The Methodology of Description and Type Classification of Beef Cattle

Introduction and reasoning

The objective type classification of beef cattle has the important relation to the expression of beef performance and it has the high correlation to the classification of carcass. With respect to the fact, that there was no experience with the type classification of particular beef breeds in the Czech Republic after the year 1990, because their breeding (besides hereford) was only implemented after this year, and that was the reason for utilization of the modified system of type classification of dual-purpose cattle breeds. Productive type, body size, body conformation, feet and legs and rump were classified. The scale with range of points from 1 to 10 was used. But this system did not allow the more detailed classification of beef performance. For that reason was proved a system which went out of foreign experience (especially from France and Denmark), and it has involved the phenotypic expression of beef performance better. „The Methodology of Description and Type Classification of Beef Cattle" was modified and elaborated after the processing and evaluation of results from the tracking period.

A: **The general requirements**

1. The methodology is intended for the description and type classification of all beef cattle breeds which are bred in the Czech Republic.
2. The methodology contains the general scheme. The classification of individual animal results from the authorized breed standard and the knowlede of the current state of population. That is why the formulation of the point scale for individual traits is special according to the particular breed.
3. The results of description and type classification belong to the estimation of breeding values. They are also used for the creation of mating plans, and within the basic selection of breeding bulls, or within other events e.g. animal shows and competitions.
4. The type classification is done by trained classifiers, who are appointed by the appropriate certified breeding association. The appropriate breeding programs modify particular categories and age, which is crucial for the classification and type judgement.
5. The description of particular type traits, the body measurements, defects and total score are written on the form, which is used as a source sheet for further processing within the performance recording and progeny testing of beef cattle breeds.

B: **The description of type traits**

The description represents the expression of classified trait with the range of points from 1 (minimum) to 10 (maximum) within the biological extremes of classified breed.

The characteristic of described traits

The classifiers who evaluate the described traits result from the average of the population of classified breed. At the same time, they respect the maximum possible utilization of the whole point scale during the classification of this population and particular age categories.

• *Body Frame*

1. **Body Height** – this trait is characterized by the height at hips which is measured with the stick measure on the junctor of hip-bone tuberosities. The point classification is done by the conversion table with regard to the age, sex and breed. The sum of points is 10.
2. **Body Length** – the classification is done by visual check. The real body length is classified from the imaginary vertical line flet down at withers to the imaginary vertical line flet down at chancebone. The sum of points is 10.
3. **Body Weight** – it is taken by weighing of animal with the accuracy of 1 kilogramme. The point classification is done by the conversion table with regard to the age, sex and breed. The sum of points is 10.

• *Body Capacity* – it includes the visual classification of following body measurements

4. **Front Chest Width** – the width of chest base between fore legs at front view is judged.
5. **Chest Depth** – it is characterized by the chest depth behind the shoulder bone. The classification is taking account of the chest depth in the area of the last rib. The real chest depth is described, and it is not taking account of its relative expression with regard to the height of animal.
6. **Rump** – it is classified the length (at side view) and the width (at rear view). The length is expressed with the distance of junctor between the tuberosity of hip bone and chancebone. The width is judged with regard to the distance of both chancebones and the fore rump width is taking account. The maximum sum of points for these described traits is 30.

• *Muscularity* – it is characterized by the muscularity of shoulder, back and rump

7. **Shoulder** – it is classified as arching and development of shoulder muscles at the fore and side view.
8. **Back** – it is classified as width and expressiveness of muscle arching from withers to loin region.
9. **Rump** – it is classified as roundness of rump, which is characterized by width, depth and arching at the side and rear view. The maximum sum of points for these described traits is 30.

10. *Productive Type* – it includes the classification of total sublimity of animal, the balance of body conformation and the sex expression. The sum of points is 10.

The total score is expressed as the sum of all gained points for body frame, body capacity, muscularity and productive type (the maximum possible score is 100). It is possible to advantage the certain trait over another one with use of the conversion coefficients within particular breeding programmes. The total number of possible gained points for each body region and the total score have to be complied.

C. **Type Defects**
The type defects, and other relevant traits, which are determined by the breeding programme of classified breed, are recorded simultaneously with the description of animal at the classification form. These programmes also determine which of those defects are crucial for the selection of animals (Appendix 4). The list of defects can be coupled with some others for some breeds.

