



Introduction



- *Festuca arundinacea* has the ability to gain water in greater depths than other grasses. Therefore great expectations exist for cultivation in dry areas
- Until now *Festuca arundinacea* has no large contribution in seed mixtures
- Cattle do not accept *Festuca arundinacea* very well because of its hard blade
- New varieties of *Festuca arundinacea* with softer leaves exist and it may be expected that the intake of cows increase

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Objectives



Do soft foliated *Festuca arundinacea* plants or mixtures have higher acceptance by cattle?

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Grass intake is usually influenced by



1. Date and term of stocking
2. Stocking density
3. Seed mixture or grass variety
4. Grassland management (mulching or cutting grazing residuals)

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Mixtures and Varieties



1	GSWI
2	GSWT
3	Revital 301
4	Progreen Dauerweide Mähweide 3 ohne Klee
5	BellMix 120DF
6	Country 2006 Weide mit Klee
7	Country 2012 Mähweide
8	GrazeMax
9	GreenStar Struktur
10	GreenStar intensiv Süd
11	LandGreen W 963 Weidemischung
12	Lolium perenne – early
13	Lolium perenne – late
14	Lolium perenne 1/3 early-medium-late + white clover
15	Dactylis glomerata early
16	Dactylis glomerata late
17	Festuca arundinacea
18	Festuca arundinacea, soft leaves

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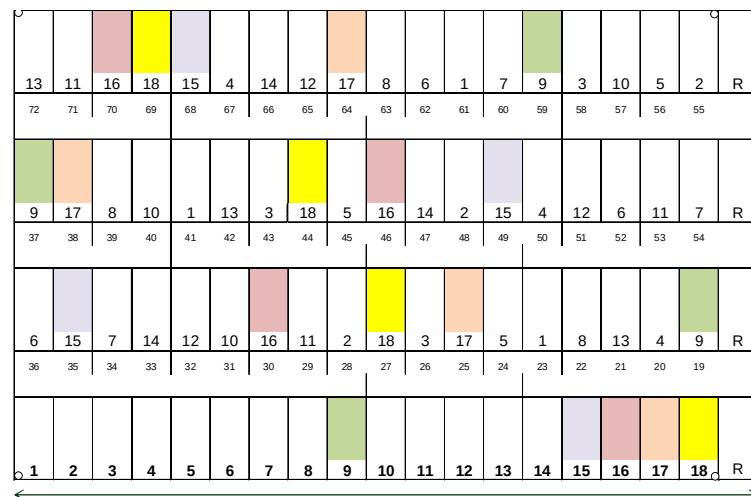
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Material and Methods



