CHALLENGES OF COMMERCIAL CAMEL (*Camelus dromedarius*) PRODUCTION IN NORTH – WEST, NIGERIA

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Abstract
The aim of the study was to identify the challenges of commercial camel production in Northern Nigeria. The main camel production system in Northern Nigeria can be generally termed as subsistence practiced by nomadic people. The economic contribution of camel production includes meat, milk, transportation, sales of live animals, therapeutics and medicinal values among others. However, among the modern ways practiced by camel herders includes fattening and milk production in commercial quantity. Poor or low quality feed resources is a challenge in camel production in which the only feed sources are the thorny plant species, browses and bushes. Breeding program is not a common practice in camel production. Mating is random. Camels are resistance to so many disease infection but a sound veterinary practice will enhance production of quality camel products. Live animals and other products obtained from camel are marketed locally and there are no processing facilities for the products. Extension services delivery in camel production is unavailable and as such no modern technology enjoyed by the herders. However, infrastructural facilities are extremely unavailable. There is need for more research interest groups to invest in camel production since there is enormous contribution from this sub-sector.

Key words: Challenges, Commercial, Camel herders, Camel production, North – West

Introduction

Camel is a potential animal which is serving millions of people especially in arid, semi arid, mountainous and desert areas of the world. It provides milk, meat, hides, hairs, wool and transportation. Camel is also considered as status symbol in many of the areas in the tropical countries (Johnson, 1988). Some research work has been done in nutrition, physiology, reproduction and health of camel. But the production potential of camel has scanty work. Camel milk is never appreciated properly as its values are not known to many people in the areas where camel exists (Younas and Iqbal, 2001). According to Iqbal (1999) and Raziq *et al.*, (2008) camel has great socio-economic importance as it serves as a cheap source of draught in many fields. Camel is used in drawing water from wells; ploughing in the fields; leveling of land; working in mini oil extraction units; crushing sugarcane; grinding corn, wheat and other grains; pulling carts and transportation. Camel is also used for transportation of fuel, salt, wood and various agricultural products as well as pack animal. In hauling carts, on an average, camel can pull more than 300 kg for 5 hrs covering 25 to 30 km /day without showing any sign of stress (Younas and Iqbal, 2001). Along with this, it has the ability to survive in the adverse conditions of severe drought and in these conditions unlike other animals; very less mortality is present in camel (Khan *et al.*, 1998). Modern husbandry practices can improve the life of pastoralists in arid and semi-arid lands (ASALs) in terms of camel rearing. Considering the concept of global warming and drought conditions, camel is the only specie which is reliable and can mitigate our work and as well food problems (Faraz *et al.*, 2013). It can upgrade the financial position of pastoralists and other farmers as well; as it fetches a good price. Indigenous camel which sustains its life in very difficult (pastoral and nomadic management systems), indirectly contribute to the economy (Younas and Iqbal, 2001). Camel survives in hot and harsh environment where survival of other livestock species is not easy (Iqbal, 1999). They browse thorny shrubs and thorny bushes which they don't have competition with any other livestock species regarding feeding requirements (Quatro *et al.*, 2003). Their hair and hides are used for making of blankets, tent cloths, ropes, floor mats, saddlers, sandals and many decorative articles. The wooly fleece of newborn camel calves are shorn once and used in manufacturing blankets by mixing it with hairs. Considering the prevailing drought conditions, decreased production of other animals, inflating population, green house effect and the changing scenario; camel represents considerable potential source for future food production (Raziq *et al.*, 2008). Camel potentials have not been fully exploited yet; it has many virgin areas of research and by working on that we

can bridge the gap between demand and supply in area of food production (Khan *et al.*, 1998). By proper milk recording, selection and modern breeding tools; we can improve the economy of pastoralists. It is expected that this will bring a revolutionary change and further improvements in the food chain and economy of the nomads and nations in general (UN, 2004). Camel is a versatile animal and it sustains its life in hot and harsh environments and performs very well. Camel is called as "Ship of the Desert". It can perform very well in those areas where other animals merely sustain their life. It has no comparison regarding feed and performance with any other animal (Rathroe *et al.*, 1999 and Farhan *et al.*, 2001).

Is commercial camel production possible in Nigeria?

As it is obtainable in commercial poultry production systems as well as small and large ruminants, an attempt of practicing commercial camel production is yet to be a successful one. Presently, there is no established farm biased in camel production in commercial perspective. Most of the farms in the semi-arid zones are concentrated either in poultry, sheep, goat and cattle production. The few number of camels kept on these farms are not in any way operated commercially. Nomads of sedentary extraction and migratory herders own the camels and operate at subsistence level.

How is camel production going to be commercialized?

