RESEARCH ARTICLE Bhartiya Krishi Anusandhan Patrika, Volume 37 Issue 1: 61-65 (March 2022)

Developing Sheep Value Chain in Dakahlia Governorate, Egypt 2021

Waleed E Abou El-Amaiem, Lobna Mohamed Abd El Kareem

10.18805/BKAP352

ABSTRACT

Sheep are a valuable livestock species because of their ability to convert forages, as well as feedstuffs not suitable for human consumption, into meat and milk that are important sources of human dietary protein. Many factors are associated with sheep value chain in Egypt especially economic ones. According to our knowledge, this is the first paper to discuss sheep value chain in Egypt.

Key word: Constraints, Dakahlia, Sheep, Value chain.

INTRODUCTION

Sheep are an essential component of Egyptian agriculture and livestock production accounts for approximately 30% of the country's total agricultural income. Sheep production is being encouraged in Egypt as a means of improving the daily dietary protein intake of humans. Sheep, therefore, constitute an important component of Egypt's food security plan. In 2017, more than 2.34 million head of sheep produced 72,296 tons of red meat representing approximately 7.4% of all red meat production in Egypt (FAOSTAT, 2018). Average carcass weight was approximately 30.9 kilograms. Total production of sheep milk was 99,322 tons.

Sheep occupy an advanced position within the Egyptian livestock sector because of their suitability to the different agricultural conditions in the country, especially in the reclaimed and desert lands. Sheep are highly efficient in converting non-dense pastures to meat, milk and wool; they also possess the ability to travel long distances during grazing and to withstand harsh environmental conditions. Sheep meat and sheep milk can contribute significantly to the goal of reducing human dietary protein deficiency which is one of the most pressing problems of the country. Thus, sheep are able to produce meat and milk without consuming large quantities of feed concentrates (that are in short supply in Egypt) when compared with large ruminants The current number of sheep in Egypt is 5.69 million head and this number exceeds that of cattle (5.06 million head), goats (4.35 million head) and buffaloes (3.37 million head). The number of sheep has increased due to their ability to graze and their need for less concentrate, while the number of cattle has increased because of their greater utilization of feeds to produce milk (when compared with buffaloes) especially in F1 Friesian × local crossbreds which now represent the majority of the cattle population (El Shazly and Youngs, 2019).

Senior Epidemiologist at Dakahlia Governorate Veterinary Authority, Egypt.

Corresponding Author: Waleed E Abou El-Amaiem, Senior Epidemiologist at Dakahlia Governorate Veterinary Authority, Egypt. Email: waleedabouelamaim@gmail.com

How to cite this article: El-Amaiem, W.E.A. and Abd El Kareem, L.M. (2022). Developing Sheep Value Chain in Dakahlia Governorate, Egypt 2021. Bhartiya Krishi Anusandhan Patrika. 37(1): 61-65. DOI: 10.18805/BKAP352.

Submitted: 09-08-2021 **Accepted:** 21-10-2021 **Online:** 02-05-2022

MATERIALS AND METHODS

This study was carried out at all districts of Dakahlia governorate, Egypt (N 29° and E 25.48°) according to GPS reading. Dakahlia governorate is present in the east of the Delta of the Nile and covers about 3.459 km^2. It locates in a very strategic location overlooking Damietta branch of the River Nile and the Mediterranean sea coast and boarded with El-Sharkia governorate from the east, El-Kharbeya governorate from the west and Damietta governorate to the north west. The weather in this area is moderate throughout the year and the rate of rains is quite higher than that of Cairo.

Participatory disease surveillance team

The team of this study was composed of four veterinarians.

Methodology

1) Pre-advocacy visits were carried out to find a suitable meeting arena in each district according to the suitability of time, place, local politics and convenience for the farmers before the commencement of surveillance. All age group of farmers were interviewed for more viable results. Materials such as Geographical Positioning System (GPS, Garmin's eTrex Legend personal navigator), cardboards, counters, permanent markers, digital camera and others were used

for the study. Each person was assigned a role before moving out. We always have our note taker, observer, tool applicator and the facilitator. In order to avoid bias, the team did not mention about milk value chain during the interview process. The following tools were used during the course of participatory disease surveillance : (a) Check list containing the following items: mutual introduction, identification of respondents, milk value chain and constraints (b) Scoring and Ranking, simple ranking, proportional pilling, pair wise ranking, matrix scoring and (c) visualization including mapping, seasonal calendar and transect walk.

2) Climatic conditions were studied by using New Loc Clim version (2006) as one of the most factors affecting sheep production in Egypt.

3) Epidemiological study was carried out by using participatory epidemiology methods according to the method described by (ILRI, 2009).

