

# ECONOMICS AND MANAGEMENT FOR COMMERCIAL MEAT RABBIT PRODUCTION

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For most people, commercial meat rabbit production is not a profitable undertaking although planning on paper makes it seem to have a great deal of potential. Why does this discrepancy exist? The central factor in a meat rabbit production system is the doe. With 10 hours of labor and 640 pounds of feed for it and its litters, it may produce 48 kits each year. If the kits are sold for \$4.00 each, the income from that doe will be \$192. Even after the cost of the feed (\$102.40) is subtracted, there is still a tidy profit of \$89.60. Why then, is meat rabbit production generally not profitable?

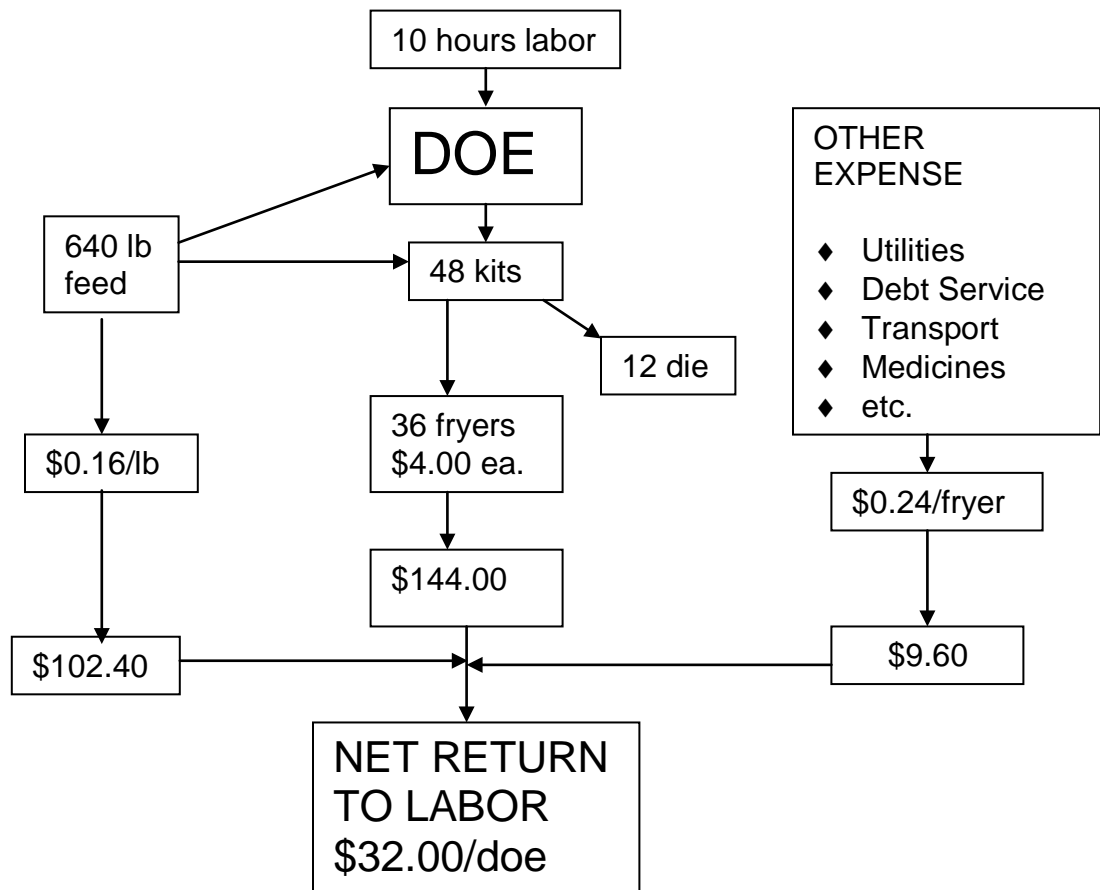


Figure 1. Yearly income and expense for one rabbit doe.

As shown in Figure 1, of the 48 kits born, 12 will die leaving 36 fryers to sell for \$4.00 each. This gives a gross income from that doe of \$144.00. There are also other expenses including utilities, payment on debts, transport, and medicines. These may add up to \$0.24 for each fryer for a total cost of \$9.60 for the doe. The feed will cost about 20 cents a pound or \$102.40 for the 640 pounds for that doe and her litters. That also must be subtracted from the gross income for the doe. Thus, the net return to labor will be \$32.00 per doe. For 10 hours of labor, that means a return of 3.20 per hour - substantially below minimum wage.

