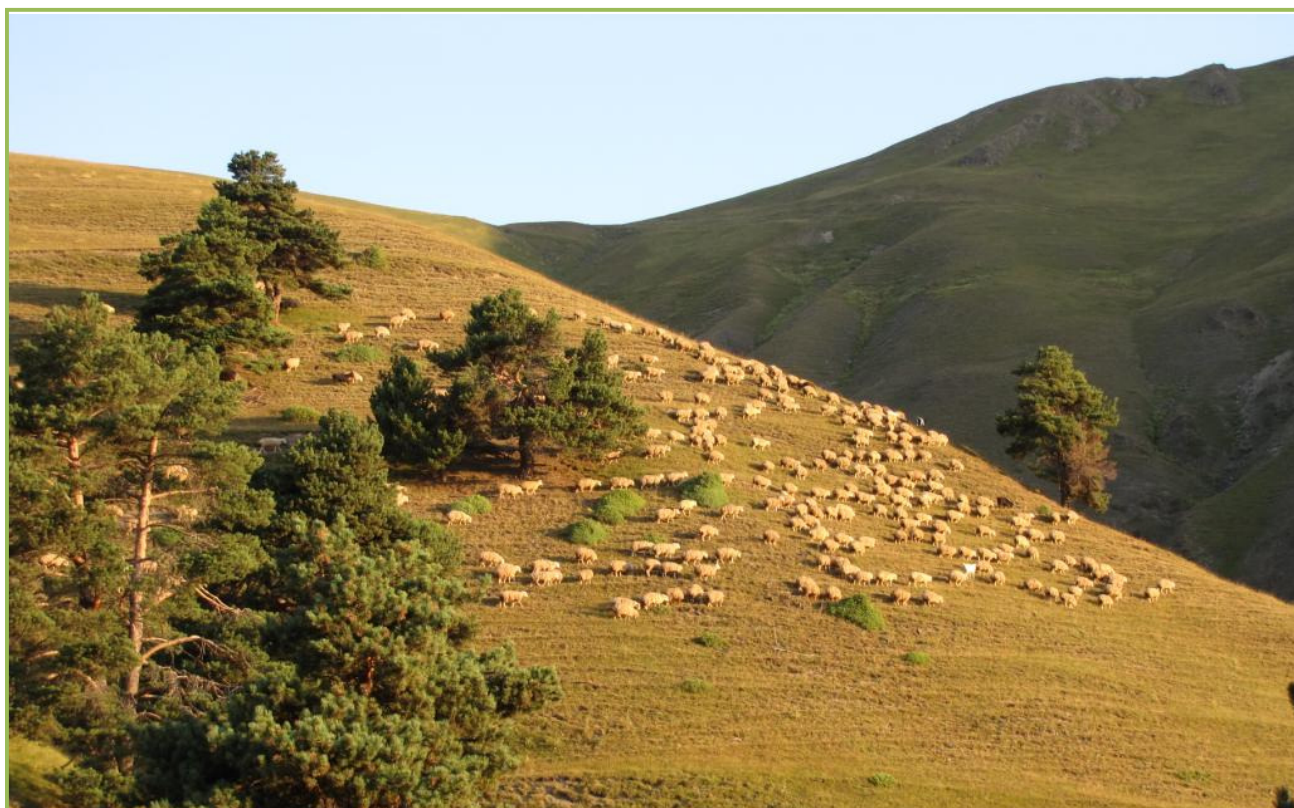


9/5/2011

Georgian Carnivore Conservation Project component: Developing human-wildlife conflict measures to implement in partnership with local stakeholders



Report on provision of animal health & husbandry outreach with selected Tushetian livestock owners at the summer pastures (Tusheti highlands)



Report developed by VMD A. Elanidze, Kakheti Regional Coordinator; GRDP, S. Khomizurashvili, Association Development Expert; GRDP, K. Jakeli; Temur Popiashvili

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Background & Objectives

A contract was signed between Georgian Institute of Public Affairs (GIPA) and The Georgian Carnivore Conservation Project (GCCP) detailing an outreach activity with Tushetian sheep-farmers to provide basic and general husbandry advice. The activity was also designed to collect detailed information regarding the livestock owners' husbandry needs to be used in developing a structured training program during the winter season.

