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Project: Sustainable Management of Pastures in Georgia to Demonstrate Climate Change Mitigation
and Adaptation Benefits and Dividends for Local Communities

Research Analysis for Identifying Veterinary Needs and Planning Veterinary Service for Tush Shepherds

Prepared by the Association Management Center (AMC)

Tbilisi-Akhmeta-Telavi-Dedoplistskaro

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The study is being conducted within the EU-funded project Sustainable Management of Pastures in Georgia to Demonstrate Climate Change Mitigation and Adaptation Benefits and Dividends for Local Communities implemented by the UNDP. Within this project Biological Farming Association Elkana conducted study - Local Livelihood Assessment of Tush Shepherds Traditionally Using Territory of Vashlovani Protected Areas for Winter Pastures in Georgia. Based on this study findings (December 2013 –April 2014) the need for a number of veterinary aspects was identified. The study showed that the unified veterinary service system was not available for sheep breeders and the issue required immediate attention.

The study suggests that:

1. sheep owners carry out most of the non-mandatory vaccinations or other preventive activities without veterinary surveillance. They buy drugs by themselves to treat their animals on their own;
2. sheep breeders consider that they are well aware of veterinary issues and use a veterinarian's qualified care only in critical cases;
3. sheep owners complain about low-quality Russian drugs, which are not effective, and disregard of the drug storage requirements. Due to this fact they have to buy drugs twice or three times that increases expenses;
4. sheep breeders who live far from the administration center express their dissatisfaction about transportation of the veterinarian;
5. many sheep shepherds mention the problem of unavailability of the veterinary services.

The Association Management Center (AMC) within a small grant agreement concluded with the UNDP conducted a study that aims at comprehensively investigating veterinary problems and needs of Tush shepherds, using the Vashlovani Protected Areas as winter pastures, revealed by Elkana. As a result of it, information was obtained through interviews and needs for veterinary services were determined. The study was conducted in Kakheti Region and all stakeholders were interviewed/involved in it.

On the one hand, this document analyzes the study to identify veterinary problems and needs of sheep breeders and shepherds who own the sheep (hereinafter the "Sheep breeders") and on the other hand, determines the quality of the current veterinary infrastructure and veterinary services in municipalities.

Based on the obtained information detailed analysis of the study was conducted. The analysis revealed sheep breeders' veterinary needs and requirements, situation in the veterinary sphere and the level of preparedness of veterinarians that will facilitate proper planning and implementation of activities to settle the above-mentioned problems:

1. determine location and types of veterinary services required by Tush sheep breeders (collect information on allotment of potential area through consultations with local self-governments);
2. identify other potential clients except sheep breeders (e.g., cattle farmers in target municipalities);
3. support mobilization of stakeholders and resource concentration to solve Tush sheep breeders' veterinary problems (the Ministry of Agriculture and its affiliated agencies, local authorities, sheep breeders, veterinaries, donors, international organizations, etc.);
4. support budgeting activities required for formation of veterinary services and identifying action period;
5. determine service providers and their competences to ensure sustainability of the project/veterinary service.

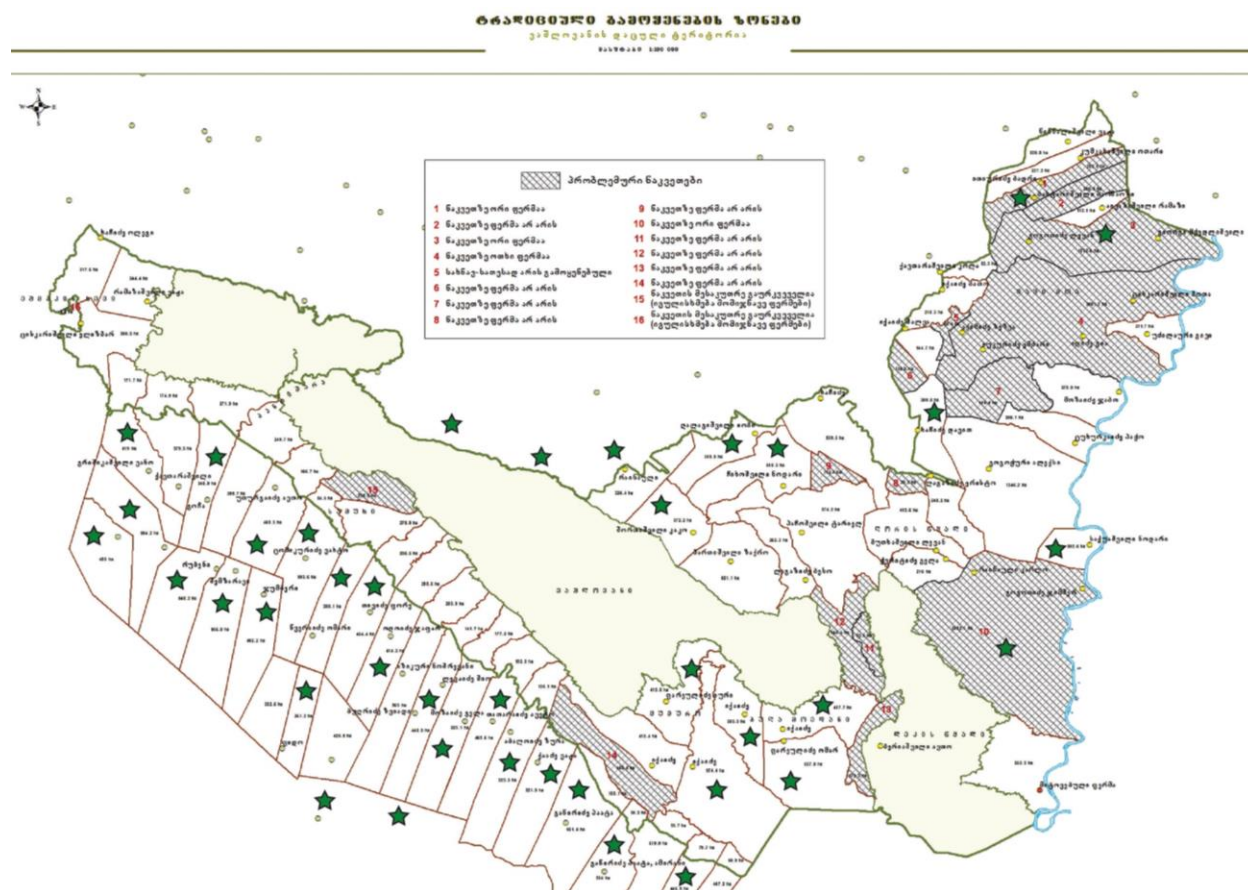
Study Area

The geographical area of the study covers seasonal pastures, Tusheti Protected Areas, Vashlovani State Reserve, and the territory of sheep movement routes. In spring (from the beginning of March to the end of May) sheep are moved to summer pastures in Tusheti and in autumn (from the end of September to the end of November) – to winter pastures in Vashlovani. This approximately 350 km sheep movement route covers territories of four municipalities of Kakheti Region: Akhmeta, Telavi, Gurjaani and Dedoplistskaro.

In the above-mentioned area approximately 97 Tush sheep breeders move per year (the information was provided by Tush Sheep Breeders' Association). The total number of sheep is about 60000-70000.

56 Tush sheep owners were interviewed who own 40897 sheep. Due to the grass problem in Vashlovani Protected Areas, sheep breeders try to enter this area later or refrain from entering it. Due to the fact that sheep breeders did not enter the Vashlovani Protected Areas and were scattered throughout the territory adjacent to the sheep route, it was difficult to find respondents. It was planned to interview 70 sheep owners, although because of lack of time and unjustified increase of logistical costs, 56 sheep owners and shepherds who own the sheep were interviewed. As a result of it, more than half of Tush sheep breeders were interviewed that is enough to make an analysis of the study findings.

Geographical areas of the locations of the Tush shepherds in Vashlovani Protected Areas are marked with stars on the map below.



The map shows the geographical coverage of the enquired Tush sheep breeders. There are 70 pasture land farms of Tush shepherds within and adjacent territory of the Vashlovani protected area. Before the interview it was planned to visit and interview 50 pastureland farms. Ultimately, out of total respondents 39 pasturelands were identified and located on the map. Due to the fact that sheep owners were not in their winter pasture land farms in Vashlovani Protected Areas, interviewers carried maps and asked the respondents to identify their locations on the map. It also appeared that some sheep owners used several places of the pasture areas segmented on the map (number of sheep breeders use different pastures every year).

Interviewing Techniques and Target Groups

The interview was conducted by two experts and two interviewers in three directions. Three types of questionnaires were developed: question points for the discussions with stakeholders, enquiry paper for the sheep owners and shepherds who own the sheep and enquiry paper for the professional veterinarians (Appendices: 1.Questionnaire_VET_ENG; 2.Questionnaire_TSO_ENG; 3.ST_meeting_topics_ENG). Questionnaires were elaborated by two research experts and two

veterinarians while interviews were conducted by two interviewers. Enquiries were conducted individually by face-to-face interview method. Questionnaires included structured and semi-structured), open-ended and close-ended questions.

The first interviews with the stakeholders were conducted through semi-structured open-ended questions in focus groups. Participants could actively participate in discussions in a round table format. The person responsible for the study facilitated the process in order to receive maximum information from participants. Discussions were recorded using voice recorder to analyze them later.

In order to determine (1) how qualified veterinary services are provided for small ruminants; (2) the need for professional veterinary service by sheep breeders; (3) impact of waste left after the use of animal care products on the environment; (4) attitudes of public institutions to veterinary practice and (5) changes in veterinary expected in the near future, the following research target groups were identified to be involved in the project:

- Representatives of the National Food Agency;
- Representatives of municipalities, self-governments;
- Extension centers of the Ministry of Agriculture of Georgia;
- Representatives of the Agency of Protected Areas;
- Sheep owners;
- Shepherds who own the sheep;
- Private veterinarians.

Meetings were held in three municipalities (Akhmeta, Telavi and Dedoplistskaro). The total number of attendees was 27. Discussions were held on pre-determined issues. Meeting participants were provided with agendas. Key issues were discussed through open question discussion. Study participants' answers and opinions were recorded using a voice recorder.

Due to the fact that the project implementation period coincides with the process of flock migration, it was important to predetermine sheep breeders' locations to organize meetings. Before the interviews were conducted sheep breeders were contacted, their locations were identified and meetings were planned. Moreover, the sheep breeders were asked to provide other sheep breeders' contact details. Due to the fact that sheep breeders constantly moved on the migration routes, it was difficult to find them. Hence only 56 out of 70 sheep breeders were interviewed.

