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Cow-calf production in Germany – status quo and perspectives in the European context

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Mutterkuhhaltung in Deutschland –

Status quo und Zukunftsperspektiven im europäischen Kontext

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Cow-calf production in Germany - Status quo and perspectives in the European context

Introduction

Cow-calf enterprises are a branch of the German agricultural industry that is considered insignificant and, consequently not much information or data is available. In Germany most cows are kept for dairy production, therefore information on cow-calf enterprises is unquestionably lacking. However, looking at the beef production worldwide, it is undeniably an important sector of the agricultural industry.

This thesis provides an overview of the cow-calf enterprises in Germany, the numbers of cows, their distribution and the different production systems. Through a survey, information and data on the different production systems was collected and then evaluated. An economic analysis was conducted to compare Germany with other selected European countries in order, to measure the influence of the CAP reform and to provide a future outlook for the industry.

Status quo

Germany currently has over 51 000 cow-calf enterprises. About 640 000 suckler-cows are kept on these farms in herd sizes with an average of 14 cows. Compared to the rest of the world, these numbers are very small, as German cow enterprises are mainly focused on milk production. Suckler-cows represent only 13 % of the total number of cows in Germany. In the European Union France, Spain and the UK have the biggest number of suckler-cows, with 4.1 million (m) in France, 1.8 m in Spain and 1.6 m in the UK.

Suckler-cow numbers in Germany increased immensely from 1990 to 2000 from about 210 000 to about 720 000, which is a growth rate of more than 300 %. From the year 2000 onwards, suckler-cow numbers stopped growing and steadily decreased to 640 000 in 2014. The development of the suckler cow numbers was affected by political decisions, the BSE crisis in Europe, which was followed by sinking prices for beef, and increasing prices for farm land.

The structure of German suckler-cow enterprises is very diverse and the distribution of cow numbers over the country is irregular. In the new federal states of Germany, 26 % of all cows kept are suckler-cows, whilst it is only a share of 11 % in the old federal states. Suckler-cows in the new federal states of Germany are often kept on farms in a total number of more than 100 cows. In the old federal states farms that size are rare.

According to the German Farm Accounting Data Network, most suckler-cows in Germany are kept on farms that are specialized in beef production (cow-calf and beef finishing enterprises). Other farms that keep suckler-cows are classified as cropping enterprises, specialized grain producers, specialized beef finishers and several other specialization forms. It can be assumed that many farms who do not focus on beef production keep the suckler-cows to make use of marginal grasslands that cannot be developed into cropland and are, therefore, unsuitable for other usage.

There is a wide variety of breeds used by German suckler-cow enterprises. Cross-breeds of different beef breed types are predominantly used all over Germany. The range includes Limousin, Charolais, Simmental, Angus, Galloway and Highlands and many more. In the southern states of Germany Angus is the predominant type used after beef cross-breeds. In the new federal states of Germany, the Simmental cattle range is the second largest fraction of breeds after the cross-breeds. States adjacent to the western border of Germany have higher numbers of Charolais used by suckler-cow enterprises.

Conclusion

In the future, suckler-cow numbers in Germany will most likely decrease. Dairy production might increase after the abolishment of the milk quota and will, therefore, compete with suckler-cow enterprises for pastureland that can be used intensively. Only marginal grasslands that cannot be farmed in alternative ways might be left for suckler-cow production, as the competitiveness of this farming system is comparatively low.

Production Systems on German cow-calf enterprises

Data on the different production systems used on cow-calf farms in Germany is not available from literature or databanks. Hence, it was collected using a questionnaire. The questionnaire was sent to several experts in each of the German states to collect specific data for each region. With the data collected for the regions and states, a description of Germany as a whole was created.

About 100 questionnaires were sent out and 31 were filled in and returned for evaluation. For some of the German states the feedback was very positive and up to 5 questionnaires for one state were returned. Information on other states was, unfortunately, incomplete or patchy. The answers given by the experts are not representative of the whole states and are not particularly based on solid numbers and/or statistical investigation. This fact has to be kept in mind when evaluating the results. The experts gave their perceptions of how cow-calf enterprises in their region work, based on their experience and know-how in the field.