The action plan was identified by the implementing party through the GIPA Kakheti Veterinarians' Regional Association (VRA). The VRA have undergone intensive capacity building over the past two years as part of the Georgia Animal Health Program (GAHP); a collaborative initiative of the US Department of Agriculture, the Georgian Rural Development Program of Georgian Institute of Public Affairs (GRDP) and Colorado State University (CSU). Trainings given in that program included protection and treatment of key livestock diseases and were conducted by both local and international partners.

To raise awareness and understanding in the importance and application of basic animal health and husbandry techniques amongst Tusheti livestock owners and shepherds.

To define husbandry issues of most interest to the target group as the basis for structured training sessions in Vashlovani.

Methodology and Preparation

The selection of trainers was carried out in August 2011 by the GRDP staff members: Kakheti Regional Coordinator S. Khomizurashvili, veterinarian consultant A. Kochalidze, under the supervision of the GRDP coordinator. In accordance with contract the trainers were selected from the members of Kakheti Veterinarians' Regional Association (VRA). Criteria for selecting the trainers included:

- Past performance during GAHP training sessions
- Familiarity with Tusheti area
- Physical ability to cover distances by walking and horse-back riding
- Ability to travel to Tusheti for the project implementation period
- Good communication skills

As a result, four trainers were selected out of 22 Kakheti VRA members:

- Dr. Akaki Elanidze
- Dr. Karlo Aivazashvili
- Dr. Zaza Midelauri
- Dr. Elza Pitskhelauri

Information about the project and the planned activity were been shared with the selected trainers by GRDP management and the conditions of cooperation agreed mutually. It was stated that the outreach program would be implemented through a number of individual meetings with the farmers and shepherds, previously identified by GCCP, in 16 locations within the Tusheti highlands (Appendix I). Through this, the participants would be provided with basic consultations on the eight most problematic diseases and five key issues related to animal

husbandry (Appendix II). Technical expertise for identifying the key issues was rendered by Dr. Debby Reynolds, GAHP expert through USDA, CSU.

GRDP management also arranged a training of trainers' sessions for the team of selected trainers. The session was delivered by GAHP veterinarian consultant, A. Kochalidze, on 23-24 July 2011 and focused on information around the eight most problematic diseases and five key issues related to animal husbandry. Training materials were developed and disseminated to the training participants.

A detailed action plan has also been developed by GRD management based on a field trip to Tusheti and in close cooperation with selected team of trainers, with the aim to inform the parties involved about dates and logistic specifics. Travel distances to be covered by walking, driving and horseback riding as well as necessary time and funds have been identified. It was agreed that there would be three teams of trainers over the implementation period and Dr. A. Elanidze would be a permanent member of each team, the second member would change every week, providing an opportunity for involvement in the program for each of the specialists.

A questionnaire was developed by Dr. Reynolds, GRDP coordinator Ketii Natriashvili and Dr. Elanidze to allow for the evaluation of outreach programs effectiveness (Appendix IV). A special orientation session was provided to the team of selected trainers on filling out the questionnaire.

The start-date for the project was July 25th and it was planned to cover a three week period, incorporating at least 18 days of consultations. Allowing for travel and breaks, the anticipated end-date was set as August 21st.

The VRA team was accompanied by the GCCP field officer, Temur Popiashvili, whose role was to:

- monitor the delivery of consultations
- recruit farmers into a winter vaccination programme
- carry out further awareness raising about HCC and GCCP interventions
- investigate the feasibility of a LGD improvement & livestock insurance schemes

In addition, the VRA team made daily progress reports to GRDP management by phone in order to enable timely problem solving if necessary.