Twenty private veterinarians from three municipalities: Akhmeta, Telavi and Dedoplistskaro were interviewed as well as research methodology required. 50% of the interviewed veterinarians were from Akhmeta. Due to the fact that traditionally Tush veterinarians provide services to Tush sheep breeders, priority was given to Akhmeta veterinarians when determining target groups. The interview was conducted using open-ended and yes/no and close-ended questions.

Interview Period

Interviews were conducted during a four-week period from October 27 through November 21.

There were no technical flaws in the interview process except the number of respondents decreased due to difficulty to find and their refusal to fill out questionnaires. The number of interviewed people is enough to meet requirements for statistical accuracy.

Implementation of Study Findings

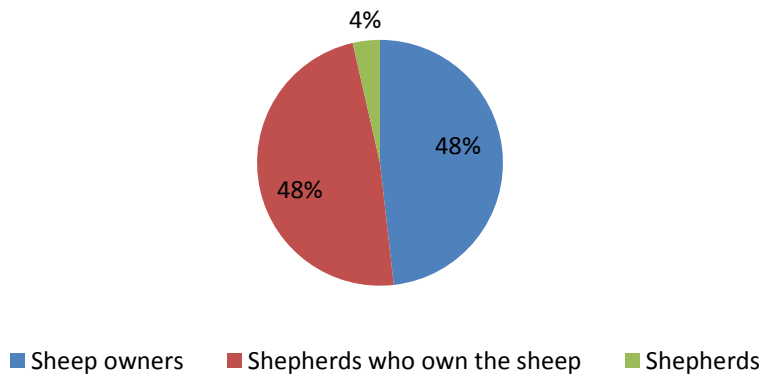
The analysis of study findings will reveal what should be done to ensure availability of complete veterinary care for Tush sheep breeders. Based on the interviews the needs of the respondents will be summarized that will help the AMC veterinarians and experts involved in the project to make recommendations on planning unified veterinary service and prospective veterinary care. The AMC will also use resources of Regional Veterinarians' Associations functioning in six regions and experience gained through collaboration with them that facilitates development of private veterinary practice, elaboration and implementation of preventive service packages for farmers, organizational development and sustainability.

Based on the performed work services required by sheep breeders will be priced, an estimate for infrastructure needed for providing these services will be drawn and a timeframe of project to be implemented for streamlining services will be set. Moreover, study findings will be shared with stakeholders and their participation in development of the needed infrastructure will be determined.

Analysis of Study of Sheep Owners and Shepherds Who Own the Sheep

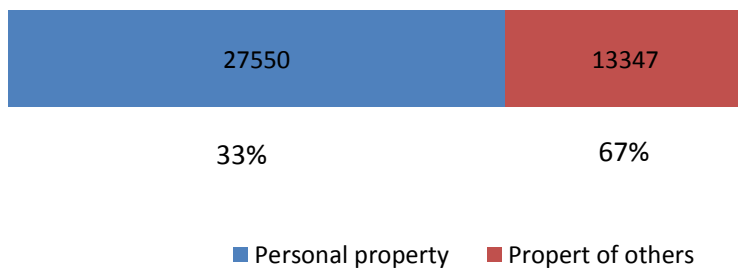
The total number of people interviewed within the project is 56. The interviewed people were categorized in the following groups: (1) owners – people who have sheep but do not shepherd them, 27 persons; (2) shepherds who own the sheep – people who have sheep and shepherd them, 27 persons. Among the interviewed people were those who shepherd their own and other people's sheep in one flock. A few of them do not have sheep and shepherd only other people's sheep but have good experience and before they had their own sheep. The percentage correlation between sheep owners and shepherds who own the sheep is equal – 48% - 48%. Shepherds amount to the rest 4%.

Percentage Distribution of People Interviewed



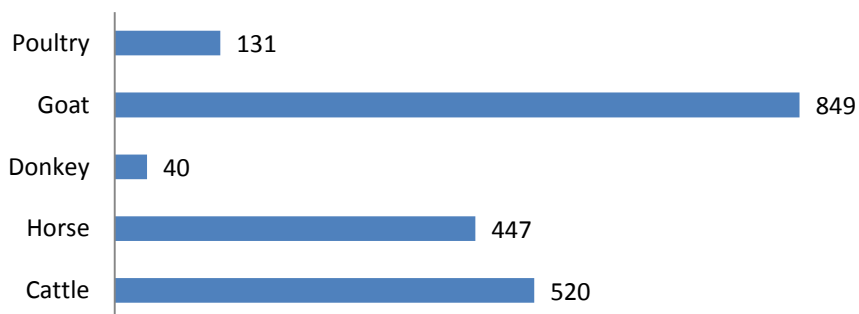
The interviewed people have 40897 sheep. 27550 out of 40897 sheep are their own property, the rest 13347 sheep are other people's property shepherded with their own sheep.

Flock Distribution

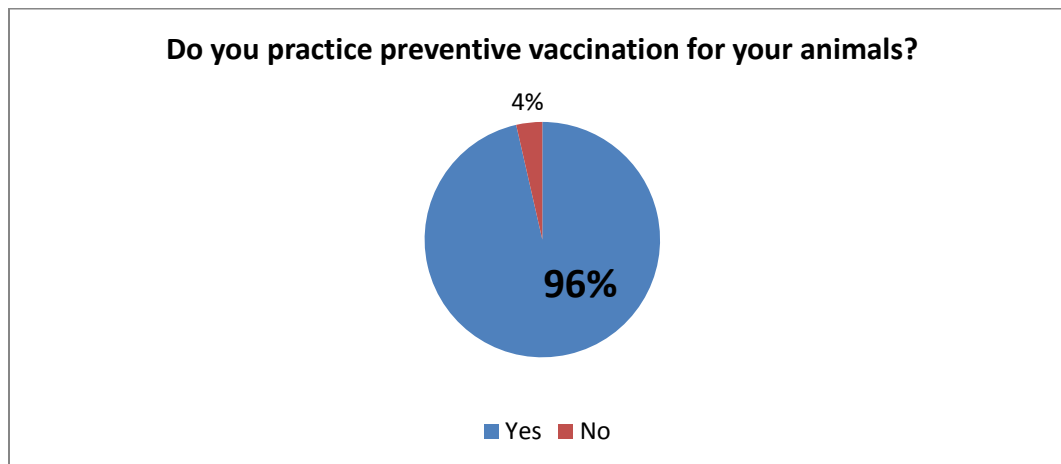


The interviewed people have other domestic animals besides sheep:

Other Animals Owned by Interviewed People

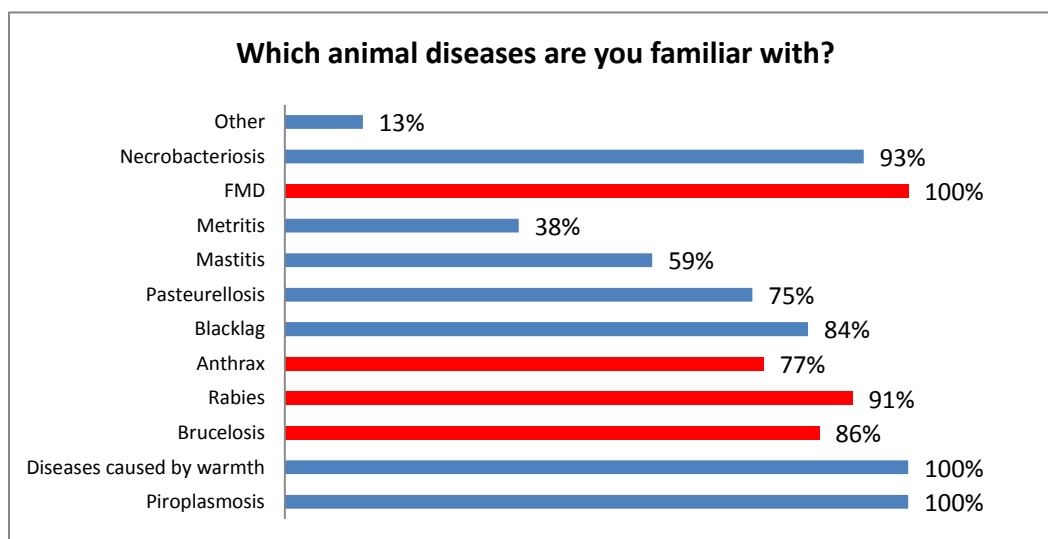


96% of the interviewed people gave a positive response to the question if they ensured preventive vaccination of their animals:



It suggests mental preparedness of the above-mentioned society for receiving veterinary services in exchange for payment.

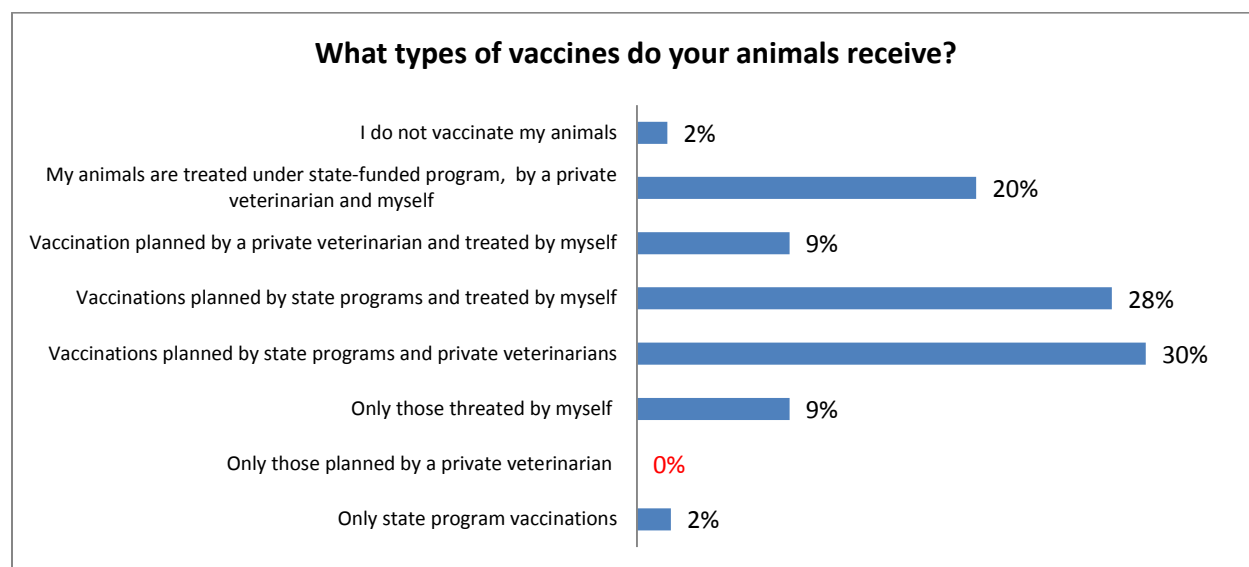
The study also shows which diseases are well-known diseases among sheep breeders.