How can that hourly wage be improved? Based on Figure 1, there are four areas where the producer can have some effect - labor, feed consumption, mortality, and the price paid for each fryer.

### Labor

It is generally accepted that the labor input per doe per year will be about 10 hours. This labor requirement can be reduced in several ways. Probably the most important is the rabbitry design. Rabbitry design should be based on the comfort and safety of the animals and the efficiency of the unit in terms of the work to be done there. Here are some suggestions.

- ◆ The cages should be installed so the producers can work both sides of the aisles as they pass through.
- ◆ There should be an even number of aisles so when the work is complete the producer will end up at the starting point.
- ◆ If the rabbitry is long, there should be occasional crossovers so the producer doesn't have to walk the full length of the rabbitry to go from one row to the next.
- ◆ Make the aisles wide enough to move carts and other equipment through them. It hurts to keep bumping into feeders and doors on the cages because the aisles are too narrow.
- ◆ Place the cages away from the walls to allow cleaning.
- ◆ The cages should allow easy access for the manager and should be self-cleaning or easy to clean.

In the course of a year, a doe produces 350-400 lb of fecal pellets and 50 gallons of urine. This has to be moved out of the rabbitry regularly. Most automated systems don't work very well, so the rabbitry should be designed with good drainage (that helps get rid of the urine) and easy access to the manure pits for cleaning out the solids with a shovel and wheelbarrow.

Efficiency of labor use for breeding is also important. Does to be bred should only be taken to the buck when their vulvas are red, moist and swollen. Otherwise, they will probably not accept service. In large herds, artificial insemination might be a useful technique.

## Feed consumption

Rabbits eat a lot of feed. Feed comprises 75% or more of the total cost of running the rabbitry. If feed usage could be reduced, the rabbitry would be more profitable. There are several ways that might be done.

- ◆ Avoid "freeloaders". The pets, the non-productive females, and the bucks that are never used all consume feed. Unless they have a purpose, these freeloaders should be eliminated.
- ◆ Handle feed in a manner to minimize breakage of the feed pellets which will increase the percentage of inedible fines (dust resulting from broken pellets).
- ◆ Avoid scrabbling and young rabbits playing in the feed and dropping the feed pellets on the ground which results in feed wastage.
- ◆ Store feed so rodents can't foul it with their scent so the rabbits won't eat it.
- ◆ Keep rodents from eating your feed.
- ◆ Use fresh feed and don't buy such a large amount that it gets damp and stale before it is fed.

Purchased feed that isn't eaten by the rabbits represents a loss of profit. Steps should be taken to ensure that all the feed goes into the rabbits.

It might be possible to obtain a less expensive feed but care should be taken to assure the physical and nutritional quality maintained. Buying feed in bulk for large herds will reduce the total feed cost. This is only feasible where the feed can be stored properly and will not be damaged by moisture or other factors.

## Mortality

Figure 1 shows that of the 48 kits born, 12 will die. That is a 25% loss and is a fairly good estimate considering all the kits that are born dead, that die within the first few days or weeks, and the fryers that die before they can be sold. The Internal Revenue Service views fryer rabbit production as a small business because it is creating a product: more rabbits. What business can stay operational if 25% of the product is lost before it is sold?

How can mortality be reduced? Rabbit producers must accept the fact that rabbits are born with an ambition to die. It is the producer's job to foil that ambition and keep them alive. One important factor here is to reduce the disease incidence in the herds. Rabbit producers prevent disease, veterinarians treat it. Veterinarians are too expensive for commercial rabbits, so producers have to work hard at prevention.

As can be seen in Figure 2, there is a constant challenge to the rabbits from the environment, from microbes, and from a variety of outside sources including the diet, housing, and management. The ability of the rabbit to resist these challenges will determine whether or not the rabbit gets sick. The job of the producer is to reduce or eliminate the challenges and to help the rabbit maintain its resistance. The most effective means of reducing the challenges include ventilation, sanitation and observation.

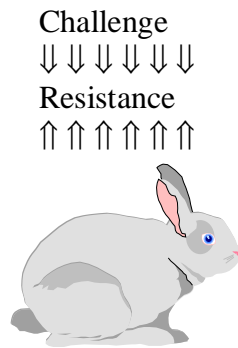


Figure 2. The balance between challenge and resistance to prevent disease in rabbits.

