REVIEW OF RESEARCH
IMPACT FACTOR : 5.7631(UIF) ISSN: 2249-894X
VOLUME - 1 | ISSUE - 1 | MARCH - 2019

IMPORTANCE OF GOAT FARMING IN INDIA

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ABSTRACT :

The livestock sector globally is highly dynamic. In developing countries, it is evolving in response to rapidly increasing demand for livestock products. In developed countries, demand for livestock products is stagnating, while many production systems are increasing their efficiency and environmental sustainability. The status, economics and prospects of commercialization of goat production in the country have been analyzed using primary data from 18 commercial goat farms in different states. It has been revealed that several large and progressive farmers, businessman and industrialists have adopted commercial goat farming. The present review covers the main topics related to goats for the last two years. The main topics were pathology, reproduction, milk and cheese production and quality, production systems, nutrition, hair production, drugs knowledge and meat production. However, use of improved technologies, particularly prophylaxis, superior germ plasm, low cost feeds and fodders and innovative marketing of the produce would be the pre-conditions for successful commercial goat production. Research needs progress rapidly to reach the level of knowledge of other species like cattle or sheep, especially in milk and meat production.

INTRODUCTION:

Livestock systems occupy about 30 per cent of the planet's ice-free terrestrial surface area and are a significant global asset with a value of at least $1.4 trillion. The livestock sector is increasingly organized in long market chains that employ at least 1.3 billion people globally and directly support the livelihoods of 600 million poor smallholder farmers in the developing world. Livestock products contribute 17 per cent to kilocalorie consumption and 33 per cent to protein consumption globally, but there are large differences between rich and poor countries.

The number of goats is increasing worldwide and they are becoming increasingly important around the world for a variety of reasons. Goats are among the main meat-producing animals in India, whose meat (chevon) is one of the choicest meats and has huge domestic demand. Besides meat, goats provide other products like milk, skin, fibre and manure. Goats are important part of rural economy, particularly in the arid, semi-arid and mountainous regions of the country.

the productivity of goats under the prevailing traditional production system is very low. It is because they are maintained under the extensive system on natural vegetation on degraded common grazing lands and tree lopping. Therefore, rearing of goats under intensive andsemi-intensive system using improved technologies for commercial productionhas become imperative not only for realizing their full potential but also tomeet the increasing demand of chevon (goat meat) in the domestic as well as international markets.

LIVESTOCK SCIENCE AND TECHNOLOGY AS A DRIVER OF CHANGE:

(a) Breeding and genetics

In developed countries, the narrowing animal genetic resource base in many of the intensive livestock production systems demonstrates a need to maintain as broad a range of genetic resources as possible, to provide genetic insurance against future challenges and shocks. Institutional and policy frameworks that encourage the sustainable use of traditional breeds and *in situ* conservation need to be implemented, and more

understanding is needed of the match between livestock populations, breeds and genes with the physical, biological and economic landscape

(b) Nutrition

What are the prospects for the future? For the mixed crop–livestock smallholder systems in developing countries, there may be places where these will intensify using the inputs and tools of high-input systems in the developed world. In the places where intensification of this nature will not be possible, there are many ways in which nutritional constraints could be addressed, based on what is locally acceptable and available. One area of high priority for additional exploration, which could potentially have broad implications for tropical ruminant nutrition, is microbial genomics of the rumen, building on current research into the breaking down of lignocellulose for biofuels.

(c) Disease

For the future, the infectious disease threat will remain diverse and dynamic, and combating the emergence of completely unexpected diseases will require detection systems that are flexible and adaptable in the face of change. Travel, migration and trade will all continue to promote the spread of infections into new populations. Trade in exotic species and in bush meat are likely to be increasing causes of concern, along with large-scale industrial production systems, in which conditions may be highly suitable for enabling disease transmission between animals and over large distances.

Goat farming - A profitable and productive enterprise producing quality milk, meat, hair skin, wool, pelt, mohair and pashmina etc. Goat is considered as the first ruminant to be domesticated by human beings between 10000 and 6000 years before Christ (BC) in South-western Asia. Goat significantly contributed to the national economy by providing, meat, milk, skin, fibers, manure etc. Goats also contributed appreciably to nutritional security of rural livelihood by providing animal protein through meat and milk. In India, about 24 breeds of goats have been identified phenotypically and registered at National Bureau of Animal Genetic Resources, Karnal.

Goat rearing, which was the economic activity of rural resource-poor people has attracted large and progressive farmers, businessman and industrialists due to its economic viability under intensive as well as semi-intensive systems of management for commercial production.

