

Dairy Sheep and Goat Farmers: Socio-Demographic Characteristics and Their Associations with Health Management and Performance on the Farms

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Table S1. The questionnaire used in the interview of farmers in 444 small ruminant farms in Greece.

No.	Question
0. GENERAL	
001	Farm reference (no.)
002	National identification of the farm (no.)
003	Name of the farmer (name)
004	Address (description)
005	Date of the visit (date)
006	Veterinarian(s) (name)
007	Geographical coordinates (geographical latitude & longitude)
008	Production type (dairy / meat / wool / reproduction / other)
009	Management system (EFSA classification: shepherding / intensive / semi-intensive / semi-extensive / extensive / very extensive / mixed)
010	Organic farm (yes / no)
011	Start date of the most recent lambing / kidding season (date)
1. INFRASTRUCTURE	
1.1. General information	
012	Year of the initial establishment of the farm (year)
013	Year of establishment at the present location (year)
014	Availability of a main building for animals (yes / no)
015	Availability of a dedicated building for lambs / kids (yes / no)
016	Availability of a dedicated lambing / kidding area (yes / no)
017	Number of pens in the lambing / kidding area (no.)
018	Accessory building(s) for animals (yes / no)
019	Availability of sheds (yes / no)
020	Number of available sheds (no.)
021	Availability of sheds for storage of concentrate feedstuffs (yes / no)
022	Availability of sheds for storage of roughage (yes / no)
023	Availability of sheds for storage of silage (yes / no)
024	Availability of a milking parlour (yes / no)
025	Availability of a waiting area before the milking parlour (yes / no)
026	Availability of personnel areas (yes / no)
027	Availability of area for veterinary works (yes / no)
028	Availability of an office (yes / no)
029	Availability of a lavatory (yes / no)
030	Drainage type (local drainage network / cesspit)
031	Availability of footbath (yes / no)
032	Availability of isolation facilities for animals (yes / no)
033	Availability of access road to the farm (yes / no)
034	Electricity source (electricity network / generator / solar cells / other)
035	Proximity to industrial sites (yes / no)

- 036 Proximity to industrial sites (distance)
- 037 Type of industrial sites near the farm (description)
- 038 Availability of waste processing facility (yes / no)
- 039 Availability of a ditch at the main entrance (yes / no)

1.2. Buildings

1.2.1. Main building

- 040 Material of the walls (bricks / plastered bricks / cement / wood / stone / plastic / straw / panel / tin / cinder blocks / other)
- 041 Material of the roof (bricks / plastered bricks / cement / wood / stone / plastic / straw / panel / tin / cinder blocks / tiles / other)
- 042 Dimensions of the building (length × width × height in m)
- 043 Openings in the walls (yes / no)
- 044 Number of openings in the walls (no.)
- 045 Opening in the roof (yes / no)
- 046 Orientation of the building (degrees)
- 047 Material of the floor (cement / soil / slatted wood / slatted metal / other)
- 048 Availability of straw bedding (yes / no)
- 049 Annual frequency of removal / clean-up of the straw bedding (no. of occasions)
- 050 Availability of ventilators (yes / no)
- 051 Number of available ventilators (no.)
- 052 Availability of artificial lighting (yes / no)

1.2.2. Building for lambs / kids

- 053 Dimensions of the building (length × width × height in m)
- 054 Availability of milk replacer facilities (yes / no)
- 055 Availability of equipment for administration of milk replacer to lambs (yes / no)
- 056 Availability of milk heating facilities (yes / no)
- 057 Number of plastic teats available (no.)
- 058 Openings in the walls (yes / no)
- 059 Openings in the walls (no.)
- 060 Opening in the roof (yes / no)
- 061 Administration of milk replacer to lambs (yes / no)
- 062 Daily frequency of administration of milk replacer to lambs (no. of occasions)
- 063 Grouping of lambs for administration of the milk replacer (yes / no)
- 064 Criteria for grouping of lambs for administration of the milk replacer (description)

1.2.3. Milking parlour

- 065 Year of initial establishment (year)
- 066 Year of most recent renovation (year)
- 067 Dimensions of the parlour (length × width × height in m)
- 068 Material of the floor (cement / tile / soil / other)
- 069 Type of milking system (mobile / non-mobile)
- 070 Type of milking parlour (fishbone / circular / linear parallel / linear one-sided / other)
- 071 Number of animal positions in the parlour (no.)
- 072 Number of available milking units (no.)
- 073 Provision of feed during milking (yes / no)
- 074 Availability of facilities for milk yield measurement (yes / no)
- 075 Type of facilities for milk yield measurement (individual / group)
- 076 Availability of milk quality indicators (yes / no)
- 077 Availability of milk flow indicators (yes / no)
- 078 System pulsation rate (p. min⁻¹)
- 079 System pressure (kPa)
- 080 Type of flow line (low / high)
- 081 Weekly frequency of check-ups of the system by farmer (no. of occasions)
- 082 Annual frequency of check-ups of the system by technicians (no. of occasions)
- 083 Type of system check-ups performed by technicians (dynamic / static)
- 084 Water cleaning of parlour after the milking sessions (yes / no)
- 085 Temperature of cleaning water (°C)
- 086 Use of detergent for parlour cleaning after the milking sessions (yes / no)
- 087 Criteria for changing teatcups (description)

088	Annual frequency of changing teatcups (no. of occasions)
089	Availability of a milk tank (yes / no)
090	Availability of a mixer in the milk tank (yes / no)
091	Temperature in the milk tank (°C)
092	Frequency of milk collection (description of the no. of times that the dairy company collects the milk)
093	Frequency of cleaning of milk tank (description of the occasions that the milk tank is routinely cleaned)
094	Date of the preceding collection of milk (description)

1.3. Equipment

095	Availability of a crate (yes / no)
096	Availability of scales (yes / no)
097	Scale type available (large / portable)
098	Availability of a roller crusher (yes / no)
099	Availability of a feed mill (yes / no)
100	Availability of an automated feeding system (yes / no)
101	Availability of a silage distributor (yes / no)
102	Availability of a straw cutter (yes / no)
103	Availability of automatic water filling system in troughs (yes / no)
104	Availability of system for waste removal (yes / no)
105	Availability of bathing tank (yes / no)
106	Availability of a generator (yes / no)
107	Availability of a tractor (yes / no)
108	Availability of a truck (yes / no)
109	Availability of a pick-up (yes / no)
110	Animal identification system used (ear-tags / boli / necklace)
111	Availability of automatic animal identification system (yes / no)
112	Availability of animal location identifiers (yes / no)
113	Total number of feed troughs available (no.)
114	Type of feed troughs available (metal / wood / plastic)
115	Total number of drinking troughs available (no.)
116	Type of drinking troughs available (metal / wood / plastic)
117	Availability of refrigerators (yes / no)
118	Description of available refrigerators (domestic use-type refrigerators / professional use-type refrigerators / deep freezers)
119	Availability of sensors for registration of environmental conditions (yes / no)
120	Description of available sensors for registration of environmental conditions (description)
121	Practicing sharing of equipment with other farms (yes / no)

1.4. Land

122	Grazing practiced (yes / no)
123	Total grazing land by the farm animals (acres)
124	Ownership of the grazing land (farmer / other private / public)
125	Private grazing land (acres)
126	Irrigation of the grazing land (yes / no)
127	Grazing of cultivated land (yes / no)
128	Total surface of the cultivated land (acres)
129	Plant types available in the grazing land (description)
130	Use of hydroponic facilities (yes / no)