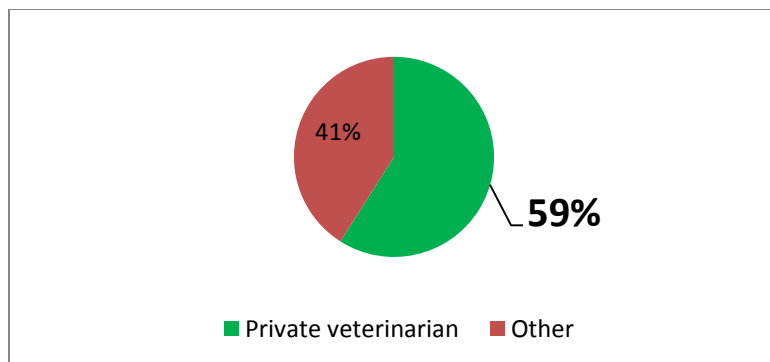
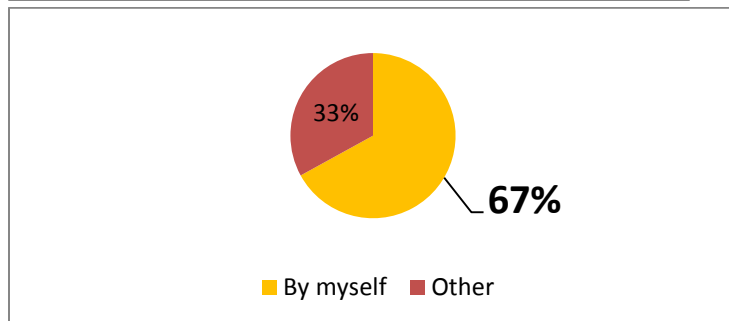
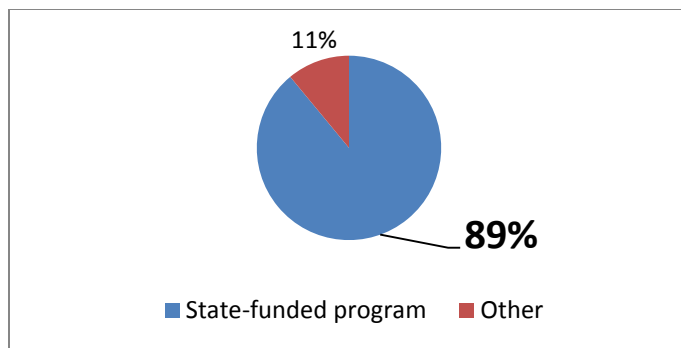
The following disease are indicated in red: FMD, anthrax. Rabies and brucellosis are indicated in red. Vaccination against these diseases are fully covered under state-funded programs. The study suggests that despite efforts made by the government, the rate of informed respondents does not amount to 100%. 23% of the interviewed people do not know about anthrax, 14% of them are not informed about brucellosis and 9% - about rabies. There is a need for raising public awareness on state-funded programs. The sheep breeders mentioned the following sheep diseases: dermatitis, sheep-pox and blindness.

The study enabled us to assess ways of carrying out vaccination of animals. Questions were grouped according to prevention, mandatory, non-mandatory activities and their combination. Mandatory activities are carried out under the state-funded program, non-mandatory – by themselves and with the help of a private veterinarian.

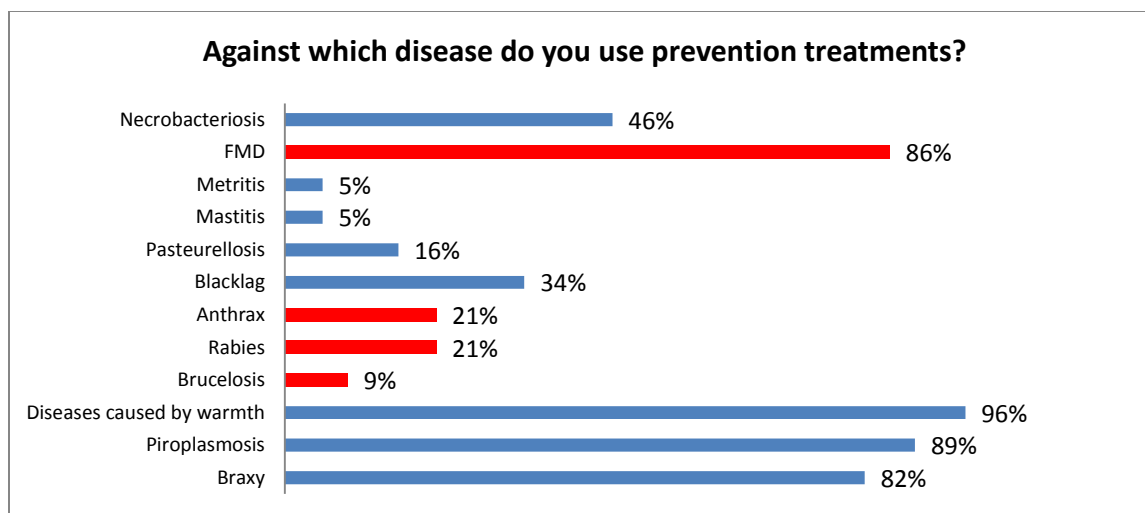
The information that 96% of the interviewed people implement preventive activities may be seemed promising, although practice of implementation of preventive activities and combination of preventive activities are very chaotic and requires proper planning by veterinarians to avoid reverse effects. If we go deeper with additional questions, we will see more clearly the picture of implementation of preventive activities, that combination of vaccinations covered by state-funded programs, scheduled by a private veterinarian and carried out by sheep breeders themselves must have been mentioned in majority of responses. The result - 20% is actually unsatisfactory that may be deemed negative. The situation in relation to other combinations (vaccinations covered under state-funded programs and scheduled by a private veterinarian) is similar. 30% of the interviewed people gave this answer. We should also consider the statement made by 2% of the respondents, who do not vaccinate their animals, 9% - who vaccinate by themselves and the rest 2% - who vaccinate animals only under state-funded program.



Please find alternative charts for the same question: “what types of vaccines do your animals receive?” according to the share of each activity. Namely, it is interesting to determine shares of activities implemented under state-funded programs, by sheep breeders themselves and scheduled by a private veterinarian summed up from different combined responses. 89% of the respondents mentioned that they use activities covered under state-funded program, 67% - vaccinate animals themselves and 59% - use a private veterinary service. As mentioned above, these are summarized data that may be included in one answer or in a combination of several answers.

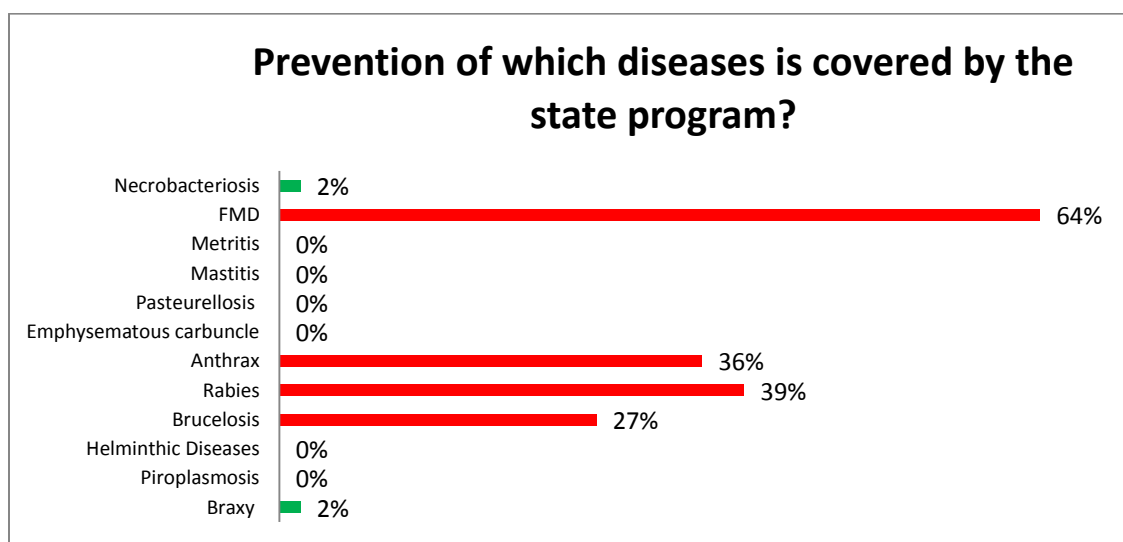


As mentioned above, 96% of interviewed people carry out preventive vaccinations. We can see sheep breeders' practice of carrying out mandatory and non-mandatory vaccinations. Correspondingly, it is interesting to know how sheep owners fight against specific diseases through the above-mentioned different types of vaccinations. The information presented below shows that there are the highest rates of vaccination (above 80%) against four diseases: FMD (86%), diseases caused by warmth (96%), piroplasmosis (89%) and braxy (82%). As for other diseases, preventive measures are not taken and the frequency of activities depends on incidence of diseases or the focus of the disease.

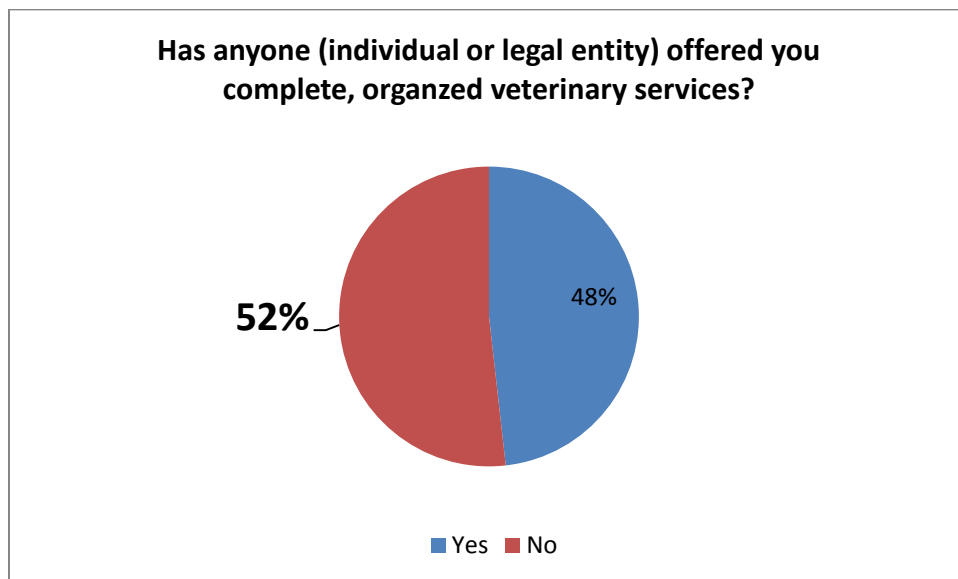


In the above-mentioned chart vaccinations covered by state-funded program are marked in red. It is mandatory to vaccinate all major and small cloven-hoofed animals against FMD. The answers show that 14% of sheep owners do not carry out preventive vaccination against FMD. As for anthrax, animals are vaccinated in the disease focus area. In case of rabies and brucellosis, sample of blood is taken.