D. **Appendices**

The appendices No. 1 to 4 are instrumental to the judgement and classification of particular traits.
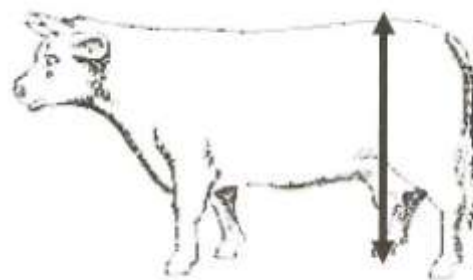
Elaboration of this methodology – the compiler

Český svaz chovatelů masného skotu v Praze/The Czech Association of Beef Cattle Breeders in Prague (ČSCHMS) IČO (company registration number): 00536903, the organization authorized in compliance with the law No. 154/2000 Sb.
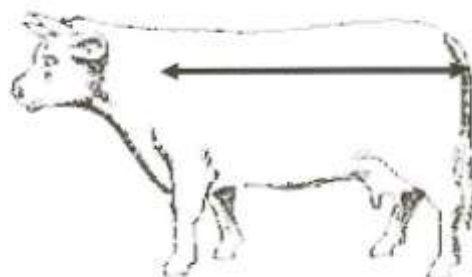
In Prague; 2006, December 20

Appendix No. 1 – **Body Frame**

1. Height at Hips
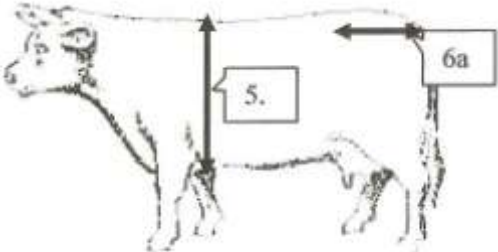
2. Body Length

3. Body Weight

Appendix No. 2 – **Body Capacity**

4. Fore Chest Width

5. Chest Depth
6. Rump Length – a

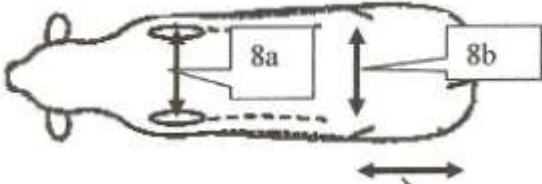6. Fore Rump Width – b
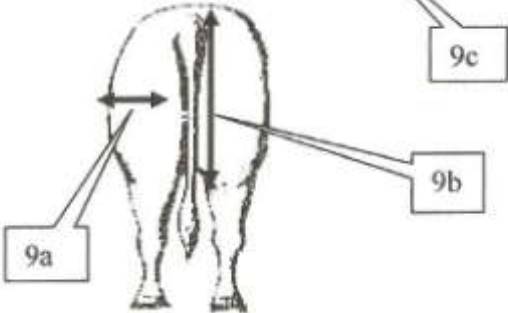6. Rump Width – c

Appendix No. 3 – **Muscularity**

7. Muscularity of Shoulder

8. Muscularity of Back – withers – a
8. Muscularity of Back – loin – b

8a   8b

9c

9. Rump – roundness – a
9. Rump – depth – b
9. Rump – length – c

9b

9a

Appendix No. 4 – **The list of type defects**

Mark	Body region	Code of defect	Defect
A	Head	1	Long
		2	Narrow
		3	Wide
		4	Coarse
		5	Short
		6	Defects of jawbones
B	Neck	1	Dewlap
		2	Long
		3	Narrow
C	Shoulder	1	Slack shoulder-bone
		2	Slack shoulder
		3	Weak shoulder
D	Chest	1	Shallow – narrow baseline
		2	Flat
		3	Choked
E	Body	1	Short
		2	Tucked flank
F	Back	1	Slack
		2	Carp back
G	Loin	1	Dropped
		2	Set-back
H	Sacrum	1	Shortened
		2	Drop-off
		3	Forward sloping
CH	Base of tail	1	High base
		2	Low base
I	Fore legs	1	Open posture
		2	Tapering posture – barrel-shaped
		3	In-knees
		4	Slack pastern
		5	Long pastern
		6	Slack interhoof ligaments
		7	Interhoof callosity
		8	Low hoofs – little hoof mass
J	Rear legs	1	Open posture
		2	Tapering posture – barrel-shaped
		3	Steep posture
		4	Sickled posture
		5	Slack pastern
		6	Long pastern
		7	Slack interhoof ligaments
		8	Interhoof callosity
		9	Low hoofs – little hoof mass
J	Rear legs	10	Knuckling over
K	Colouration	1	Defects of coloration
L	Character	1	Too temperamental – rowdy
		2	Nervous