4) All data analyses were performed by using statistical software program (SPSS for Windows, Version 15.0, USA).

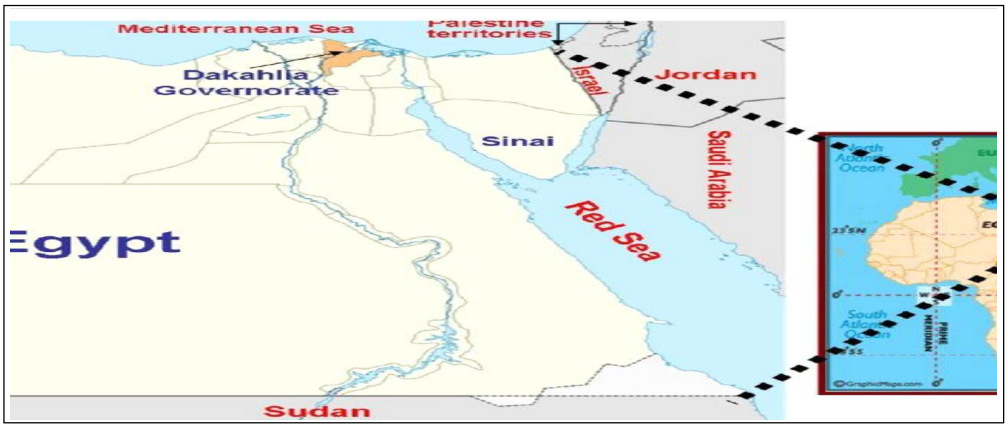
RESULTS AND DISCUSSION

We would like to explain that all farmers deal in both sheep and beef together. Most markets joint both sheep and beef at the same time.

Distribution channels for live sheep in Dakahlia governorate, Egypt

A. Sale of sheep at farmer level

From our epidemiological study we concluded that about 80% of sheep herd owners in the small and medium category are selling lambs at a local livestock market. For large herd owners mora than 30% happens at farm gate. This occurs



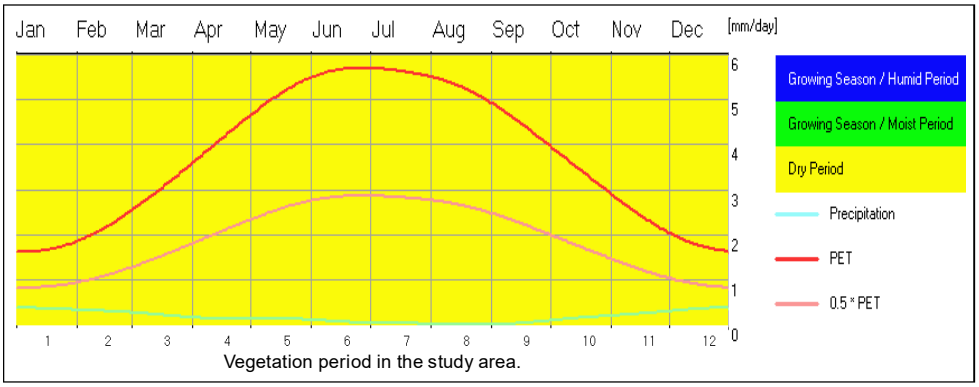


Fig 1: Vegetation period in the study area.

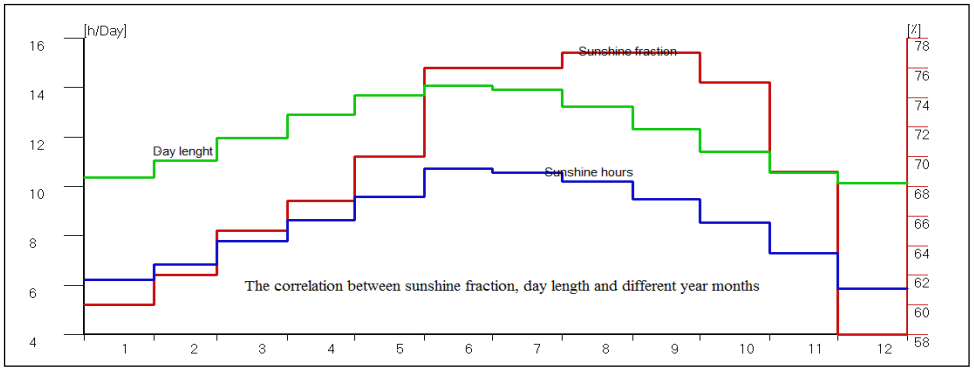


Fig 2: The correlation between sunshine fraction, day length and different year months in the study area.

