
back

Fleckvieh (Simmental) Beef Production in Germany

Maximilian Putz

Arbeitsgemeinschaft Süddeutscher Rinderzuchtverbände

The Fleckvieh population in Germany altogether runs to some 4.3 million Fleckvieh animals, of which 1.5 million are dairy cows, of which again some 983,000 are under milk recording. Some 25, 020 Fleckvieh farms with 686,135 herd book cows belong to one of the 20 regional breeding associations.

Fleckvieh breeding is here centred on Baden-Württemberg and Bavaria. In Bavaria, Fleckvieh, with a breed share of 83%, holds the absolutely dominant position.Germany also has around 200,000 Fleckvieh suckler cows. With 13,582 Fleckvieh suckler cows, the breed thus holds the number 1 position in the suckler cow stock as a whole as well as in the beef cattle herd book.

Beef production in Germany is also dominated by 1.2 million Fleckvieh fatstock bulls, because other breeds cannot compete with Fleckvieh in terms of quantity or quality or both.Development of cattle stock

Year	Dairy Cows (n)	Fatstock Bulls (1 - 2 yrs old)	Suckler Cows (n)	Suckler Cows (%)
1970	5,797,000	1,084,900	32,000	0.6%
1990	5,561,000	1,348,500	82,000	1.5%
1997	5,026,200	1,245,200	607,800	10.8%

Of the 5 million dairy cows in Germany, 1.5 million belong to the Fleckvieh breed, which represents a share of around 30 %.The calves from the dairy farms continue to provide the sound basis of beef production. In 1970, with 32,000 suckler cows, it was still thoroughly insignificant. Since 1980, it has more than doubled, having been able to grow more than six-fold by 1990.

In the 90s, the EU agricultural policy gave it another fillip by the introduction of the dam premium. Added to this was the fact that the preconditions for large-scale extensive beef farming were favourable especially in East Germany. The total suckler cow stock in Germany now runs to some 608,000 suckler cows. Relative to the dairy stock, this is 10.8 %, which, however, is much less than in (e.g. France (47.8 %) or the UK (42. 9 %)).

In beef cattle herd book breeding, Fleckvieh holds the top-ranking position with 13,582 herd book cows at 564 farms. Lagging somewhat behind are Charolais, Galloway, Angus, Limousin, and Highland. It is especially noticeable that Fleckvieh is overwhelmingly farmed in large stocks (averaging 24.1 dams), whereas the Galloway and Highland "exotics", averaging 5 cows each, smack very much of a farmyard hobby.

The most typical thing about hobbies is that, by general farming consensus, they do not bring in any money, but only ever cost money. The Fleckvieh cow, however, is regarded as being an economic breed which can be farmed to earn money.

Beef cattle herd book breeding stock (Sept. 30, 1997)

	Breed	Cows (n)	Farms	Average Stock
1	Fleckvieh	13,582	564	24.1
2	Charolais	10,241	916	11.2

3	Galloway	9,513	1,662	5.7
4	Angus	8,101	487	16.6
5	Limousin	6,888	618	11.1
6	Highland	4,666	889	5.2
	TOTAL	63,450	5,881	10.8

In other respects, both Fleckvieh populations - the dual-purpose of milk and meat, on the one hand, and pure meat use, on the other are indissolubly bound with each other. The major reasons for the upsurge and strong dissemination of Fleckvieh in beef production are as follows: -

- the large structures in Germany requiring a cost-effective breed;
- the large dual-purpose population as a reservoir for the build-up of new suckler herds;
- and the genetic polled trait.

Even though breeding for genetically polled Fleckvieh was initially extremely laborious and ridiculed by many, it today represents a brand name and quality mark much coveted by many other breeds. By the efforts of some private pioneers and a state breeding test sponsored by the Bavarian Regional Institute of Animal Breeding at Grub, the past 20 years have seen heartening progress being made. Since polledness is a trait with dominant heredity, it was at first relatively easy to achieve phenotypically visible results. This advantage, however, is at the same time a serious disadvantage, since either a heterozygotic or homozygotic genotype may lurk behind a phenotypically polled animal.

To identify the genotype, we have for 10 years conducted a progeny test of polled bulls involving around 50 horned cows being mated via artificial insemination. In isolated cases, we have succeeded in identifying the genotype via repeated super ovulation and embryo transfer in polled cows mated with horned bulls and have identified a number of homozygotic polled cows. For the hopefully not too distant future, we expect to achieve a substantial simplification and acceleration of this process through the use of gene markers for the polled trait.

Polled genetics is now already being inaugurated with over 50% of all Fleckvieh suckler herds.In the face of high progress having been made in dairying, the question arises as to whether meat might not have been left in the shade. The development on the basis of different forms of beef performance testing shows the contrary.