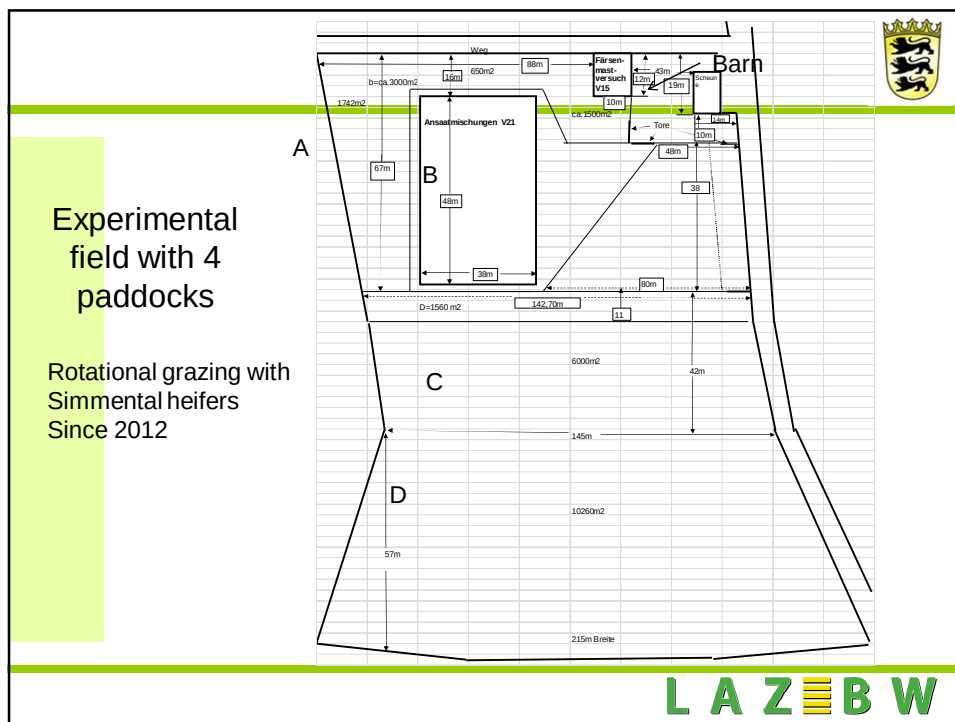
37 m



- 9 Mixture with 85 % Fest. arund.
- 15 Dactylis glomerata early Treranc
- 16 Dactylis glomerata late Lidaglo
- 17 Festuca arundinacea soft Bariane
- 18 Festuca arundinacea Lipalma

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Grazing dates in the first 3 experimental years

Date and length of stocking:
(Size of grazing land is 0,18 ha in 72 plots)

Ten heifers were set on the plot from to:

2012	2013	2014
23.04. – 30.04.	02.05. – 07.05.	17.04. – 24.04.
16.05. – 21.05.	26.05. – 29.05.	13.05. – 17.05.
<u>15.06. – 22.06.</u>	<u>01.07. – 05.07.</u>	<u>24.06. – 30.06.</u>
<u>19.07. – 25.07.</u>	30.07. – 05.08.	<u>24.07. – 30.07.</u>
04.09. – 07.09.	25.09. – 27.09.	
16.10. – 18.10.		

Grazing residues mulched or cutted

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Proved parameters



- 1. **grazing residues** (2012 – 2014):
FM yield of 3 x 0,25 m² in each plot
- 2. **estimation of grazing effects – scoring**
from 1 = very well grazed – short
to 10 = very high residuals after grazing
- 3. **sward height before and after grazing** (2012 - 2014)
3 measurements in each plot
- 4. **percentage of grasses (%)**

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Measuring grass yields



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Results



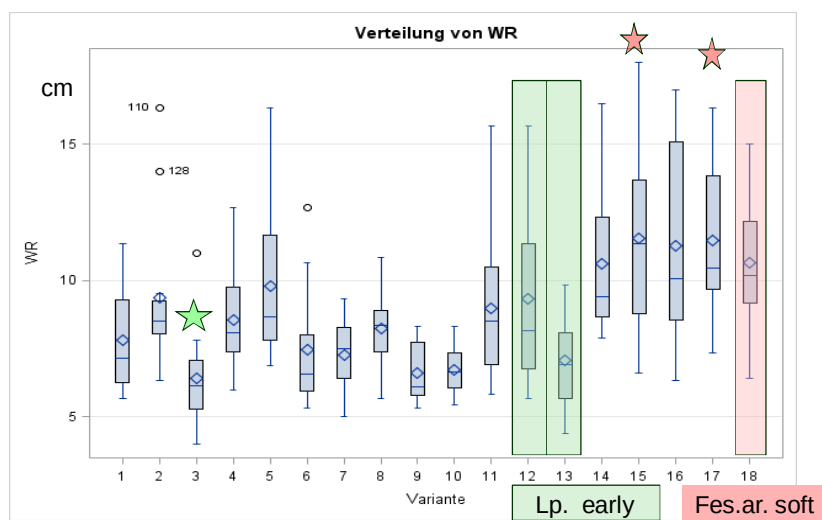
- Residuals after grazing expressed as sward height

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Grazing residues 2012 (= sward height in cm after grazing; average of whole year)

