

RABBIT PRODUCTION IN THE NETHERLANDS

E.M. Steenland

Spelderholt Centre for Poultry Research and Extension
 Spelderholt 9 - 7361 DA Beekbergen, the Netherlands

Introduction

Rabbit production on a more commercial base started in the Netherlands around 1960, mainly caused by new developments like the use of wire cages and special pelleted feed for rabbits. There were high expectations for this new branche but in practice the results of the rabbitries were quite disappointing. Expansion of the sector was moderate because of the absence of good breeding stock and a lack of knowledge about nutrition, reproduction, housing, management and prevention and treatment of diseases, especially for units with a large number of animals.

However, during the following years experience with rabbit keeping slowly increased. Although there were still problems left, especially in the field of disease prevention and management, from 1970 onwards rabbit production expanded steadily.

Since 1985 the interest for rabbit production increased significantly, partly caused by the restrictions on the production of cattle, swine and poultry.

Figures about the development of the production, import, export and consumption are given in Table 1.

Table 1. Production, import, export and consumption of rabbit meat in the Netherlands since 1970.

Year	Production x 1000 kg	Import x 1000 kg	Export x 1000 kg	Consumption (kg)
1970	2150	1230	1250	0.160
1975	4700	1890	2260	0.320
1980	7500	4540	3240	0.630
1985	9000	3300	3180	0.650
1986	9500	3050	3720	0.650

About one third of the rabbit meat production is from commercial farms. The rest of the meat is produced by hobby breeders. The consumption of rabbit meat is low. Most of it is consumed during Christmas time.

The Netherlands traditionally import deep frozen rabbits mainly from China. Exports are to Belgium (60%), France and West-Germany.

Rabbit production in the Netherlands can be divided in four categories: hobby breeding, laboratory utilization, meat production and fur and wool production.

Hobby breeding

Sportbreeding in the Netherlands is well developed for poultry, pigeons and rabbits. In 1987 the Rabbit Sportbreeder Organisation had 11,580 registered members. The dutch Standard contains 47 breeds from which some have several colour varieties. Shows are organized from October to January all over the country. For the 1987 - 1988 season 350 contests have been planned.

The most important races are: Dutch Dwarf, Flemish Giant, Polish Dwarf, Vienna, Dwarf Lop and Black and Tan.

More or less connected with the sportbreeders activities, or on the other-hand, with the meat production there are a large number of families keeping rabbits as pets.

Laboratory utilization

Rabbits are traditionally suitable for research purposes. The animals are used in industrial laboratories and governmental institutes. Their number, however, is limited. Only 1.3% of the research animals are rabbits, representing a number of about 15,000 animals. The main use is for production of sera, vaccins and medicines (58%) and science (31%).

There is one company that produces laboratorium rabbits on a commercial base.

Meat production

Numbers

Rabbit meat production is, in comparison with poultry meat and red meat production, of minor importance in the Netherlands.

There are no official statistics of the number or size of commercial rabbit

units. In 1987 there were about sixty rabbitries with more than 400 does, two hundred (or perhaps even three hundred) in between 50 and 400 does and several hundreds with less than 50 does. The largest farms have approximately 800 - 1000 does. In total there were 800 farms with rabbits for a more or less commercial purpose. The increase in rabbit production at the moment is almost completely due to the start of farms with 50 to 200 does.

Housing

In general rabbit farms are closed units: selection, reproduction and fattening is situated at the same unit. Modern rabbitries have separate compartments for on the one hand does and young rabbits and on the other growing rabbits. A few farms have separate compartments for grand parent stock in which selection is carried out.

Flat deck cages are generally used at the commercial farms. A few producers use two-tier batteries. The manure system is mostly fairly simple and consists of a dry manure system just on the floor under the cages. Several of the large farms have a dry manure deep pit system.

In general mechanization and automation is only used for the watering system and ventilation. Most ventilation systems operate by negative pressure. Recently at some farms computer regulated ventilation is installed. In 1987 two rabbitries started with a ventilation system by which the incoming air is heated or cooled by means of windpipes in the ground.

Nutrition

Rabbits are normally fed once a day. However, there is a tendency to feed the weaned rabbits twice a day.

On most farms one diet for all categories is supplied. Several large farms have separate diets for does and growing rabbits. There are also feedmills that supply special feed for weanling rabbits.

Rabbit feed contains among others lucerne, maize, wheat middlings, pulp and soya-bean or sun-flower products. The complete formulation of the diet depends on prices and availability of feedstuffs. Extra hay or straw is sometimes provided for.

Management

In general the breeding system is semi-intensive at the rabbit farms. Does are mated from 7 till 14 days after parturition. Only a few farms use an intensive breeding system (post-partum). Some smaller farms do not mate the does again before weaning the young rabbits. Artificial insemination has

been introduced at a very small number of farms in 1986. Commercial farmers wean the rabbits at the age of 4 - 5 weeks.