Year	PeT-field (Auction)		PeT-station BW (112nd-350th day)		PeT-station BV (112nd-420th day)		PrT-field BV		PrT-station BV (112-500 day)	
	LW-kg	DG-g	LW-kg	DG-g	LW-kg	DG-g	CW-kg	NG-g	CW-kg	NG-g
1978	612	1,215	442 (330d)	1,320 (330d)	577	1,358	358 (1981)	615 (1981	355	722
1986	626	1,252	473	1,339	586	1,378	365	591	358	674
1997	634	1,319	488	1.425	577	1,321	374	650	356 (450d)	756 (450d)
97:78	+22	+104	+46	+105	+0	-37	+16	+35	--	+34

PeT: performance test
NG: net gain
PrT: progeny test
DG: daily gain
LW: live weight

CW: carcass weight
at PrT station:
BW: Baden-Württemberg
BV: Bavaria

The performance test in the field is conducted on bulls in the breeding stall, with the end results being taken during selection at the age of 12-14 months. Between 1978 and 1997, the average live weight increased with a decreasing age from 612 to 634 kg, and the daily gain (from birth) from 1 215 to 1 319 g.

Baden-Württemberg has a performance test from the 112th to 350th day, whereas, in Bavaria, this lasts from the 112th to 420th day. Tests at both stations have shown major progress to have been made in final weight and daily gain.It may be suspected thus far that the subjects are young breeding bulls whose growth rate has not yet been exhausted so as not to impair their breeding fitness.

The progeny test in the field (Bavaria) refers to mass data taken and gathered at the slaughterhouses. These results, obtained under average fatstock conditions, also show an unequivocally positive development in terms of both carcass weight and net gain.

Finally, in Bavaria, we have conducted the progeny test on station to provide us, in the scientific sense, with the precisest data yet, including the meat quality traits. This test was initially arranged for 18 sons per sire and subsequently scaled down to 12 sons. Since 1995, the test has been run for only 6 sons per sire, although we achieve the same test accuracy through application of the BLUP animal model, since all relatedness data can be used.

A key factor however, is to obtain a test loading plan matched to the application of bull sires in the planned mating.We can thus on the whole read a positive development of the Fleckvieh meat yield in the different test results. The good Fleckvieh qualities are moreover confirmed by the positive resonance on the meat market.The head of Südfleisch, the biggest beef company in Europe, put the market-shaping role of Fleckvieh tersely as follows: "We sell a good 50% of our beef products outside Bavaria, chiefly in Italy. Our Italian customers particularly appreciate the bright, well-shaped Fleckvieh meat. We can hold our ground very well with Fleckvieh in competition with French beef breeds. A special advantage of Fleckvieh is that it doesn't form a pool of water in a self-service tray".

To compare Fleckvieh with specialised beef breeds, I can offer you the following objective comparative data relating to the specific yield test of beef cattle at Eickelborn: Results of specific yield test of beef cattle in 1997 at Eickelborn test station

Trait	Fleckvieh (n) = 23	Charolais (n) = 88	Gelbvieh (n) = 8	Piemontese (n) = 22	Limousin (n) = 90	Angus (n) = 10
Age at start of test, (days)	210	218	219	224	223	218
Weight at start of test, kg	339	323	329	270	311	245
Average daily gain during test, (g)	1,620	1,549	1,621	1,425	1,433	1,463
Average daily gain, (g)	1,485	1,391	1,437	1,170	1,297	1,166

Test system New: (e.g. TMR ad lib., open stall) Old: (e.g. hay, concentrated feed)

Young steers aged 180 to max. 225 days after being cared for by their dams are subjected to this station test. For the intensive breeds, the feed ration in the 14-day settling-in period and 135-day test period consists of a total mixed ration (straw, beet, molasses, concentrated feed) and, for the other breeds, of hay and concentrated feed. The tested Fleckvieh animals, together with Gelbvieh, then achieved on average the best results and outperformed even the Charolais pure special beef breed.The Fleckvieh animals brought with them very high growth rates from the suckling period, as made clear by the weights at the onset of testing.

In terms of the average daily gain, the tested Fleckvieh achieved 1 620 g and the Gelbvieh 1 621 g. Charolais gave 1 549 g, Piemonteser 1 425 g, Limousin 1 433 g, and Aberdeen Angus 1 463 g. Fleckvieh has thus proved that, even after intensive juvenile development thanks to the abundant milk yield of their dams, further intensive growth under fatstock conditions is assured.The overall result is then expressed in terms of the daily live weight gain calculated from the weight

at test completion less the birth weight, divided by the number of days since birth. Fleckvieh and Gelbvieh also score best here with 1 485 g and 1 437 g respectively against Charolais with 1 391 g, Limousin with 1 297 g, Piemonteser with 1 170 g, and Aberdeen Angus with 1 166 g.

Maximilian PutzArbeitsgemeinschaft Süddeutscher RinderzuchtverbändeHaydnstrasse 11D - 80336 München Tel.: 0049-89-537976 Fax: 0049-89-535540 E-Mail: Maximilian.Putz@StMELF.Bayern.de