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Gender participation in sheep and goat farming in Najran, Southern Saudi Arabia

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ABSTRACT

Sheep and goat farming is a major source of income in the rural areas of Al-Wadiah in Najran region of Southern Saudi Arabia. The study aims to identify the factors and parameters that influence gender participation in sheep and goat farming. Data were collected by interviewing 167 high school students, including 70 male and 97 female students, in Al-Wadiah, by using the simple random sampling technique. Data were statistically analyzed to establish the relationship between gender and participation in sheep and goat farming. The study revealed significant differences between the two genders, for instance, male herders were more experienced, received more benefits, showed greater interest in discussions on topics related to sheep and goat farming, followed information from TV and radio, and received more services offered by veterinary clinics, which proved more beneficial for them. On the other hand, female herders received fewer services, and the veterinary clinics proved less beneficial for them. However, the correlation between the participation of both genders in sheep and goats management was non-significant toward the statement “feeling ashamed of participating in sheep and goat farming.” Generally, sheep and goat rearing proves more beneficial for male participants than female participants, owing to their greater experience and interest in livestock farming. Moreover, they receive more benefits from TV, radio and veterinary clinics to maintain better health of their livestock. Both male and female herders contribute equally to sheep and goat farming by limiting the time spent on their daily routine. This study would enable policymakers and planners to develop more strategies and extension education programs to overcome the identified barriers and improve the livelihood of herders through their enhanced participation in remote areas.

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1. Introduction

Livestock contribute to the sustainable livelihoods and security of more than 800 million poor smallholders as Natural Capital (meat, milk, wool, hide, rangeland, and pasture), Financial Capital (cash, savings, credit, insurance, gifts, and remittance), Social Capital (traditions, wealth, prestige, identity, respect, friendship, marriage dowry and festivity), and Human Capital. Furthermore, livestock offer a source of high-quality nutrition for poor households, especially for pregnant women, and improve the cognitive skills and mental growth of children. In marginal rural areas, where

poverty is rampant, livestock represent an important asset for local, cultural and socio-economical systems, and allows the effective use of otherwise no utilizable resources (IFAD, 2016).

Along with the source of income and food security in low potential areas, sheep and goat farming has also been the driver for many biological advantages. It is a good source of income owing to its advantages such as a short maturity stage and gestational period. This helps in furnishing cash income for the farmers, as a large number of lambs become ready for sale in local markets (Fitzhugh et al., 1987). Since centuries, small farmers in the arid and semi-arid rural areas of the Arab region have been involved in rearing the small ruminants (sheep and goat) for their survival. Studies have confirmed that goats are important for people living in arid areas. It is well documented that sheep and goat rearing and their production are important tools to improve the living conditions of poor women. It also contributes to meeting their major needs by providing money needed to maintain children's health and taking care of other responsibilities at home. Small ruminants

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are also a major source of food and non-food products, thus generating more market opportunities (Pollott and Wilson, 2009).

In central and southern Tunisia, women participate in different agricultural activities in irrigated and rain-fed areas, including weeding, hoeing, feeding, and watering the animals. Paid positions not only improve their life standards but also enable them to switch from conventional to modern farming and production activities. Married women are highly involved in innovative activities such as agriculture and livestock management (sheep and goat rearing) to meet their daily needs. The living standards of Tzotzil farmers highly depend on agriculture of maize and beans and sheep rearing, especially for the production of wool and weaving. Among Tzotzils, women earn up to 36% income through sheep husbandry. They produce less expensive clothes, garments, and crafts out of sheep wool. Sometimes, they sell out their sheep or goat to meet their urgent financial needs (Boven, K; Nuffic; Jun Morohashi, UNESCO/MOST). According to Ojango (2014), in East Africa, poultry, goats, and sheep, which are managed by youth and women, are the only assets for leading a better life.

IFAD (1994) revealed that the indigenous knowledge of livestock and its management among rural women most often remains underestimated in developing countries. It is preferred as a special gender task. Women mostly take part in assisting during reproduction, daily care, and doctoring of animals in the society. In Yemen, women share responsibilities in agriculture at their small family-owned farms and help maintain domestic livestock, including sheep, goat, camel, and cows.

IFAD (1994) reported that women spend almost five hours in the management/control of sheep production. The organization further noted that Yemeni women involved in domestic animal rearing had extensive indigenous technical knowledge on sheep fattening and the characteristics and requirements of breeding based on respective environments. They could easily differentiate between continuous versus occasional breeding. Indigenous knowledge and management practices on animal production include different technical aspects like time of mating, selection, and lambing interval and season. Women also possess indigenous knowledge on veterinary practices and the effects of nutrition on the growth of the animals. Moreover, they are well aware of the principles of management of the four types of disease symptoms commonly observed in sheep and goat, which include coughing, wheezing, mucous discharge, as well as bloating and digestive ailments. They attribute bloating in sheep to the rapid intake of fresh alfalfa and wet grass, which can be treated effectively using oil or Pepsi Cola if detected early enough. Yemeni women also have indigenous technical knowledge on sheep fattening operations, and it is important to take this into consideration in any related developmental initiatives (M. Niamir-Fuller, nd).