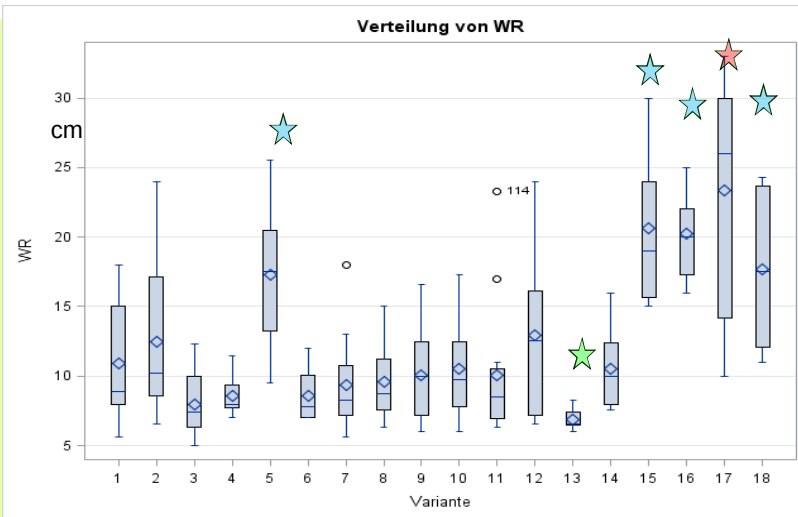


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Grazing residues 2014

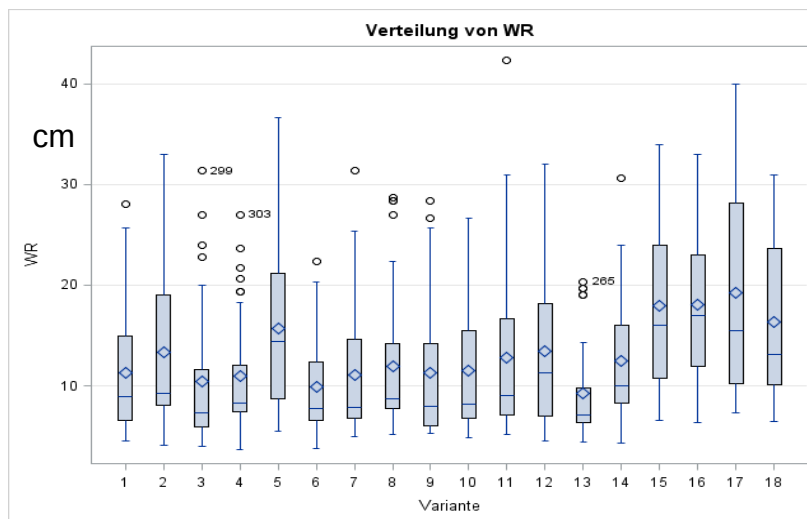


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Mean grazing residues (average 1st to 3rd growth; 2012-2014)



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Results



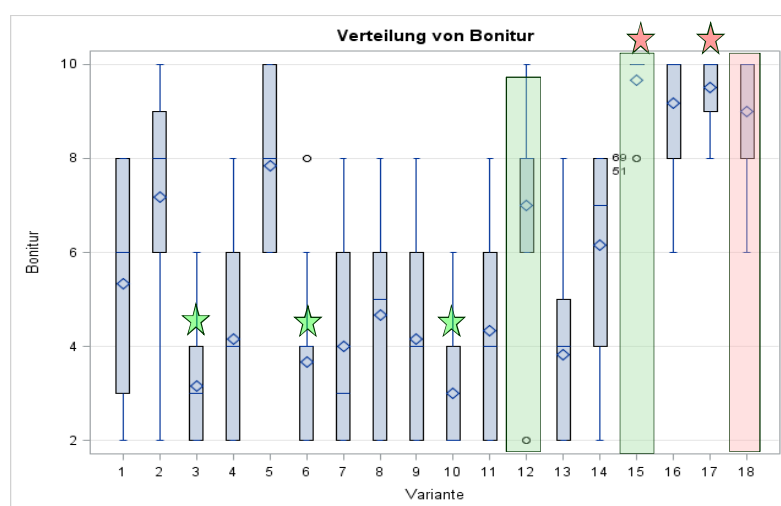
- Scoring of residuals

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Scoring 2012 - average of the total year

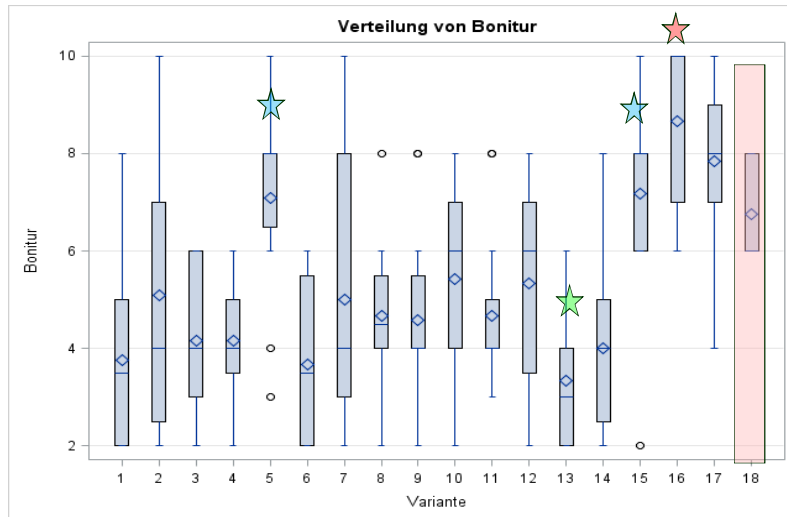


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Scoring 2013 – average of the total year