There is no serious attempt in making camel production a commercial one. However, camel herders do not have an established farm as in the case of poultry, small ruminants and cattle. Camel herders use local or subsistence method to produce camel meat through fattening and milk from lactating camel cows. Other utility services such as transportation of goods from one place to another, farming activities, drawing of water from tube-wells among others are sustained traditionally (Tukur and Maigandi, 1999).

Challenges of commercial camel production

Despite the enormous contributions of camel to the economy and livelihood of the nomads in northern Nigeria, the sub-sector is facing serious challenges. However, there are so many problems facing camel production. These include:

- Poor or low quality feed: Considering the wide nature of camels feeding, enough investment should be made to take care of feed under commercial production. Camel feed are mainly browses, shrubs and forbs as the case may be. Camel can spend between 8 – 12hrs grazing (Rathroe *et al.*, 1999). Camels feed intake depends primarily on its selective feeding of a wide variety of vegetation and different parts of forage and browse which differ in quality. However, feeds and feeding intake, utilization and absorption do not take into account the standard diets of camels to accommodate its selective nature in our environments (Quatro *et al.*, 2003). Dromedary camels are herbivores. They eat primarily thorny plants, dry grasses and salt bushes. However, they eat almost everything that grows in the desert (Gihad *et al.*, 1988).
- Breeding stock: The reproductive efficiency of camel under natural conditions is low, due to short breeding season, late age of puberty and long gestation period. Full exploitation of the camel's production of milk and meat will only be possible when the reproductive performance is improved. In camel production, what are practiced during breeding are the body conformation and other physical traits. There are no established scientific methods of selecting breeding bull. The camel heifers and cows are introduced to the selected breeding bull with little or no consideration of the physiological or disease infection status (Farhan *et al.*, 2001).
- Healthcare services: Animal health, production and management in the tropics are facing a serious set-back as a result of inadequate facilities to keep the system a sustainable one. Camels are resistance to so many disease infection (Ghude *et al.*, 2012). Camel herders are not enjoying the agro-veterinary extension services, as such; they need more knowledge on disease and parasites infections. However, the major infection affecting camels are the ecto-parasites (Ghude *et al.*, 2012).
- Marketing: Marketing of animals and their products in the tropical countries still

maintain its traditional practices. Farmers are yet to accept the use of scale and other weighing devices to value animal and products based on weight (UN, 2004). Camel meat, milk, urine and dung are of economic importance. Camel urine and dung are medicinal while meat and milk are for human consumption and as well medicinal. There is no modern approach in the marketing system of camel products from that of other livestock. The marketing system is still traditional.

- Expertise and extension services: There are few researchers in the area of camel production. This seriously affects camel extension services. Extension services and availability of well trained extension agents have effect on innovation in livestock management system and production in which sources of information exists in almost every developing countries, but packages for camel production is still lacking. There is none or poor extension services. According to (Faraz *et al.*, 2013), different extension services are rendered to farmers in the tropics but, yet, there is no special package for camel production.
- Processing facilities: There are none or little processing facilities for camel products. Milk produced by camel are consumed fresh or after preserved locally. Meat which is also like a cattle beef are consumed as other conventional meat. In the case of camel milk, the shelf life is longer than the rest of milk from other mammals. Ordinarily, knives, axes and cutlasses are the major equipment used in camel meat processing (Ghude, 2014) while ordinary bowl (of any products of small size) are used to collect milk during milking. However, abattoir attendants carry meat on their head using head pan from inside the abattoir to be trans-loaded into motor vehicles, tricycles and motorcycles respectively.
- Infrastructure: There are no infrastructural facilities such as access roads, electricity, water supply among others in respect to camel production. However, even the local facilities such as livestock routes are already encroached by crop farmers.
- Conflicts between livestock and crop farmers: This is another set-back in camel production. Although, the number of cattle out-numbered that of camels, the conflict between crop farmers and camel herders is minimal or does not exist. During rainy season when farmlands are under cultivation, camel herders migrated to an area where there is no crop cultivation but only bushes and thorny plant species.

Recommendation

With growing and increase of camel slaughtering and as well acceptance of camel meat for human consumption, more sensitization and awareness campaign on the importance of camel products should be embarked. It may not be possible for an immediate provision of loan facilities from government to camel herders but an adequate extension services should come first. However, since camel production is not an expensive business and does not need much capital to invest, little encouragement to camel farmers will boost the production. Camel production is a practice of rural dwellers and there is no backyard camel production as in poultry and small ruminants, however, land, labor and capital may not pose a serious threat. The major encouragement camel herders may need is preservation of grazing areas for camels with raising, planting and maintenance of thorny plant species for optimum utilization by camels.

Conclusion

There is need for more research interest groups to invest in camel production since there is enormous contribution from this sub-sector. Camel products such as beef and milk are utilized by humans as consumables while urine and dung are used as medicinal. However, camel extension services need to be established to encourage camel production with at least little improvement from traditional to modern ways.

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