2. ANIMALS

2.1. Small ruminants

131	Main animal species (sheep / goats)
132	Mixed farm (yes / no)
133	No. of ewes (no.)
134	No. of rams (no.)
135	No. of does (no.)
136	No. of bucks (no.)
137	Main breed of ewes / does (description)
138	Secondary breed of ewes / does (description)

139	Main breed of rams / bucks (description)
140	Secondary breed of rams / bucks (description)
141	Average age of culling ewes / does (years)
142	Average age of culling rams / bucks (years)
143	Average annual replacement rate of ewes / does (%)
144	Average annual replacement rate of rams / bucks (%)
145	Source of replacement animals (own animals / purchase)
146	Criteria for selection of own animals as replacements (description)
147	Criteria for selection of animals for purchase as replacements (description)
148	Purveyors of replacements to be purchased (description)

2.2. Other domestic animals in the farm

149	Adult cattle (yes / no)
150	Adult cattle (no.)
151	Calves (yes / no)
152	Calves (no.)
153	Buffaloes (yes / no)
154	Buffaloes (no.)
155	Pigs (yes / no)
156	Pigs (no.)
157	Rabbits (yes / no)
158	Rabbits (no.)
159	Poultry (yes / no)
160	Poultry (no.)
161	Domestic birds (yes / no)
162	Domestic birds (no.)
163	Dogs (yes / no)
164	Dogs (no.)
165	Sheepdogs (yes / no)
166	Sheepdogs (no.)
167	Cats (yes / no)
168	Cats (no.)
169	Exotic animals (yes / no)
170	Exotic animals (no.)
171	Horses (yes / no)
172	Horses (no.)
173	Donkeys or mules (yes / no)
174	Donkeys or mules (no.)
175	Other animals (yes / no)
176	Other animals (no.)

2.2.1. Rodents in the farm

177	Visual contacts of the farmer with rodents (yes / no)
178	Recognition of dead rodents in the farm grounds or within a radius of 500 m of the farm (yes / no)
179	Bioindications of rodents in the farm grounds or within a radius of 500 m of the farm (yes / no)
180	Description of bioindications of rodents (feed / faeces / other)
181	Recognition of rodents in feed troughs (yes / no)
182	Recognition of rodents in water troughs (yes / no)
183	Presence of rodents in fields within a radius of 2 km of the farm (yes / no)
184	Rodents identified within a radius of 2 km of the farm (description)
185	Administration of rodenticides (yes / no)
186	Annual frequency of administration of rodenticides (no. of occasions)

2.3. Wildlife

2.3.1. Wildlife mammals

187	Visual contacts of the farmer with wildlife mammals (yes / no)
188	Recognition of dead wildlife mammals in the farms grounds or within a radius of 500 m of the farm (yes / no)
189	Recognition of traces of wildlife mammals within a radius of 2 km of the farm (yes / no)
190	Recognition of wildlife mammals within a radius of 2 km of the farm (yes / no)
191	Recognition of damage to cultivations within a radius of 2 km of the farm (yes / no)

- 192 Population of wildlife mammals recognised within a radius of 2 km of the farm (no. of animals)
 193 Wildlife mammals identified within a radius of 2 km of the farm (description)
 194 Common grazing of sheep / goats with wildlife mammals (yes / no)
 195 Species of wildlife mammals identified in common grazing (description)

2.3.2. Avian wildlife

- 196 Visual contacts of the farmer with avian wildlife (yes / no)
 197 Recognition of dead avian wildlife in the farms grounds or within a radius of 500 m of the farm (yes / no)
 198 Bioindications of avian wildlife in the farms grounds or within a radius of 500 m of the farm (yes / no)
 199 Description of bioindications of avian wildlife (bird calls / feathers / feed / eggs)
 200 Recognition of avian wildlife in feed troughs (yes / no)
 201 Recognition of avian wildlife in water troughs (yes / no)
 202 Presence of nests within the farm buildings (yes / no)
 203 Presence of eggs in such nests (yes / no)
 204 Presence of chicks in such nests (yes / no)
 205 Population of avian wildlife recognised within a radius of 2 km of the farm (no. of animals)
 206 Avian wildlife identified (description)

2.3.3. Hunting

- 207 Presence of hunters in the area around the farm within a radius of 2 km of the farm (yes / no)
 208 Number of hunters in the area within a radius of 2 km of the farm (no.)
 209 Weekly frequency of the presence of hunters in the area (no. of daily occasions)
 210 Description of hunted avian species (description)
 211 Description of hunted mammalian species (description)
 212 Distance from the farm that hunting activity occurs (km)
 213 Months during which hunting activity occurs (description)
 214 Hunting activity of the farmer (yes / no)
 215 Length of hunting activity of the farmer (no. of years)

3. PRODUCTION CHARACTERISTICS

- 216 Month of the start of the lambing / kidding season (description)
 217 Usual month of the start of the milking period (description)
 218 Usual month of the end of the milking period (month)
 219 Total milk quantity obtained during the preceding milking period (litres)
 220 Average fat content in milk during the preceding milking period (%)
 221 Average protein content in milk during the preceding milking period (%)
 222 Average somatic cell counts in milk during the preceding milking period (no.)
 223 Total number of lambs / kids born during the preceding lambing season (no.)
 224 Total number of lambs / kids sold during the preceding season (no.)
 225 Average age of lambs / kids at slaughter (days)
 226 Average live bodyweight of lambs / kids at slaughter (kg)
 227 Average carcass weight of these at slaughter (kg)
 228 Total number of ewe- or ram-lambs / doelings or bucklings sold during the preceding period (no.)
 229 Average carcass weight of these at slaughter (kg)
 230 Record keeping (yes / no)
 231 Type of records kept (paper / electronic)
 232 Local manufacturing of dairy products (yes / no)
 233 Objective of local manufacturing of dairy products (sale / home consumption)
 234 Types of dairy products in local production (description)

4. HEALTH MANAGEMENT

4.1. Health parameters

- 235 The two health problems in lambs / kids considered to be of the higher importance (description)
 236 Total cases of these two health problems in lambs / kids during the preceding season (no.)
 237 The two health problems in replacement animals considered to be of the higher importance (description)
 238 Total cases of these two health problems in replacement animals during the preceding season (no.)
 239 The two health problems in adult animals considered to be of the higher importance (description)
 240 Total cases of these two health problems in adult animals during the preceding season (no.)
 241 Total deaths, of any cause, in adult animals during the preceding season (no.)

242	Collaboration with a veterinarian (yes / no)
243	Means of calculating live bodyweight for the administration of pharmaceutical products (weighing / estimation)
244	Routine overdosing (compared to dose prescribed) of pharmaceuticals (yes / no)
245	Use of laboratory diagnostic examinations (yes / no)
246	In samples of milk (yes / no)
247	In samples of blood (yes / no)
248	In samples of faeces (yes / no)
249	Laboratory diagnostic examinations performed in these samples (description)
250	Total visits made annually by veterinarians to the farm during the preceding season (no.)
251	Reasons for the visits of the veterinarians (description)
252	Maintenance of prescribed withdrawal periods after administration of pharmaceuticals (yes / no)
253	Evaluation of ammonia concentration within the buildings (yes / no)
254	Animal deaths from attacks by wildlife animals (yes / no)
255	Total number of animal deaths by wildlife animals during the preceding season (no.)
256	Species of wildlife animals that caused animal deaths during the preceding season (description)
257	Animal deaths from natural disasters (yes / no)
258	Total number of animal deaths from natural disasters during the preceding season (yes / no)
259	Description of natural disasters that caused animal deaths (description)