Results

A total of 23 beneficiaries attended the outreach activities; all of them sheep owners. Appendix IV gives information about each meeting with beneficiaries, dates and locations of meetings as well as notes for changes as they occurred (highlighted in green are the beneficiaries that participated in outreach meetings).

As a result of the meetings, the team helped to raise awareness and increase knowledge amongst the target group on key diseases as well as to improve livestock husbandry techniques by sharing information according to developed checklist.

The team also collected information for the design and implementation of a structured training program to be delivered in the winter pastures. The evaluation questionnaire (see above; Appendix III), was filled out by every participant with only a few exceptions. The questions concentrated on getting the sheep owners' perspectives on a number of issues including the most common diseases and their requirements for further information.

Farm and livestock demographics

When talking to livestock owners generally about their business most of them said that they often change their winter pastures primarily because they don't own any pastures themselves and every year they have to find pastures available for rental. In addition, some farmers with long-term leases on pastures don't have many sheep and so sub-lease to other farmers. As a result, some of those interviewed were unable to provide an idea of when they would settle in the winter pastures.

However, all respondents will be leaving Tusheti sometime between mid-September and mid-October (Chart 1) whilst arrival times varied from mid-November to mid-January (Chart 2). Before livestock owners reach the winter pastures they usually try to stay along the Alazani River, grazing their sheep in harvested vineyards where possible, as long as they can in order to preserve grass quality on the winter pasture.

