

Vocational Agricultural Education for Self-Reliance Through Goat Production

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Abstract

Vocational Education is that aspect of education which leads to the acquisition of Practical and applied skills as well as basic scientific knowledge. One of the aims of vocational education is to give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant. Therefore, graduating students of vocational agricultural education could fulfill the aim of vocational education of being self-reliant through goat production.

Keywords: Vocational, Agricultural Self, Reliance, Goat,

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Introduction

Vocational Education according to the National Policy on Education (1985) is that aspect of education which leads to the acquisition of practical and applied Skills as well as basic scientific knowledge. Osuala (1982) also defined vocational education as the systematic learning experience designed to fit individuals for gainful employment in recognized occupations as semi-skilled workers or technicians or sub-professionals.

One of the aims of vocational education as stated by the National Policy on Education (1985) is to give training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant. Smith (1929) described a vocation as a pursuit and as a calling. As a calling, it is an activity that is satisfying and worthwhile. According to Phipps (1980), the Smith Hughes act of 1917 described the purpose of establishment of vocational agricultural education in high schools as to fit for useful employment and to meet the needs of persons over fourteen years of age who are preparing to enter the work of the commercial farm or the home farm.

The role of vocational agricultural education should be to stress the development of saleable skills and those attributes that make the worker an intelligent and productive participant in society (Wubben, 1979). Murray et al (1980) suggested that a vocational agricultural education programme should teach students the decision-making process in addition to the manipulative skills needed in an agricultural occupation.

According to Fatunsin (1986), Contemporary Vocational Education programmes emphasized broad objectives for vocational agriculture to include:

- 1) Preparation and advancement in any occupation involving knowledge and skill Contemporary Vocational Education in agriculture.
- 2) Occupational exploration, guidance and counselling; and
- 3) Development of abilities essential for effective citizenship.

The U.S. National Committee on vocational education has laid down some major objectives in high schools which must be attained to secure proficiency in farming for prospective farmers. They include: -

- (1) To help the individual make a beginning and advance in farming
- (2) To enable him to market farm products efficiently and advantageously. To enable him to conserve soil and other natural resources.
- (3) To enable him to conserve soil and other natural resources
- (4) To manage the farm business effectively.
- (5) To maintain a favourable environment. Have knowledge of landscaping; and make the environment attractive.
- (6) To participate in rural leadership activities through a background in agriculture (Phipps, 1980).

Our graduating students are in dire need of employment, and it is believed that with all the above incorporated into their educational career they could easily be self-reliant through goat production.

The goat perhaps occupies an important place in the rural economy of the humid tropics as a source of meat. According to Francis (1987), goats are more widely owned than sheep. Goats also unlike cattle, pig and poultry production require less capital in their establishment (Ajaja, 1985, Upton 1987, Gomani 2022). Goat rearing offers ready employment to a rural household and are major source of ready income to meet daily cash needs. To a traditional farmer, it provides continued food supply during periods of crop failure (Nuru, 1985). Upton (1987) listed four advantages of goat production as a form of investment. They include:

- a) A goat is a conveniently small unit of investment.
- b) Goats do not compete with crops for land.
- c) Investment in goats is for landless people. This is because goats may be fed on household scraps, crop residues and rough grazing or browse, therefore access to land is not a necessary precondition.
- d) Another advantage of goat production is that goats do not need a bogus house (Williamson and Payne, 1959). All they require is a simple building to protect them from rain and sunshine and to act as a place to sleep.

In agreement with Upton (1987), Nuru (1985) also stated that under the traditional production system, goats could be viewed as an independent, low-risk investment in the off-farm activity.

In goat production, there is a faster turnover of capital due to earlier maturity and short generation interval plus low labour requirement and efficient use of labour (Ajaja 1986). This agrees with the Minister of Science and Technology, Lagos (1985) who reported that fecundity for goats is about 170%.

Goats adapt easily to various environments as can be seen from their wide geographical distribution and resistance to disease and dehydration (Devendra & Mcleroy, 1982). They show high ability in fending for themselves (David-West, 1985). Ademosun (1985) observed that many more goats are sold in both urban and rural markets than sheep. David-west (1985) confirmed that sheep and goat meat are highly relished all over the country and that there is a great demand for them particularly for festive and religious occasions.

Establishing a Goat Unit

To establish a goat unit, the prospective farmer would need to follow the following guidelines-

Acquisition of Land

The prospective farmer under the traditional system of management does not need a large piece of land. He only needs land large enough to build simple structures to act as shelter for the goat from sunshine and rain and to act as a sleeping place at night. It could even be the backyard of his house or a piece of family land.

Housing

Goats require the simplest accommodation which will provide shade during the daytime to avoid intense sun heat. At night, the goats enjoy dry quarters which will provide shelter from the rain (Williamson & Payne, 1959). According to Ajaja (1986), the construction of goat housing does not require elaborate design materials. The floor could be made of rammed clay or concrete. Timber or bamboo could be used. The roofing materials could be leaves or coconut pends or even palm fronds. Therefore, with a little capital, a prospective farmer will be able to set up structures for his herd.

