

## **Review Of Sheep And Goat Production In The Eastern Badia Of Jordan**

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The purpose of this paper is to give you an idea of the production parameters of livestock in the Badia Programme area. Our area of investigation in the North-Eastern Badia, 11,000 square kilometres making up over 15% of the total Badia of Jordan.

Numbers of sheep and goats in the area are anything between about 100,000 to 200,000. The area, receiving 50 to 200 mm to of precipitation per year represents the extensive extreme of livestock production in Jordan. This is why we think it is of interest, especially where national research and planning may concentrate on farmers in more fertile and less remote parts of the Kingdom.

Several papers will cover several different issues of animal production, so I will exclude these from my presentation.

### **Methodology:**

The data I am presenting is based on three separate pieces of work undertaken by the livestock team at Safawi:

- 1) Initially a livestock owners survey was carried out involving interviews with 105 livestock keepers. This asked questions about livestock numbers, locations, feeds, shepherding, and management priorities.
- 2) The second investigation was on milk production. This involved fortnightly or monthly measurement of milk production in samples of sheep in 6 locally managed flocks.
- 3) Following on from these, long term monitoring programme for animal production involved 23 livestock owners. These were visited on a monthly basis to assess feed and other inputs, measure production parameters such as lamb production and growth, and quantify flock structure and temporal changes.

### **Problems:**

At this juncture, I have to highlight conflicting pressures in such field based research:

In working with Bedouin farmers there is a tension between getting data of sufficient quality and losing the co-operation of the subjects. We are proud of the fact that of the 23 owners who agreed to work with us in our research, we have not had any withdraw from the work since we started one and half years ago.... And that is despite two owners being superseded by their children after their death.

This success at keeping our sample large has been at the cost, however, of not pushing the farmers too hard when we have needed do more intrusive data gathering.

Our data is thus based on both physically counting or measuring animals and also the owners verbal assessment of, say, ewe numbers or lamb sales. In undertaking such work, the mobility of the bedouin and the diverse way in which they divide up their flocks to different locations and different members of their family must not be underestimated.

Such data may lack some degree of precision but is more reliable for being drawn from a larger database.

#### **Figure 1: Flock size:**

Results of the initial survey indicated average numbers of animals owned were about 390, however variation was large ranging from a few animals in a flock to over 2500.

*Fig. 1* indicates the distribution of flock sizes and shows a non-normal distribution with the mode at about 100 animals

#### **Goats:**

The survey indicated goat numbers at an average of 50 animals remain fairly independent of total sheep and goat flock size. Goats form the backbone of family subsistence milk supplies, this is due to their perceived ability to milk for an extended period, and less seasonally when compared to sheep. Because sheep, rather than goats, are the more commercial side of livestock production in the Badia I will concentrate on these for the remainder of the paper.

#### **Flock Structure:**

Flocks co-operating in the monitoring programme averaged about 490 animals, adults and replacers; that is on average

382 ewes, 13 rams, with the rest as followers (91 about 7 young males).

In percentage terms ewes make up 77 % of the flock, followers 20% and rams 3%;

#### **Selection**

It appears that rams within the flock are chosen mainly on conformation, not on ability to sire good milkers. It is likely however, that in choosing the young ram lambs good growth will be part of the decision. No selection of female animals was observed. As far as we were able to assess, no female animal was removed from the flock for reasons of poor reproductive or milking ability, nor for proneness to diseases such as mastitis. Dry animals were still kept for lamb production. Sick animals were often kept until it was too late to either sell them or slaughter them.

#### **Feeding: Figure 2**