

# CARCASS CLASSIFICATION OF BEEF, SHEEP AND PIG

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## Summary,

Proposed is a system for the classification of beef, sheep and pig carcasses. The types are divided into categories, with beef and sheep according to age, and with pigs and by the thickness of the fat. Categories are divided in qualities, mainly after the outside appearance of the carcass - shape, weight, quantity of meat, degree of fattening, as well as after the colour of the meat.

With beef are proposed four categories with eight qualities, with sheep three categories with eight qualities, and with pigs, four categories with five qualities. Excessive fattening is shown as a negative indice.

All meat, which does not fall into the given indexes, but is possible as food, is passed for processing.

## КЛАССИФИКАЦИЯ ТУШ КРУПНОГО И МЕЛКОГО РОГАТОГО СКОТА И СВИНЕЙ

### Резюме

Предлагается система категоризации и сортировки говяжьей, овечьей и свиной туши.

Виды распределяются по категориям, при крупном и мелком рогатом скоте в зависимости от возраста, а при свинье кроме того по толщине шпика.

Категории подразделяются на сорта главным образом в соответствии с внешним видом туши - форма, вес, мясистость, упитанность и т.д., а также по цвету мяса.

При крупном рогатом скоте предлагаются четыре категории с восьмью сортами, при овце - три категории с восьмью сортами и при свинье - четыре категории с пятью сортами.

Сильная упитанность везде является отрицательным показателем.

Все мяса, не отвечающие данным показателям, но годные для консервации, передаются для переработки.

## KLASSIFIKATION DES SCHLACHTKÖRPERS VON RIND, SCHAF UND SCHWEINEN

### Zusammenfassung

Vorgeschlagen wird ein System der Klassifikation und Beurteilung des Schlachtkörpers bei Rind, Schaf und Schwein.

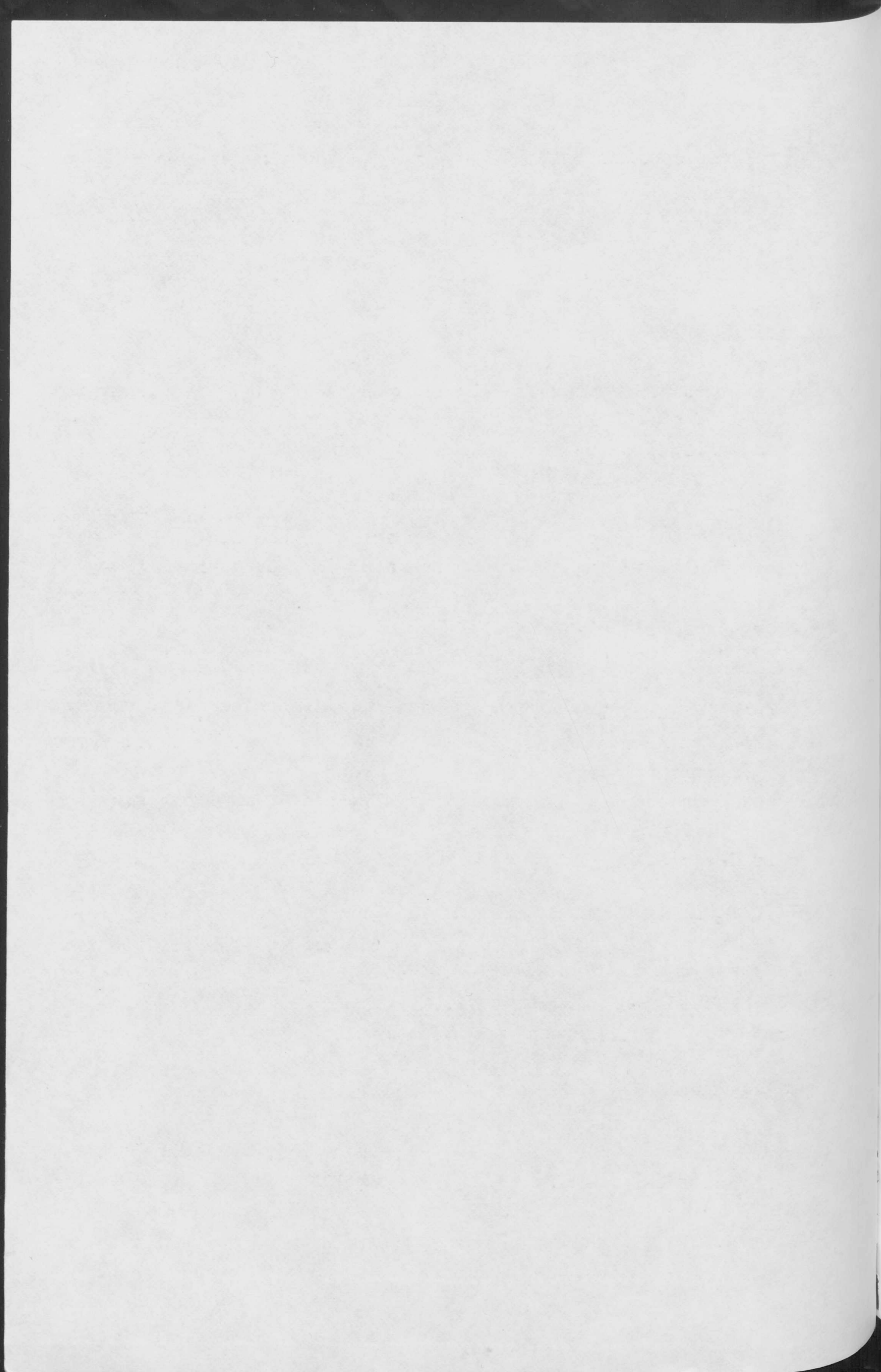
Die Tierarten beim Rind und Schaf werden in Abhängigkeit vom Alter klassifiziert, beim Schwein kommt darüber hinaus auch die Stärke des Specks in Betracht.

