

Supplemental information file



Figure S1. Map of Egypt showing the location and movement of Barki sheep of this study. 1; refers to Barca region in Eastern Libya (origin of Barki sheep in Egypt), 2; Matrouh governorate which is the most common place for breeding of Barki sheep in Egypt, 3; Beheira governorate which is the main collection center for Egyptian Barki sheep and the main distributing region for other Egyptian governorates, 4; Qena governorate which was the final destination for our tested Barki sheep.

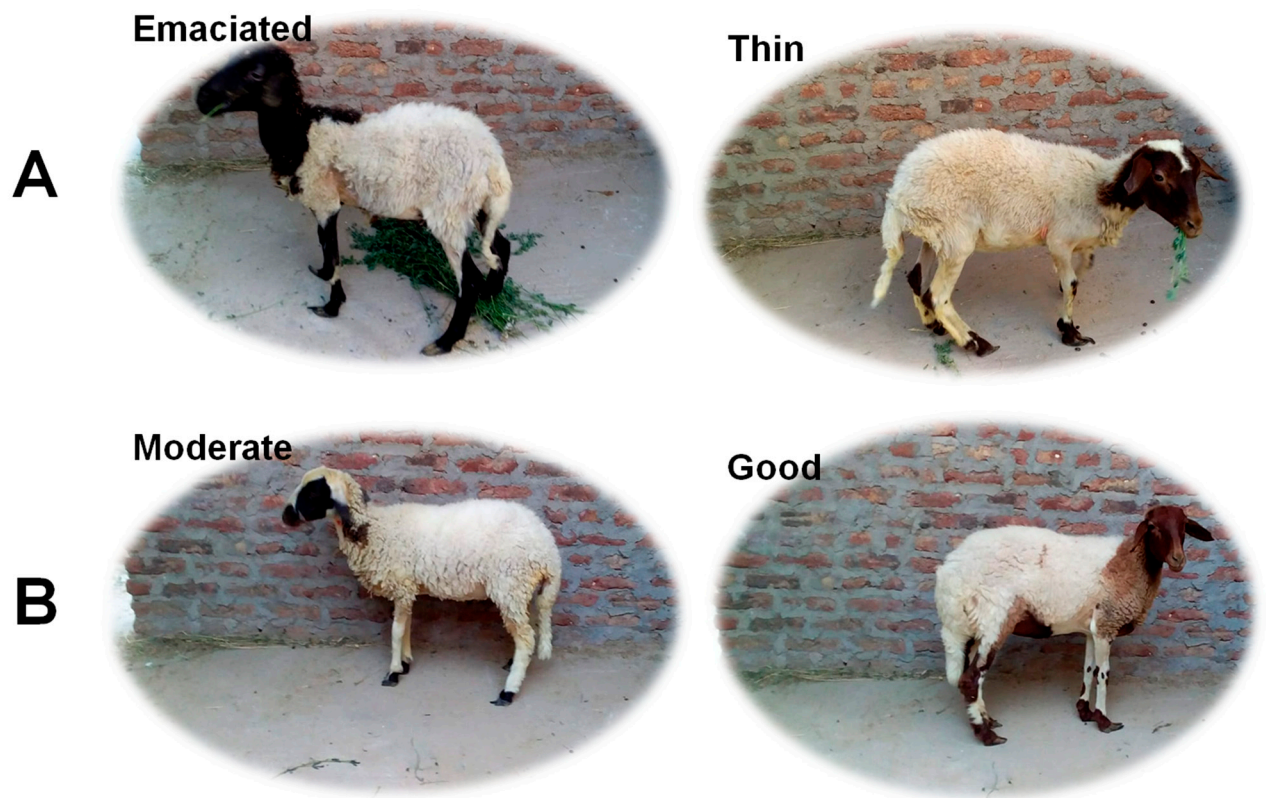


Figure S2. Representative image for Barki sheep used in the current study. (A) Sheep of stunted or test group that included animals with body condition score of BCS 1; emaciated and BCS 2; thin. (B) Sheep of good body condition or control group that comprised animals with body condition score of BCS 3; moderate and BCS 4; good.

Table S1. Biochemical variables among stunted and good body condition Barki sheep.

| Parameter (unit) | Stunted (n = 10) | Good condition (n = 9) | <i>P- value</i> |
|-----------------------------|------------------|------------------------|-----------------|
| Cholesterol (mg/dl) | 35.7 ±5.8 | 49.8 ±8.8 | 0.0007 |
| Triglycerides (mg/dl) | 36 ±3.3 | 46.9 ±10.4 | 0.0059 |
| Creatinine (mg/dl) | 0.58 ±0.09 | 0.81 ±0.1 | <0.0001 |
| Urea (mg/dl) | 29.6 ±3.2 | 26.9 ±2.9 | 0.0381 |
| Blood urea nitrogen (mg/dl) | 13.8 ±1.5 | 12.3 ±1.4 | 0.0381 |
| Total bilirubin (mg/dl) | 0.5 ±0.29 | 0.46 ±0.16 | 0.738 |
| Direct bilirubin (mg/dl) | 0.15 ±0.07 | 0.13 ±0.03 | 0.473 |
| Indirect bilirubin (mg/dl) | 0.35 ±0.3 | 0.33 ±0.15 | 0.858 |
| ALT (U/l) | 31.1 ±5.4 | 35.1 ±12.6 | 0.370 |
| AST(U/l) | 86.5 ±46.4 | 90.8 ±33 | 0.822 |
| Total protein (g/dl) | 6.7 ±0.44 | 7.2 ±0.48 | 0.0445 |
| Albumin (g/dl) | 3.6 ±0.27 | 4.1 ±0.4 | 0.0087 |
| Globulin (g/dl) | 3.1 ±0.42 | 3.1 ±0.7 | 1 |
| A/G ratio (numerical) | 1.2 ±0.2 | 1.4 ±0.4 | 0.193 |
| Glucose (mg/dl) | 45.3 ±5.3 | 45.1 ±9.1 | 0.956 |
| Calcium (mg/dl) | 8.7 ±0.6 | 8.3 ±2.4 | 0.700 |
| Phosphorus (mg/dl) | 5.7 ±0.6 | 5.9 ±0.9 | 0.432 |
| Magnesium (mg/dl) | 2.2 ±0.2 | 2.4 ±0.2 | 0.096 |
| Iron (µg/dl) | 111.8 ±25 | 127.6 ±16.2 | 0.124 |
| Zinc (µg/dl) | 50.3 ±25.3 | 44 ±11.2 | 0.499 |
| TSH (IU/ml) | 0.003 ±0.002 | 0.005 ±0.005 | 0.342 |
| Growth hormone (ng/ml) | 0.06 ±0.03 | 0.08 ±0.04 | 0.250 |

ALT; Alanine transaminase, AST; Aspartate transaminase, TSH; Thyroid-stimulating hormone. Significant values at $p < 0.05$ and highly significant at $p < 0.0001$ as measured by t-test (unpaired)