4.2. Health problems

4.2.1.a. Diseases of adult animals – mastitis

260	Total cases during the preceding season (no.)
261	Sample collection and testing for diagnostic purposes (yes / no)
262	Treatment (yes / no)
263	Pharmaceuticals used for treatment (description)
264	Route for administration of antimicrobials (systematically / intramammary)

4.2.1.b. Diseases of adult animals – abortion

265	Total cases during the preceding season (no.)
266	Sample collection and testing for diagnostic purposes (yes / no)
267	Types of samples collected for testing (description)
268	Pharmaceuticals used for treatment (description)
269	Collection of aborted material for safe disposal (yes / no)

4.2.1.c. Diseases of adult animals – pregnancy toxemia

270	Total cases during the preceding season (no.)
271	Treatment performed (description)

4.2.1.d. Diseases of adult animals – lameness

272	Total cases during the preceding season (no.)
273	Treatment performed (description)

4.2.1.e. Diseases of adult animals – mange

274	Total cases during the preceding season (no.)
275	Treatment performed (description)

4.2.1.f. Diseases of adult animals – obstetrical cases

276	Total cases during the preceding season (no.)
277	Call for veterinary support (yes / no)
278	Person who performed manipulations (veterinarian / farmer / non-veterinary staff member)

4.2.2.a. Diseases of young animals – respiratory problems

279	Total cases during the preceding season (no.)
280	Treatment performed (description)
281	Pharmaceuticals used for treatment (description)

4.2.2.b. Diseases of young animals – diarrhoea

282	Total cases during the preceding season (no.)
283	Treatment performed (description)
284	Pharmaceuticals used for treatment (description)

4.3. Management practices

285	Reproductive management (no hormonal control / administration of melatonin / administration of progestagens)
286	Duration of mating period (unlimited period / defined time-schedule)

- 287 Changes of rams / bucks into the ewes / does during the mating period (yes / no)
- 288 Castration of lambs / kids kept for fattening (yes / no)
- 289 Use of vasectomies (yes / no)
- 290 Use of artificial insemination (yes / no)
- 291 Use of embryo transfer (yes / no)
- 292 Use of ultrasound for pregnancy diagnosis (yes / no)
- 293 Nutritional modifications before the mating period (yes / no)
- 294 Nutritional modifications before the lambing period (yes / no)
- 295 Beginning of the mating period for ewes / does (month)
- 296 End of the mating period for ewes / does (month)
- 297 Beginning of the mating period for ewe-lambs and doelings (month)
- 298 End of the mating period for ewe-lambs and doelings (month)
- 299 Grouping of pregnant females during the final stage of pregnancy (yes / no)
- 300 Induction of lambing (yes / no)
- 301 Newborn care and specific monitoring (yes / no)
- 302 Maintenance of a colostrum bank (yes / no)
- 303 Lamb / kid fostering to female animals other than their dams (yes / no)
- 304 Reasons for doing this practice (description)
- 305 Administration of a lamb- / kid-specific diet (yes / no)
- 306 Age for lamb / kid removal from their dams (days)
- 307 Age of weaning of lambs / kids (days)
- 308 Daily number of milking sessions (no.)
- 309 Method for drying-off at the end of the lactation period (abrupt / progressive)
- 310 Duration of the dry-period (months)
- 311 Seasonal transfer of animals to other site (yes / no)
- 312 Means of animal transfer between sites (description)
- 313 Distance between sites (km)
- 314 Nights out during transfer between sites (yes / no)
- 315 Post-mortem examination of animals that die (yes / no)
- 316 Disposal of carcasses from dead animals (incineration / burying / feeding to dogs / feeding to birds / drop-off away)
- 317 Reporting to the farming insurance agency (yes / no)
- 318 Compensation by the farming insurance agency (yes / no)
- 319 Manure management (spread to fields / sale / disposal / feed to animals / biogas production)
- 320 Security presence at the farm (yes / no)
- 321 Duration of security attendance (continuous / morning & night visits / once daily visit / other)
- 322 Farm security (light wire fence / strong wire fence / stoned wall / wooden wall / alarm / other / no security)
- 323 Recording of vehicles entering into the farm (yes / no)
- 324 Availability of disinfectant at entrance ditch (yes / no)

4.4. Vaccinations

- 325 Against *Chlamydia* infection (yes / no)
- 326 Description of schedule:
- 327 Against *Toxoplasma* infection (yes / no)
- 328 Description of schedule:
- 329 Against *Brucella* infection (yes / no)
- 330 Description of schedule:
- 331 Against clostridial infection (yes / no)
- 332 Description of schedule:
- 333 Against mastitis (yes / no)
- 334 Description of schedule:
- 335 Against contagious agalactia (yes / no)
- 336 Description of schedule:
- 337 Against bacterial respiratory infections (yes / no)
- 338 Description of schedule:
- 339 Against orf (yes / no)
- 340 Description of schedule:
- 341 Against paratuberculosis (yes / no)

342	Description of schedule:
343	Against foot-rot (yes / no)
344	Description of schedule:
4.5. Administrations of antiparasitics	
4.5.1.a. Antiparasitic administrations – Anthelmintic treatments to small ruminants	
345	Administration of anthelmintics to sheep / goats in the farm (yes / no)
346	Administration of anthelmintics to all or only some animals in the farm at the same time (all / some)
347	Timing of administration within the annual production cycle (before the mating season / at the beginning of dry-period / at the final stage of pregnancy / 1st-2nd month of the lactation period / 3rd-6th month of the lactation period)
348	Anthelmintics administered (description)
349	Pharmaceutical form administered (description)
350	Use of environmental applications for helminth control (yes / no)
351	Which ones (description)
4.5.2. Antiparasitic administrations – Ectoparasiticide treatments to small ruminants	
352	Administration of ectoparasiticides to sheep / goats in the farm (yes / no)
353	Timing of administration within the annual production cycle (before the mating season / at the beginning of dry-period / at the final stage of pregnancy / 1st-2nd month of the lactation period / 3rd-6th month of the lactation period)
354	Ectoparasiticides administered (description)
355	Pharmaceutical form administered (description)
356	Use of environmental applications for ectoparasite control (yes / no)
357	Which ones (description)
4.5.3. Antiparasitic administrations – Antiparasitic treatments to dogs in the farm	
358	Administration of antiparasitics to dogs in the farm (yes / no)
359	Antiparasitics used (description)
360	Pharmaceutical form administered (description)
4.6. Other health management practices	
361	Application of disinfections in the farm (yes / no)
362	Annual frequency of systemic disinfections in the farm (no. of occasions)
363	Administration of oxytetracycline to the pregnant animals (yes / no)
364	Administration of selenium to pregnant animals (yes / no)
365	Administration of selenium to newborn animals (yes / no)
366	Administration of 'dry-ewe' treatment at the end of the lactation period (yes / no)
367	Use of teat disinfection before milking (yes / no)
368	Use of teat disinfection after milking (yes / no)
369	Use of teat spraying after milking (yes / no)
370	Weekly frequency of changing teat disinfectant in the cup (no. of occasions)
371	Foot care (yes / no)
372	Annual frequency of foot care (no. of occasions)
373	Shearing (yes / no)
374	Shearing equipment used (shearing shears / shearing machine)
375	Recording of births – maintenance of a lambing book (yes / no)
376	Disinfection of navel stumps in newborns (yes / no)
377	Tail docking in newborns (yes / no)
378	Routine administration of antimicrobials in newborns (yes / no)
379	Antimicrobials administered (description)
380	Maintenance of quarantine period for new animals into the farm (yes / no)
381	Isolation of sick animals (yes / no)
4.7. Vectors	
382	Presence of spots suitable for reproduction of vectors (yes / no)
383	Types of spots identified (muddy spots inside or outside the buildings, near the water troughs / spots of wet manure / ditches with manure)
384	Distance of spots from farm (>50 m / 50-500 m / >500 m)
5. NUTRITION	
385	Grazing (yes / no)
386	Duration of grazing during the winter (no. of months)

