

Dairy Carcase Index



Figure 1. Calves in straw yard

Genetic index to aid dairy carcase quality

With around 55 per cent of UK beef originating from the dairy herd, there is a supply chain efficiency desire to monitor, and where, possible improve dairy cattle carcasses.

The Dairy Carcase Index (DCI) has been created to improve dairy cattle carcasses. The DCI is calculated using the average daily carcase gain and carcase conformation predicted transmitting abilities (PTAs).

These two PTAs have been developed using data from seven major abattoirs around GB and were found to have heritabilities between 50 per cent to 60 per cent.

Table 1 indicates the fat and conformation scores of carcasses processed in 2016. From the data used from this project, the average dairy carcase fell into the 3O- class (highlighted by yellow square) failing to meet the optimal market specification in conformation of at least R.

Resulting genetic evaluations are being made available by AHDB Dairy for the dairy breeds, and AHDB Beef & Lamb for the beef breeds in the dataset.

The DCI is primarily based on:

- Average daily carcase gain
- Carcase conformation

Table 1. Fat and confirmation of 2016 processed carcasses

Prime cattle	Fat class → Increasing fatness								
	1	2	3	4L	4H	5L	5H	Total	
Improving conformation ↑	E	0.0	0.2	0.3	0.1	0.0	0.0	0.0	0.7
	U+	0.1	0.9	2.3	1.1	0.2	0.0	0.0	4.5
	-U	0.1	1.4	6.1	6.4	1.4	0.1	0.0	15.5
	R	0.1	2.7	15.0	19.6	6.6	0.5	0.0	44.7
	O+	0.1	1.4	7.2	9.1	3.1	0.3	0.0	21.3
Conformation class ↑	-O	0.1	1.7	5.3	3.4	0.5	0.0	0.0	11.1
	P+	0.2	0.7	0.8	0.2	0.0	0.0	0.0	1.9
	-P	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.4
	Total	0.9	9.2	37.2	39.9	11.8	0.9	0.1	

How to use the Dairy Carcase Index (DCI)

DCI is published on a scale of about -5% (bad) to +5% (excellent). For each percentage point increase, an improvement is predicted in both carcase conformation and average daily carcase gain in a bull's progeny.

From April 2018 the DCI is published by AHDB Dairy alongside existing dairy genetic evaluations, but is not included in the total economic merit indexes (£PLI/£SCI).

Therefore, farmers interested in improving the carcase quality of their cattle are advised to pay attention to bulls rating higher for the DCI.

However, even farmers not directly interested in improving carcase quality are advised to monitor how the bulls used for breeding dairy replacements score. From a shortlist of sires with similar genetic merit for traits of interest, the ones with higher DCI could be favoured for use.

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Further information

For more information on AHDB Dairy breeding and genetics, visit dairy.ahdb.org.uk/breeding or email breeding.evaluations@ahdb.org.uk



Figure 2. Dairy carcase

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