Feeding

Much money is not required in the feeding of goats as compared to poultry. Goats can utilize a wide variety of feedstuff and feeds not normally eaten by cattle or sheep. They also thrive well when they are kept on a single type of feed (Davendre, 1978).

When kept in the tree range system, they could graze on scattered pasture and browse within the areas of rural households. Besides, they feed and scavenge on domestic waste such as cassava peelings, yam peelings, plantain peelings, beans, grains residue etc. (Awogbade, 1985).

The goats could be fed with a variety of grasses for example elephant grass, gaint star grass and guinea gross. Leguminous crops such as Centrosema Pubeseens, Calopogonium,

Mucunoides, and *Stylosanthes gracilis* could be planted with the grasses to enhance the nutritive value of such pasture and to provide nitrogen for plant growth (Ajaja, 1986).

One of the major constraints to the production of goats in the humid tropics is the problem of insufficient feed to sustain their growth during the dry season. This problem however could be alleviated by feeding preserved forages in the form of hay or silage (Okeke and Oji, 1987).

Starting a Herd

A prospective farmer who has not enough capital to buy goats could hire goats on a trans-human level. This is the widespread practice of "caretaking" (Upton, 1987). In research carried out by Okali (1979) he found out that in South-Western Nigeria, 54% of households surveyed were caring for "borrowed" animals. The social norms are such that a livestock owner cannot refuse a request for a loan of breeding stock. The offspring are usually shared equally between the borrower and the lender, although the risk of mortality of the duo is borne largely by the owner (Sempeho, 1981). The borrower therefore receives income from rearing his or her share of the offspring in return for caretaking, at little or no capital cost. In this way breeding stock is shared and redistributed among individuals and households (Upton, 1987).

Caretaking not only redistributes livestock and income but also reduces risk to the individual on the other hand risk of kid loss is shared between the owner and the caretaker. If an individual either due to a disease outbreak loses a lot of his or her breeding stock, he or she could easily rebuild her flock by caretaking borrowed stock.

The caretaker reserves her own share of the stock to be slaughtered during occasions or for family needs or to be sold when there is a pressing need for cash.

Breeding

A West African Dwarf Goat according to Mack (1983) is a veritable engine of production. She kids every eight or nine months on average and bears one or two kids per parturition. She, therefore, produces more than two young every year from the age of about 18 months under the traditional village system. The gestation period is between 145 to 153 days. The Oestrus cycle is 21 days while her heat period lasts for 2 or 3 days. With this knowledge, the prospective farmer starting a herd with "borrowed" animals will be able to build up his/her own stock within a few years.

Health

One of the greatest constraints to the intensification of goat production in Nigeria is the poor health of the animals. The major health problems which could be encountered by a prospective goat farmer are parasitic diseases due to internal parasites such as gastrointestinal helminths, liver flukes, tapeworms and blood parasites and external parasites such as ticks, lice and fleas; viral and mycoplasmal diseases of which the most important is the rinderpest like disease, Peste des Petits Ruminants (PPR); bacterial diseases such as brucellosis, anthrax and infectious pneumonia due to *Pasteurelia* spp and nutritional diseases such as nutrient deficiencies bloat, milk fever and plant poisoning (Ademosun, 1985). These diseases and parasites can reduce the condition of the goats and therefore could seriously affect the overall production.

Davendra and Mcleroy (1982) therefore, suggested that to minimize losses due to diseases and parasites, efficient management and good husbandry must be practised. The prospective goat farmer wishing to ensure the good health of his animals should:

- (1) Obtain healthy animals to start his herd.
- (2) Oversee their feeding properly.

- (3) Make sure the makeshift houses of the goats are sited in such a way as to allow good ventilation.
- (4) Goats should be given fresh, clean feed daily to prevent them from picking up internal parasites through eating contaminated feed on the floor.
- (5) Goats should not be allowed to run on damp or swampy land where they may pick up parasites.
- (6) The goat house must be swept daily.
- (7) To control parasites, land previously grazed by sheep should be ploughed and reseeded before being grazed by goats. This is because goats and sheep could be infected by the same parasites.

Management System

Goats are largely managed under the traditional extensive system (Ademosun, 1985). Under this traditional system of management, little attention is paid to adequate feeding and the health of the animals. Two types of management practices could be identified here:

(a) Free-Range System: In this system, the animals are allowed to roam freely in the environment. They are left to scavenge for their food. This system has limited management and capital input in terms of nutrition and veterinary care.

(b) Containment or Tethering: Where there is the danger of crop destruction or where because of increasing human population and pressure on land, free-ranging is no longer practical animals are kept on tethers or any type of confinement. The use of household wastes is supplemented with hand feeding of natural forage.

Conclusion

One can see that an agriculture student need not sit idle after graduating searching for a white-collar job but could immediately start on the way to self-reliance through goat production.

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