In United Arab Emirates, sheep production is more effective than goat farming, establishing a strong relationship exists between the types of sheep and goat, technical knowledge, and experience of women in sheep and goat management (Fathelrahman et al., 2014). A 2002 study on sheep and goat production in Syria recommended the adoption of innovative technical knowledge rather than conventional practices (Shomo et al., 2010). In Jordanian villages, processing of sheep and goat milk to obtain products such as “Jameed” (traditional “rock” cheese), yogurt, and ghee plays a vital role in generating income at a smaller scale. A partnership with Jordan’s National Center for Agricultural Research and Extension (NCARE) helped improve the profitability of Jameed in the El Karak region. Jameed from El Karak is renowned all over the country and through “rapid rural assessments” of four communities; it was found that it offered the best income potential among dairy products.

In Tanzania, in both districts of Kongwa (Dodoma region) and Mvomero (Morogoro region), 78.7% households had men as major-

ity and only 21.3% had women, owing to local customs and practices in the agro-pastoral and pastoral production systems of the country. Chenyambuga et al. (2012) reported that men mostly owned livestock in agro-pastoral communities. Only few women were involved in livestock practices and most of them were widowed, divorced, or unmarried women. The main economic activity in both districts was agriculture, which contributed to 97.5% in Kongwa district and 82% in Mvomero district.

Livestock remains one of the dominant sectors of the Saudi economy and imports. Approximately 80% of the rural population living in remote villages is involved in animal husbandry, either as nomadic pastoralists (dominant in rural communities), agro-pastoralists, or in the livestock value chain. Sheep and goat meat constitute a major component of the daily diet of the citizens of Saudi Arabia. However, livestock production is characterized by poor productivity and scarce animal feed and is aggravated by recurring droughts and environmental degradation. Both men and women participate in sheep and goat farming. However, it is important to identify the factors that limit their participation in the livestock management and such a study has not yet been made particularly in the remote villages so far. This situation prompted the author to identify the challenges, with an objective to help improve their situation.

In scenarios where the land is of poor quality and is marginal, crop cultivation is often difficult, rarely intensive, and constrained by several environmental factors such as rainfall, very high temperatures, and poor soil fertility. Diversification of the farming system becomes difficult, and goat and sheep rearing together make significant contributions to the poor farmers and the stability of small farm systems. This contribution by goats increases with decreasing quality of the land, sustainability of the extensive type of farming system, and is typical of the arid and semi-arid regions of the world. Goats are known to constitute a major component of the system in semi-arid regions. It is well documented that the application of indigenous knowledge on sheep and goat farming for production of milk and dairy products and prevention of sheep and goat’s diseases could enhance the profitability of poor families in the arid and semi-arid areas of the world.

Sheep and goat farming has been an integral part of the nomadic culture of Saudi Arabia. The Awassi sheep (locally called Naimi) are traditionally shepherded by the desert nomads and villagers. At the household level, they are primarily raised for milk and its products while the village women use their wool for making certain crafts. Awassi sheep due to its fat tail brings the premium price to the farmers in the Saudi market, compelling them to raise them for meat production.

Goat (*Capra hircus*) is one of the most favorite domesticated small ruminants among the nomads, elevating their livelihoods by providing them with milk, meat, wool and leather. In the Kingdom of Saudi Arabia (KSA), goat population is estimated to be 1.06 million (Ministry of Agriculture, 2011). Widely spread goat breeds in KSA are mainly Ardi, Jabali and Shami goats. Ardi goats are medium-sized, black colored, well adapted to arid conditions and produce less (3 litre/day for 120–150 days) but persistent milk production. The Shami goat is a native breed of Syria and other Near East countries. Both Shami and Jabali goats are very popular among the sheep and goat farmers and the nomads of the suburbs of Saudi Arabia for their appreciable milk and meat production (Adam et al., 2015). In addition, Hajazi goats are raised for their beauty and physical appearance. Bedouins revive their traditions by rearing and breeding Hajazi goats.

Though many studies conducted so far on various aspects of sheep and goat farming, including enhancing the profitability of sheep and goat farming, yet no study has focused on the participation of males and females (gender difference) in the Kingdom of Saudi Arabia, particularly in a remote village like Al-Wadiah, situ-

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