

ON THE HYGIENE STATUS OF BAGGED ROE DEER FROM THE FEDERAL REPUBLIC OF GERMANY

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Keywords: Roe deer meat, hygiene status

251 specimens of Roe deer were examined for Hygiene Status. From this total 198 deer were bagged in accordance with Game Law Regulations, for the most part in the course of shooting from a stand. 35 specimens were killed as game accidentally through a collision with motor vehicles and 18 specimens were discovered as dead game.

The deer originated from shooting areas around the Chiemsee in Bavaria (LENZE, 1977), from the Bodensee area around Ravensburg (HÄUSLE, 1987) as well as within a radius of 160 km around Hannover (RING/STEINHOF/BANDICK, 1995).

The increased female specimens came for examination at ages of less than 1 year old up to 8 years old. Patho-morphological, bacteriological and chemico-physical and parasitological examinations were carried out on all specimens.

The various seasons in which the deer were hunted resulted in considerable variations in the body weights of specimens belonging to an age group.

In the case of 197 bagged deer the pH measurements were carried out within a time span of 1-3 hours after their discovery. The average pH value lay at 6,0 in *M. semimembranosus*. In the case of 50 bagged deer a 12-15 hour post mortem was also carried out with the use of electrometric pH measurements. A middle pH value of 5,62 was ascertained, the minimum value being 5,51, the maximum value 5,82. The middle pH value in *M. longissimus dorsi* lay at this moment in time at 5,64, the minimum value being 5,52 and the maximum value at 5,87. A middle pH value of 5,77 (5,74-5,79) was measured in *M. triceps brachii* with a p.m. of 12 to 15 hours, the quotient value concerning the water absorption capacity of this muscle, established by means of the filter paper pressure method, lay on average at 0,63. In the case of game killed through an accident, as a rule a similar pH course can be proceeded from. This is different in the case of the discovered perished game: the pH measurements of 11 out of 18 specimens of perished game lay at 6,99. As regards the exsanguineous level the best results were to be ascertained with shots to the heart with a fleeing distance of 80 m. Other causes for death, such as shots in the belly or accidents, often resulted in an insufficient bleeding.

The sensory status is in the same way primarily dependent on the cause of death or, as the case may be, on the location of the hit. Healthy specimens which were bagged in accordance with Hunting Law Regulations with an accurate shot, revealed no deviation from the norm. This was different in the case of specimens with belly-wound shots which had a greater fleeing distance. In this case the tendency to a putrid smell increases on account of the issuing stomach contents, which for the most part confines itself to the abdominal wall after a boiling test. In the case of an 19 hour search at an outside temperature of c. 12 °C disemboweling a putrid sanious smell could be ascertained; the boiling test of the abdominal wall and of the inner surfaces of the haunches produced in each case a stifling, fusty musty smell. Finally, a deer which had died as a result of an accident and which was traced after a day revealed an intensive ammoniacal smell. Within the framework of the parasitological examinations the larve of the Deer bot (*Cephenomyia stimulator*) was discovered. In the case of another 50 deer eggs from the intestinal *Strongyliden* and *Trichuris* spp. were isolated from the feces. The secretion of eggs of these helminths did not enable any seasonal influence to be perceived. 8 types of helminth, all of them Nematodes, were found: *Trichuris globulosa* (in 36 % of the deer), *Haemonchus contortus* (24 %), *Chabertia ovina* (24 %), *Bunostomum trigonocephalum* (20 %), *Oesophagostomum dentatum* (6 %), *Oesophagostomum radiatum* (2 %), *Trichostrongylus axei* (2 %) and *Nematodinus europaeus* (2 %). Neither cestodes, their fins, nor trematodes were to be discovered. The total number of helminths found amounted to 57 (STÖYE/SPELLMEYER, 1955).

In the northern area of the Bodensee ticks (*Ixods ricinus*) filled with blood could be palpated on 4 bagged deer. Other ectoparasites were diagnosed as the Biting louse (*Cerricola meyeri*) or Deerflies (*Lipoptena cervi*).

The following findings were pathologically-anatomically diagnosed.

In the case of deer from the Bavarian region the following was particularly conspicuous: in the case of one roebuck (20 kg) a perforating festering wound on the Dorsum nasi apical on the Os nasale sinister and a Pharyngitis, and in the case of a Buck of 11 kg an old wound from a shot with a fleshwound, flat of the hand in size, fetid, sanious, occupied by fly larvae, on the vertebral column at shoulder blade height with in part a free lying Proc. spinales. Near it were several fractures, for the main part previously identified with an abundance of callus growth. A further frequent finding was Enteritis verminosa.

In the case of deer from the rangers' districts around Hannover the majority of the specimens showed a good to very good state of nutrition, only in the case of one roe deer was the state of nutrition to be classed as moderate.

In one deer an old wound, which had healed in the meantime, was discovered on the right anal extremity with at the same time an extended exterior paw. This animal was also well-fed.

Another Roe deer showed clotting and deformities in the chest and stomach area, which were to be classified as chronic Pleuritis and Peritonitis. Another animal showed practical clotting on the Pleura and lungs. Reference is made to the parasitological findings.

On the Bacteriological Status of Roe Deer Game.

The result of the bacteriological examination of Roe deer game depends to a large extent on the locality of the hit, the time between the

fatal hit and the ripping open and disemboweling of the animal, the transport of the game and the period of time up to the cooling down at lower temperatures.

The importance of ripping open as swiftly as possible becomes clear from the 100 Roe deer bagged in Bavaria:

Ripping open within 30 min.:	germ-free	33 %
	low germ content	64 %
	high germ content	3 %
Ripping open within 2 hr.:	germ-free	17 %
	low germ content	50 %
	high germ content	33 %
More that 2 hr to Ripping open:	germ-free	0 %
	low germ content	17 %
	high germ content	83 %

The following spectrum emerged from this:

Coliform germs	100 %
Cocci	100 %
Flavo and Chrombacteria, Shewanella	17 %
Pseudomonas-Acinetobacter-Moraxella-Ass	10 %
Proteus	5 %
Anaerobes	4 %
Aerobic spore forming	1 %

A swift ripping open is of special importance in the case of shots causing belly wounds and after accidents.

In this connection it is of interest that an examination in the same area for *Coxiella burnetti* by means of a CFT of the human forest employees resulted in a positive antibodies titer (SCHAAL, 1986).

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