

Appendix 15 – Abolhassani Livestock Biodiversity Register

Livestock

The predominant activity conducted by the Abolhassani people is pastoralism. Sheep and goat are the main types of livestock they raise. Livestock is the main source of Abolhassanis' livelihoods but in recent years, the frequent and long drought periods is making pastoralists' livelihoods increasingly difficult and have caused some detrimental impacts, e.g. decreased livestock and agricultural productions, water shortage, decreased fodder and loss of rangeland vegetation cover.

Table 1: Traditional Annual Cycle of Migratory Livestock

Period	A: Natural grazing cycle base on seasonal migration
Spring grazing areas	<ul style="list-style-type: none"> • 6 March- 22 May, Grazing livestock on rangelands in way stations; • 23 May, separation of Lambs and kids from their mothers and their weaning
Summering grounds	<ul style="list-style-type: none"> • 23 May- 22 September, Grazing livestock in summering grounds; • 23 May- 22 September, milking livestock in summering grounds and preparation of dairy products; • 1 August, separation of rams from the herd and grazing them separately; • 1 September: releasing the rams into the herd ewes for copulation; • 6 September, releasing the he- goats into the herd of she- goats;
Autumn Grazing lands	<ul style="list-style-type: none"> • 22 September- 6 Nov. Grazing livestock on Rangelands around the settlements • Late October: sale of goat kids
Wintering grounds	<ul style="list-style-type: none"> • 22 October- 6 March, Grazing livestock on rangelands in desert; • late January, sale of lambs • 1 February- 10 February, Birth of lambs and kids

Because the Abolhassani community live in a particularly challenging dry and increasingly drought-prone environment, there is little they can do to mitigate the causes of climate change. Their efforts have therefore concentrated on community action for adaptation to climate change. The ingenuity of this initiative is that this community has ended up gathering the totality of their own innovations in one logical strategy they have called “Coping with the Drought Cycle”, which is presented in the figure below, based on their own hand-drawn charts and information. It takes into account all the improvements that have been noted above. The water supply has been redesigned and optimized thanks to the restoration of Qanats, to digging open storage tanks and cisterns, and the use of the hanar system¹, aiming at water security. The map of their territory shows that most of the area is still in rangeland, and that a careful analysis has helped them enhance their pastoralist activities, by anticipating carefully both fodder and grazing needs

¹ Watering the animals once every two days instead of everyday during the cooler autumn and winter seasons. It saves water and allows the animals to go twice as far without needing to be watered, thereby relieving pressure on natural range due to better distribution of grazing. The revival of the *hanar* system has also facilitated sharing available water sources effectively between livestock and wildlife, as the former are watered around mid-day, while wildlife get to these watering points at daybreak and sunset.

of their herds in each season, harvesting the feed from their reinvented agriculture at the right time and saving part of the harvest in case of extreme meteorological events. Finally, the strategy also revitalises the natural resources used in traditional seasonal migration. The reinvention of the entire agricultural system not only has permitted restoring the ecosystems on a regional scale but has also helped supply critically needed fodder exactly when the natural vegetation needs a respite from grazing, and when wildlife are in need of their turn to use these same resources.

