

BELGIAN RABBIT PRODUCTION AND RESEARCH

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1. Introduction

Belgium has a long tradition in rabbit breeding. Already in the 19th century rabbit breeding was important. Rabbits were produced as "low cost" meat and for their skin. The value of a good quality skin nearly equalled that of the meat. For a lot of people at that time, rabbit meat constituted the major part of meat consumption. Rabbit breeders were mainly "working class" and farmers. Therefore rabbit meat had longtime been associated with the meat of the poor.

Besides this autoconsumption, there was also an important export to Great-Britain. One hundred years ago, London consumed 500,000 rabbits per week (Rougeot, 1981). The main part of these rabbits came from Belgium and France. They were collected at the small breeders and each week ten thousands of rabbits were shipped from the harbour of Ostend to London. Our export to England was about 6,000 ton meat per year (Lamont-Van Hecke, 1912), which represents nearly the half of our present production.

At the end of the 19th century a lot of breeds were created. Most of these breeds have a local origin, for example Blue de Beveren, Blue de St. Nicolas, White of Termonde, Flemish Giant. The name of each of these breeds indicates the original region. The Flemish Giant descends from the region of Ghent. At a market place in Ghent (Muide) a weekly test (on sundays) was organised in order to know the heaviest rabbit. These rabbits were not weighted but balanced. Because of the high popularity of these games, a selection took place to larger rabbits. At that time the only selection criterion was weight gain and end weight. Colour and other characteristics were not yet important.

In the beginning of the 20th century, with increasing prosperity, clubs were founded for pure rabbit breeds. Standards were drawn up and shows were organised.

Today, apart from the show breeders, there are still a lot of small breeders with raceless rabbits. The first large rabbitries (>100 does) were started in the late sixties, whereas the real expansion of intensive production dates from the last ten years.

2. Production and consumption

Between 1970 and 1980, the yearly rabbit production was estimated between 6,000 and 8,000 ton meat (table 1). From 1980 onwards, a yearly increase of the production can be noticed and in 1986 the production reached about 16,000 ton. This increase can totally be ascribed to the more intensive production in larger units.

Belgium is not yet self-provided in rabbit meat. Still 25% has to be imported, mainly from Holland followed by China (frozen rabbit) and Hungary.

The consumption of rabbit meat still has a seasonal character: in autumn, winter and spring till Easter. But in June, July and

August consumption is very low and there is an overproduction. Rabbit prices follow this evolution. In 1987 official winter price was between 74 and 78Bf/kg live weight, but last summer price had fallen under 60Bf/kg.

Table 1. Production and consumption of rabbit meat and wild in Belgium / (ton carcass). (Statistics of the I.E.A., 1987)

	1976	1978	1980	1983	1985	1986
Total production rabbits	6250	6300	8000	13200	16100	16200
wild	2800	3000	2600	2600	1700	2000
Export* - live animals	4	2	6	58	185	207
- meat	1667	1059	744	1696	2062	2436
Import* - live animals	373	387	304	768	871	1157
- meat	7367	7458	8384	7882	7340	7702
Consumption*	15.319	16.084	18.538	22.696	23.764	24.416
kg/inhabitant	1.56	1.63	1.88	2.30	2.41	2.48
Self-provision(%)	59.1	57.8	57.2	69.6	74.9	74.5

Source : National Institute for Statistics

* rabbit meat and wild together

3. Rabbit producers

As mentioned in the introduction, still a lot of small rabbit breeders exist. The National Institute of Statistics estimates that still 40% of the Belgian rabbit meat production takes place in small units with one to 10 does.

Official figures of the number of rabbit raisers don't exist. So the following structure of the Belgian rabbit production is an estimate: rabbitries with > 350 does : 20 - 30
 rabbitries with 100 - 350 does: 200 - 300
 rabbitries with 20 - 100 does: 1000 - 2000

Only the first group can be considered as full-fledged rabbitries. In the second group there are farmers who raise rabbits with other activities, while in the third group rabbit breeding is a supplementary income.

A survey of the production results is given in table 2. The Ministry of Agriculture follows 11 rabbitries. They have between 50 and 350 does. Large differences can be noticed between rabbitries.

