Best Practices for Managing Awassi Sheep

Sheep Selection 6

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6- Sheep Selection

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Foreword

This booklet is part of a ten-part series of technical Guidelines describing 'Best practices for managing Awassi sheep' – the dominant sheep breed in several countries across the Middle East. The series is targeted at sheep farmers and milk processors, and provides practical, easy-to-follow advice on managing Awassi sheep under dryland conditions.

Efficient husbandry, feeding and milk processing are crucial in management of Awassi sheep in dry areas; but many small-scale producers are unfamiliar with simple productivity-enhancing practices. This series aims to fill this information gap, enabling farmers to increase their income from livestock while using resources more efficiently and sustainably.

The series draws on the practical experience of researchers, as well as the extensive literature, to capture scientific and local knowledge in an easily accessible format in the local language. The bulletins are organized in accordance with sheep management calendar, and describe the management of Awassi ewes during important physiological stages over the year. Supplementary guidelines provide additional information on each stage.

These booklets were produced as part of an IFAD-ICARDA project, Scaling up best practices for managing Awassi dairy sheep to small-scale sheep farmers in West Asia, implemented in Syria and Lebanon in collaboration with IFAD development projects in both countries.

We would like to thank all those involved in the preparation of these guidelines. We expect these booklets will be useful to sheep farmers, milk processors, extension staff, as well students of agricultural development and knowledge transfer.

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Introduction

Selection is the basis for any flock improvement. The accuracy of decision on which animal to keep is critical to progress in improving the sheep flock.

The aim of sheep selection is to maximize profit. The offspring from selected ewes and rams should produce high quantity and quality of milk, meat, and wool.

However, the animals in a flock should also show good movement and walking ability, ewes should have good mothering ability, be calm and docile and follow her flock-mates, rams with excellent serving ability, lambs that will reach market weight in less time.

How can we pick the best females and males for breeding?

Selection Methods

Selection is based on visual appraisal and performance. In practice, combination of these two methods is generally used; performances can be evaluated based on recorded information.

Keeping good records on ewes and rams help in assuring steady positive progress within the flock. Records can be extremely useful in identifying the most productive ewes within the flock and thus replacement stock which may have superior genetics.

Records can be kept in designed sheet forms or in spreadsheets.

The comparison of records is a valuable tool for evaluating the performance of individual animals.

Selection on Performance Traits

The first step in any selection program is to identify the traits of economic importance.

For Awassi sheep these include:

• Growth rate (Weights at birth, at weaning, at age of selling…)

• Reproductive efficiency (cull ewes that fail to lamb, select early maturing ewe lambs, select twins for replacements where twinning is preferred)

• Milk production

• Maternal instincts

When this knowledge is properly applied, rapid changes in levels of performance can be achieved.

Recording books

Important recording books which help taking decisions of keeping or culling an individual animal are:

- **Health recording book** to record disease history for each animal, with date of disease, usage of medicines, vaccinations…
- **Lambing recording book** to record mating and lambing dates, problems during lambing, lamb status; this information helps to identify barren sheep, ewes with dystocia and ewes with twins.
- **Milk recording book** to record information related to milk production for each ewe, starting date of milking and drying.

When should animals be culled

Selection should be a continuous process managed by farmers. Best times for culling animals are:

- After shearing, when defects covered by wool become evident
- After the end of the lambing season, eliminating barren ewes; those giving birth to lambs with defects; and ewes that failed to raise a lamb because of low milk production and neglected their lambs

Which animals should be culled

- Very old animals, as productivity is under risk if ewes are older than 6 years. These animals cannot eat well and will fail to reproduce.
- Animals that are often sick and do not thrive well.
- Mature ewes that have never reproduced in their lifetime, which can be easily detected by lack of udder development.
- Ewes having udder problems, such us missing teats, hardness due to mastitis or abscesses, and pendulous udder with teats located too high.
- Ewes that failed to reproduce for at least 2 seasons
- Rams with poor libido, small testicles, lumps in the scrotum, and lesions in the penis.
- Rams that are no longer used for reproduction.