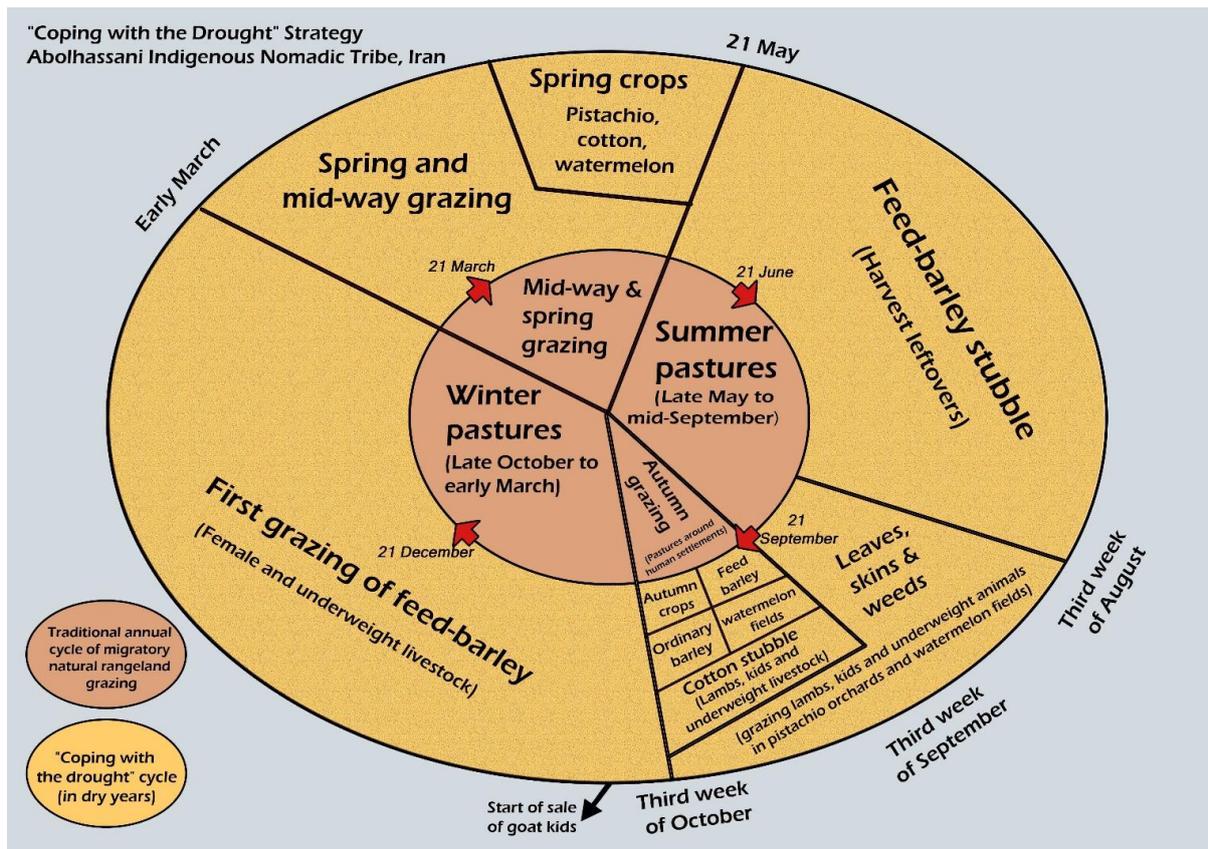


Figure 1. Diagram of the Saleh tribe innovative strategy "Coping with the Drought Cycle"

Livestock diversity

The ration between number of sheep and goat depends on the drought, since goat is more resistant to hot and dry weather and needs little water and little forage is more popular during dry years.

Species	Breed	Description
Goat	Local	The main breed of goat that the Abolhassani keep is called Local goat, a breed that has lived from many years in this area and adapted to the climate and vegetation of the Khar Touran region. The main specifications of these animals are medium size with medium size legs and dense hair. They are very resistant to heat, cold and drought, need little food and therefore are reasonable, have immunity to many local sickness and can walk long distances. In average they give half a kilo of milk every day. The average weight of local goats is 40 to 45 kilograms.
Goat	Pakistani	The non-local race of goat in Abolhassani is called Pakistani, which is larger, has very long ears and has taller legs. They have less hair and are very sensitive to cold, so if the temperature drops, they can die very easily. These goats need more forage, and give more milk, their kids are larger than local goats, and the possibility of twinning is higher in this type. The hybrid of these types of goats are usually large with more wool and can give more milk. But they are still sensitive to cold and need more forage. The average weight of the hybrid or locally called Dobar goats is about 60 to 70 Kilograms.
Sheep	Balouchi	The common sheep in Abolhassani is a Balouchi breed and is called local sheep, this breed has brought from province of Khorasan and during many generations, adapted to the climate and vegetation of the Khar Touran area. It has a middle size, dense wool, is more adaptive to cold and hot, but still not as resistant as local goats. They give about half kilo milk each day, usually have one offspring, but there have been incidents of twinning as well. They usually age between 7 to 8 years and if the grassland is good and they are well fed, these animals can walk long. The average weight of these breed is about 45 to 50 kilograms.
Sheep	Afshari	The non-local type of sheep is called Afshari, which is very profitable in short time, but very delicate and weak against heat and drought. Therefore, the Abolhassani tribe cannot keep them in their arid land.