387	Distance from farm of area grazed during the winter (km)
388	Duration of grazing during the summer (no. of months)
389	Distance from farm of area grazed during the summer (km)
390	Type of graze area (meadow / wetland / scrub pasture / hay / forest / other)
391	Common grazing for sheep and goats (yes / no)
392	Provision of hay as fodder to animals (yes / no)
393	Total quantity of hay consumed during the preceding season (tonnes)
394	Plants included in hay consumed by animals (description)
395	Hay type (dried plant / pelleted)
396	Origin of hay (own production / purchase)
397	Provision of straw to animals (yes / no)
398	Provision of silage to adult animals (yes / no)
399	Provision of silage to young animals (yes / no)
400	Total quantity of silage consumed during the preceding season (tonnes)
401	Origin of silage (own production / purchase)
402	Provision of finished feed to animals (yes / no)
403	Origin of silage (own production / purchase)
404	Provision of finished feed (concentrate) to animals throughout the year (yes / no)
405	Finished feed (concentrate) form provided to adult animals (mashed / pellets / flakes / other)
406	Provision of finished feed (concentrate) to young animals (yes / no)
407	Finished feed (concentrate) type provided to young animals (mashed / pellets / flakes / other)
408	Total quantity of finished feed (concentrate) consumed during the preceding season (tonnes)
409	Total quantity of raw materials purchased during the preceding season (tonnes)
410	Raw materials used by the farm in the diets (corn / wheat / barley / bran / soyabean meal / cottonmeal / sunflower meal / fats / salt / phosphate salts / magnesium salts / limestone / trace minerals / water soluble vitamins / fat soluble vitamins)
411	Raw materials purchased by the farm for use in the diets (corn / wheat / barley / bran / soyabean meal / cottonmeal / sunflower meal / fats / salt / phosphate salts / magnesium salts / limestone / trace minerals / water soluble vitamins / fat soluble vitamins)
412	Premix purchase for use in the diets (yes / no)
413	Nutrient content in finished feed (description)
414	Feed change in animals (abrupt / progressive)
415	Water source (local water board / drilling / other source)
416	Water provision to animals (water troughs / tank / water collectors / fountains / rivers / lakes / other)
417	Use of laboratory examinations for quality testing of feeds and raw material (yes / no)
418	Laboratory examinations used (description)
419	Use of laboratory examinations for quality testing of water (yes / no)
420	Laboratory examinations used (description)
421	Person responsible for nutritional management (farmer / nutritionist / animal scientist / veterinarian / other)

6. HUMAN RESOURCES

6.1. Farmer

422	Age (years)
423	Previous animal farming experience (yes / no)
424	Length of previous animal farming experience (years)
425	General education (yes / no)
426	General education (description)
427	Professional education (yes / no)
428	Professional education (description)
429	Primary language spoken (description)
430	Farmer by profession (yes / no)
431	Daily period of presence in the farm (hours)
432	Marital status (description)

6.2. Public health

433	Personal opinion regarding occurrence of transmission of diseases from animals to the farmer or members of the family (yes / no)
434	Diseases, according to above, for which transmission occurred from animals (description)

6.3. Family	
435	Work of family members in the farm (yes / no)
436	Family tradition in farming (yes / no)
437	Total members of the family (no.)
6.4. Staff	
438	Ethnicity (Greek local / Greek from other part of the country / non-Greek)
439	Nationality of non-Greek nationals (description)
440	Age (years)
441	Previous farming experience (yes / no)
442	Length of previous animal farming experience (years)

Table S2. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the area of the country (Central Greece, Islands of Greece, Northern Greece, Southern Greece), where farms were located.

Farmers in Central Greece (n = 169)				Farmers in islands of Greece (n = 59)				Farmers in Northern Greece (n = 123)				Farmers in Southern Greece (n = 93)				P
Male		Female		Male		Female		Male		Female		Male		Female		0.61
91.7%		8.3%		91.5%		8.5%		95.1%		4.9%		94.6%		5.4%		
Mean age				Mean age				Mean age				Mean age				0.017
44.9±0.9 years				49.8±1.6 years				48.3±1.1 years				47.4±1.3 years				
Mean farming experience				Mean farming experience				Mean farming experience				Mean farming experience				<0.001
20.0±1.2 years				33.5±2.2 years				24.9±1.4 years				25.5±1.5 years				
Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		0.52
87.0%		13.0%		91.5%		8.5%		89.4%		10.6%		92.5%		7.5%		
Daily time spent at the farm				Daily time spent at the farm				Daily time spent at the farm				Daily time spent at the farm				0.55
11.4±0.3 hours				11.7±0.5 hours				11.8±0.3 hours				12.2±0.4 hours				
Primary education ²	Secondary education	Vocat. Education ³	Tertiary education	Primary education	Secondary education	Vocat. education	Tertiary education	Primary education	Secondary education	Vocat. education	Tertiary education	Primary education	Secondary education	Vocat. education	Tertiary education	<0.001
14.8%	59.8%	16.0%	9.4%	0.0%	78.0%	15.2%	6.8%	17.9%	52.8%	13.8%	15.5%	32.3%	31.2%	21.5%	15.0%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.25
83.4%		16.6%		89.8%		10.2%		95.1%		4.9%		91.4%		8.6%		
Family members				Family members				Family members				Family members				0.015
4.5±0.1 persons				3.9±0.1 persons				4.1±0.1 persons				4.4±0.2 persons				
Family members working at the farm				Family members working at the farm				Family members working at the farm				Family members working at the farm				0.60
2.2±0.03 persons				2.3±0.1 persons				2.2±0.04 persons				2.2±0.04 persons				

Farm worker employment	No farm worker employment	Farm worker employment	No farm worker employment	Farm worker employment	No farm worker employment	Farm worker employment	No farm worker employment	
37.3%	62.7%	15.3%	84.7%	47.2%	52.8%	17.2%	82.8%	<0.001

1. Central part: includes the administrative regions of Continental Greece and Thessaly, as well as the division of Aetolia-Acarnania of the administrative region of Western Greece and the divisions of Arta and Preveza of the administrative region of Epirus; Islands part: includes the administrative regions of Crete, Ionian islands, North Aegean and South Aegean; North part includes the administrative regions of Central Macedonia, Eastern Macedonia and Thrace and Western Macedonia, as well as the divisions of Ioannina and Thesprotia of the administrative region of Epirus; South part: includes the administrative regions of Attica and Peloponnese, as well as the divisions of Achaea and Elis of the administrative region of Western Greece.

2. Education: the highest level of education received is noted.

3. Vocational.

Table S3. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the animal species (sheep, goats) in the farms.