Table 2. Technical results of rabbit production in Belgium: mean of 11 rabbitries in 1985 (Van Gelder, 1987).

	mean	mean of 3"best"*	mean of 3"worsed"*
Number of does	150	114	158
Litter size at birth	7.93	8.36	7.31
at weaning	7.16	7.44	6.64
Litters/doe/year	6.72	8.24	5.81
Weaned/doe/year	42.1	56.4	28.5
Slaughtered/doe/year	36.7	51.6	23.1
Mortality (%)			
birth - weaning	21.3	16.8	31.3
weaning - slaughtering	12.3	5.0	15.7
Mortality of does (%)	61.6	47.3	51.5
Replacement level of does (%)	174	140	225
Feed conversion of the rabbitry	4.9	4.3	5.4

* based on number of fat hening rabbits produced/doe/year

Almost all commercial rabbit raisers use New Zealand White or crosses with White of Termonde or Californian. The most important reason is that the New Zealand White is the only breed which has sufficient resistance to wire mesh. Only a minority of the large rabbit breeders use hybrids.

Small meat rabbit breeders use productive pure breeds (White of Termonde, Belgian Silver, Fauve de Burgundy) or raceless rabbits. For show breeding nearly all breeds are raised.

4. Angora wool production

The production of Angora wool is very low in Belgium. Only in the French speaking part there are some rabbitries with 10-200 Angora rabbits. Most of them follow the French system.

5. Rabbit Research

Ministry of Agriculture

- * Research Station for Small Stock Husbandry - C.L.O.-Ghent
Burg. Van Gansberghelaan 92, 9220 Merelbeke
Scientists: G. De Groote and L. Maertens
Equipment: 400 doe-places in 2 houses
60 digestibility cages

- Programs : * Selection: constitution of specific lines
- * Nutrition: -digestibility and energy evaluation of feedstuffs
 - nutrient requirements of does (protein, energy, fiber, amino-acids)
 - relationship between diet composition and digestive disorders
- * Reproduction and management:
 - breeding systems
 - pre- and postweaning management problems

- * National Institute of Veterinary Research
Groeselenberg 99, 1180 Brussels
Scientists: Ph. Halen, J.E. Peeters and G. Charlier
Programs: * Coccidiosis:

- evaluation of current situation in the field by screening commercial rabbitries
- tests of the efficiency of present and new anticoccidials
- * Enteritis complex:
 - histology, scanning and transmission electron microscopy, bacteriology & parasitology
 - experimental infection with isolated agents
 - prevention and treatment
- * Enteropathogenic E. Coli:
 - characterisation, pathology and prevention
- * Clostridium Spiriformis enterotoxemia
- * Relationship between diet composition and digestive disorders

Universities

- * Free University of Brussels - Dept. of Molecular Biology
Paardestraat 65, 1640 St. Genesius-Rode
Scientists: R. Hamers and E. Leysen
Programs: -immune mechanisms involved with the invasion of rabbit Eimeria
- * State University of Ghent - Dept. of Microbiology and Poultry Pathology, Casinoplein 24, 9000 Ghent

- Scientist: L. Devrieze and L. Okerman
Programs: -colibacillosis
 -pasteurellosis
 -staphylococcosis
- * State University of Ghent: - Dept. of Animal Breeding and Genetics, Heidestraat 19, 9220 Merelbeke
Scientists: Y. Bouquet and H. Varewyck
Equipment: 100 doe-cages
Programs: -evaluation of rabbit meat characteristics and their heritability
- * Catholic University of Louvain-La-Neuve - Dept. of Domestic Animal Physiology, 2, Place de la Croix du Sud, 1348 Louvain-La-Neuve
Scientist: P. Wittouck
Programs: -digestive physiology
 -nutrient balances

6. Education and publications

At the faculties of Agriculture and Veterinary medicine of the State University of Ghent, rabbit education is included in the course "Small Animals". This course is limited to a few hours.

Each year one or more courses for rabbit breeders are organised, either by Agricultural schools or by feed manufactories. Such a course consists of about 50 hours of lecture and demonstrations.

A periodical exclusively for rabbit breeders does no longer exist. Articles are included in periodicals for poultry or sport-breeding

The Belgian Branch of the WRSA organises, at least two conferences yearly. In spring for a scientific audience and in November, during the yearly small animal show in Ghent, on more practical topics.

Publications of rabbit research can be found in the "Flemish Veterinary Journal" and in the "Journal of Agriculture". For example n°5 of the 1987 issue of the latter has been exclusively devoted to rabbit topics.

References

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- Statistiques de L'I.E.A., 1987. Annuaire de statistiques agricoles. Ministère de l'Agriculture, Bruxelles.
- ROUGEOT J., 1981. Origine et histoire du lapin. Ethnozootechnie, n° 27.
- VAN GELDER H., 1987. Quelques données sur la rentabilité en cuniculture. Revue de L'Agriculture, 40, 1313-1323.