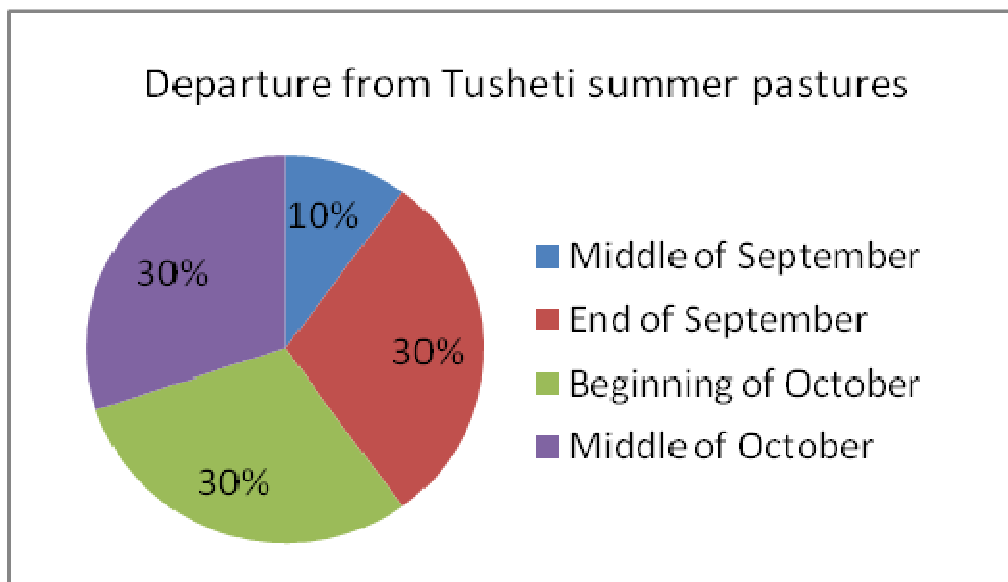


Chart 1: Spread of estimated departure times from Tusheti

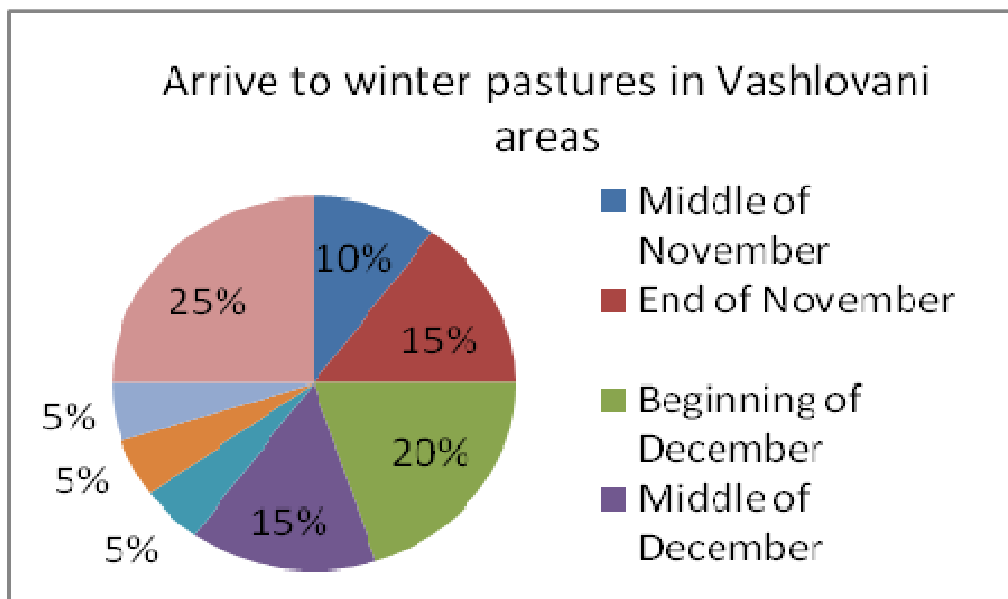
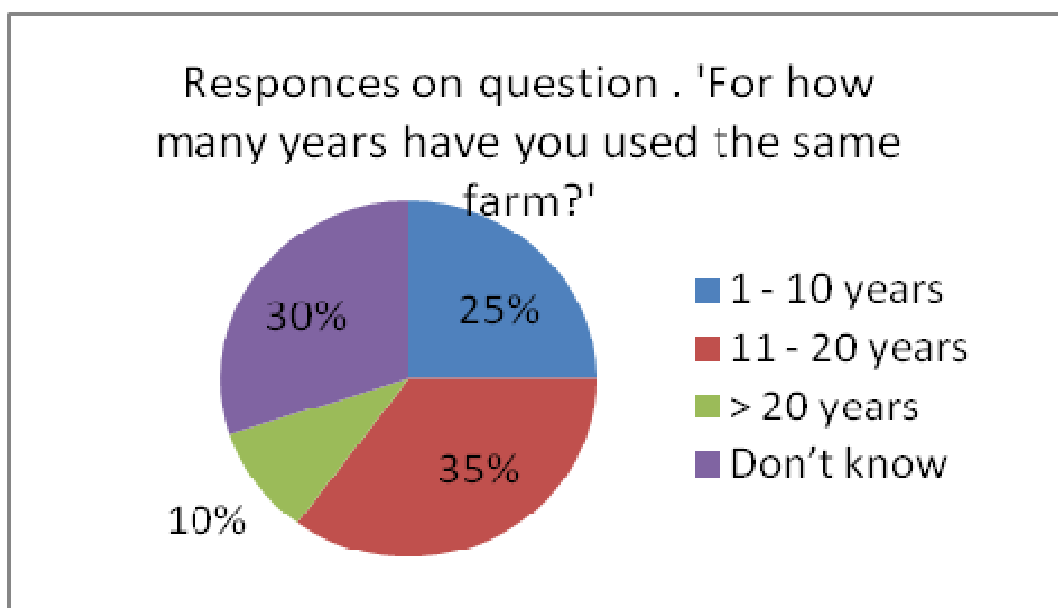


Chart 2: Spread of estimated arrival times in Vashlovani

The summer pastures are mostly community-owned territories and each village has access to unofficial areas which can be used by inhabitants. Only a few respondents said that they have owned or have leased pastures in Tusheti (Chart 4). Most sheep owners don't know the size of their pastures as many pastures don't have clear boundaries, and so answers about pasture size were not exact; the average size was 240 hectares.



