

Management of Rabbit farming for income generation and their advantages

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Introduction

Rabbits are becoming increasingly popular as an additional source of animal protein to meet the increasing demand from the ever-growing human population. Rabbit rearing gained momentum in the recent past among the developing countries including India, owing to their high prolificacy, early maturity, shorter generation interval and efficient feed utilization (Ghosh *et al.*, 2008). High prolificacy and fast growth make rabbit an ideal animal for meat production in developing tropics. They have high reproductive potentials and fast growth rate due to their high feed utilization efficiency. Rabbit farming is not only profitable but enjoyable too. It can be grown as a pet animal in small land without much investment. Their farming is done from long time ago all over the world including India. There are many advantages of commercial rabbit farming in India. Bunnies are a cute and small sized animal. They are soft and tender which can be used as a good source of meat. There is a very high demand for rabbit meat in the market and there are not enough suppliers to fulfil this growing demand. In India, the total rabbit population has increased from 424 thousand in 2007 to 591.6 thousand in 2012 which is around 39.55% increase in 5 years. The meat from rabbit contains high protein, low calories and low fat and cholesterol contents, being considered as a delicacy and a healthy food product, easy to digest, indicated in feeding children and old people (Dalle Zotte, 2000). The business of rabbit farming involves low investments and high profits. There is a high demand for fur obtained from Angora rabbits in India as well as in foreign countries due to which it can be a successful business venture. Rabbit's meat is also consumed by a small population in India which can further add to the income obtained from fur marketing.

Rabbit makes efficient use of plant protein (Timon and Hamrahan, 1985) and crude fibre (Egbo *et al.*, 2001). Rabbit meat is relatively rich in protein and low in fat comprising 60%



unsaturated fatty acids. In addition, rabbit meat is highly digestible and rich in omega-3 fatty acids, often recommended by nutritionists over other meats (McCroskey, 2000). The body weights and growth rates are important variables determining the value in broiler rabbits. One can easily make a small shed at the backyard with a very small investment. Good cover or shed is necessary for keeping the rabbits free from weather conditions, rain, sun and various types of predators like dogs or cats, etc.

Advantages of Rabbit farming:

1. Prolific in Nature: They are highly prolific with some good females producing 25 to 50 kits per year.
2. Shorter generation interval: Due to shorter generation interval rabbits can multiply to large number within a short span of time.
3. Less Space: One can also start this business at small scale business as a part-time in the backyard garden and also, it does not require too much space and capital to start a rabbit farm.
4. Negligible food Cost: Rabbits can be fed with all available greens and waste from vegetables, forage etc. So, there is no involvement of fodder cost. Rabbits feed on forages so, less quantity of costly concentrate feed required.
5. High Feed efficiency: Rabbits convert food and water into edible meat 1.4 times more efficiently than pigs and 4 times more efficiently than sheep and cattle.
6. Low rearing cost: Small groups up to 50 numbers can be reared in the backyard of the house with kitchen waste as feed. Anyone can start this business such as a farmer, a housewife, a labourer etc.
7. Quick return: The initial investment cost for rabbit farming is low along with quick returns (about 6 months after the establishment of the farm), one can repay all the initial costs.
8. Source of income: They also provide income from the sale of kits, meat, wool, pelt and manure. By rearing small number of rabbits one can earn handsome amount.
9. Good Manure: The residual feed of rabbit commonly mixed with rabbit manure is best suitable for the worm's compost to yield excellent manure for the agriculture. Rabbit manure is highly suitable for vermicomposting which provides excellent manure to be used as an organic fertilizer.
10. Insulation material: Rabbit's wool provides good insulation since it is 6-8 times warmer than the contemporary sheep wool. It is very smooth in texture and looks beautiful.
11. High-Quality Wool: Rabbits are the best wool producer on the basis of wool produce per kilograms of body weight because rabbit needs about 30% low digestible energy for



producing wool in compared to sheep. The wool obtained from the rabbit is about 8 times warmer in comparison to the sheep's wool. Also, this can be mixed well with sheep wool, silk, rayon, polyester, nylon, and other fibers to obtain high-quality handlooms.