Results of the questionnaire

Production systems on cow-calf enterprises in Germany vary widely between the different regions and depend on the management systems of the farms. The majority of suckler-cows in the old federal states of Germany are kept by part-time farmers and on smaller enterprises. In the new federal states the situation is reversed and most farmers keeping suckler-cows farm full-time.

The first question in the questionnaire asked whether suckler-cows in Germany are farmed conventionally or organically. Depending on the region, between 30 and 100 % of the suckler-cows in Germany are farmed conventionally.

The second question was asked to find out if suckler-cows are kept outside on the pasture all year round or if they are housed in a cowshed for parts of the year (in winter). Only up to 20 % of the suckler-cows in Germany are kept outside all year round. Brandenburg and Mecklenburg-West Pomerania are an exception, as between 40 and 80 % of the suckler cows are kept outside all year round without being housed at all. Cows are usually housed over winter for a period of 5 to 26 weeks. Most commonly they are housed for about 20 weeks between October and April depending on the region and weather conditions. Typically farmers will use old farm buildings that are modified to be used as cow-sheds to provide shelter over the winter period. Only a minority of farmers build new cowsheds particularly to house suckler-cows, and if so they are mostly very basic constructions to keep costs low.

Herd management was another important topic, addressed in the questionnaire. First, the herd sizes were investigated. Suckler-cows in Germany are kept in herd sizes from 10 up to 100 animals, depending on the region and farm management. Herd size tends to be bigger in the new federal states of Germany compared to the old ones. In the old federal states suckler-cow herds are usually no bigger than 40 animals.

In most cases, suckler-cows are naturally mated and bulls are, therefore, kept within the herds. Only about 5 % of the suckler-cows are artificially inseminated, usually to improve breeding or on stud farms. Usually one bull is kept with a herd of maximum 40 cows. To ensure conception rates do not drop herd size has to be adapted to the bulls mating capacity.

Calving management is another important factor in the herd management of suckler-cow enterprises that has to be considered. Calving is either organized seasonally or cows are calving all year round. If farmers choose seasonal calving management, calves are either born in spring (February to April) or in winter (November to February). The experts were asked for reasons that make farmers choose one or the other management strategy. The main argument for seasonal calving was the synchronization of pasture growth and the lactation period of the cows and ,therefore, their need for higher valued feed. The main argument for year round calving was the need to

constantly provide fresh beef to customers through direct marketing and/or on-farm sale of products.

Different indicators can be used to decide on the right weaning time for calves. Decisions can be made based on the weight or age of the calves, the body condition of the cow, market prizes for weaners or auction dates. The weaning process is often arranged around the end of the summer grazing period. Room in the cowshed and feed can be saved by the cow-calf enterprises through selling at this time of the year.

The majority of suckler-cows are either kept on extensive or rotational grazing systems. During the summer grazing periods, the feed is usually not supplemented. In winter or during times of less pasture, growth herds are additionally fed with hay, silage, straw, concentrates, grain and/or mineral supplements

More detailed information on each of the German states was collected and is available in the German version of this thesis, but will not be further elaborated here. To gain a better insight into production systems on cow-calf enterprises, individual farm data would need to be collected and evaluated.

Effects of the CAP-reform on cow-calf enterprises in the European Union

After describing the status-quo and the production system of suckler-cow enterprises in Germany, the effects of the newest CAP-reform will be analyzed. The Common Agriculture Policy (CAP) was founded in 1958 and can nowadays be renegotiated every 7 years. The latest CAP-reform is aiming for a fairer distribution of direct payments. In the future, direct payments are supposed to be more equitable, better targeted and greener.

According to the latest CAP-reform direct payments, all member states of the European Union are supposed to follow the same scheme in the future.

- All historical individually farm based payments (SFP = Single Farm Payments) are converted into acreage payments. (In the UK and Germany this conversion of payments has already taken place in the past reform period.)
- The “Greening” and “Young Farmers” payments will be introduced in all member states.