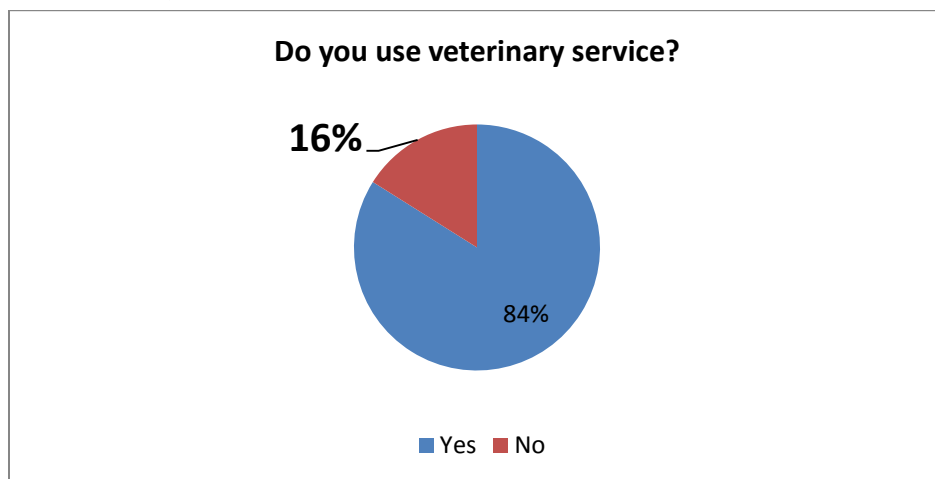
The question related to preventive activities covered by the state-funded program reveals that more information should be provided to sheep breeders. 64% of the respondents know about FMD, although 86% vaccinate their animals against this disease. It is conditioned by the fact that some sheep breeders vaccinate animals themselves and do not use services provided under the state-funded program. The issue related to awareness on anthrax, rabies and brucellosis is very critical. 2% of the respondents mentioned that necrobacteriosis and braxy are covered by state-funded program that is not correct and indicates the need for raising public awareness on non-mandatory preventions and veterinary care.



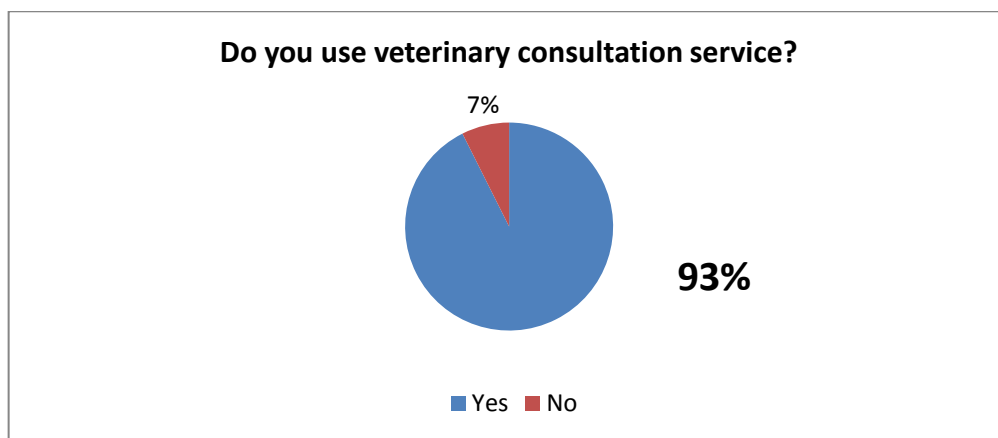
It was especially interesting to find out if there was practice of complete veterinary service or if anyone offered such veterinary service when under the contract service provider- a natural person or legal entity plan and implement all preventive activities and keep records of provided veterinary care, also issue relevant document and is responsible for provided services. There is no organized veterinary care practice among sheep breeders. 52% of the respondents mentioned that no one had offered organized service. 48% said that Kakheti Regional Veterinarians' Association had offered such service, although none of the sheep breeders used it.



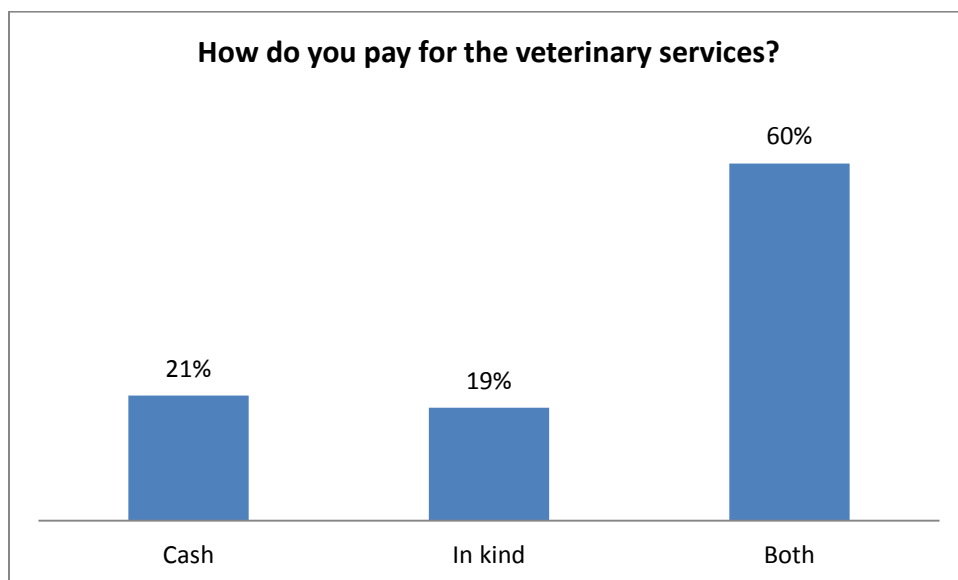
Due to the lack of organized veterinary care for sheep breeders we wanted to find out if they received any veterinary service. 84% of the respondents receive veterinary care that is unorganized, chaotic and informal, 16% of them do not receive it at all.



93% of the respondents mention that they receive veterinary consultations through calling a veterinarian or pharmacy or when a veterinarian visits them. Due to the fact that the number of visits made by a veterinarian is irregular, consultation is provided only in case of critical problem.



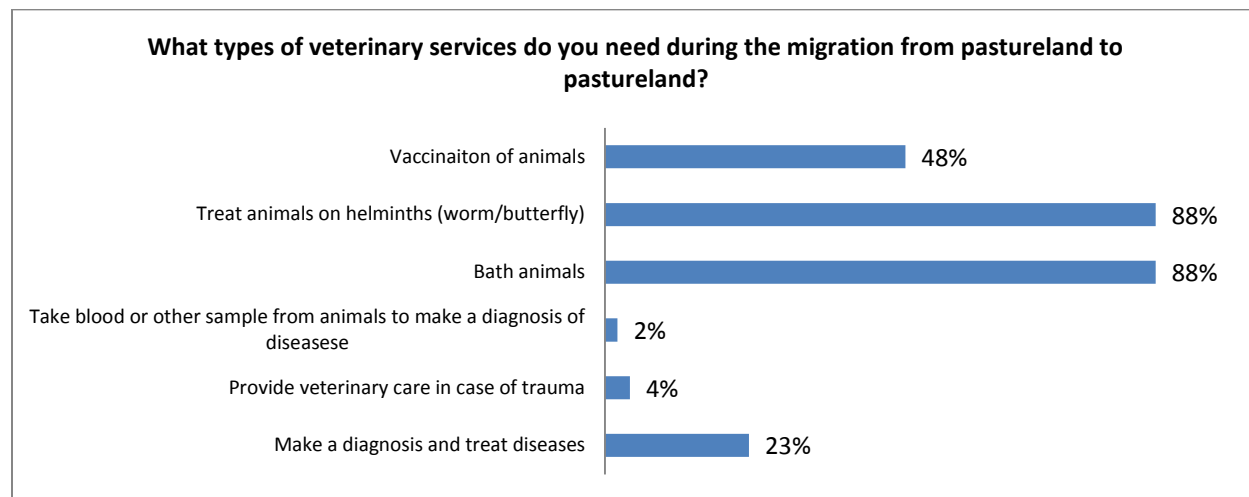
The significant problem that impedes development of veterinary service is sheep breeders' preparedness to pay for services. Only 21% of them pay for veterinary care. 79% of the respondents use barter or do not pay for service provided by a veterinarian.



