

# Selecting Traits for International Beef Evaluations: Survey Results

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## Abstract

Since January 2007 Interbull is collaborating together with France, Ireland, United Kingdom and the Nordic countries in a project for setting up of international genetic evaluations for beef breeds. In its initial phase the project focused on two breeds, Limousin and Charolais and one trait, weaning weight. In May 2009 Interbull Centre sent out a questionnaire to find out from the five member organizations participating what would be the next economically important trait to be included in the Interbeef project. The aim of this paper is to summarize some of the results of the survey and highlight important traits that should be considered in the future by Interbeef. The results of the survey showed that carcass weight and carcass conformation together with calving difficulty are considered the most economically important traits by the member organizations.

**Keywords:** interbeef, survey, new traits

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## 1. Introduction

After the workshop in Kuopio held in June 2006, Interbull decided to go forward with the development of a system for beef international genetic evaluation. The Interbeef project started in January 2007 with the subscription of a 3 years project among ICAR, Institute d'Élevage (France), Irish Cattle Breeding Federation Society Ltd (ICBF, Ireland), Meat & Livestock Commission (MLC, United Kingdom) and Nordic Cattle Genetic Evaluation (Denmark, Sweden and Norway). It was agreed upon to start building a system for two breeds, Charolais and Limousin, and one trait, weaning weight.

The Interbeef Working Group (IWG) decided to launch a first survey to participating organizations about inclusion of new traits in the international genetic evaluations for beef cattle. The questions in the survey covered four important beef trait groups (Table 1) and got an answer rate of 100%.

## 2. Data collection

A questionnaire in the form of a blank table was sent to Interbeef member organizations via the Interbeef forum (Interbull, 2009). For each trait in the four trait groups the national organizations were asked to rank the traits according to the priorities set for their national selection programs. The rating scale for each trait was from 1 to 5. One (1) meant “very important trait” to be included in the next international genetic evaluation and five (5) meant “unimportant trait/not present in the national evaluation system”. To make the results easier to interpret graphically, national ranks were rescaled; 1 become 100, 2 become 80 and so on down to 5 with an interval of 20.

## 3. Results

Results of the survey are discussed here and for each of the four trait groups a histogram summarizing the results is presented.

### **3.1 Weight traits**

Figure 1 shows that all countries collect birth weights but only France (80), Sweden (60) and the United Kingdom (60) consider this trait relatively important and want it to be included in the international genetic evaluations. Weight at 400 days is important only for the United Kingdom (80) while weight at 365 days is very important only for Denmark (100). Ireland (20) doesn't consider the weights important at either 365 or 400 days. France (60) is the only country that considers the weight at 18 or 24 months relatively important.

### **3.2 Carcass traits**

All countries have expressed their interest in having carcass weight and carcass conformation included in the next international genetic evaluation (Figure 2). For France (100), Ireland (100) and the United Kingdom (100) carcass weight has the highest priority, while carcass conformation has the highest priority for all the aforementioned countries with the addition of Denmark (100). Fat score is very important for Ireland (100) and the United Kingdom (100) while it is less important for Sweden (40). The ultrasound trait is relatively important for the United Kingdom (80) but not so important for Denmark (40) or Ireland (20).

### **3.2 Calving traits**

For all five countries calving difficulty is an important trait (Figure 3). However, for Sweden (100) this trait has a high priority and should be included in the international genetic evaluations, for France (80), Ireland (80), Denmark (80) and the United Kingdom (40) the priority is not so high but it nevertheless still represents an important trait. Gestation

length is important for Ireland (80) but not for the United Kingdom (20) or for the other countries.

### **3.2 Maternal and other traits'**

Calf survival/mortality trait is an important trait for Ireland (80) and Denmark (80) while it is less important for the United Kingdom (20). Calving interval and age at first calving are relatively important traits for Ireland (60) and the United Kingdom (60) while cow survival/life span trait is important for United Kingdom (80) and relatively important for Ireland (60). Docility trait is considered very important for Ireland (100) but not so much for France (40).