The average number of livestock owners and shepherds in each farm was two and four, respectively. The number of shepherds seems, then, to be higher in Tusheti than compared to Vashlovani where an average of two shepherds was recorded (Second Survey of Human-Carnivore Conflict in Vashlovani, Temo Popiashvili) and is probably because milk and cheese production takes place in the summer pastures.



Typical pasture in Tusheti

There seems to be little variation between the general appearance of farm buildings and other facilities in the highlands although there are some differences in exposition and sizes. Every farm has: a house for the shepherds, storage for cheese, a night-time coral and a milking facility.

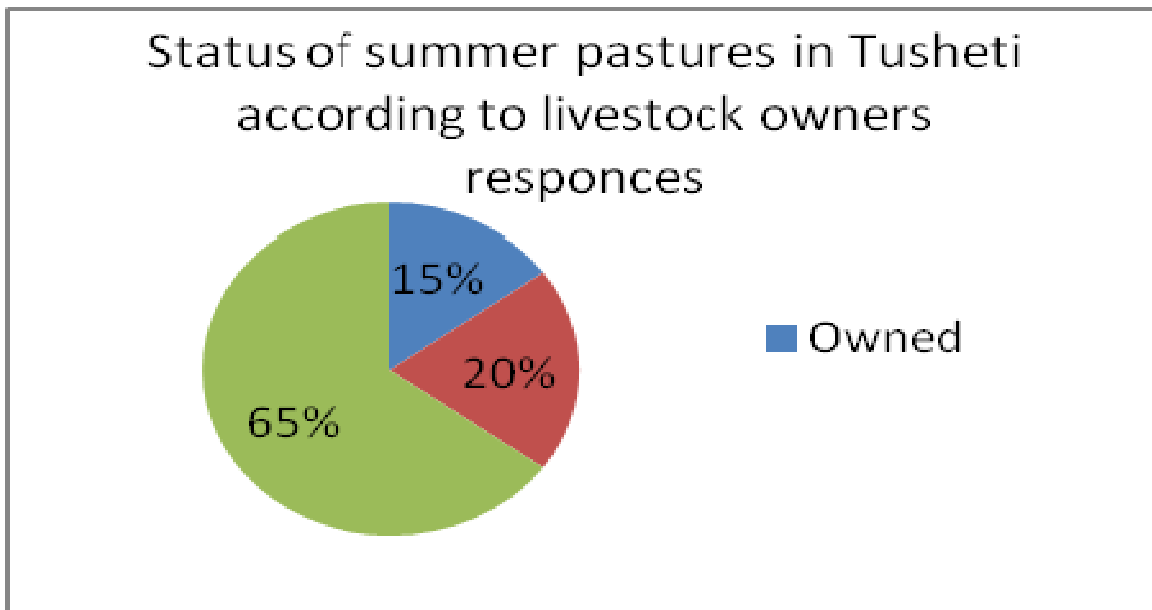


Chart 4: Ownership status of Tusheti summer pastures

Table 1: Number of livestock in study area.

Livestock	<i>n</i> Farms	Per farm		Total
		Average	Range	
Sheep	20	881	250 - 1700	17625
Goats	20	31	5 - 100	620
Cattle	2	2.8	5-51	56
Horses	20	8.8	1 - 28	176
Donkeys	2	0.2	1 - 3	4
				18,481

Habitat variables

The elevation of farms ranged between 1,800 and 2,900 masl with the average being at about 2,100 masl. However, lambs are kept at even higher altitudes of, typically, around 3,000 masl. More than 60% of farms are situated less than 1km to the nearest tree cover and have relatively clear pastures (less than 25% overgrown). Most farms very close to a ravine with an average distance of 135 m and a maximum distance of around 700 m. Most farms have good access to water (see map).

Health and Husbandry

The survey revealed that the most common disease in sheep is foot and mouth disease (FMD) with 16 respondents identifying it as the first priority and four as the second priority (Chart 5). Brazzot is the second most common disease, identified by four respondents as a priority and by 16 as a second priority. Monezios and necrobacillosis were identified as the first priority by single respondents and Necrobacillosis was named as the priority by three. Helminths, ekhinokokoz and shedding mangy received one vote each and were identified as low priority diseases.

