5          M     4      5 3.5
## 5    3          M     3      6 5.0
```