Sheep farmers (<i>n</i> = 325)				Goat farmers (<i>n</i> = 119)				<i>P</i>
Male		Female		Male		Female		
94.2%		5.8%		90.8%		9.2%		0.21
Mean age				Mean age				
47.2±0.7 years				46.6±1.1 years				0.64
Mean farming experience				Mean farming experience				
24.2±0.9 years				24.6±1.4 years				0.80
Full-time		Part-time		Full-time		Part-time		
89.8%		10.2%		88.2%		11.8%		0.63
Daily time spent at the farm				Daily time spent at the farm				
11.5±0.2 hours				12.3±0.3 hours				0.047
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	
17.5%	50.8%	18.5%	13.2%	16.8%	63.9%	10.9%	8.4%	0.06
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		
87.1%		12.9%		87.4%		12.6%		0.93
Family members				Family members				
4.3±0.1 persons				4.2±0.1 persons				0.57
Family members working at the farm				Family members working at the farm				
2.2±0.02 persons				2.2±0.04 persons				0.34
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		
37.8%		62.2%		28.6%		28.6%		0.07

1. Education: the highest level of education received is noted.

Table S4. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with management system (intensive, semi-intensive, semi-extensive, extensive¹) applied in the farms.

Farmers following intensive management system in the farm (<i>n</i> = 53)				Farmers following semi-intensive management system in the farm (<i>n</i> = 169)				Farmers following semi-extensive management system in the farm (<i>n</i> = 177)				Farmers following extensive management system in the farm (<i>n</i> = 45)				<i>P</i>
Male		Female		Male		Female		Male		Female		Male		Female		0.91
92.5%		7.5%		93.5%		6.5%		92.7%		7.3%		95.6%		4.4%		
Mean age 44.8±1.7 years				Mean age 45.7±0.8 years				Mean age 48.1±0.9 years				Mean age 50.3±2.2 years				0.037
Mean farming experience 15.3±2.2 years				Mean farming experience 22.3±1.1 years				Mean farming experience 26.1±1.2 years				Mean farming experience 35.6±2.2 years				
Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		Full-time		Part-time		0.68
84.9%		15.1%		90.5%		9.5%		89.8%		10.2%		91.1%		8.9%		
Daily time spent at the farm 10.2±0.6 hours				Daily time spent at the farm 11.4±0.3 hours				Daily time spent at the farm 12.3±0.3 hours				Daily time spent at the farm 12.2±0.6 hours				0.008
Primary education ²	Secondary education	Vocat. education ³	Tertiary education	Primary education	Secondary education	Vocat. education	Tertiary education	Primary education	Secondary education	Vocat. education	Tertiary education	Primary education	Secondary education	Vocat. education	Tertiary education	
13.2%	58.5%	11.3%	17.0%	16.0%	52.7%	20.1%	11.2%	20.3%	53.7%	13.6%	12.4%	15.5%	57.8%	20.0%	6.7%	0.55
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		<0.001
66.0%		34.0%		87.0%		13.0%		91.5%		8.5%		93.3%		6.7%		
Family members 4.5±0.2 persons				Family members 4.3±0.1 persons				Family members 4.2±0.1 persons				Family members 4.1±0.2 persons				0.71

Family members working at the farm 2.3±0.1 persons		Family members working at the farm 2.2±0.03 persons		Family members working at the farm 2.2±0.03 persons		Family members working at the farm 2.4±0.1 persons		0.003
Farm worker employment 75.5%	No farm worker employment 24.5%	Farm worker employment 40.2%	No farm worker employment 59.8%	Farm worker employment 24.3%	No farm worker employment 75.7%	Farm worker employment 13.3%	No farm worker employment 86.7%	<0.001

1. Classification according to the European Food Safety Authority system (European Food Safety Authority. Scientific opinion on the welfare risks related to the farming of sheep for wool, meat and milk production. *EFSA J.* **2014**, *12*, 3933-4060.

2. Education: the highest level of education received is noted.

3. Vocational.

Table S5. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with application of machine- or hand-milking in the farms.

Farmers applying machine-milking in the farm				Farmers applying hand-milking in the farm				<i>P</i>
<i>(n = 321)</i>				<i>(n = 119)</i>				
Male		Female		Male		Female		0.33
92.5%		7.5%		95.1%		4.9%		
Mean age				Mean age				<0.001
45.6±0.6 years				50.8±1.1 years				
Mean farming experience				Mean farming experience				<0.001
21.9±0.9 years				30.5±1.4 years				
Full-time		Part-time		Full-time		Part-time		0.99
89.4%		10.6%		89.4%		10.6%		
Daily time spent at the farm				Daily time spent at the farm				<0.001
11.2±0.2 hours				12.9±0.3 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.004
14.3%	54.5%	17.8%	13.4%	25.2%	53.7%	13.0%	8.1%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.004
84.1%		15.9%		94.3%		5.7%		
Family members				Family members				0.95
4.3±0.1 persons				4.3±0.1 persons				
Family members working at the farm				Family members working at the farm				0.65
2.2±0.02 persons				2.2±0.04 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		<0.001
44.2%		55.8%		12.2%		87.8%)		

1. Education: the highest level of education received is noted.

Table S6. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the number of animals in the farms.

Mean number of animals in farms				<i>P</i>
Male		Female		
308.9±11.9 animals		197.3±6.7 animals		0.012
Age				
<i>r</i> =-0.0317				0.25
Farming experience				
<i>r</i> =-0.0325				0.25
Full-time		Part-time		
307.2±11.9 animals		251.3±35.0 animals		0.12
Daily time spent at the farm				
<i>r</i> =0.1068				0.012
Primary education ¹	Secondary education	Vocational education	Tertiary education	
247.2±23.4 animals	316.2±16.8 animals	308.3±24.7 animals	302.3±26.7 animals	0.17
Farming family tradition		No farming family tradition		
302.8±11.9 animals		291.7±34.1 animals		0.74
Family members				
<i>r</i> =0.1185				0.006
Family members working at the farm				
<i>r</i> =-0.0558				0.12
Farm worker employment		No farm worker employment		
414.5±22.4 animals		239.4±10.8 animals		<0.001

1. Education: the highest level of education received is noted.

Table S7. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the breed of animals in the farms.

Farmers with imported animal breeds				Farmers with indigenous animal breeds				P
in the farm (n = 184)				in the farm (n = 260)				
Male		Female		Male		Female		0.87
93.5%		6.5%		93.1%		6.9%		
Mean age				Mean age				<0.001
44.4±0.8 years				48.9±0.8 years				
Mean farming experience				Mean farming experience				<0.001
20.2±1.1 years				27.2±1.0 years				
Full-time		Part-time		Full-time		Part-time		0.27
87.5%		12.5%		90.8%		9.2%		
Daily time spent at the farm				Daily time spent at the farm				0.093
11.3±0.3 hours				12.0±0.2 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.17
16.3%	50.0%	20.7%	13.0%	18.1%	57.3%	13.5%	11.1%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.26
84.8%		15.2%		88.5%		11.5%		
Family members				Family members				0.45
4.3±0.1 persons				4.2±0.1 persons				
Family members working at the farm				Family members working at the farm				0.95
2.2±0.03 persons				2.2±0.03 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		<0.001
44.6%		55.4%		28.8%		71.2%		

1. Education: the highest level of education received is noted.

Table S8. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the application of quarantine measures for animals newly entering into the farms.

Farmers applying quarantine measures				Farmers not applying quarantine measures				P
in the farm (n = 374)				in the farm (n = 70)				
Male		Female		Male		Female		0.16
92.5%		7.5%		97.1%		2.9%		
Mean age				Mean age				0.11
46.6±0.6 years				49.1±1.6 years				
Mean farming experience				Mean farming experience				0.002
23.3±0.8 years				29.7±2.0 years				
Full-time		Part-time		Full-time		Part-time		0.31
88.8%		11.2%		92.9%		7.1%		
Daily time spent at the farm				Daily time spent at the farm				0.98
11.7±0.2 hours				11.7±0.5 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.44
18.2%	53.5%	15.8%	12.5%	12.8%	58.6%	20.0%	8.6%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.22
86.1%		13.9%		91.4%		8.6%		
Family members				Family members				0.46
4.3±0.1 persons				4.3±0.2 persons				
Family members working at the farm				Family members working at the farm				0.25
2.2±0.02 persons				2.3±0.1 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		<0.001
39.3%		60.7%		14.3%		85.7%		

1. Education: the highest level of education received is noted.

Table S9. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the number of occasions in which cleaning and disinfection procedures were performed at the farms annually.