Goats are generally managed under extensive production system followed by semi intensive production system, where only night shelter is provided. However, now-a-days farmers are taking more interest for rearing under **intensive production system for commercial purposes**.

Goat farming has multifarious added advantage as it required less housing facility , less management and labour, higher prolificacy, improve the soil fertility, easily managed by women and children goat export market in skin, high quality clothing can be manufactured by mohair and pashmina, provide transport power in high altitude, to control bush and undesirable forbs, high dry matter and fibre digestibility managed under integrated system in small holder.

Intensive System: It is characterized by high input and high output and usually practiced for high potential animals. It is associated with high investment on housing, veterinary care, housing, feed resources, labor and other infrastructure etc. It involves cultivation of fodder with zero grazing, usually low forage and high plane of concentrate diet. This system is very less practiced in India and mostly undertaken at institutional flocks and few commercial sheep and goat farmers. In semi intensive and intensive production system the selection of ram or buck can be done on the basis of their pedigree family if proper record is available or on the basis of phenotypic performance. Selective breeding plan should be conducted to take good results for improvement of breed. Breeding buck or ram should be replaced from the flock in every year to avoid adverse effect of inbreeding.

Advances in Goat Production and Management:

The goat rearing using improved management practices undertaken for maximization of returns from the enterprise was considered as 'commercial goat farming' in the present context.

No information was available on the commercial goat farms operating in different parts of the country; however during the past one decade, a number of such commercial farms have come into existence. Therefore, initially, the efforts were made to identify commercial goat farms operating in different states and develop rapport with them. breed is defined as a group of animals with similar characteristics. A majority of sheep and goat population in our country do not conform to any breed characteristics and are designated as non-descript sheep and goat. India is a rich repository of goat genetic resources with 24 well established breeds that have wide product diversity i.e. meat, milk and fiber (hair/pashmina).

The breed habitat and utility of various goat breeds are:
Milk & Meat- Sirohi, Jakhran , Beetal, Barbari, Jamunapari, Mehsana, Gohilwadi, Zalawadi, Kutchi, Surti, Osmanabadi, Malabari
Meat- Sangamneri, Kannai Adu, Ganjam, Attapady , Berari, Konkan Kanyal,
Meat and hair – Marwari
Meat and skin – Black Bengal
Pashmina and Meat – Changthangi, Chegu
Milk, meat and hair – Pantja

Goat breeds in major regional tracts Our country can be considered into four regions with respect to distribution of goats, viz. North-Western and Central Arid/Semiarid region, Southern Peninsular region, Eastern region and Northern Temperate region.

The Sirohi,Barbari, Osmanabadi and Black Bengal were the important breeds of goats reared by the commercial has recently started spreading to other states like Karnataka, Andhra Pradesh and Madhya Pradesh. The Sirohi remained the most sought after breed, particularly in the semi-arid and arid parts of the country.

The major initial investment was found on the purchase of breeding stock and construction of sheds and structures, which accounted for 47 percent and 48 per cent of the total capital investment, respectively. In the traditional flocks, 75-80 per cent of the total investment was made in acquiring the breeding stock **.**

Awareness and Adoption of Improved Technologies by Commercial Goat Farmers

A number of technologies are available for productivity improvement of goats. Technological and management options are the only alternatives to accelerate growth in the productivity of goats, which is low in the traditional system of production. There was high level of adoption of recommended package of practices and technologies related to direction and type of shed, feeding and watering devices and mineral mixture, but the adoption of daily management practices and prophylaxis was not 100 per cent. The use of vaccines such as PPR, HS and FMD and medication for internal as well external parasites need to be used as recommended for effective prevention of diseases and improved productivity. The level of adoption of different technologies by commercial goat farmers, who had received training on scientific goat farming, was found encouraging. An increased level of adoption of technologies and availability of good quality breeding stock would be essential to make the commercial goat farming more profitable. Most of the farmers were eager to adopt the improved technologies, but the absence of any support system to provide quick access to the latest information and technologies and weak input delivery system resulted in poor adoption.

Service centres will have to be established to provide technical knowledge, recommended inputs and market information. Small size modern slaughterhouses need to be established near the production centres to maintain commercialization of goat production.

Advantages of goat farming / Utility of goats :-

1. The goat is a multi-purpose animal producing meat, milk, hide, fibre and manure. In hilly areas, goats are also used for hauling light loads.