In general the doe stays in the same cage from the first mating onwards. On modern farms with enough separate compartments an all in - all out system is usually used for growing rabbits and some use a rotation system for the does.

About forty farms are joined with a computerized Technical Economical Administration (TEA). Every four weeks technical and economical results from the farms are provided for.

Breeds and selection

More than 95% of the rabbits used on commercial farms are of the New Zealand White (NZW) type. They are pure NZW rabbits or crosses with mainly Californians. Selection is normally performed at the farm itself. The main aim for selection is the number of weaned rabbits per doe per year.

Hybrids are not used very often in the Netherlands. There are a few breeders that work with *Elco* or *Cunistar* rabbits. In 1986 one multiplier started with the German hybrid *Zika* and since then there have been some farmers with *Zika* rabbits.

Market and price

There are three rabbit slaughter-houses with an E.C.-permit. All rabbits from these slaughter-houses get a veterinary inspection, performed by specially educated rabbit inspectors. Apart from these, two more slaughter-houses are specialised on rabbits. Rabbits from hobby breeders are mostly slaughtered and sold by poulterers.

The slaughterweight of the growing rabbits from the commercial rabbitries is on average 2400 - 2500 grams at an age of about 11 - 12 weeks. In general these carcasses are sold fresh, mainly in parts.

The price of rabbits is determined by a free-market system. During the year and over years they show an important variation. Prices are high during wintertime and low in the summer.

Organisations

About 500 rabbit producers are joined in respectively 11 regional unions. Some of these unions are originally started to collect rabbits ready for transport to the slaughter-house. They mostly have a winterprogram, a number of organized evenings with guestspeakers.

The Dutch Organization of Rabbit producers is an umbrella organization that

looks after the interests of the rabbit meat production branche. At the end of 1987 there were 580 members.

The WRSA in the Netherlands has 50 members, persons connected with sport-breeding, rabbit meat production or laboratory utilization. They organize two study-meetings a year.

Wool and fur production

Fur is not produced in the Netherlands as a main-product. Skins from rabbits are by-products from the meat production. These skins are used by the felt industry.

Since 1987 there has been one full-sized angora rabbit farm on a commercial base and there are a few small ones. Besides that some angora breeding is performed as a form of sportbreeding.

Research activities

At the Agricultural University of Wageningen two scientists are part-time occupied with rabbit ethology research. They study the influence of environmental factors on the behaviour and reproduction results of does in commercially used housing systems in comparison with alternative systems. Mortality of young rabbits is registered because a connection with maternal behaviour is expected.

Two scientist of the Department of Veterinary Pathology of the State-university of Utrecht work part-time and incidentally with rabbits in their research project: "The defense mechanisms of the intestinal mucosa against external noxious compounds". Some elements of this project are carried out with rabbits in view of the very frequent occurrence of juvenile enteropathy. The rabbits are exposed to noxious substances which may normally occur in rabbit feed and subsequently their intestines are examined for lesions. The correlation between the lesions and intestinal disorders is studied.

At the Spelderholt Centre for Poultry Research and Extension in Beekbergen an experimental farm for about 200 does will be started at the end of 1988. One full-time scientist will carry out the research.

The research will in the first instance be aimed on reducing morbidity and mortality. Therefore projects are being worked out on the following subjects:

- Climatic conditions for rabbits in the reproduction and fattening units.
- Behaviour and welfare of rabbits (does, young and weaned rabbits).
- Composition of rabbit feed for all categories.
- Management of rabbitries.

At the moment data on weight and chemical composition of rabbit meat parts are collected.

On the Spelderholt Centre the extension service is housed as well. There is one full-time extension officer in the field of the commercial rabbit production. Applied research is by means of co-operation with the extension service carried out in close connection with the practical producers. The extension service has at the same time the task to translate results of fundamental research to the producers and industries.

Some institutes or laboratories do experiments on behalf of or with laboratory animals.

Education

Education possibilities for rabbit production subjects are fairly scarce in the Netherlands. The Veterinary Faculty of the State-university of Utrecht does not really provide special classes for her students about rabbit diseases. In some general lectures some attention is paid to rabbits.

At the Agricultural University of Wageningen education is nearly only aimed at ethological aspects of rabbit production. Some of the 6 Animal Husbandry Colleges give a few lessons about rabbit production. At the 3 Centres for Animal Husbandry Training practical courses are given for starting or existing rabbit producers.

In 1987 these centres have organised 5 courses for totally 125 persons.

Books and journals

In 1986 the extension service published a handbook about all the aspects of rabbit production. The training centres use a coursebook that is regularly updated. There are no scientific dutch journals on rabbit breeding. For sportbreeders there are two journals available and for the commercial farmers the Dutch Organization of Rabbit producers publishes six times a year a journal.