Usually there are about equal number of male and female lamb born in a herd, the female is usually kept for milk and dairy products, and the male is kept to stall feed and to be sold for meat. Also younger animals get fat much faster than the older ones. There are certain crops

being fed to the animal for stall feeding: local varieties of barley, local varieties of wheat and Alfalfa.

Classification of livestock from external features

Depending on their reappearance goats and sheep are called differently, which will be shown in the following table.

Goats				
Color of face hair	Very small ears	Small ears	Medium size ears	Large ears
Golden hair	Kar Ahoo	Kor Ahoo	Gish Ahoo	Ahoo Ala
White	Kar Aroos	Kor Aroos	Gish Aroos	Aroos Ala
Black	Kar Siah	Kor Siah	Gish Siah	Siah Ala
Black with white spot on the nose	Kar Booseh	Kor Booseh	Gish Booseh	Bosseh Ala
Brown	Kar Khalaj	Kor Khalaj	Gish Khalaj	Khalaj Ala
Red lines around face	Kar Khadda	Kor Khadda	Gish Khadda	Khadda Ala
White spots on the ears	Kar Kaftar	Kor Kaftar	Gish Kaftar	Kaftar Ala
White spot on the forehead	Kar Siah Mahak	Kor Siah Mahak	Gish Siah Mahak	Siah Mahak Ala

Sheep			
Color of face hair	Very small ears	Ears looking like date	Wide ears
White	Kar Sefid	Korr Sefid	Gooshdar Sefid
Black	Kar Siah	Korr Siah	Gooshdar Siah
Brown	Kar Shiva	Korr Shiva	Shiva-ye Gooshdar
Dark Brown	Kar Talkh	Korr Talkh	Talkh-e Gooshdar
White with black spots	Kar Kaleh	Korr Kaleh	Kaleh Gooshdar

White with gray spots	Kar Nileh	Korr Nileh	Nileh Gooshdar
Purplish	Kar Benoosh	Korr Benoosh	Benoosh Gooshdar
White with red ears	Kar Garmeh	Korr Garmeh	Garmeh Gooshdar
White with black ears, nose and feet	Kar Guzal	Korr Guzal	Guzal Gooshdar

Also there are other names given to very young lamb and goat in their first year.

Year	Male	Female
One year old Sheep	Shishak	Togholi
One year old Goat	Cheboush	Koolar

And the goat which has its first childbirth is called Giszeh

Dairy production

The Dairy products of Abolhassani tribal confederacy decrease in the drought years, but in years with enough rain--called Bahar Saali meaning Spring Year-- the dairy products consist of a diverse variety as followed:

1. Milk
2. Cream: by turning the milk in a hand wheel machine that separates the fatty cream from the skimmed milk
3. Sarshir or Qeymaq: the fat that accumulates on top after boiling the milk
4. Cheese
5. Maast: Yougurt
6. Maast-e Poosti: is yogurt that is made and kept in a goat skin bag and is dense
7. Meske or Butter: by putting the yogurt in sheep skin and beat with special stick called Tolom to separate the butter and doogh
8. Doogh: The other product from beating the yogurt in sheep skin, which is drinkable and has a sour taste.
9. Kashk-e adooghi: Mixture of doogh and milk is boiled and liquid and solid separate
10. Kashk-e Maasti: Mixture of yogurt and milk is boiled till the liquid and solid separate
11. Kameh: product from boiling the Kashk-e maasti while adding doogh in the process
12. Ghoroot: The liquid left from producing Kashk is boiled to produce ghoroot. Ghoroot from Kashk-e Maasti has a sweet taste and ghoroot from kashk-e dooghi has a sour taste.
13. Jak Milk: the first milk of the animal after having a new born, is a yellow colour and very fatty kind of milk that is used in special dairy products.
14. Felleh: mixture of jak milk with regular milk then it is boiled and makes a product that has a texture like yogurt.
15. Jekkeh: A mixture of jak and eggs

16. Arisheh: a mixture of milk, flour, cheese and oil

17. Roghan Zard or Yellow oil: a type of oil that is extracted from heating butter

Figure of Dairy products