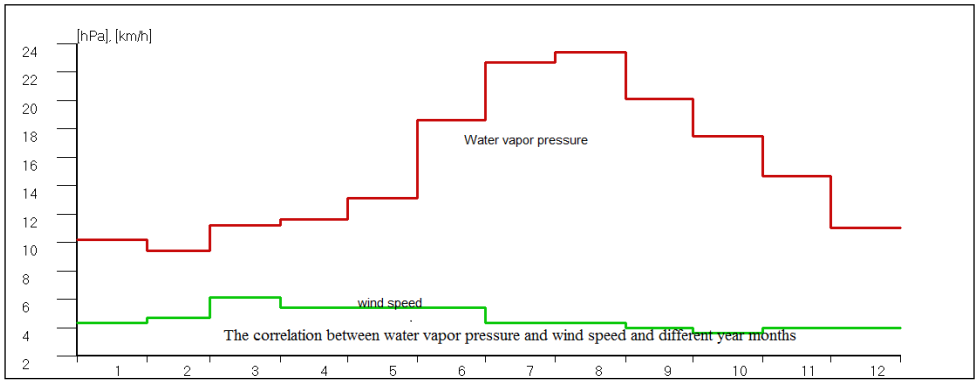


Fig 3: The correlation between vapor pressure and wind speed all over the year in the study area.

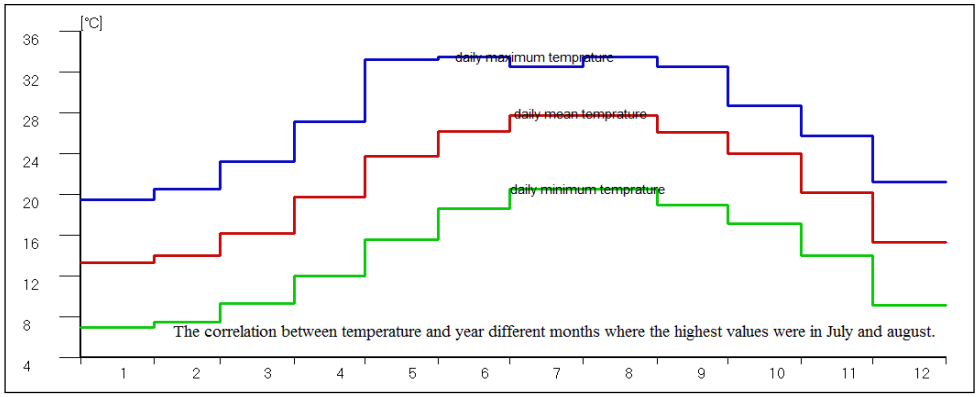


Fig 4: The correlation between year months and atmospheric temperature in the study area.

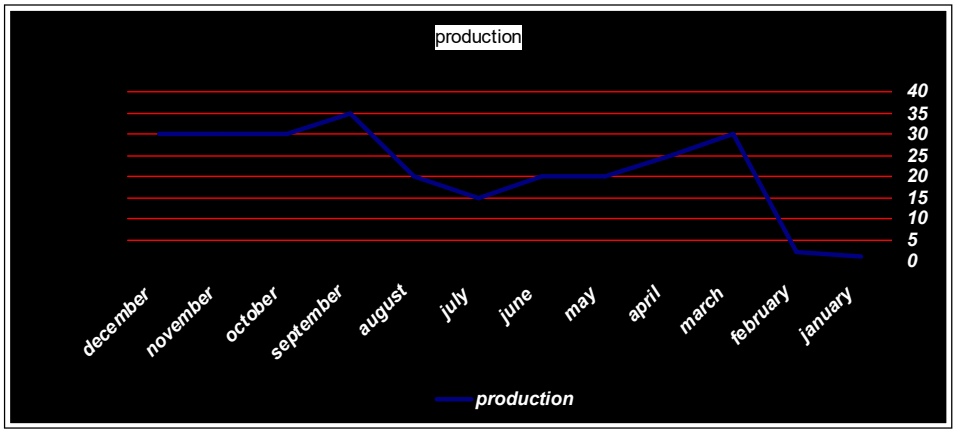


Fig 5: The correlation between sheep production and time of the year where the appropriate production time is at December and March in both milk and meat.

