

# Pastoralism in Azerbaijan - Development within economic and ecological bounds



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## Present situation

Mobile sheep farming is traditional in Azerbaijan, but management has been highly transformed during Soviet Union times. Present farms show the following characteristics:

- + Full market orientation with emphasis on lamb sale
- Low labour costs due to low salaries
- Investment deficit
- + Acceptable economic performance

### How can sustainable development of pastoralism look like?

- Increase ewe productivity through investments!
- Reduce costs by using benefits from **economies of scale!**
- We assume: at least average management quality

Characteristics of pastoral farms (N=43)				
		min	median	max
Ewes	pcs.	171	600	2400
Winter pasture	ha	200	406	1721
Summer pasture	ha	70	165	600
Shepherds		2	4	32
Raised lambs/ewe		0.45	0.87	1

Cost revenue calculation for an average model farm (based on median from above)	
	AZN/Ewe
1 AZN = approx. 1 €	
<b>Revenues</b>	<b>65.50</b>
Variable costs	21.28
<b>Contribution margin</b>	<b>44.22</b>
Overhead costs	7.16
Labour costs	14.10
<b>Profit</b>	<b>22.96</b>
Family labour costs	4.80
Interest on permanent and current assets (i=0,12)	14.50
<b>Entrepreneurial profit</b>	<b>3.66</b>
<b>Net rentability (%)</b>	<b>119</b>

## Investment in stables

- **Measure:** complete rebuilding of stables with AZN 50,000 financed by credit with 12% interest and 15 years duration
- **Benefit:** 10 % increase in ewe productivity
- **Assumption:** increase in all prices of 5 % annually and labour costs of 7,5 % annually

**Investment repays with sole productivity increases. Growth of farms can lead to gains from economies of scale.**

## Cooperation

- Cooperation can **reduce costs:**  
 25 % in veterinary costs  
 25 % in labour costs  
 26 % in variable machine costs
- **Trust** between partners is precondition

		no cooperation		cooperation	
		none	new stables truck	none	new stables truck
<b>Investment</b>	AZN	0	64,300	0	64,300
Profit	AZN	13,764	9,344	16,708	12,951
<b>Net rentability</b>	%	119	77	144	107
Net gearing	%	0	28	0	25
Return on ownership equity	%	15	8	19	13

**With cooperation small farms can benefit from economies of scale. Investments unprofitable for one single farm can become feasible.**

## Risk assessment

- **Droughts or severe winters (shocks)** occur on average all seven years and can lead to a 50 % reduction of revenues
- **Assumption:** Entrepreneurial profit losses translate directly into reduction of ewes in the following year in model farm under investment in stables

**Two subsequent shocks can push investing farms into instability. Stability could be achieved by savings or deferment options in credit schemes.**