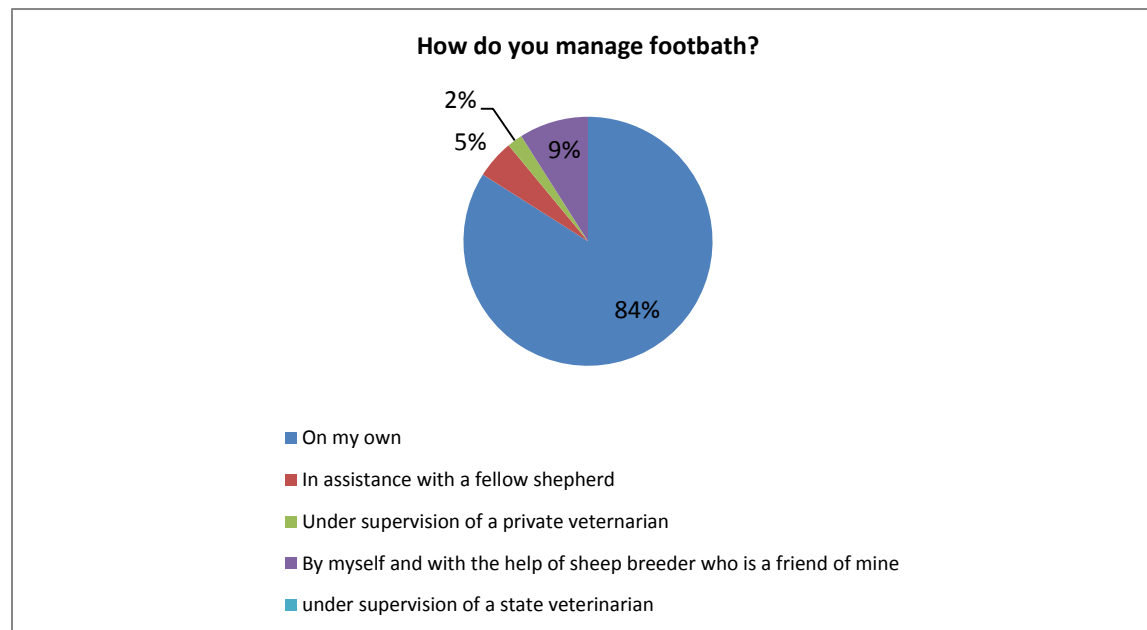
The interview suggests that shepherds who own the sheep use veterinary services approximately 3 times a year. It includes any procedure, such as vaccination, treatment of sheep, etc. Based on the obtained information, the average annual cost for veterinary care is 330 Gel that is 0.42 Gel spent per sheep. If subtracting costs incurred by sheep farmers who have large flocks, the average annual cost for veterinary service would be 157 Gel that is 0.21 Gel. It does not include transportation cost.

The average cost for drugs per sheep is 6 Gel. The study suggests that owners of 27020 (66% of the total number of sheep owned by the interviewed people) out of 40897 sheep pay for veterinary service.

The average number of days spent by a sheep breeder on sheep routes each year is 50. Main veterinary services used on sheep routes are treatment of animals on helminthes, bathing animals and vaccination for FMD.



98% of sheep breeders bath their sheep. 84% out of 98% do it themselves.

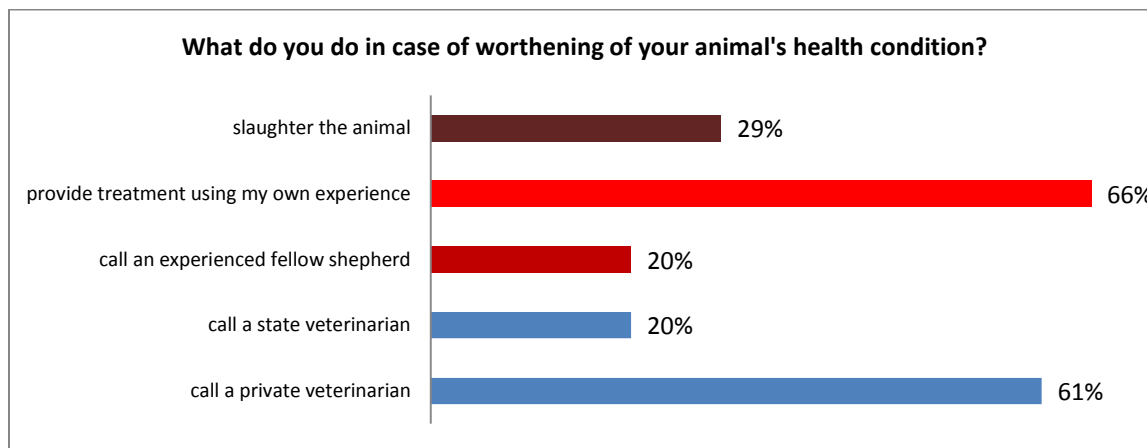


It is noteworthy to mention the bathing process. 75% of the respondents bath their sheep on the territory of so called informal “service provider” and pay for it. Accordingly, sheep breeders do not take any measures related to disposal of waste that creates danger to ecology of the surrounding

territory. They think that the territories are arranged so by “service providers” that is not dangerous for the environment. Moreover, they mention that water is accumulated in a special pit and leaks into the soil. 25% of the respondents pour wastewater into the ravine. It is noteworthy that sheep breeders bath their sheep almost on one and the same place that increases the risk of contamination of the specific place.

Due to the fact that bathing sheep is one of the important issues in veterinary, it is interesting to know how much sheep breeders pay for this activity. The average cost of one bathing is 0.37 Gel , although most of the sheep breeders mentioned 0,5 Gel. If they bath their sheep twice a year they would spend 0.74-1 Gel. It is drug-related cost. They pay in kind (one sheep) for bathing place.

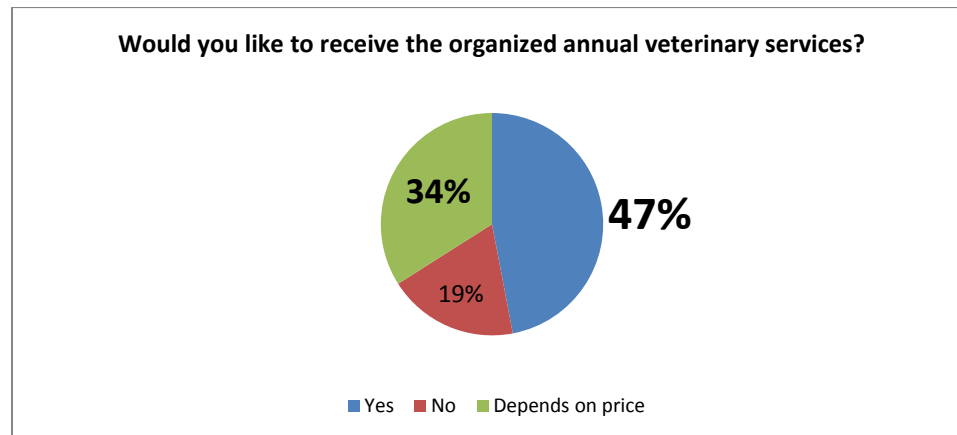
What do sheep owners do if sheep has health problem?



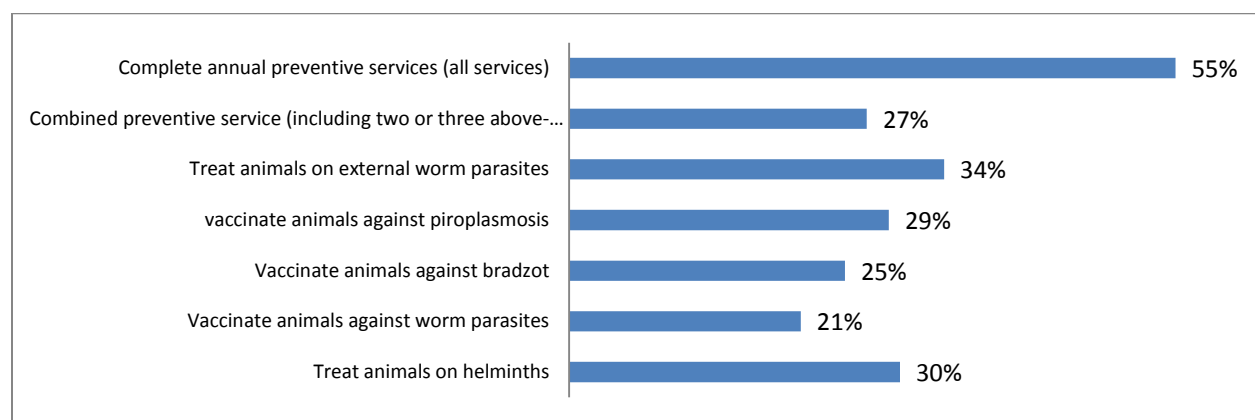
More than half of the respondent start treatment of animals themselves and ask a veterinarian for help only in extreme case when the animal’s health deteriorates and the situation becomes critical. If they consider that the sheep will not survive, they slaughter it. The interview with veterinarians also suggests that one of the key problems of veterinary care is a veterinarian’s delay in the treatment of animals. It is conditioned by sheep breeders consciousness and their attitude to the issue. Moreover, veterinary system and infrastructure are not developed, such as a lack of vehicles, time spent on veterinarian’s transportation, etc.

Most of the respondents buy drugs themselves in different veterinary pharmacies. Moreover, quality of drugs is not controlled, their transportation or storage requirements are not met. 88% of the sheep breeders think that pharmacies are trustworthy and reliable and prefer to buy drugs there. 5% of the respondents do not control drug quality. It is reasonable to elaborate and introduce such model of providing drugs together with vet service. Drugs bought in a pharmacy may be safe and their storage requirements may be followed but a sheep breeder may violate these requirements and drugs become ineffective.

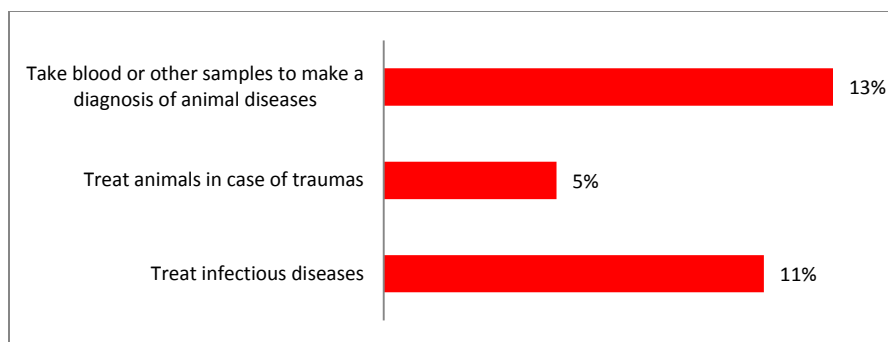
Almost 80% of the sheep breeders are ready to receive organized veterinary service, although the most important factor will be the total fee for service and flexibility of service provision. Nowadays annual drug cost per sheep is 6 Gel plus additional expenditures in case of veterinary service and one sheep paid in kind for bathing.