Selection on Visual Appraisal

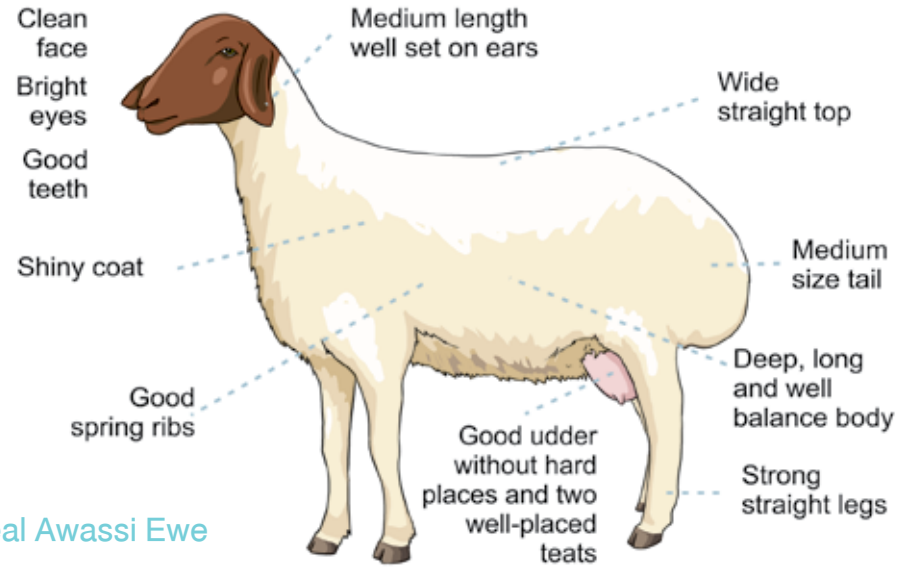
Ewe Selection

Livestock Producers need a basic understanding of livestock anatomical terms.

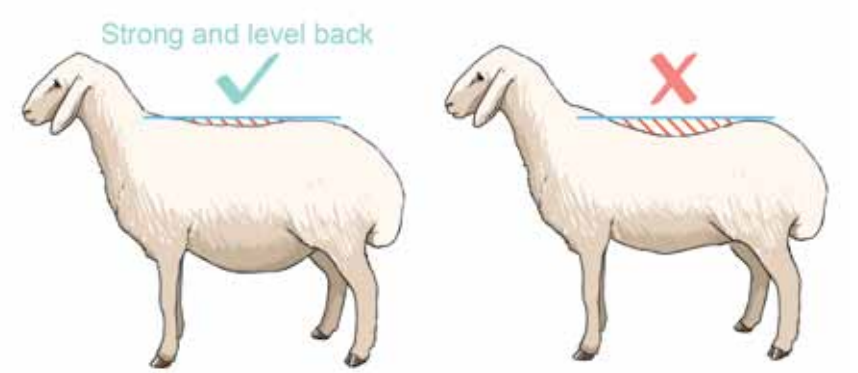
Ewes should look feminine; the udder should be soft, smooth, well-shaped, and balanced. The female external genitalia should be well developed and properly structured. An infantile vulva often indicates a lowered rate of fertility. However, ewes that have not given birth by 24 months of age are sub-fertile.

A sheep with good conformation should have:

- A wide, straight top
- Smooth shoulders
- Fullness through the heart area
- A good spring of ribs
- A long, well-balanced body, with adequate skeletal size and scale. Good skeletal size and scale indicate a fast-growing animal
- Shiny coat, high quality fleece, free of sore and dark fiber
- Clean face
- Medium length, well set on ears
- Animal should be able to hear and see well



Ideal Awassi Ewe



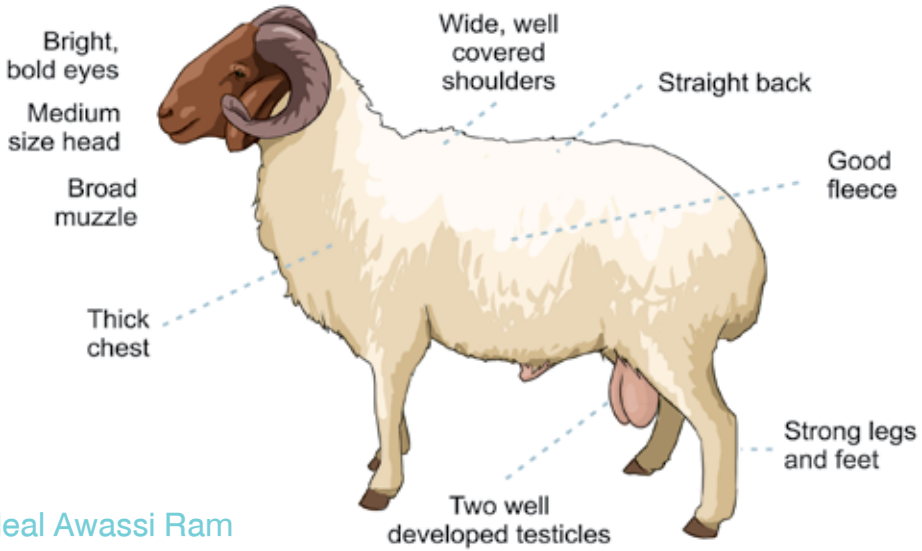
Ram Selection

Ram selection is a critical decision. Rams will contribute half of the genetics but may quickly influence more than 80% of the genetics of the flock if replacement ewes are kept from the same flock.