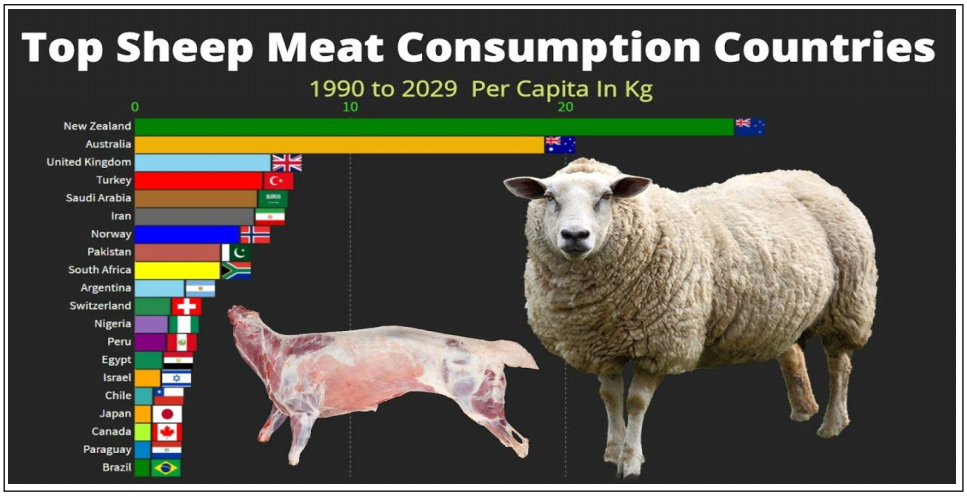


Fig 6: The situation of Egypt between sheep meat consumption countries.

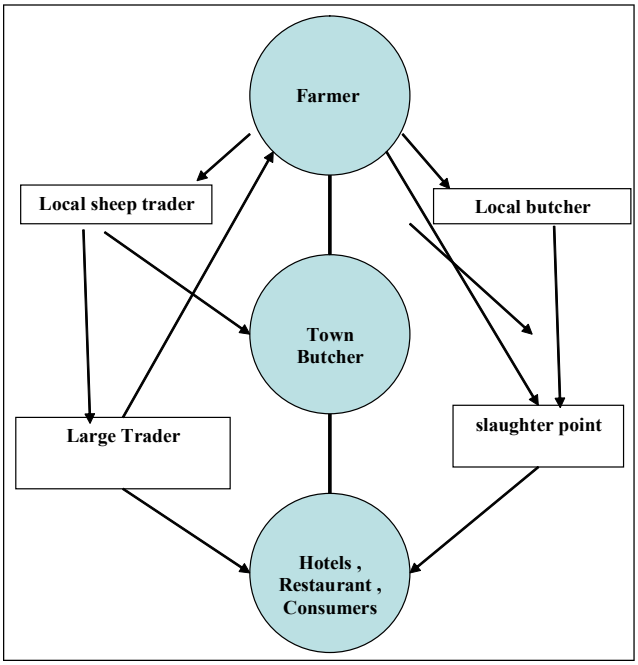


Fig 7: The mapping of sheep value chain in Egypt.

Table 1: Different products of sheep in Egypt.

Product type	Per cent
Wool production	20%
Milk production	3%
Meat production	75%
Others	2%

Table 2: Distribution of sheep among different districts in Dakahlia Governorate.

District	Number
Sahragt El Kobra	1090
Talkha	1423
Mansoura	112
Sherbin	4711
Meniat El Nasr	3065
Nabaroh	2086
Meet suid	950
Aga	2775
Sadaka	451
Meet Khamr	2300
El manzalah	1748
Bandr	1153
Dekerns	6302
Belkas	1090
Senbellawin	663
Temay	1196
Gamasa	1334
Gamali	590

Table 3: Shows the marketing process at farms and is prices.

Age of sheep	Weight (kg)	Price received (LE)	Percent of farmers selling sheep at this age
3-6 month	30	1600	80%
6-12 months	50	2300	15%
12- 14 months	65- 70	2600	5%

due to economical considerations such as high transportation costs.

From our study we detected those lambs are sold at smaller age as lambs are born between February to march where vegetation period begins and green feed up to September and around Ramadan where meat consumption is very high as an Islamic festival then followed by El Adha Eid after 2 months where the vegetation period still at its peak.

B. Trading at livestock markets

There are about 5 live stock markets in Dakahlia Governorate, Egypt where the most famous one is Belkas. Many heads of sheep transported to 6 surrounding governorate around Dakahlia and also take from them.

CONCLUSION

Many studies should be performed to complete studying the sheep value chain in Egypt as there is a great shortage about this data in Egypt. This study is the first one that study the sheep value chain in Egypt according to our knowledge.

REFERENCES

El-shazly, A.G., Youngs, C.R. (2019). Feasibility of utilizing advanced reproductive technologies for sheep breeding in Egypt. Egyptian Journal of sheep and Goat Sciences. 14(1): 3952, April 2019.

FAOSTAT, (2018). Live Animals. Downloaded December 5, 2018, from http://www.FAO.org/FAOStat/en#data/QA.