The study also shows services required by sheep breeders:

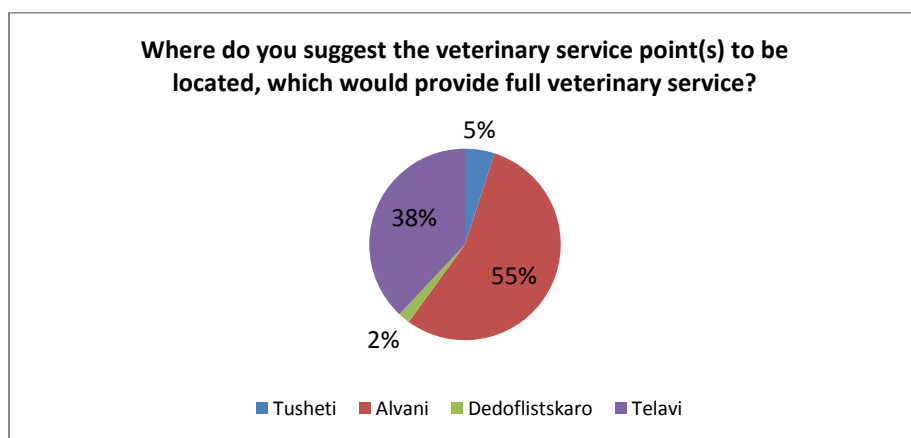


27% of the interviewed people want to receive a combination of different veterinary services and 55% of them – complete preventive care for a whole year. In addition, they need the non-preventive services indicated in the chart below:



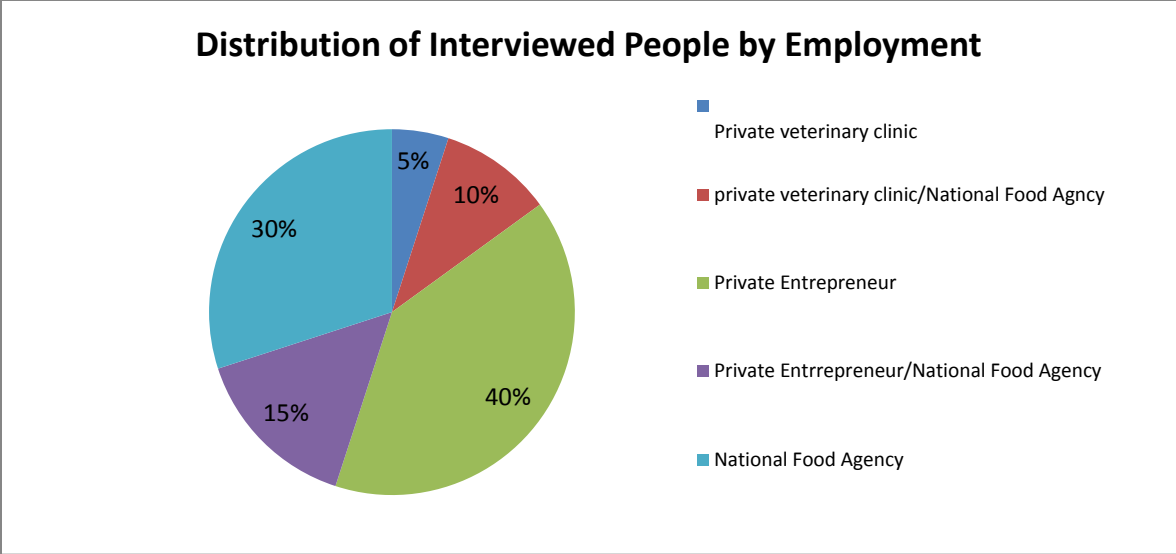
It is important to select a location for a veterinary clinic, which will solve the problems. Per sheep breeders' request, mobile veterinary service should also be provided. It will ensure access of sheep breeders to complete veterinary services that is impossible today.

The study helped us to determine location for a veterinary clinic. 55% of the respondents mentioned Alvani, 38% -Telavi.



Analysis of Veterinarians

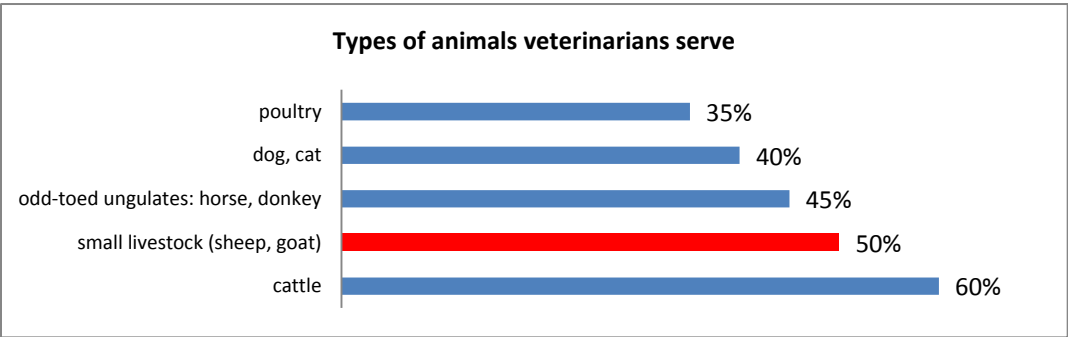
Besides sheep breeder 20 practicing veterinarians were interviewed who are employed by the following facilities/institutions:



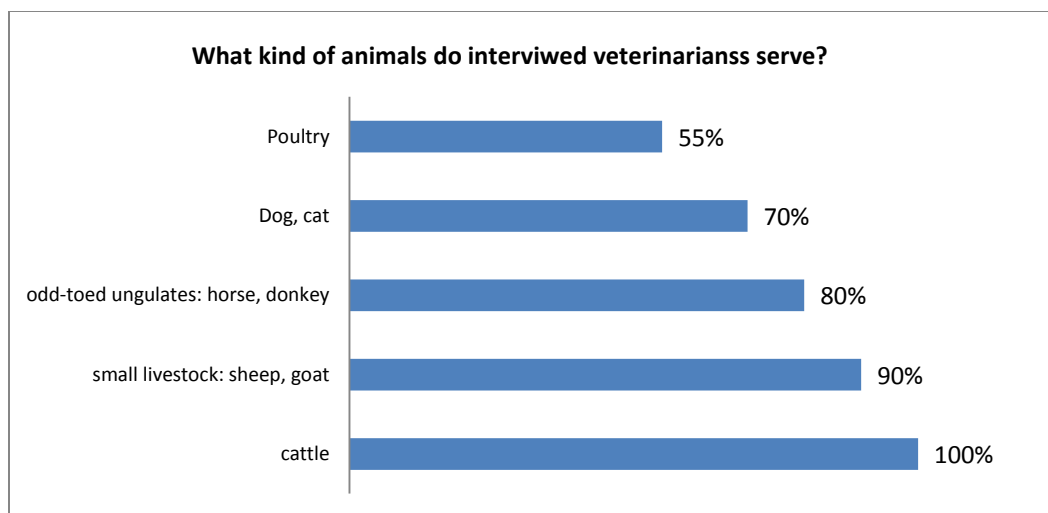
The chart shows that the majority of the veterinarians are private entrepreneurs and work for the National Food Agency.

The veterinarians mentioned only two organizations that provide complete veterinary services: Kakheti Regional Veterinarians' Association (mentioned by 60% of the respondents) and veterinary clinic (mentioned by 10%).

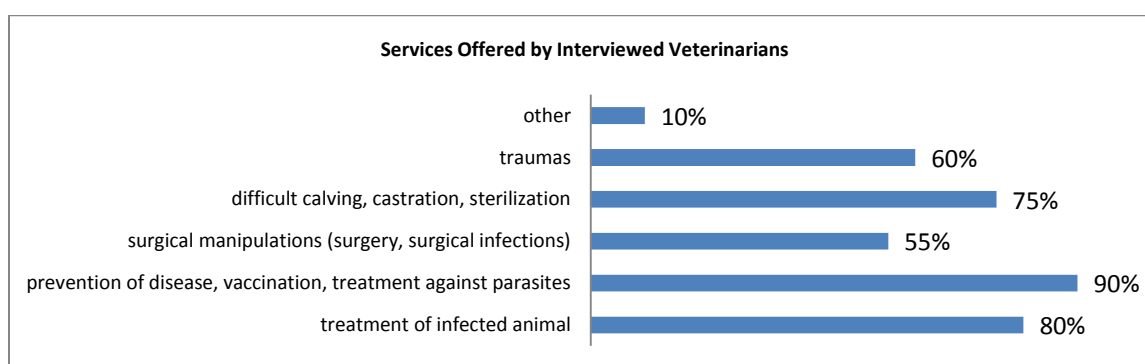
The veterinarians said that these veterinary centers render the following services:



The study suggest that only 50% of the veterinarians provide services to sheep breeders. It is noteworthy to mention that it s difficult to render services due to peculiarity of flock movement. As for the veterinarians' practice, they provide services to the following animals:

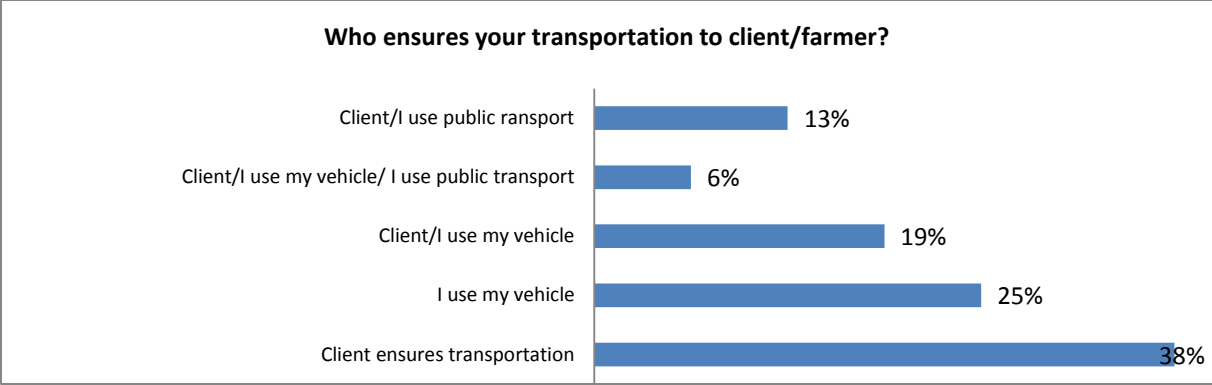


Veterinarians' practical experience should also be taken into consideration, what services they provide and if they have enough knowledge to render new services, if necessary, It is recommended to determine if they need additional information.

