

Proposal master thesis

Topic:

Analysis of the sales prices of calves and their determinants: the case of Rheinland Pfalz

Background:

For the production of milk for human consumption, it is essential that dairy cows give birth to calves at regular intervals in order to stimulate milk production. However, only an average of 20-40% of calves born on dairy farms are needed for restocking (remounting). The surplus female calves and the male calves that cannot be used for milk production are usually marketed to animal dealers as sale calves. Classic dairy breeds such as Hollstein-Friesian, Braunvieh and Jersey are only suitable for fattening cattle to a limited extent, which is why they are marketed for calf fattening. In recent years, interest in the fate of calves for sale and the welfare of the calves has increased. Studies from Rhineland-Palatinate and North Rhine-Westphalia have shown that calves, and especially bull calves and calves for sale, are not kept under optimal conditions (Hayer et al., 2021). One reason for this is the low selling price of purebred dairy calves (see Figure 1), which do not cover the costs of rearing them. However, with the increased use of beef cattle breeds for mating and the possible use of sexed semen, it is now possible to specifically increase marketing opportunities (e.g., Pahmeyer and Britz, 2020).

The project "Kälber in Wert setzen in Rheinland-Pfalz" (KiWi) also pursues the approach of promoting the welfare of calves by increasing their sales value through adapted breeding management (e.g., usage of sexed semen, beef sires, prolonged inter calving intervals, ...) and improved marketing. In order to investigate the opportunities for increasing value through more targeted matings and usage of specific semen, historical sales data from Rhineland-Palatinate is to be analyzed as part of the thesis.

The aim of the thesis is to analyze the historical sales calf data of the price survey of the Rhineland-Palatinate Chamber of Agriculture with regard to the historical development and the influencing factors. The following questions are to be answered in the thesis:

- How has the sales calf price in Rhineland-Palatinate developed since the start of the survey (2000)?
- What influence do important potential determinants, such as breed, sex, region of origin and quality classification have on the selling price of calves?
- Which factors should be included in the future for an improved market presentation for farmers?

Material and Methods

The Rhineland-Palatinate Chamber of Agriculture has been collecting producer prices for farmed calves on a weekly basis since October 2010. These are published in the form of a market report (see Figure 1) to support farmers in their decision-making. The LWK RLP provides the raw data from this survey, which will be ~~cleaned~~, statistically analyzed and interpreted as part of the thesis. Note that basic-intermediate knowledge of German language will be a strong plus for working on this thesis.

Erzeugerpreise für Nutzkälber ab Hof				
1. und 2. Qualität, zur Bullen- bzw. Kälbermast geeignet; Alter ab 28 Tage; ca. 60–80 kg LG in €/Stück; inklusive MwSt., nach allen Vermarktungsabzügen				
Region: Rheinland-Pfalz			05.02. – 11.02.24	
männl.	Anzahl	Preisspanne	Ø aktuell	Ø Vorwoche
Holstein	371	30 – 130	70,50	69,50
Kreuzungen	109	60 – 280	171,70	168,80
Fleckvieh	39	50 – 200	113,50	119,90
3. Qualität	7	10 – 30	16,40	20,80
weibl.	Anzahl	Preisspanne	Ø aktuell	Ø Vorwoche
Holstein	3	15 – 35	20,00	10,00
Kreuzungen	66	30 – 160	93,70	88,30
3. Qualität	–	–	–	–
Erzeugerpreise für Fleckviehkälber; bis 100 kg LG, ab Hof, in Eur/kg LG, o. MwSt.				
(Veränderungen zur Vorwoche) Zeitraum:			29.01. – 04.02.24	
Region	Bayern	Ba-Wü.	Südbaden	
Bullenkälber	4,30 (- 0,10)	4,50 (± 0,00)	4,39 (± 0,00)	
Mutterkälber	2,36 (+ 0,02)	2,50 (± 0,00)	2,54 (± 0,00)	
Quelle: LWK RLP, LLH, LBV-BW, BBV				

Figure 1: Producer prices for farmyard calves from the LWK RLP market analysis (available at: <https://www.lwk-rlp.de/de/markt-statistik/marktbericht/marktbericht/news/News/detail/nutzkaelber/>)

In addition to the statistical analysis of the historical development and the factors influencing the price development, a recommendation for improved market presentation is also to be derived. In this way, the work could also have a direct influence on the way market presentations are conducted and thereby support farmers in their decision-making.

Literature

Pahmeyer, C. and Britz, W. (2020). Economic opportunities of using crossbreeding and sexing in Holstein dairy herds. *Journal of Dairy science*, 103(9), 8218-8230.

Hayer, J. J., Nysar, D., Heinemann, C., Leubner, C. D., and Steinhoff-Wagner, J. (2021). Implementation of management recommendations in unweaned dairy calves in western Germany and associated challenges. *Journal of Dairy Science*, 104(6), 7039-7055. **Contact**

The thesis will be jointly supervised by the Production Economics Group, ILR, University of Bonn and Dr. Jason Hayer (LVAV Hofgut Neumühle).

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