Mean number of occasions in which cleaning and disinfection procedures were performed at the farms annually				<i>P</i>
Male		Female		
3.4±0.2 occasions		3.5±0.2 occasions		0.85
Age				
<i>r</i> =-0.0793				0.048
Farming experience				
<i>r</i> =-0.1365				0.002
Full-time		Part-time		
3.4±0.2 occasions		3.1±0.4 occasions		0.56
Daily time spent at the farm				
<i>r</i> =-0.0420				0.19
Primary education ¹	Secondary education	Vocational education	Tertiary education	
2.9±0.4 occasions	3.9±0.3 occasions	2.9±0.4 occasions	2.7±0.4 occasions	0.043
Farming family tradition		No farming family tradition		
3.2±0.2 occasions		5.0±0.5 occasions		<0.001
Family members				
<i>r</i> =0.0363				0.22
Family members working at the farm				
<i>r</i> =0.0491				0.15
Farm worker employment		No farm worker employment		
3.6±0.3 occasions		3.3±0.2 occasions		0.32

1. Education: the highest level of education received is noted.

Table S10. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with performing laboratory evaluation of feedstuffs and water provided to the animals in the farms.

Farmers performing laboratory evaluation of feedstuffs and water provided to animals (<i>n</i> = 134)				Farmers not performing laboratory evaluation of feedstuffs and water provided to animals (<i>n</i> = 310)				<i>P</i>
Male		Female		Male		Female		0.66
94.0%		6.0%		92.9%		7.1%		
Mean age				Mean age				0.24
46.0±1.0 years				47.4±0.7 years				
Mean farming experience				Mean farming experience				<0.001
23.0±1.4 years				26.0±0.9 years				
Full-time		Part-time		Full-time		Part-time		0.46
91.0%		9.0%		88.7%		11.3%		
Daily time spent at the farm				Daily time spent at the farm				0.31
11.4±0.4 hours				11.8±0.2 hours				
Primary education ¹	Secondary education	Voca tional education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.079
11.9%	62.7%	13.5%	11.9%	19.7%	50.7%	17.7%	11.9%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.51
79.9%		20.1%		90.0%		10.0%		
Family members				Family members				0.26
4.2±0.1 persons				4.3±0.1 persons				
Family members working at the farm				Family members working at the farm				0.54
2.2±0.03 persons				2.2±0.02 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		<0.001
50.8%		49.2%		42.4%		57.6%		

1. Education: the highest level of education received is noted.

Table S11. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the use of ultrasonographic examination for pregnancy diagnosis in the farms.

Farmers using ultrasonographic examination for pregnancy diagnosis in the farm (<i>n</i> = 139)				Farmers not using ultrasonographic examination for pregnancy diagnosis in the farm (<i>n</i> = 305)				<i>P</i>
Male		Female		Male		Female		0.33
95.0%		5.0%		92.5%		7.5%		
Mean age				Mean age				<0.001
43.3±0.9 years				48.7±0.7 years				
Mean farming experience				Mean farming experience				<0.001
17.9±1.3 years				27.6±0.9 years				
Full-time		Part-time		Full-time		Part-time		0.45
87.8%		12.2%		90.2%		9.8%		
Daily time spent at the farm				Daily time spent at the farm				0.001
10.7±0.4 hours				12.2±0.2 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.26
12.2%	56.1%	18.0%	13.7%	19.7%	53.4%	15.7%	11.2%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		<0.001
73.4%		26.6%		93.1%		6.9%		
Family members				Family members				0.18
4.4±0.1 persons				4.2±0.1 persons				
Family members working at the farm				Family members working at the farm				0.55
2.2±0.04 persons				2.2±0.02 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		<0.001
47.5%		52.5%		29.8%		70.2%		

1. Education: the highest level of education received is noted.

Table S12. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with application of anti-clostridial vaccination in the farms.

Farmers performing anti-clostridial vaccination to the animals (<i>n</i> = 434)				Farmers not performing anti-clostridial vaccination to the animals (<i>n</i> = 10)				<i>P</i>
Male		Female		Male		Female		0.39
93.1%		6.9%		100.0%		0.0%		
Mean age				Mean age				0.010
46.8±0.6 years				56.7±4.2 years				
Mean farming experience				Mean farming experience				0.009
24.0±0.8 years				37.5±6.1 years				
Full-time		Part-time		Full-time		Part-time		0.95
89.4%		10.62%		90.0%		10.0%		
Daily time spent at the farm				Daily time spent at the farm				0.11
11.7±0.2 hours				9.7±1.4 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.35
17.7%	53.7%	16.6%	12.0%	0.0%	80.0%	10.0%	10.0%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.011
73.4%		26.6%		60.0%		40.0%		
Family members				Family members				0.55
4.3±0.1 persons				4.0±0.3 persons				
Family members working at the farm				Family members working at the farm				0.46
2.2±0.02 persons				2.3±0.1 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		0.72
35.5%		64.5%		30.0%		70.0%		

1. Education: the highest level of education received is noted.

Table S13. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with administration of ‘dry-ewe’ treatment at the end of the lactation period in the farms.

Farmers administering ‘dry-ewe’ treatment at the end of the lactation period (<i>n</i> = 68)				Farmers not administering ‘dry-ewe’ treatment at the end of the lactation period (<i>n</i> = 376)				<i>P</i>
Male		Female		Male		Female		
94.1%		5.9%		93.1%		6.9%		0.75
Mean age				Mean age				
44.9±1.4 years				47.4±0.6 years				0.12
Mean farming experience				Mean farming experience				
16.5±1.9 years				25.7±0.8 years				<0.001
Full-time		Part-time		Full-time		Part-time		
83.8%		16.2%		90.4%		9.6%		0.10
Daily time spent at the farm				Daily time spent at the farm				
10.6±0.5 hours				11.9±0.2 hours				0.011
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	
11.8%	50.0%	17.6%	20.6%	18.4%	55.1%	16.2%	10.3%	0.078
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		
73.5%		16.5%		89.4%		10.6%		<0.001
Family members				Family members				
4.2±0.2 persons				4.3±0.1 persons				0.49
Family members working at the farm				Family members working at the farm				
2.3±0.1 persons				2.2±0.02 persons				0.33
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		
45.6%		54.4%		33.5%		66.5%		0.055

1. Education: the highest level of education received is noted.

Table S14. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the method of calculation of bodyweight for administration of drugs to animals in the farms.

Farmers estimating bodyweight of animals				Farmers weighing animals				<i>P</i>
before drug administration (<i>n</i> = 344)				before drug administration (<i>n</i> = 100)				
Male		Female		Male		Female		0.91
93.3%		6.7%		93.0%		7.0%		
Mean age				Mean age				0.016
46.3±0.6 years				49.6±1.3 years				
Mean farming experience				Mean farming experience				<0.001
22.6±0.8 years				30.3±1.8 years				
Full-time		Part-time		Full-time		Part-time		0.83
89.2%		10.8%		90.0%		10.0%		
Daily time spent at the farm				Daily time spent at the farm				0.92
11.7±0.2 hours				11.7±0.4 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	<0.001
21.5%	50.0%	17.4%	11.1%	3.0%	69.0%	13.0%	15.0%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.72
86.6%		13.4%		88.0%		12.0%		
Family members				Family members				0.007
4.4±0.1 persons				3.9±0.1 persons				
Family members working at the farm				Family members working at the farm				0.89
2.2±0.02 persons				2.2±0.04 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		0.13
37.2%		63.8%		29.0%		71.0%		

1. Education: the highest level of education received is noted.

Table S15. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with keeping prescribed withdrawal periods after drug administration in the farms.