## **4. Conclusions**

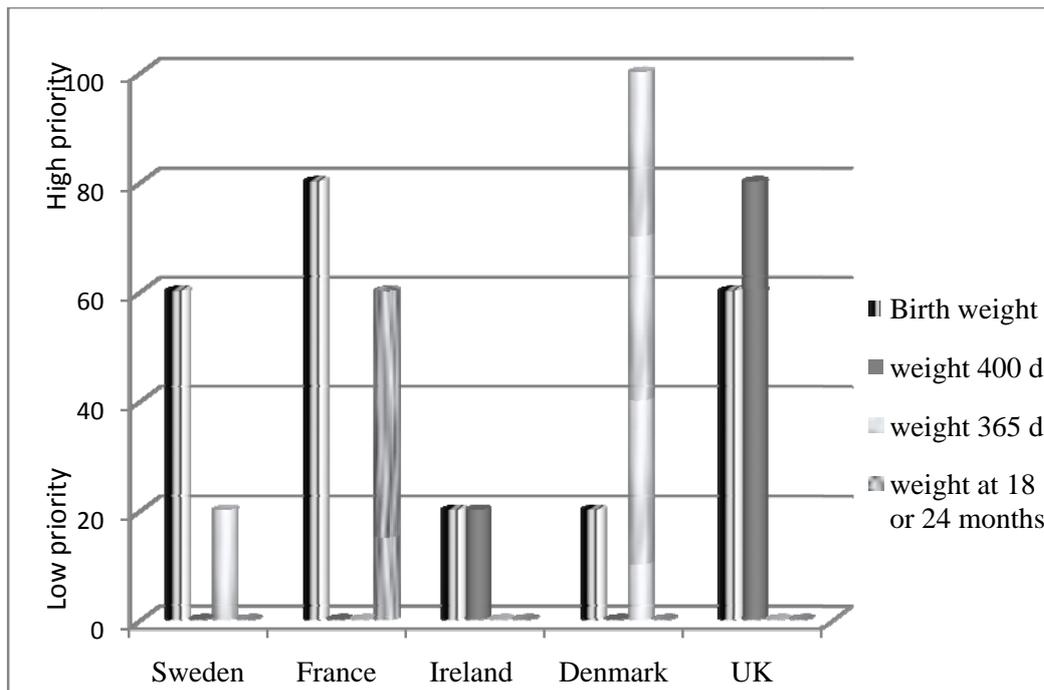
Although the survey showed quite different breeding objectives among participating countries, it also pointed out how carcass traits (carcass weight and carcass conformation) and calving traits (calving difficulties) were considered the most economically important traits by all participating countries. Looking at the trait groups, there is general agreement that the carcass traits (in particular carcass weight and carcass conformation) and calving traits (in particular calving difficulties) are considered the most important traits by the member organizations.

## **5. References**

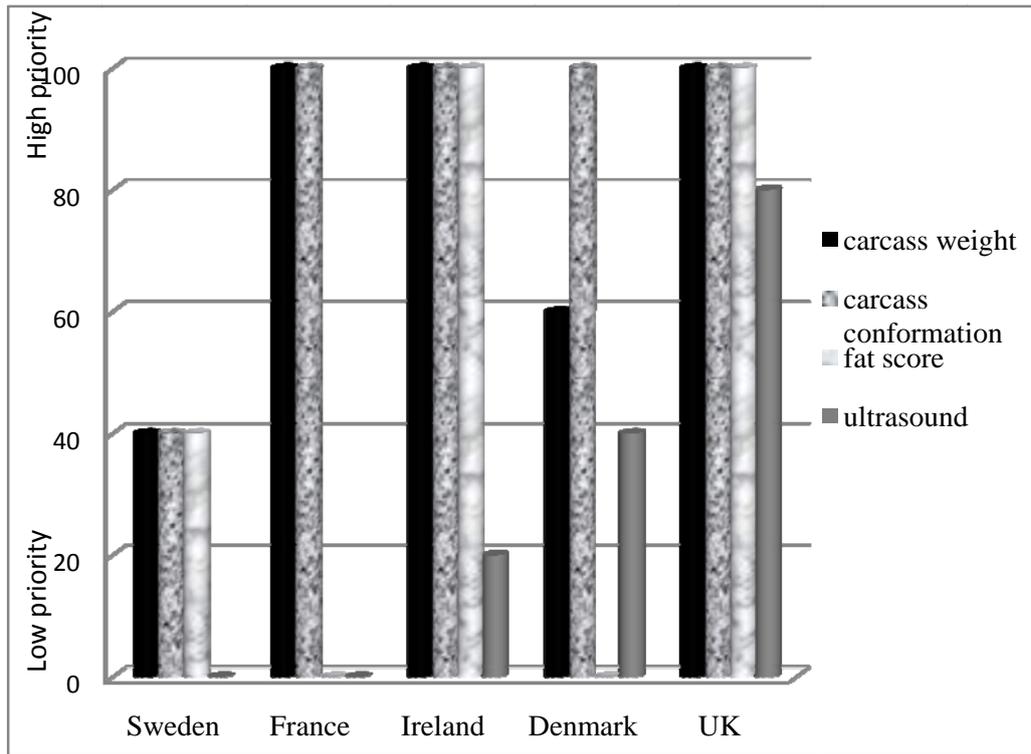
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**Table 1.** Beef traits included in the survey.

