



## Rabbit farming: A growing enterprise in South Africa

Article by Jaco Smit, marketing manager: Opti Feeds

The demand for rabbit meat is on the rise in South Africa with the result that a growing number of producers are making enquiries about this farming industry. Rabbit meat is seen as a niche market with the result that producers can expect a better price than other industries. This is also one of the most sought after and healthiest products in Europe being high in protein value, low in fat and cholesterol.

Animal	Protein (%)	Fat (%)	Moisture content (%)
Rabbit	20,8 - 25,5	10,2	67,9
Chicken	20,0 - 21,5	11,0	67,9
Beef	16,3 - 19,0	28,0	55,0
Pork	11,9 - 13,3	45,0	42,0
Lamb	15,7	27,7	55,8

On average a female rabbit delivers six babies eight times a year. In intensive units with good management practices, a higher average of eight babies is possible. The average life expectancy of a rabbit is five to ten years although 15 years has been recorded. Rabbits are described as clean and fairly odour-free animals that will fit into any farming industry.

The rabbit is a herbivore with a digestive system resembling other monogastric animals (pigs and chickens). The big difference is in the proximal colon where a very interesting phenomenon can be observed, namely coprophagia. In short this is a process where the rabbit produces and ingests its own nutrients. In the morning rabbits eat the soft, nutritious manure pellets (*cecotropes*) when secreted. These *cecotropes* are critical in terms of maintaining vitamin B-levels as well as protein synthesis in the rabbit. Coprophagia is a normal phenomenon and of the utmost importance in the rabbit's overall health.

Adequate fibre (14% - 20%) is also critical in a rabbit's nutrition as it not only assists digestion but also plays an important role in the preservation of the rabbit's teeth. If a rabbit does not chew enough, it can develop a painful condition called *malocclusion* (the overgrowth of teeth). Fibre protects the rabbit's intestines and prevents them from chewing their hair. Furthermore an overgrowth of normal bacteria in the *cecum* can lead to diarrhoea and subsequent death.

Just like with a horse, microbial digestion takes place in the large digestive system and the *cecum*. The correct bacteria must be present for optimal utilization of undigested particles. A

diet containing high levels of grain and lesser levels of fibre will be accompanied by unwanted bacteria and subsequent diarrhoea.

Intensive rabbit farming operations use mainly pelleted feed although it is recommended that additional fodder must also be provided for rabbits. Different rations are fed to rabbits at different levels of production. In Europe it is not uncommon to find lactation, growth and maintenance products since each production level has its own nutritional needs.

Avoid overfeeding with pellets or using an incorrect product high in carbohydrates as this can lead to obesity. The rabbit has the ability to regulate its energy intake in relation to energy content of the feed if the other nutrients are balanced. When it comes to the protein needs of the rabbit, the most important essential amino acids are arginine, methionine and lysine. Lactating rabbits, producing milk three times richer as ordinary cow's milk, have especially high lysine requirements.

Protein from animal origin is unnecessary and all efforts to feed non-protein nitrogen to the rabbit as cost saving has always failed. The reason is that all sources of this nitrogen is absorbed or degraded into the digestive tract before it reaches the *cecum*. Vitamin C has no effect on the growth of the rabbit. Mineral levels especially that of calcium, should be balanced. Water is probably the most important nutrient and rabbits should therefore always have fresh water at their disposal.

Feed conversion ratios can vary between 2,5 and 4,5. It is very important to seek the best feed conversion ratio as this is where profitability is determined. The following rule of thumb can be used to determine the daily food consumption and plan feed flow:

- Young growing rabbits (4 - 11 weeks): 110 g - 130 g/day.
- Lactating females with babies (weaned at 4 weeks): 350 g - 380 g/day.
- Adult rabbits (maintenance): 120 g/day.
- For the rabbit farming enterprise as a unit: 1 kg - 1,4 kg feed/house mother/day.

The ideal thickness (diameter) of the pellets must range between 3 mm to 4 mm, with 5 mm the thickest to minimize wastage. Pellets should not exceed 8 mm to 10 mm in length. It is alleged that where the pelleting process is accompanied by heat, the nutritional value increases by 5% to 7%. When the feed is changed it must be done systematically and discreetly as these little animals are very sensitive to change.

Please note that this is not a cheap farming operation. It costs about R3 000 per female to invest in this kind of operation. Producers can generate approximately R1 200 profit per annum, depending on management, feed cost and producer prices. Although the manure can also generate funds in the gardening industry, it has not been included in the abovementioned scenario.

It would be wise to do good market research before venturing into this kind of operation.