In small flocks inbreeding can be a problem if outside genetics are not brought into the flock. Rams should not be kept in the flock for more than 3 seasons. Avoid using rams from a closed herd because this will increase the inbreeding level.

Avoid selecting any ram with poor libido, genetic mal formation, and abnormal testicles

Rams should look masculine, rugged, active, and aggressive. The good ram should have a broad muzzle, straight back, thick chest and deep hindquarters. He should be standing square on all four feet, be up on his pasterns. Feet and legs should not include any lameness or foot rot, check between toes for redness or infection. It should have a good fleece.

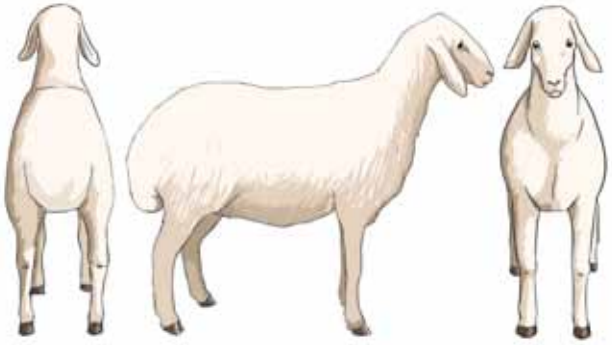


Ideal Awassi Ram

Testicles and penis should be firm, free from injury, normal, and adequate in size. The size indicates ability to produce sperm. Bottom of testicles should be rounded and free from hard knots.

Rams must be especially sound in rear leg and hip structure. A ram that has proper angulations to his rear legs will be approximately straight down from the pins to the hock and the dewclaw. An animal with sickle-hocked condition has too much angulations to the set or angle of the hocks. This trait is usually associated with weak rear pasterns.

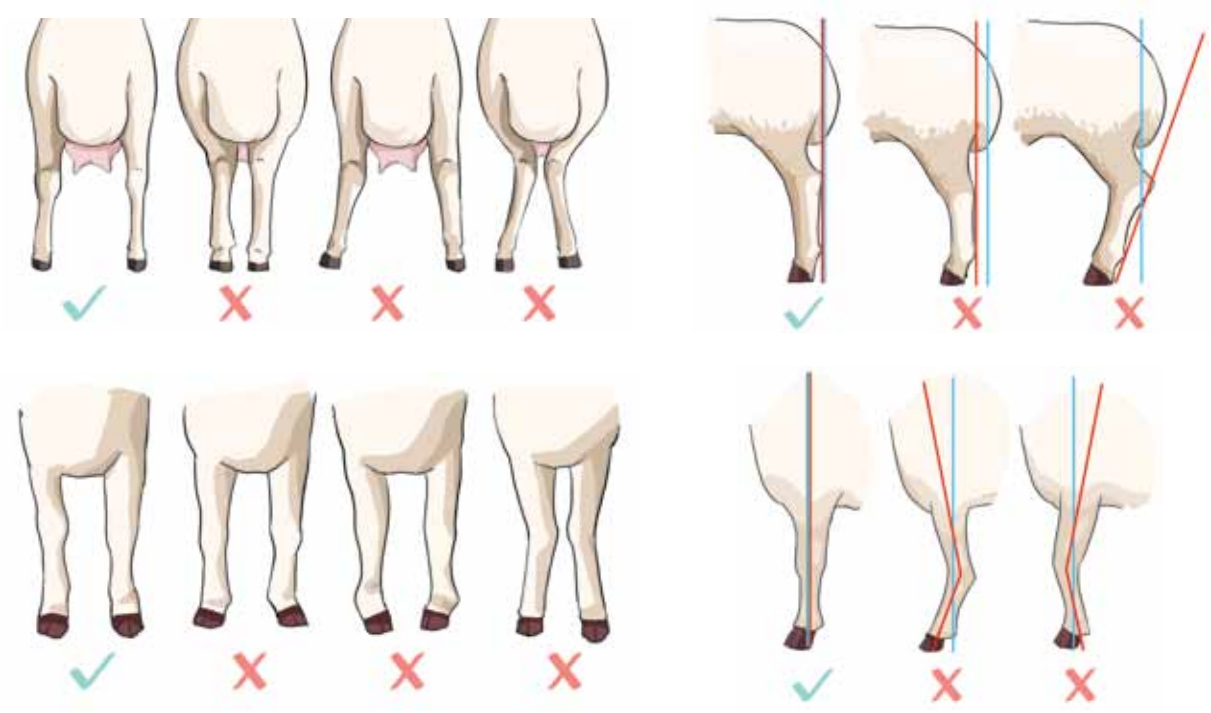
Legs and Feet



Sheep should stand squarely, with a leg on each corner, on feet with good broad cleats. Good balance with a free moving straight action is important.