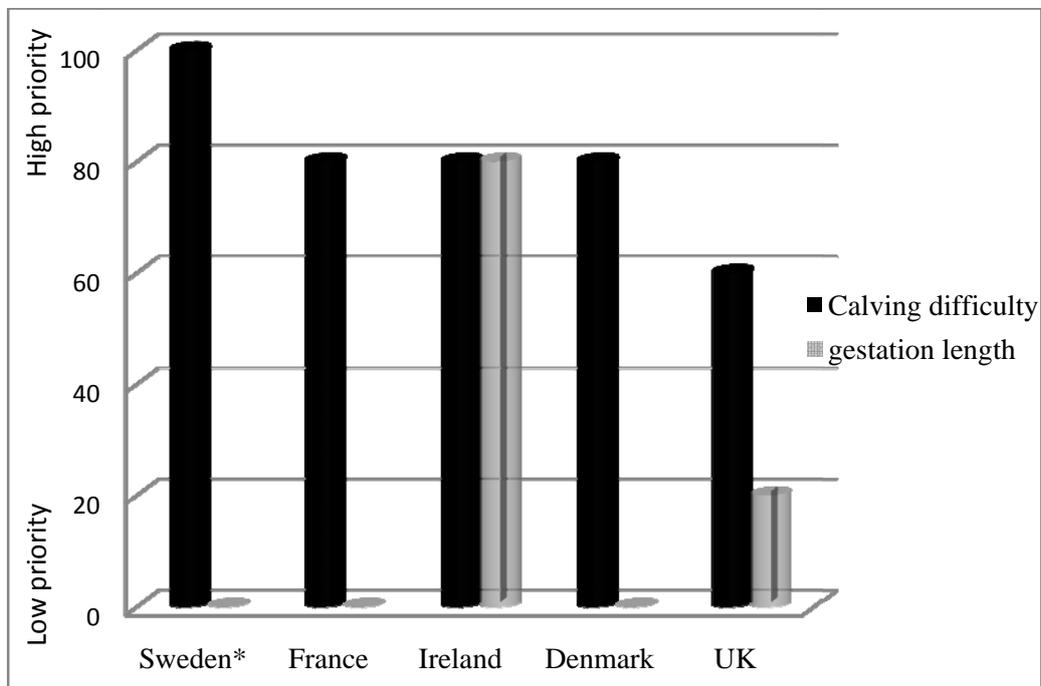
Trait groups			
Weight traits	Carcass Traits	Calving Traits	Maternal (M) and other traits
Birth weight	Carcass weight	Calving difficulty	Age at first calving (M)
Weight at 365 days	Carcass conformation	Gestation length	Calving interval (M)
Weight at 400 days	Fat score		Calf survival/mortality (M)
Weight at 18 or 24 months	Ultrasound		Cow survival/life span
			Docility



**Figure 1.** Importance of weight traits across countries.

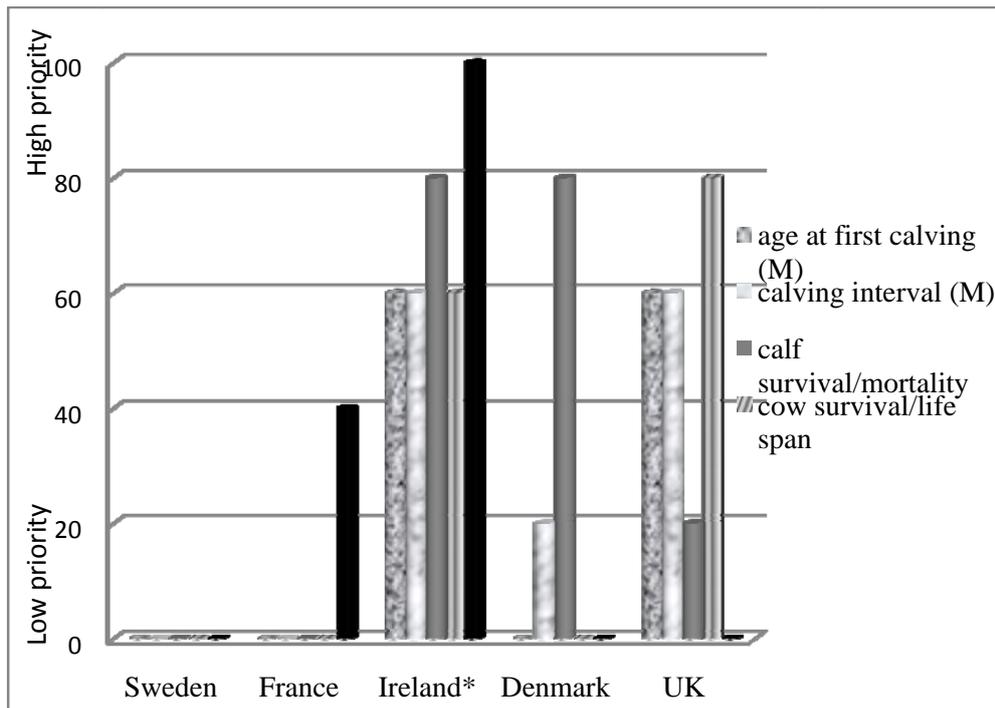


**Figure 2.** Importance of carcass traits across countries.



**Figure 3.** Importance of calving traits across countries.

\*Sweden= calving difficulty (direct 80, maternal 100)



**Figure 4.** Importance of maternal (M) and other traits across countries.  
 Ireland= calf survival/mortality (direct 80, maternal 20)