Farmers keeping prescribed withdrawal periods				Farmers not keeping prescribed withdrawal periods				<i>P</i>
after drug administration (<i>n</i> = 438)				after drug administration (<i>n</i> = 6)				
Male		Female		Male		Female		0.33
93.4%		6.6%		83.3%		16.7%		
Mean age				Mean age				0.36
47.1±0.6 years				42.5±4.4 years				
Mean farming experience				Mean farming experience				0.92
24.3±0.8 years				25.0±2.3 years				
Full-time		Part-time		Full-time		Part-time		0.63
89.5%		10.5%		83.3%		16.7%		
Daily time spent at the farm				Daily time spent at the farm				0.75
11.7±0.2 hours				11.2±1.9 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.17
17.4%	54.8%	16.2%	11.6%	16.7%	16.7%	33.3%	33.3%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.34
86.8%		13.2%		100.0%		0.0%		
Family members				Family members				0.92
4.3±0.1 persons				4.3±0.8 persons				
Family members working at the farm				Family members working at the farm				0.08
2.2±0.02 persons				2.5±0.2 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		0.33
35.6%		64.4%		16.7%		83.3%		

1. Education: the highest level of education received is noted.

Table S16. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with provision of care to the newborns in the farms.

Farmers providing care to newborns (<i>n</i> = 403)				Farmers not providing care to newborns (<i>n</i> = 41)				<i>P</i>
Male		Female		Male		Female		
93.1%		6.9%		95.1%		4.9%		0.35
Mean age				Mean age				
46.6±0.6 years				51.4±1.6 years				0.014
Mean farming experience				Mean farming experience				
23.8±0.8 years				29.6±0.2 years				0.028
Full-time		Part-time		Full-time		Part-time		
89.1%		10.9%		97.6%		2.4%		0.075
Daily time spent at the farm				Daily time spent at the farm				
11.6±0.2 hours				12.5±0.6 hours				0.20
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	
17.1%	55.1%	15.6%	12.2%	19.5%	46.3%	24.4%	9.8%	0.46
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		
86.6%		13.4%		90.2%		9.8%		0.51
Family members				Family members				
4.3±0.1 persons				3.9±0.2 persons				0.11
Family members working at the farm				Family members working at the farm				
2.2±0.02 persons				2.2±0.1 persons				0.81
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		
36.5%		63.5%		24.4%		75.6%		0.17

1. Education: the highest level of education received is noted.

Table S17. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the maintenance of a colostrum bank in the farms.

Farmers maintaining a colostrum bank				Farmers not maintaining a colostrum bank				P
in the farm (n = 58)				in the farm (n = 386)				
Male		Female		Male		Female		0.61
94.8%		5.2%		93.0%		7.0%		
Mean age				Mean age				0.016
43.5±1.5 years				47.5±0.6 years				
Mean farming experience				Mean farming experience				0.003
18.5±2.0 years				25.2±0.8 years				
Full-time		Part-time		Full-time		Part-time		0.078
82.8%		17.2%		90.4%		9.6%		
Daily time spent at the farm				Daily time spent at the farm				0.026
10.6±0.5 hours				11.9±0.2 hours				
Primary education ¹	Secondary education	Vocational education	Tertiary education	Primary education	Secondary education	Vocational education	Tertiary education	0.050
10.3%	70.7%	8.7%	10.3%	18.4%	51.8%	17.6%	12.2%	
Farming family tradition		No farming family tradition		Farming family tradition		No farming family tradition		0.023
79.3%		20.7%		88.3%		11.7%		
Family members				Family members				0.99
4.3±0.2 persons				4.3±0.1 persons				
Family members working at the farm				Family members working at the farm				0.76
2.2±0.1 persons				2.2±0.02 persons				
Farm worker employment		No farm worker employment		Farm worker employment		No farm worker employment		0.19
43.1%		56.9%		34.2%		65.5%		

1. Education: the highest level of education received is noted.

Table S18. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the number of veterinary visits to the farms annually.

Mean number of veterinary visits to farm annually				<i>P</i>
Male		Female		
7.2±0.3 visits		8.6±0.3 visits		0.28
Age				
<i>r</i> =-0.0361				0.22
Farming experience				
<i>r</i> =-0.1268				0.004
Full-time		Part-time		
7.4±0.3 visits		6.6±0.8 visits		0.44
Daily time spent at the farm				
<i>r</i> =-0.0218				0.32
Primary education ¹	Secondary education	Vocational education	Tertiary education	
9.5±0.9 visits	6.8±0.4 visits	7.0±0.7 visits	7.0±0.8 visits	0.017
Farming family tradition		No farming family tradition		
7.3±0.3 visits		7.4±0.8 visits		0.99
Family members				
<i>r</i> =0.0133				0.39
Family members working at the farm				
<i>r</i> =0.0453				0.17
Farm worker		No farm worker		
employment		employment		
8.6±0.6 visits		6.6±0.4 visits		0.003

1. Education: the highest level of education received is noted.

Table S19. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the mean milk production per ewe or doe during the preceding season in the farms.

Mean milk production per animal				P
Male		Female		
205.6±4.8 L		205.9±5.1 L		0.98
Age				
r=-0.1166				0.007
Farming experience				
r=-0.1725				<0.001
Full-time		Part-time		
204.3±4.9 L		217.4±15.0 L		0.38
Daily time spent at the farm				
r=0.0520				0.14
Primary education ¹	Secondary education	Vocational education	Tertiary education	
208.8±11.0 L	200.3±6.0 L	221.1±13.2 L	204.0±13.6 L	0.45
Farming family tradition		No farming family tradition		
203.5±5.0 L		219.7±12.1 L		0.24
Family members				
r=-0.0354				0.23
Family members working at the farm				
r=0.0145				0.38
Farm worker		No farm worker		
employment		employment		
234.4±7.5 L		189.9±5.7 L		<0.001

1. Education: the highest level of education received is noted.

Table S20. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the fat content of the bulk-tank milk in the farms.

Fat content of the bulk-tank milk				P
Male		Female		
5.8%±0.1%		5.7%±0.1%		1.00
Age				
r=0.0153				0.37
Farming experience				
r=0.0621				0.096
Full-time		Part-time		
5.8%±0.1%		5.5%±0.2%		0.12
Daily time spent at the farm				
r=0.0243				0.30
Primary education ¹	Secondary education	Vocational education	Tertiary education	
5.9%±0.1%	5.7%±0.1%	5.6%±0.1%	5.8%±0.2%	0.070
Farming family tradition		No farming family tradition		
5.8%±0.1%		5.7%±0.1%		0.66
Family members				
r=0.0520				0.14
Family members working at the farm				
r=0.0907				0.028
Farm worker		No farm worker		
employment		employment		
5.7%±0.1%		5.8%±0.1%		0.23

1. Education: the highest level of education received is noted.

Table S21. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the protein content of the bulk-tank milk in the farms.