Auf Grund des Aussehens, der Form, der Fleischfülle, Mast, Fleischfarbe usw. werden die Schlachtkörper in Qualitätskategorien eingeteilt.

Für Rindfleisch werden 4 Kategorien mit 8 Qualitäten, beim Schaf- 3 Kategorien mit 8 Qualitäten und für das Schweinefleisch 4 Kategorien mit 5 Qualitäten vorgeschlagen.

Der starke Fettansatz wird immer als ein negatives Merkmal betrachtet. Die übrigen Fleischarten, welche den festgelegten Qualitätsmerkmalen nicht entsprechen, aber gebrauchsfähig sind, werden weiter zu Fleischwaren verarbeitet.

The transition from a system for the purchase of slaughter animals by live weight to the purchase by carcass weight requires the



preliminary solution of three basic problems:

- (1) The creation of an objective carcass classification with class determination and grading,
- (2) The development of standards conformed to this classification, and
- (3) The development of a price-list with differentiated and economically justified prices, conformed also to the new classification.

We shall consider here only the first item. A suitable and purposeful carcass classification supported by just and reasonable price politics will ensure the rearing of quality slaughter animals according to pre-determined indices and will steer animal husbandry in the desired direction.

Our classification embraces the species cattle and buffalo, sheep and goat, and pig. The species are divided into classes according to age, and in the pig, also according to finish, i.e., speck thickness. The classes are divided into grades in accordance with definite indices, namely:

- (a) Conformation, including the shape of the carcass and its parts, the fleshiness, the finish, etc.
- (b) Biochemical and biophysical indices: texture, water holding capacity, chemical composition (proteins, carbohydrates, fats, vitamins, salts, micro-elements, etc.)
- (c) Organoleptic properties: colour, aroma, tenderness, taste.