- ◆ Ventilation is effective because it will reduce the moisture and ammonia in the air. Ammonia can be a serious problem because it irritates the lining of the respiratory tract and provides an entry for infectious agents. Ventilation also reduces the numbers of micro-organisms. This is a positive effect because one of the factors that determines the strength of the challenge to the rabbit is the number of micro-organisms in the surroundings. Ventilation also provides cooling for the rabbits.
- ◆ Sanitation refers to cleaning and disinfecting the rabbit's surroundings. Cleaning means regularly removing the manure and urine, and removing the hair from the cages and surrounding. Nestboxes and other equipment used with the rabbits should be washed or brushed after every use. Sick or dead animals and their discharges must be removed from the rabbitry as soon as they are noticed. When the cleaning is done, the items should be disinfected. This means treating the cages and other equipment to destroy pathogenic microorganisms with heat, drying, exposing to ultraviolet (sun) light or chemicals. Probably the most commonly used chemical is household bleach that contains 4.25% chlorine.
- ◆ Observation means that you look at all your rabbits every time you are in the rabbitry. There is a saying that "Any fool can tell when an animal is dying and most people can tell when an animal is sick. A good stockman can tell when an animal is going to be sick tomorrow." That is because the stockman knows his animals very well and can see abnormal postures, movements, etc., and recognizes them as the beginning of a problem. All rabbit producers should strive to be good stockpersons.

Helping the rabbits to maintain their resistance includes being sure they are healthy by providing the correct amount of the proper feed and clean water. A major cause of death for fryers is enterotoxemia as a result of overeating. This is especially common in the Spring and Autumn when the weather changes rapidly. When a cool snap follows hot weather, feed should be restricted for the first day or so to prevent excessive intake. Rabbits also need housing that will protect them, that is large enough for free movement and does not have rough or sharp corners that might injure them and provide an open wound for harmful microorganisms to enter their bodies.

## Prices Paid for Fryers

The following are the steps from the producer through the processor, broker and the supermarket that show how the \$1.00 per pound paid to the producer for the live rabbit becomes \$3.55 per pound for a whole or cut-up fryer sold in the supermarket. As an example, a 4-pound rabbit is purchased for \$1.00 a pound. It is then harvested for \$0.30 a pound to give a 2-pound carcass worth \$2.30 per pound. Brokerage will add another \$0.25 and the supermarket will take a 30-50% markup for profit and spoilage. Thus the retail price is \$3.55 per pound. Interestingly, most household meat purchasers buy on the basis of total package price rather than price per pound. Thus, a 4-pound rabbit will produce 2-pound carcass in a package costing \$7.10. It may not sell very easily! Nobody becomes rich in this scenario, but the grocers end up trying to sell a whole or cut-up carcass for a very high price while the producer is hardly getting enough to pay the bills. The producer isn't going to get very far trying to get a better price from the processor because the processor isn't making very much either. What then should be done?

- ◆ Producers know that rabbit meat is low in sodium and fat, is all white meat and is easily digestible and they view those attributes as strong selling points.
- ◆ McLean-Meynsse et al. (1995) found that the positive nutritional attributes of rabbit meat were of minor importance to purchasers and they viewed rabbit as being inferior to chicken, beef or pork. Non-rabbit eaters were reluctant to try rabbit meat.
- ◆ In that study, the people most likely to consume specialty meats such as rabbit were 18 to 34- year-old college graduates with incomes over \$50,000 in professional or administrative positions. Commercial rabbit advertising and marketing efforts must target this group.
- ◆ Rabbit growers must also provide products that the customers want. The thick meaty loins and hind quarters will sell easily but what about the fore quarters? These can be used to make convenience foods, like microwave-ready nuggets and cutlets. These value-added products not only increase the salability, they also increase the profit margin.
- ◆ People who consume rabbit tend to have environmental interests, so there is opportunity to market rabbit reared in specialty production systems such as grass finishing, antibiotic- and pesticide-free production, use of "rabbit friendly" housing or other systems that will attract the buyers.
- ◆ In some areas of the country, ethnic markets may provide an excellent outlet for rabbit meat. People from Europe and other areas where rabbit is regularly eaten view rabbit as a delicacy and want to include it in their diets.

## Conclusion

Rabbit meat is a good product with high nutritional value. The problem faced by producers is that the costs of production are so near to the income that there often is little profit in being a commercial meat rabbit producer. Methods of increasing the profit margin include increasing the efficiency of labor use, reducing mortality, and increasing the efficiency of feed usage. The price paid for the fryers can be increased by targeting the consumers and producing products for which they are willing pay a premium price.

Reference

McLean-Meynsse, P., J. Hui and J. Meynsse. (1994) Consumer perceptions of, and attitudes toward, rabbit meat. *J. Agribusiness*, 12:55-67.