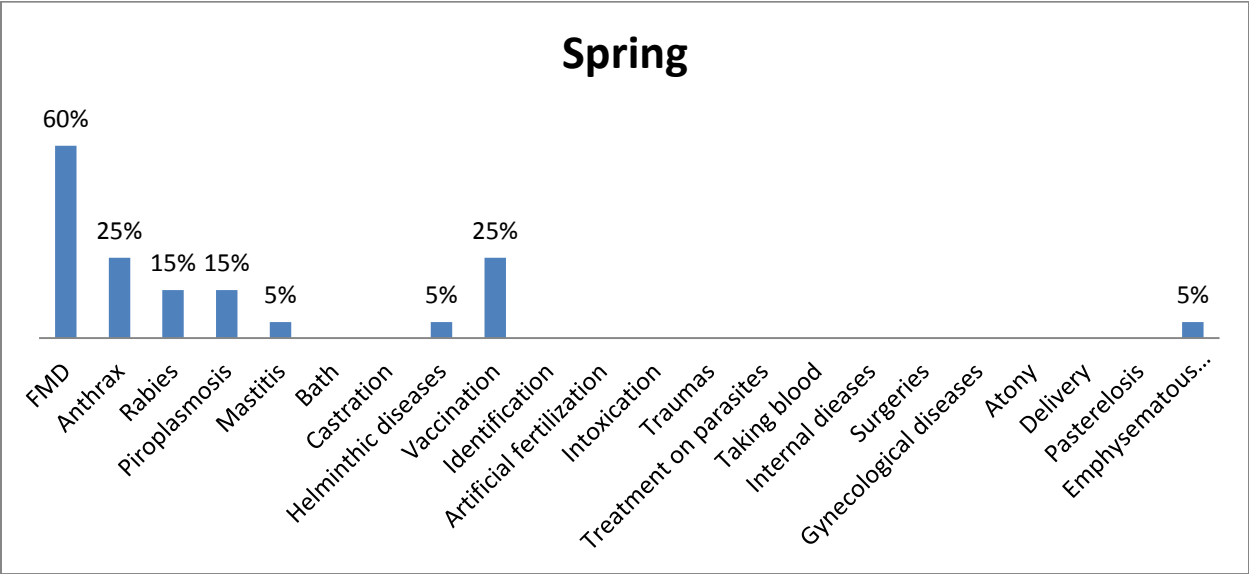


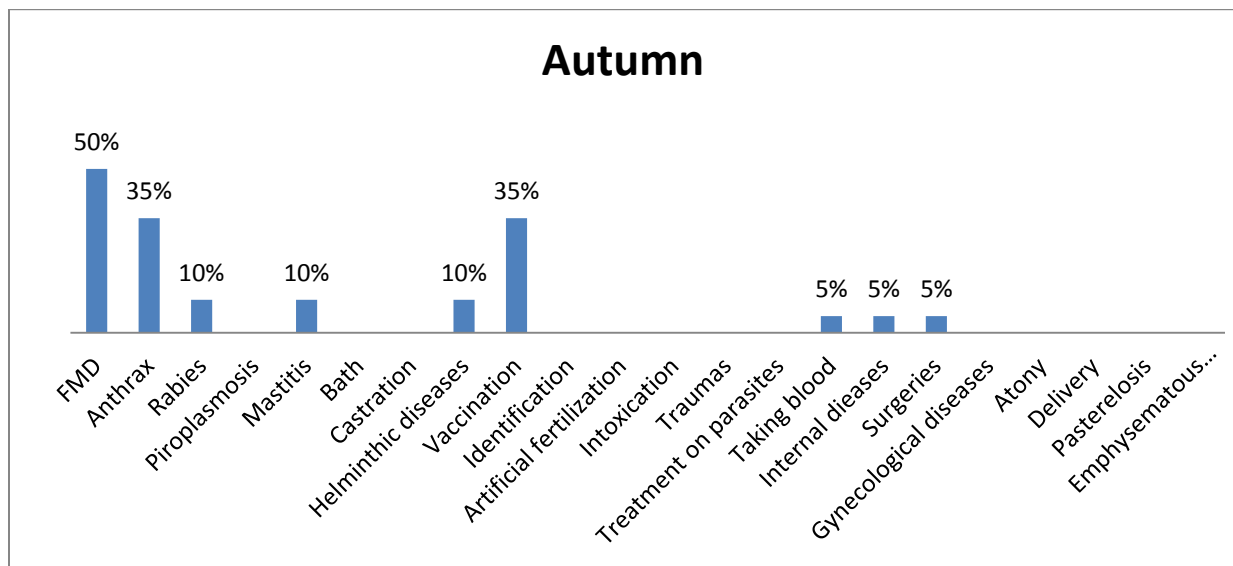
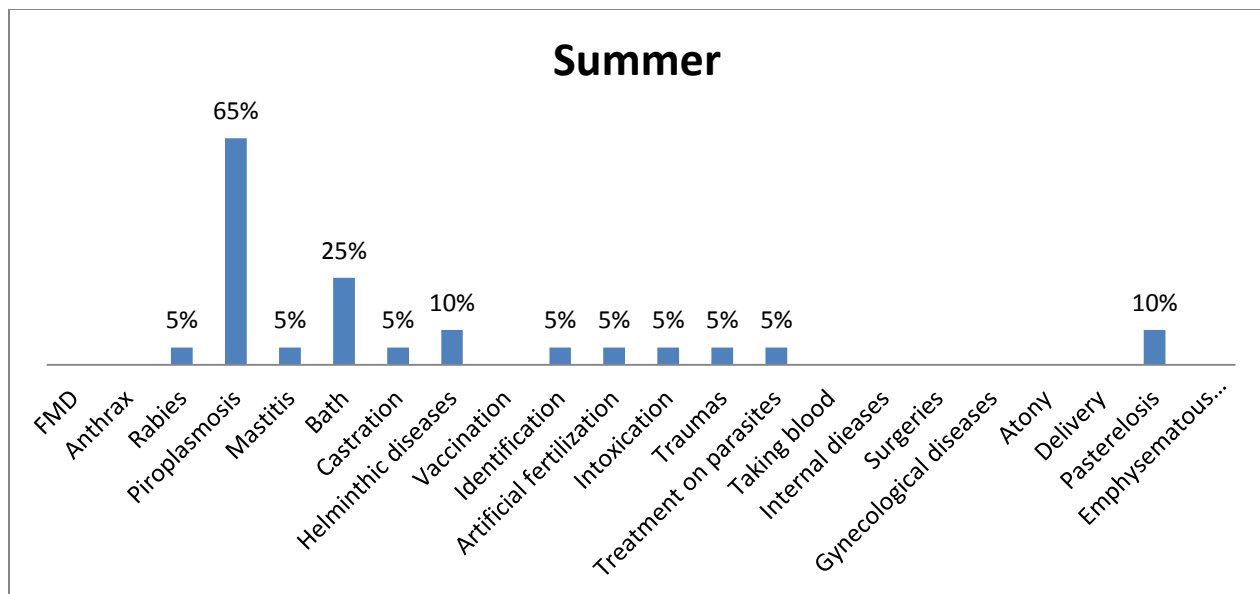
Others also mentioned ultrasound, internal care and cosmetics.

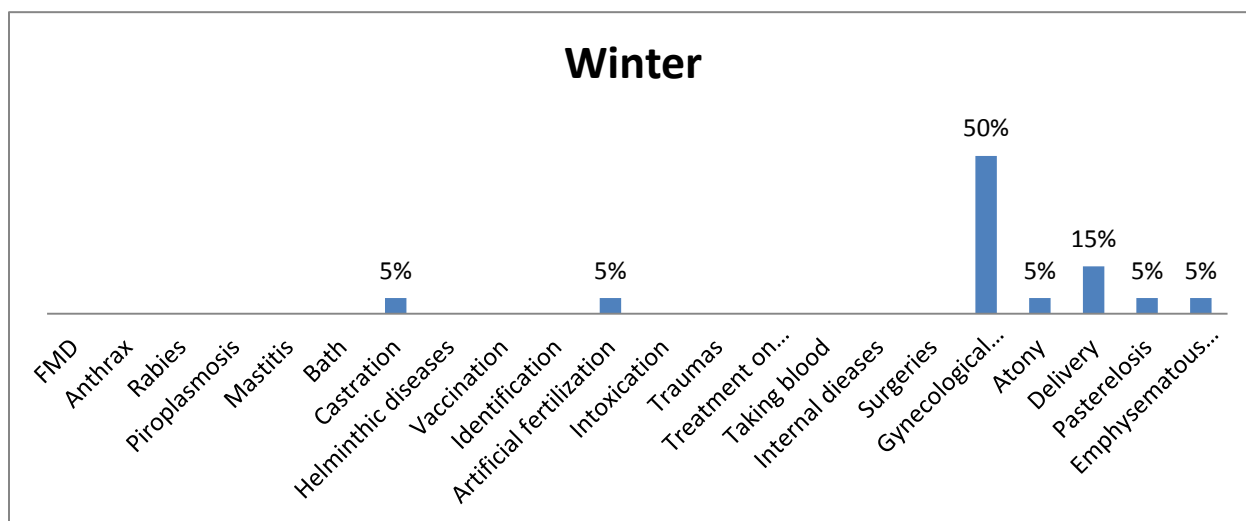
The study suggest that veterinarians' mobility impedes provision of veterinary care that is caused by different factors: catchement area -65 km, although 85% of the veterinarians are ready to provide services to far-away customers. In case of far-away customers, 50% of the veterinarians have to stay overnight there. Therefore, it is important to determine the mode of transportation and who will ensure their transportation.



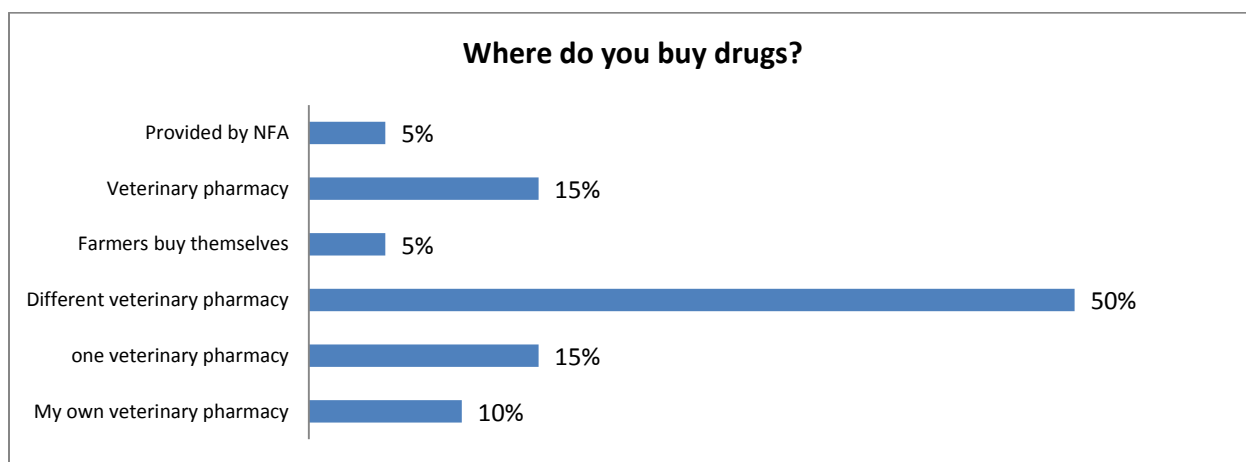
Veterinarians workload according to seasons should be taken into consideration based on which we may determine veterinary market requirements in Kakheti Region.