As far as the conformation is concerned, we distinguish between full fleshed, moderately fleshed and thin fleshed carcasses. The characteristic features here are muscle profiles, particularly those of the hind leg, the size of the rib eye, as well as the surface fat covering, respectively, the speck. The size of the rib eye is measured immediately behind the last rib. In cattle and sheep, the surface fat covering is also measured there, and the speck, above the thorn-like extensions of the 5th and 6th thoracic vertebra, once. In order not to hamper the instilment of the new system, for the time being the biochemical and biophysical indices are applied only experimentally in large lots and in disputable cases, although that these indices provide a full, objective and reliable evaluation of the biological, culinary and commercial value of the meat.

#### CATTLE

The objective here is early maturing cattle that at the age of



15-16 months attains a live weight of 500 kg with a yield of about 56-57%. We aim particularly at a full fleshed carcass with a long and wide back, deep breast and short legs, with intensely developed muscles and an even fat covering, no thicker than 0,8 cm, with a distinct, but not intense marbling, with a compact, but not tough, bright red meat. The carcass weight is taken without the head, tail and feet, without kidneys, kidney fat and pelvic fat (except in the suckling, where the kidneys and kidney and pelvic fat remain with the carcass). In accordance with the above we suggest the following

CLASSIFICATION OF CATTLE

Class	Grade	Indices
A. Suckling	-	An animal at the age of 1 to 3 months with a live weight of 40-90 kg and a carcass weight of 25-50 kg
B. Calf at the age of 3 to 12 months	I	Full fleshed carcass of good finish, but not fat, with excellent shape, protruding back profile of the round and well-shaped rib eye. A surface covering no thicker than 0,4 cm. Pale red meat.
	II	Moderately fleshed carcass of a satisfactory finish with a good shape, flat back profile of the round and a satisfactory rib eye. Thin broken covering. Meat colour may be darker.
C. Young cattle at the age of 12 to 24 months	I	Full fleshed carcass of a good finish, but not fat, with an excellent shape, protruding back profile of the round and well-shaped rib eye. Continuous covering not thicker than 0,6 cm. Bright red meat.
	II	Full fleshed very fat carcass with protruding muscle profiles and well developed rib eye. Continuous covering thicker than 0,6 cm. The meat may be darker.
	III	Moderately fleshed carcass of a satisfactory finish with a good shape, flat to slightly concave back profile of the round and a satisfactory rib eye. Thin broken covering. The meat may be darker.
D. Cattle over 2 years old	I	Full fleshed not very fat carcass with an excellent shape, protruding muscle profiles and intensely developed rib eye. Continuous covering not thicker than 0,6 cm. Distinct, but not intense, marbling.

Class	Grade	Indices
D	II	Full fleshed fat carcass with protruding muscle profiles and intensely developed rib eye. The covering is thicker than 0,6 cm. Distinct marbling.

Meat which does not comply with the indices pointed out though it was proved to be fit for consumption, is sent for processing. Here belongs a deficient in flesh carcass with prominent bone extensions and a concave back profile of the round, with poorly developed rib eye, with a thin, broken or entirely lacking covering and lacking marbling. We also reckon here multiparous cows, old bulls used for breeding purposes and castrated late or not at all, sucklings under 1 month of age, very watery meat and meat with an unusual colour or odour.

Age is determined according to the accompanying papers, the teeth and horns, ossification, fat, etc. In case of argument, the opinion of the State Veterinary and Sanitary Control is valid.

SHEEP

Here also we make use of age as a basic index in class determination, and in grading, of the general shape, weight and finish, and in older animals, sex, to a certain extent. The lamb or mutton carcass must conform to the following requirements:

Greater length and width of the back. Intense muscle development, particularly in valuable cuts. Limited fat covering and distinct though not intense marbling. The strong odour of mutton fat is undesirable, as well as eventual foreign odour. In the ewe and the wether lamb over 6 months old, the carcass is measured without the head and viscera, though with the tail and kidneys, and in the lamb younger than 6 months, with the head and tail, heart, lungs, liver, spleen, caul and kidneys.