Additionally member states can

- Pay redistributive payments for the first hectares or reduce the payments for enterprises that receive more than 150,000 Euros by 5 %.
- Introduce coupled support linked to a specific product, which can only be a maximum of 8 % of the total national envelope. If the current coupled support in a member state is higher than 5 % of the total national envelope, it can be up to 13 % after the implementation of the reform.
- Pay additional coupled support for the farming of protein crops.
- Introduce a “Small Farmers Scheme” to pay direct payments to small enterprises, simplifying the process for farmers and saving administrative effort for the government.

The focus of this thesis is on the CAP-reform implementations that affect suckler-cow enterprises. Consequently, other political changes regarding the CAP-reform will not be addressed. Germany, France, Ireland, Austria, Sweden, Spain, the Czech Republic and the UK keep about 80 % of all suckler-cows in the European Union. Therefore, in the following, only these countries will be discussed.

The implementation of the CAP-reform varies across the member states of the European Union and, therefore, the impact on suckler-cow enterprises differs. Please refer to the table below for a summarized presentation of the changes in the selected member states. In some countries that are discussed below, decisions on the implementation of the CAP-reform are not finalized yet and the conditions assumed here are proposals. Hence, the information calculated for the year 2020 involve a certain degree of uncertainty.

Table Policy specifications for the CAP-reform period 2014-2020 in selected EU member states

Suckler-cow premium			Acreage pay- ment	First hectares	Maximum per farm	Other
Austria	Removal		280 €	-	-	Extensive grass- land: 1/3 of payment
Czech Republic	per cow and calf	143 €	201 €	-	> 150 000 € 5 % deduc- tion	
	National payments	3,80 €				
	Ruminants	2,50 €				
France	1-50 cows	181 €	280 €	+ 100 € for the first 52 ha	-	
	51-99 cows	136 €				
	100-139 cows	73 €				
	> 139 cows	0 €				
Germany	none, no change		281 €	+ 50 € for the first 30 ha + 30 € for the next 16 ha	-	
Ireland	per calf		253 €	-	-	max. 700 € per ha
Spain	All cows	190 €	258 € arable land (ink. Greening) 93 € pasture land (ink. Greening)	-	> 150 000 € 5 % deduc- tion	
Sweden	All cattle > 1 year	89 €	197 €	-	-	
UK	none, no change		244 €	-	> 150 000 € 5 % deduc- tion	

The Model TIPI-CAL was used for the calculations, it works within an Excel-spreadsheet and allows the simulation of farming enterprises for up to ten years into the future. The model can show future development of the farms under the influence of changing government payments. Constant prices and costs were assumed for the calculation of the future scenarios. Furthermore, it was expected that the enterprises will continue their farming practice as before, that machinery, buildings and other equipment will be regularly replaced and that no additional investments will be undertaken.

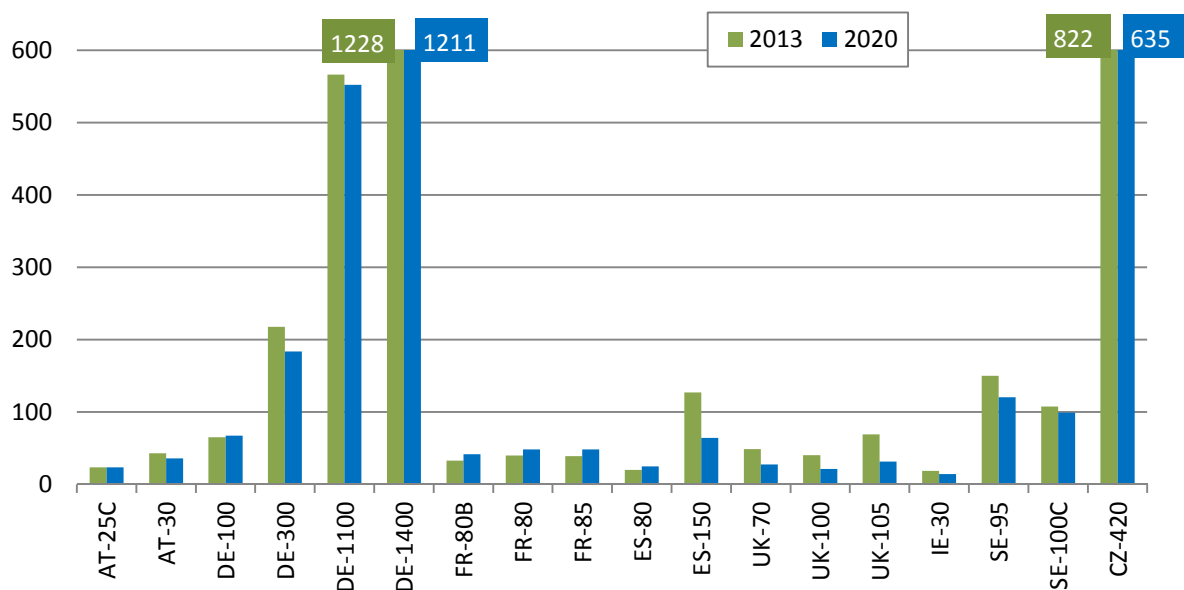
Data from typical farms of the *agri benchmark* network was used to qualify the impact of the CAP-reform on suckler-cow enterprises in selected countries of the European Union. In the following, the impact of the CAP-reform is shown for 18 example farms.