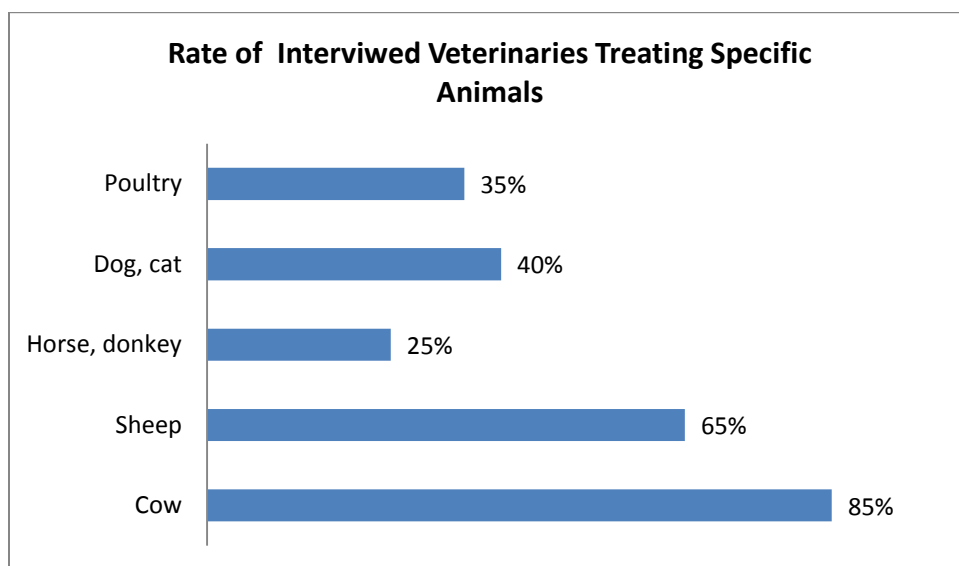
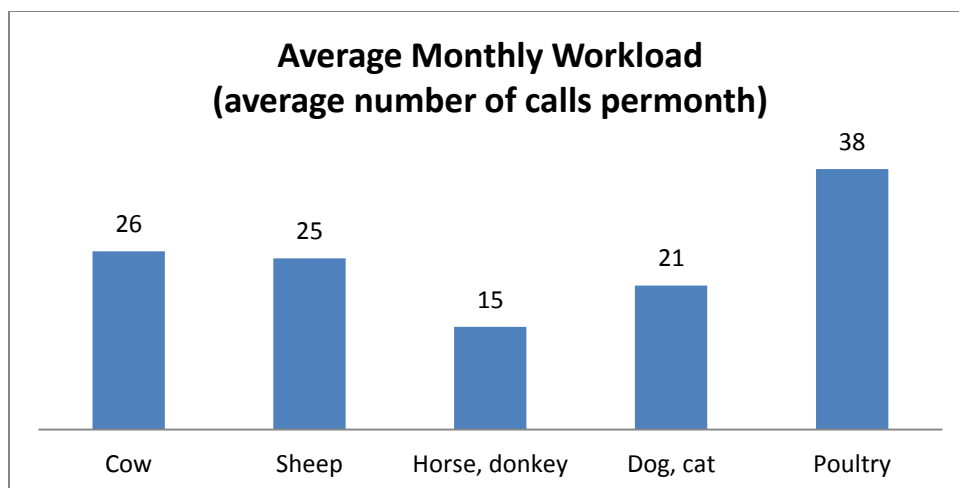




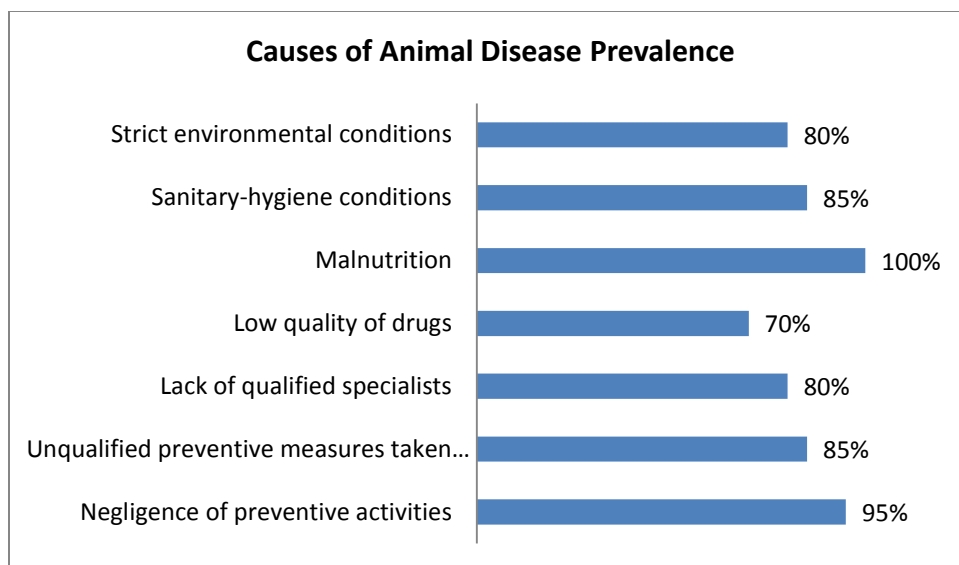
75% of the veterinarians think that their work is seasonal. They consider that their fee per home visit should be approximately 21 Gel. Their monthly income is 349 Gel. About 43% of payments is in kind. The study suggest that veterinarians do not buy drugs at one specific place.



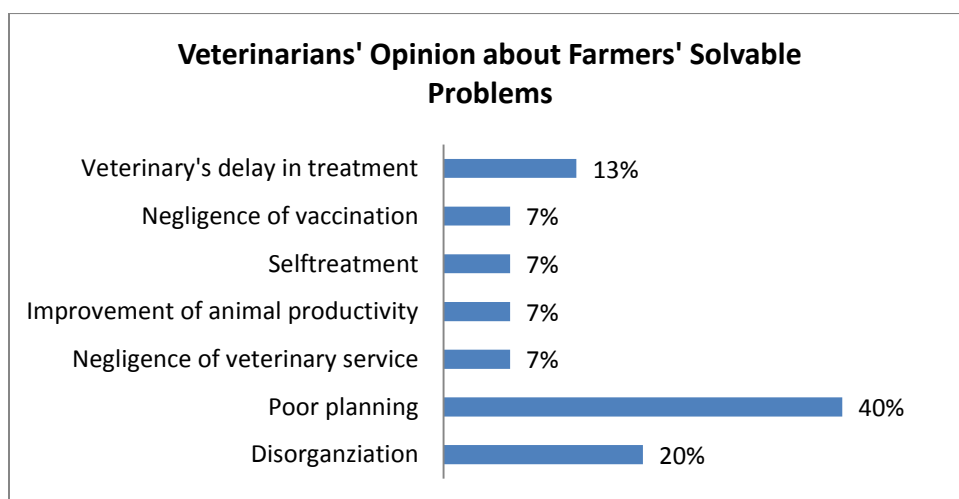
It is noteworthy to mention the average number of calls per month and animals they treat:



We tried to find out the main cause of different diseases. Their responses to this question were unanimous that was the only case during the whole study.



The veterinarians mentioned problems that can be solved today:



Summary of Findings

Interviews conducted with sheep breeders i.e. sheep owners and shepherds who own the sheep and veterinarians revealed veterinary problems among Tush sheep breeders and issues that require settlement.

The above-mentioned charts clearly show that sheep breeders think they do not pay much attention to veterinary care. In fact, based on the interviews with veterinarians and sheep breeders we may conclude that sheep breeders do not use unified, legal and organized veterinary care. Actually, there

is no streamlined veterinary center providing different service packages of complete veterinary care adjusted to sheep breeders' requirements according to the veterinary calendar standards.

Veterinaries and sheep breeders mention that the main problem is disregard for preventive activities. It is noteworthy to mention that qualification of those sheep breeders who try to take preventive measures is under question. The attempt to treat their own sheep or ask a veterinary to provide informal care may not be considered as legal due to the fact that a sheep breeder cannot obtain health certificate of animals. It should also be noted that quality control of used drugs is not implemented and requirements for transportation, storage and use are not met. On the other hand, sheep breeders' awareness of vaccinations covered under the state-funded program and veterinary activities under state control is very low.

Moreover, sheep breeders do not have enough information about issues related to sheep's diet, sanitation and hygiene. They settle veterinary problems based on their own experience and ask a veterinarian for help only in critical situation. It was revealed in veterinarians as well as sheep breeders' responses. Ultimately, sheep breeders do not take care of veterinary problems through preventive measures or a veterinarian's timely intervention. The veterinarians mention that there is a lack of qualified specialists. The number of young veterinarians is very small. The average age of the specialists is over 50. The interviews show that sheep breeders try to refrain from calling a veterinarian.

It is necessary to cooperate with state agencies to develop and implement waste utilization standards due to the fact that sheep breeders bath their sheep twice a year and do not utilize wastewater properly.

Sheep breeders do not properly plan veterinary activities (combination of activities under state-funded program, implemented by a private veterinarian and sheep breeders, veterinary calendar is not followed). Chaotic veterinary measures are ineffective and sometimes negatively affect the animals. Moreover, sheep farmers are not business-oriented, 10% of sheep loss is acceptable for them and do not try to improve sheep farming practice.

More than the half of the interviewed veterinarians want to receive complete, organized veterinary service in relation to preventive measures in exchange for payment. They also think that one organization, a natural person or legal entity should supervise or ensure implementation of mandatory activities under state-funded program, which will standardize veterinary services.

Despite the fact that a lack of qualified veterinarians is a big concern, there is enough veterinary potential in the region to solve Tush sheep breeders' problems. The interviewed veterinarians' practice and qualification level are enough to ensure organized care and improve access to veterinary services. A specific veterinary organization will be able to provide organized, legal services to sheep

breeders through mobilization of resources, elaboration of service packages and improvement of material-technical basis of the organization.

The National Agency under the Ministry of Agriculture will gradually tighten animal health and food safety standards and correspondingly, control mechanisms for public and private veterinary supervision will be tightened. It is recommended to mobilize resources timely to introduce and implement complete veterinary care that will ensure meeting sheep breeders' veterinary requirements and improvement of the private veterinary sector.