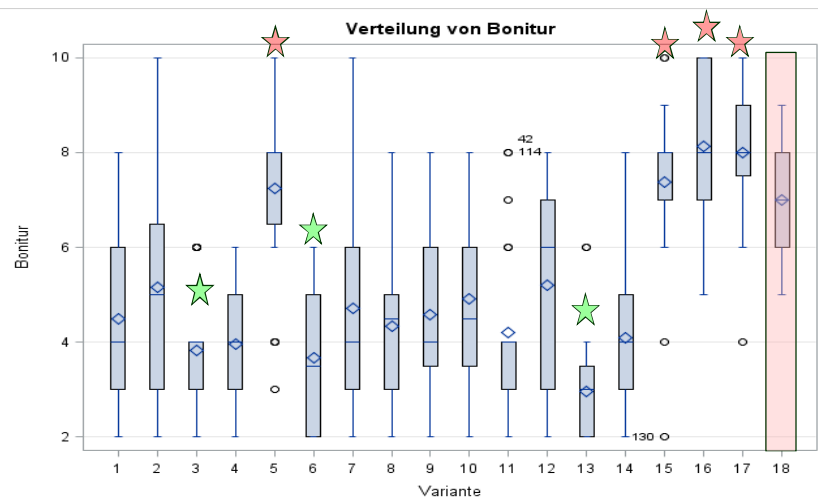


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Scoring (average 2012 + 2013)

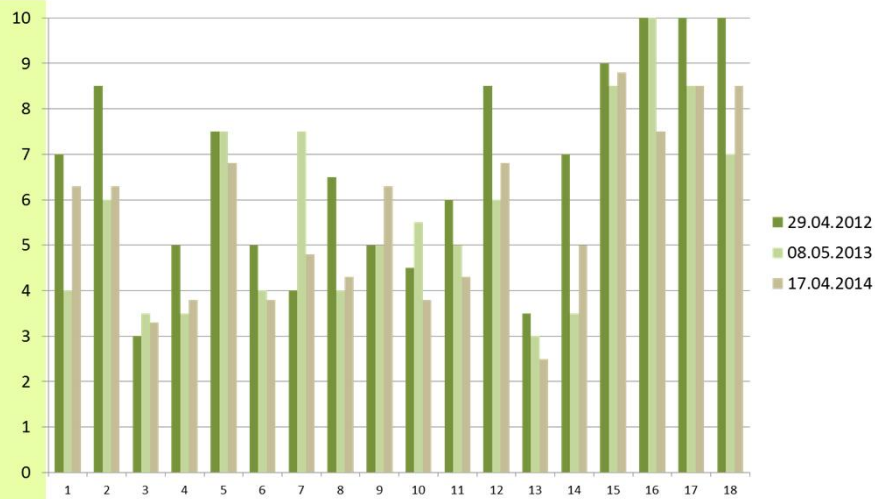


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Scoring of swards after grazing the 1st growth



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DM-Intake of *Festuca arundinacea* by grazing with heifers



Concerning remaining grass:

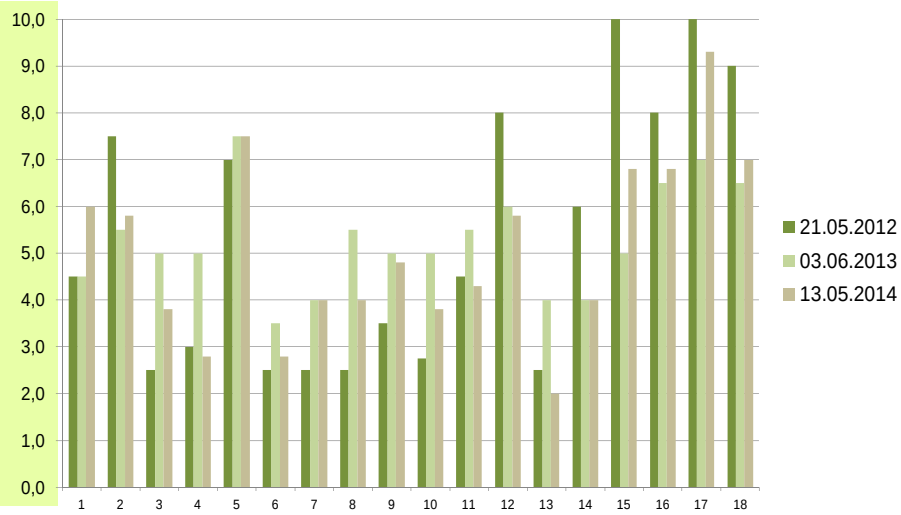
During grazing in 2012 there were more differences between the remaining grass in the plots than in 2013

That is because of

- the length of stay: Cattle had more time to graze in 2013
- the bad weather conditions in may '13

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Scoring of swards after grazing the 2nd growth

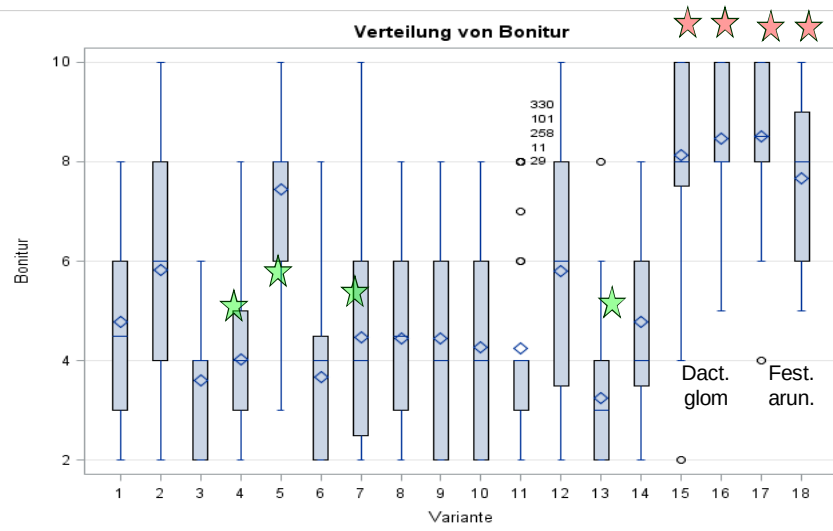


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Scores after grazing (average 1st to 3rd growth; 2012-2014)



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Results



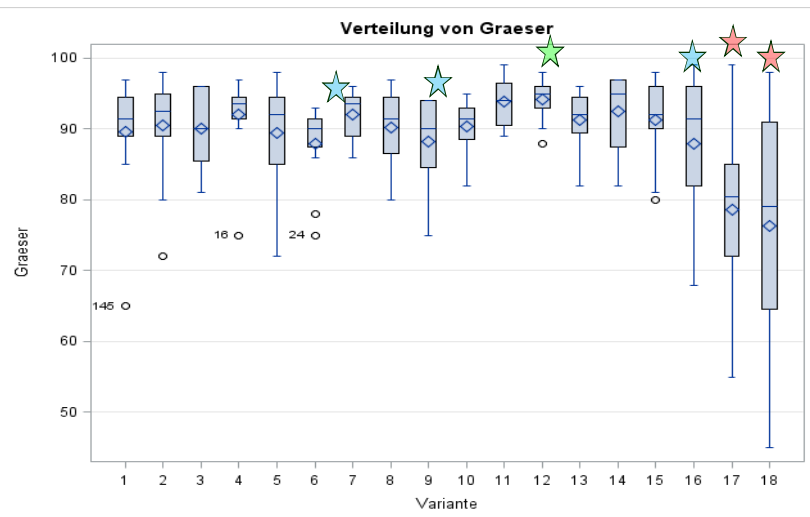
- Percentage of grasses %

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Percentage of grasses % (average 2013)



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Conclusions



- No large differences exist between *Festuca arundinacea* varieties and *Dactylis glomerata*.
- The variety with soft leaves was slightly better grazed.
- Late *Lolium perenne* had best intake