Model Results

The names of the farms analyzed in the following derive from the country they are located in and the number of suckler-cows that are kept on the enterprise. When interpreting the results it is crucial to bear in mind that some of the typical farms are a combination of beef finishing and cow-calf enterprises (DE-1400, FR-80, FR-80B, AT-30, SE-95, ES-150, CZ-420, UK-70 and UK-100). The historical SFPs were based on production and output of products. Farms with a higher stocking rate (beef finishers) received a high amount of direct payments. These farms will, therefore, lose bigger amounts of direct payments when changing from SFPs to acreage payments, whilst extensive suckler-cow enterprises could benefit from that change.

For cow-calf enterprises, land costs are much more important, due to the fact that they are extensive production systems. Prices for purchased goods, for example feed, are a lot less important than in beef finishing and the main production factors used are land and labor.

Figure Total farm payments in 2013 and 2020 (in € 1000 per farm)



Germany: In Germany, suckler-cow premiums were already abolished and SFPs were turned into acreage payments in the past CAP-reform period. But acreage payments will be reduced from 2013 to 2020. DE-100 is the smallest of the German farms and will benefit from the introduction of the redistributive payments on the first hectares.

France: France will keep their suckler-cow premium and French farms will benefit from the new CAP-reform due to the redistributive payments on the first hectares.

Spain: The two Spanish farms analyzed are very different enterprises, but they will both lose a small amount of payments due to the reduction of the suckler-cow premium. ES-150 runs a feed-lot besides the suckler-cow enterprise and will lose a considerably big amount of payments due to the change from SFP to acreage payments. ES-80 runs an extensively stocked suckler-cow enterprise and will, therefore, gain payments from the change from SFPs to acreage payments.

UK: Suckler-cow premiums were already abolished and SFP were turned into acreage payments in the past CAP-reform period. But, through the CAP-reform from 2014 to 2020, the farms will lose payments due to the reduction of the acreage payments.

Ireland: The change from SFPs to acreage payments will be followed by a loss of direct payments for the Irish farm.

Czech Republic: Direct payments for the Czech farm will be reduced by 5 % as they are over 150,000 Euros in total. Acreage payments and the suckler-cow premium will be reduced from 2014 to 2020 and result in a loss of direct payments for the farm.

Conclusion

Under the assumption that land prices will keep rising, cow-calf enterprises might not be able to keep competing for land with more intensive agricultural production systems. Eventually, cow-calf enterprises might be forced to farm on marginal pastures. In order to still be profitable, adapted low-input beef breeds will have to be used and different, more local marketing strategies will have to be developed in order to be less dependent on market prices.

Suckler-cow enterprises are affected by the differing implementations of the CAP-reform in the states of the European Union. Differing price levels for weaners can develop, between the different states as direct payments vary. When animals are sold internationally into other states of the European Union, this could potentially distort the market.

It is fair to assume that weaner production with low-input beef breeds will, in the future, still be the best option to use on marginal pastureland areas for food production.