As it is, we suggest the following

CLASSIFICATION OF SHEEP

Class	Grade	Indices
1	2	3
A Lamb at the age of 1 to 6 months	I	Lamb carcass with a carcass weight of 5-8 kg. Full fleshed carcass with a thin, broken fat covering.
	II	Lamb carcass with a carcass weight of up to 20 kg. Full fleshed carcass with an intense continuous

H5

1	2	3
	II	covering. The kidneys are completely covered with fat, but with other features well expressed individual sections may be bare.
A		
	III	Thin fleshed lamb carcass with a carcass weight of over 5 kg. Thin or lacking covering. Little kidney fat.
B		
Wether	I	Full fleshed carcass with a minimum carcass weight of 15 kg. Well developed continuous covering and distinct marbling. Covered kidneys.
lamb,		
6 to 12		
months	II	Thin fleshed carcass with a minimum carcass weight of 15 kg. Thin broken covering. Kidneys are only partly covered with fat.
old.		
C		
Ewe	I	Full fleshed not very fat carcass. Good though not extreme covering. Satisfactory marbling. In individual sections the kidneys may not be covered with fat.
over		
6		
months	II	Fat carcass with a thick covering. Kidneys completely covered with fat.
old		
	III	Satisfactorily developed carcass. Thin, broken covering. Kidneys covered with fat only in their foundation.

All meat which does not comply with the above indices, but is fit for consumption, is sent for processing. Here belong any skinny carcass, carcass with foreign odour, thin fleshed non-castrated buck with sharply pronounced fat odour.

### PIG

The aim is to obtain an early maturing pig that at a live weight of 100-110 kg represents an excellent meat pig with fat thickness of up to 3,5 cm and a yield of 68-69%. With the task set in this way, raising and feeding are of primary importance along with breed.

In class determination, the basic indices are age and finish, and in grading, back fat.



A long fleshy carcass is looked for with a light head, long and wide back, well shaped ham, fleshed abdomen and thin fat. The fats must be limited in a biologically justified extent.

So, we suggest the following

#### CLASSIFICATION OF PIG CARCASSES

Class	Grade	Indices
A Piglet	-	Suckling piglet up to 2 months old with a live weight of up to 25 kg and a carcass weight of up to 12 kg.
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B Young pig	-	Non-parous young gilt or a male pig castrated at the age of 3 months or younger, with fat thickness of up to 2,5 cm and a live weight of over 60 kg.
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C Meat pig	-	Full fleshed carcass with fat thickness of up to 3,5 cm. The female pig should not have been used for breeding purposes, and the male pig should have been castrated at the age of 3 months or younger.
	-	
D Fat pig	I	Carcass with a fat thickness of 3,5-4,5 cm. The female pig should not have been used for breeding purposes, and the male pig should have been castrated at the age of 3 months or younger.
	II	Carcass with a fat thickness of over 4,5 cm. The female pig should not have been used for breeding purposes, and the male pig should have been castrated at the age of 3 months or younger.

All meat that does not comply with the above requirements, but is fit for consumption, is sent for processing. Here belong parous female pigs and also boars used for breeding purposes, castrated late or not at all.

The indices used for class determination of the carcasses, namely age and, for pigs, finish also, are comparatively easy to establish. As far as grade goes, the experienced grader could manage easily the suggested pattern as well. Another question is how far it is possible at present to give a quick and quite just quality evaluation based on objective indices. For the time be-

H5

ing, the problem of quality determination of meats is not solved quite satisfactorily not only in this country but also abroad since, furthermore, tastes and consequently conceptions are different and changeable in the individual countries. For the present we have not any completely objective method allowing the determination, in manufacturing conditions, of quality rapidly and exactly, equally satisfactorily for all parts concerned. But we need meat quality. It solves the hard problem of completely meeting consumer's demand, raises the prestige of meat industry, enables us to conform to the motto, "All from man, all for man". With hard and purposeful work, we approach the satisfactory solution of this problem.