12. White Meat: Great demand in the market because it is rich in poly-unsaturated fatty acids (PUFA). Good for elderly people and serves as alternative sources of high-quality food.
13. Companion animals: Bunnies are wonderful companion animals. The maintenance cost is fairly low as compared to other pet animals like dogs or cats. Unlike dog and cats, rabbit is more docile. There is no risk of Rabies.
14. Biological Research: Rabbits are used as lab. animal for research purpose for testing wide range of drugs. This animal is docile so very easy to handle and conduct experiment.
15. Economic benefit: Rabbit farming can also provide supplementary income for farm families with limited land, resource and capital. Small scale rabbit farming under backyard system can empower women.

Table 1: Comparative nutritional composition of different meats.

Composition	Rabbit	Chicken	Beef	Pork
Moisture (g/100g)	68.5 ± 1.05	68.1 ± 1.19	53.2 ± 1.21	43.7 ± 2.13
Protein (g/100 g)	21.2 ± 0.79	20.1 ± 0.27	26.3 ± 0.16	27.3 ± 0.22
Fat (g/100 g)	9.2 ± 0.38	10.8 ± 0.08	19.6 ± 0.09	28.2 ± 0.13
Ash (g/100 g)	1.1 ± 0.08	1.0 ± 0.05	0.9 ± 0.07	0.8 ± 0.11
Calcium (mg/100g)	21.4 ± 0.09	12.1 ± 0.04	10.9 ± 0.38	9.3 ± 0.47
Phosphorus (mg/100g)	347 ± 0.26	252 ± 0.06	179 ± 3.62	176.4 ± 3.36
Sodium (mg/100 g)	40.5 ± 0.89	71.4 ± 0.92	63 ± 0.90	67.3 ± 0.91
Cholesterol (mg/100 g)	56.4 ± 0.92	68.3 ± 2.14	114.5 ± 11.68	108.4 ± 10.31

Source: Nistor *et al.* (2013)

Feeding of Farm Rabbits - Nutritious food must be fed to the farm rabbits for proper growth and good health. Grains, legumes and green fodders like Lucerne, and kitchen wastes like carrot and cabbage leaves can be fed. Some amount of concentrate feed should also be fed. For 1 Kg body weight of rabbit, about 40 grams of concentrate food and 40 grams of green fodder are required along with *ad libitum* supply of fresh and clean drinking water. Rabbits need about 15-16% crude protein, crude fibre about 12-16%, crude fat about 3-6%, energy of 2500 Kcal/kg of diet and minerals about 1-2%.

Different types of feeds suitable for feeding of rabbits: Rabbits can be fed with roughages and Concentrates. Roughages are of two types (a) Dry Bulky feeds: e.g. Hay made from grass or legume (Alfalfa) and (b) Fresh Bulky feeds: under this category of feed (i) Grasses like Guinea grass, Napier grass (ii) Green cereal plants (Maize, Sorghum) (iii) Legumes (Alfalfa, Berseem) (iv) Roots (Turnips, radish, carrots, sweet potatoes) (v) Green vegetables (Green leaves of



cabbage, spinach, lettuce) (vi) Other plants (Banana leaves, various weeds, local grass). Under **Concentrate feeds** (i) Energy supplements (Maize, Sorghum, millets, barley) and (ii) Protein supplements (Soya flour, groundnut cake, cotton seed cake, meat, fish meal.)

Conclusion

Rabbits are becoming increasingly popular as an additional source of animal protein. They have high reproductive potentials and fast growth rate due to their high feed utilization efficiency. Rabbit meat is relatively rich in protein and low in fat suitable for elderly people. Rabbit farming can be taken as a profitable business venture for self-employment.

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