2. Goat farming can be a profitable occupation for a farmer and can fit well into mixed farming. Goats are cheaper to maintain, easily available and have a friendly disposition.
3. Goats are capable of adapting to various agro-climatic conditions ranging from arid dry to cold arid to hot humid. They can be raised in plains, hilly tracts, sandy zones and at high altitudes.
4. Goats are called the foster mother of man, as their milk is considered better for human nutrition than other species of livestock.
5. Goat milk is cheap, wholesome, easily digestible and nutritious.
6. Goat milk has higher phosphate content, which is beneficial for vegetarian communities.
7. Goat milk has a higher content of B-complex vitamins.
8. Goat manure is 2.5 times richer in nitrogen and phosphoric acid than cow manure.
9. Goats form an excellent animal for physiological and biomedical research.
10. The goat meat (Chevon) is more lean (low cholesterol) and relatively good for people who prefer low energy diet.

Utility of goat meat :

Goats are the main meat-producing animals in India, whose meat (chevon) is one of the choicest meats and has huge domestic demand.Goat contributed 0.97 million tonnes meat (15.56% of total production i.e., 6.235 million tonnes) during the year 2013-2014 .

Goat meat is called as chevon and so chevon leg soup is very famous, delicious and healthy for the health especially bones. It is rich in calcium and helps in bone building and teeth strengthening. It enhances producing new body cells thus delay the aging. It is good for weight watchers as it is rich in protein which keeps stomach full longer.

Advantage of goat meat :

1. Proteins found in it acts as a hunger suppressing agent and keeps the stomach full for longer time thus helps in controlling weight.
2. It contains B group vitamins, selenium and choline which is very beneficial to be prevented from cancer.
3. It helps in iron recovery among women during menstruation and provides relief from the menstrual pain.
4. It provides better nourishment to the bones, teeth and hairs thus prevents from osteoporosis, joints pain, tooth ache and hair loss.
5. It enhances the memory power among kids by helping in proper brain development.
6. It contains low sodium level and high potassium level thus safe food for the heart and prevents from the high blood pressure, risk of stroke, kidney diseases and etc.

Medicinal values of goat milk-

- Goat milk is finer than cow milk i.e. the fats and proteins are present in a finer state and are more easily digestible, especially by children and invalids. Goat milk has lesser allergic problems than other species of livestock.
- Goat milk has a higher content of B-complex vitamins.
- Goat milk has 9 minerals more in number than any other milk used for human consumption.
- Goat milk is used as a ayurvedic medicine for personas ailing with asthma, cough, diabetes etc.

Goat manure –

Manure are the excreta of the animals and bedding materials of the animals. Goat manure is great for fertilizing to the fields. Goat manure is a good source of NPK possibly other minerals as well. Goat manure helps maintain the soil fertility.Goat urine is equally rich in both nitrogen and potash, and is more valuable than that of any other animal.

Goat mohair –

It is produced by Angora goat and similar to the wool in chemical composition, but differ in mohair fibre are smoother surface and non-insulating used for summer cloth.

Mohair is used in scarves, winter hats, suits, sweaters, coats, socks and home furnishing. Mohair fiber is also found in carpets, wall fabrics, craft yarns, and many other fabrics, and may be used as a substitute for fur. Mohair is a very soft yarn when compared with other natural and synthetic fibers.

Goat skin –

Goat skins are of two types viz. Amritsar and Calcutta. Goat Leather is used for car & furniture upholstery, luggage, wall painting, gloves, hats, coats, dress, handbags, wallets, bookbinding's & numerous other products. In the world of sports, leather is essential-cricket, soccer & rugby ball are made by leather. The biggest use of leather is in the manufacture of shoes.

goat pashmina –

Pashmina can also be defined as the undercoat fiber derived from Cashmere goats with a diameter of 30 microns or less. Pashmina has derived its name from the Persian word meaning soft gold or the king of fibers. However in India, majority of Pashmina is utilized for preparation of shawls in Kashmir valley. The shawl preparation is hand woven only and involving labour in sorting, spinning and weaving on specified handlooms.

CONCLUSION:

Demand for livestock products in the future, particularly in developed countries, could be heavily moderated by socio-economic factors such as human health concerns and changing socio-cultural values.

Sheep & Goat farming has huge scope and demand in India as purchasing power of majority of people is increasing. Goat provides nutritious milk, meat, mohair, pashmina with good fertilizing manure. Considering good economic potential in commercial goat production,some large industrial houses such as Hind Agro Industries (a major meat exporter of the country) are entering into goat farming business, especially for the export market. However, there is a need for appropriate policy and institution for transfer of need based technologies, linking with smallholders with the market, value addition and safeguards mechanism in face of increased competition due to globalization and climate change. Hence small ruminant rearing has a great promise as source of income and employment and livelihood security of resource poor rural people throughout the country in general and the arid and semi arid regions in a particular.

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