Foot structure and hooves should be in proportion to the bone structure of the animal. Cracked or split hooves can be a concern for longevity. Animals with colored hooves tend to be preferable to animals with lighter colored hooves.

Legs should be wide apart, strong and straight. Hooves should be healthy and normal.



When viewing an animal from the rear, the legs should come out of the center of the hindquarters and go straight to the ground.

The common front leg structural problems include the conditions of being buck-kneed, calf-kneed, pigeon-toed, splay-footed, or knock-kneed. The correct knee structure is straight up and down and in line with the forearm and cannon. splay-footed is a common defect and is associated with being knock-kneed or turned-out.

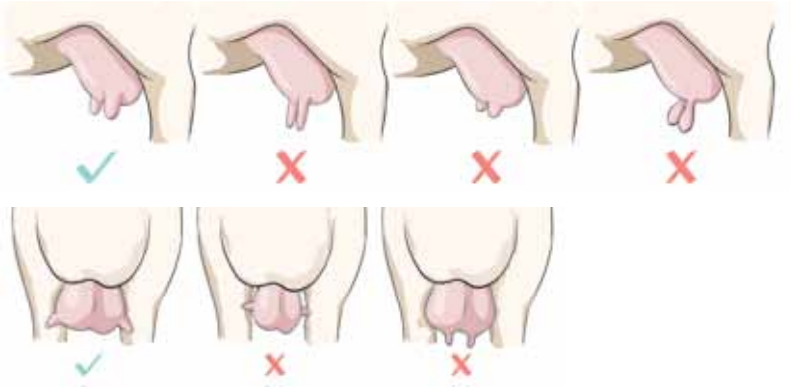
Pigeon-toed animals are not common, but this trait is a serious defect because it is often associated with other defects such as being wing-shouldered, base-narrow, or bow-legged. Buck-kneed or “over at the knees” is a condition when the knees are pitched forward. This is a serious defect associated with steep shoulders and steep pasterns, and, quite frequently, the post-legged condition.

Udders and Teats

Udder should be well attached, soft, smooth, well-shaped and balanced. The size of the udder depends on the age and the stage of lactation of the ewe.

Ewes with hard, lumpy udders should not be considered for breeding purposes, ewes with pendulous, bulbous or oversized udder should be culled.

The structure of the udder should allow the offspring to nurse unassisted.



Cull ewe with teat or udder defects and also their daughters.

Ewes should have two functional teats with medium size, well directed to allow lambs to nurse unassisted and to facilitate hand milking.

Mouth and Teeth

Mature sheep should have 8 incisors on the lower jaw. Upper and lower jaws should be correctly close to ensure ability for nurse and graze.

Avoid animals with “undershot jaws” (the lower jaw is too long and the incisors are posterior to the pad) and those with “overshot jaws” (the lower jaw is too short and the incisors are anterior to the pad).

Selection of replacement ewe lambs

The level of production of a flock will depend on the rate and superiority of replacement ewe lambs. As a general rule, between 20 - 30% of the adult ewes that will be culled because of age or reasons as listed above should be replaced by fresh well-selected lambs every year.

Selection of ewe lambs should be done in the following order:

- Separate all the ewe lambs from other animals and put them together in a pen
- Eliminate all animals with anatomical defects, undersized and unthrifty
- First choose animals that were born and raised as twins if this trait is preferable in your area
- Once you have eliminated the worst lambs check the mothers of the remaining ones. Make sure that the mothers always produce and wean lambs each season and produce good quantity of milk. In addition make sure that the mothers have good jaws, good udders and teats and also good health records

Advices for buying ewes or ewe lambs

- It is preferable to buy sheep from a nearby area where they are adapted to the prevailing climate of the area, but not very close to the farm and having had no much exchange of rams among farms
- Ensure that the flock from which you are buying animals is healthy, in particular free from abortion disease
- Ensure that the animals are healthy, free of defects, active, and able to eat and ruminate, with healthy udder and nipples.

In summary

Selection is very important for flock improvement and for laying the ground for future generations to ensure continued success. Sound selection emphasizes the performance as well as physical appraisal of animals.

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