Protein content of the bulk-tank milk				P
Male		Female		
4.1%±0.03%		4.1%±0.04%		0.68
Age				
r=0.0235				0.31
Farming experience				
r=-0.0504				0.14
Full-time		Part-time		
4.1%±0.03%		4.0%±0.1%		0.41
Daily time spent at the farm				
r=-0.0863				0.035
Primary education ¹	Secondary education	Vocational education	Tertiary education	
4.2%±0.1%	4.0%±0.04%	4.0%±0.04%	4.2%±0.1%	0.016
Farming family tradition		No farming family tradition		
4.1%±0.03%		4.2%±0.1%		0.51
Family members				
r=0.0573				0.11
Family members working at the farm				
r=0.0458				0.17
Farm worker		No farm worker		
employment		employment		
4.2%±0.04%		4.1%±0.04%		0.021

1. Education: the highest level of education received is noted.

Table S22. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the mean number of lambs or kids born per ewe or doe during the preceding season in the farms.

Mean number of newborns per female animal				<i>P</i>
Male		Female		
1.3±0.01 newborns		1.3±0.01 newborns		0.76
Age				
<i>r</i> =-0.0840				0.039
Farming experience				
<i>r</i> =-0.1291				0.003
Full-time		Part-time		
1.3±0.01 newborns		1.4±0.03 newborns		<0.001
Daily time spent at the farm				
<i>r</i> =0.1234				0.004
Primary education ¹	Secondary education	Vocational education	Tertiary education	
1.3±0.02 newborns	1.3±0.01 newborns	1.3±0.02 newborns	1.3±0.02 newborns	0.97
Farming family tradition		No farming family tradition		
1.3±0.01 newborns		1.3±0.02 newborns		0.46
Family members				
<i>r</i> =-0.0416				0.19
Family members working at the farm				
<i>r</i> =0.0010				0.49
Farm worker employment		No farm worker employment		
1.4±0.02 newborns		1.3±0.01 newborns		0.005

1. Education: the highest level of education received is noted.

Table S23. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the mean body condition score of animals examined in the farms.

Mean body condition score (1-5)				<i>P</i>
Male		Female		
2.4±0.02		2.4±0.02		0.93
Age				
<i>r</i> =-0.1994				<0.001
Farming experience				
<i>r</i> =0.0736				0.061
Full-time		Part-time		
2.4±0.02		2.5±0.1		0.039
Daily time spent at the farm				
<i>r</i> =-0.0133				0.39
Primary education ¹	Secondary education	Vocational education	Tertiary education	
2.5±0.03	2.4±0.02	2.4±0.03	2.4±0.04	0.86
Farming family tradition		No farming family tradition		
2.4±0.02		2.5±0.04		0.50
Family members				
<i>r</i> =0.0077				0.44
Family members working at the farm				
<i>r</i> =-0.0079				0.43
Farm worker employment		No farm worker employment		
2.5±0.03		2.4±0.02		0.16

1. Education: the highest level of education received is noted.

Table S24. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the incidence risk of clinical mastitis during the preceding period in the farms.

Incidence risk of clinical mastitis				<i>P</i>
Male		Female		
5.2%±0.6%		6.1%±0.6%		0.68
Age				
<i>r</i> =0.0356				0.23
Farming experience				
<i>r</i> =0.0398				0.20
Full-time		Part-time		
5.2%±0.6%		5.2%±1.1%		0.99
Daily time spent at the farm				
<i>r</i> =0.0188				0.35
Primary education ¹	Secondary education	Vocational education	Tertiary education	
6.7%±1.1%	4.2%±0.6%	4.7%±0.7%	5.1%±1.9%	0.19
Farming family tradition		No farming family tradition		
5.2%±0.6%		5.4%±1.9%		0.92
Family members				
<i>r</i> =0.0297				0.27
Family members working at the farm				
<i>r</i> =0.0397				0.20
Farm worker employment		No farm worker employment		
5.8%±1.2%		4.9%±0.6%		0.45

1. Education: the highest level of education received is noted.

Table S25. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the somatic cell counts in the bulk-tank milk in the farms.

Somatic cell counts in the bulk-tank milk				<i>P</i>
Male		Female		
0.575×10 ⁶ cells mL ⁻¹		0.439×10 ⁶ cells mL ⁻¹		0.048
Age				
<i>r</i> =0.0311				0.28
Farming experience				
<i>r</i> =0.0511				0.14
Full-time		Part-time		
0.575×10 ⁶ cells mL ⁻¹		0.487×10 ⁶ cells mL ⁻¹		0.14
Daily time spent at the farm				
<i>r</i> =0.1325				0.003
Primary education ¹	Secondary education	Vocational education	Tertiary education	
0.587×10 ⁶ cells mL ⁻¹	0.615×10 ⁶ cells mL ⁻¹	0.524×10 ⁶ cells mL ⁻¹	0.435×10 ⁶ cells mL ⁻¹	0.004
Farming family tradition		No farming family tradition		
0.564×10 ⁶ cells mL ⁻¹		0.566×10 ⁶ cells mL ⁻¹		0.97
Family members				
<i>r</i> =0.0664				0.081
Family members working at the farm				
<i>r</i> =0.0300				0.26
Farm worker employment		No farm worker employment		
0.576×10 ⁶ cells mL ⁻¹		0.558×10 ⁶ cells mL ⁻¹		0.66

1. Education: the highest level of education received is noted.

Table S26. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the total bacterial counts in the bulk-tank milk in the farms.

Total bacterial counts in the bulk-tank milk				<i>P</i>
Male		Female		
451×10 ³ cfu mL ⁻¹		348×10 ³ cfu mL ⁻¹		0.39
Age				
<i>r</i> =0.0814				0.043
Farming experience				
<i>r</i> =0.0887				0.031
Full-time		Part-time		
440×10 ³ cfu mL ⁻¹		470×10 ³ cfu mL ⁻¹		0.79
Daily time spent at the farm				
<i>r</i> =0.1067				0.012
Primary education ¹	Secondary education	Vocational education	Tertiary education	
499×10 ³ cfu mL ⁻¹	494×10 ³ cfu mL ⁻¹	338×10 ³ cfu mL ⁻¹	398×10 ³ cfu mL ⁻¹	0.096
Farming family tradition		No farming family tradition		
447×10 ³ cfu mL ⁻¹		420×10 ³ cfu mL ⁻¹		0.78
Family members				
<i>r</i> =0.0229				0.32
Family members working at the farm				
<i>r</i> =0.1016				0.016
Farm worker employment		No farm worker employment		
455×10 ³ cfu mL ⁻¹		437×10 ³ cfu mL ⁻¹		0.79

cfu: colony-forming units.

1. Education: the highest level of education received is noted.

Table S27. Socio-demographic characteristics of small ruminant farmers in Greece ($n = 444$), in accord with the incidence risk of deaths of adult animals during the preceding season in the farms.

Incidence risk of deaths of adult animals				<i>P</i>
Male		Female		0.25
6.9%±0.5%		4.9%±0.3%		
Age				0.004
<i>r</i> =0.1254				
Farming experience				0.29
<i>r</i> =0.0257				
Full-time		Part-time		0.055
7.1%±0.5%		4.4%±0.5%		
Daily time spent at the farm				0.38
<i>r</i> =−0.0150				
Primary education ¹	Secondary education	Vocational education	Tertiary education	0.69
7.8%±1.5%	6.5%±0.4%	6.8%±0.5%	6.4%±1.0%	
Farming family tradition		No farming family tradition		0.83
6.8%±0.4%		7.1%±1.1%		
Family members				0.042
<i>r</i> =−0.0822				
Family members working at the farm				0.37
<i>r</i> =0.0156				
Farm worker employment		No farm worker employment		0.89
6.9%±0.8%		6.8%±0.5%		

1. Education: the highest level of education received is noted.