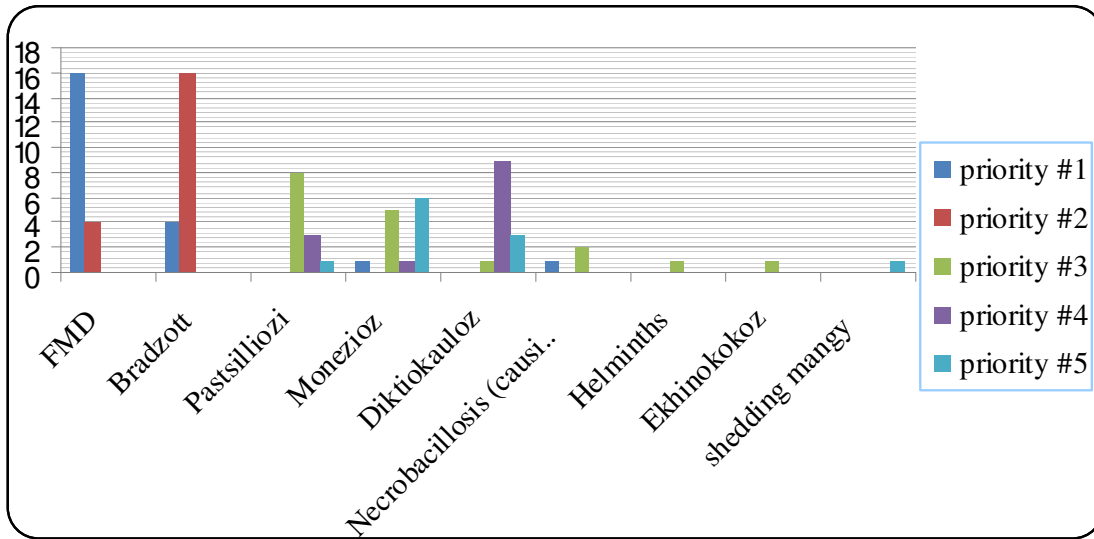


Chart 5: Diseases commonly suffered by sheep in summer pastures

Malanders and necrobacillosis were identified as priorities by six respondents whilst Monaziozis was considered a priority by only two owners (Chart 6).

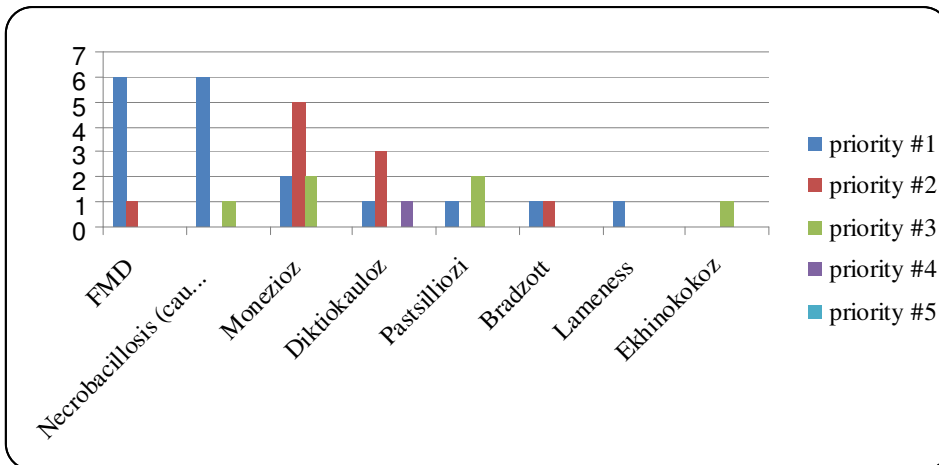


Chart 6: typical summer pasture veterinary problems in 2010

Foot and mouth disease and brazzot share first and second priority status (Chart 7).

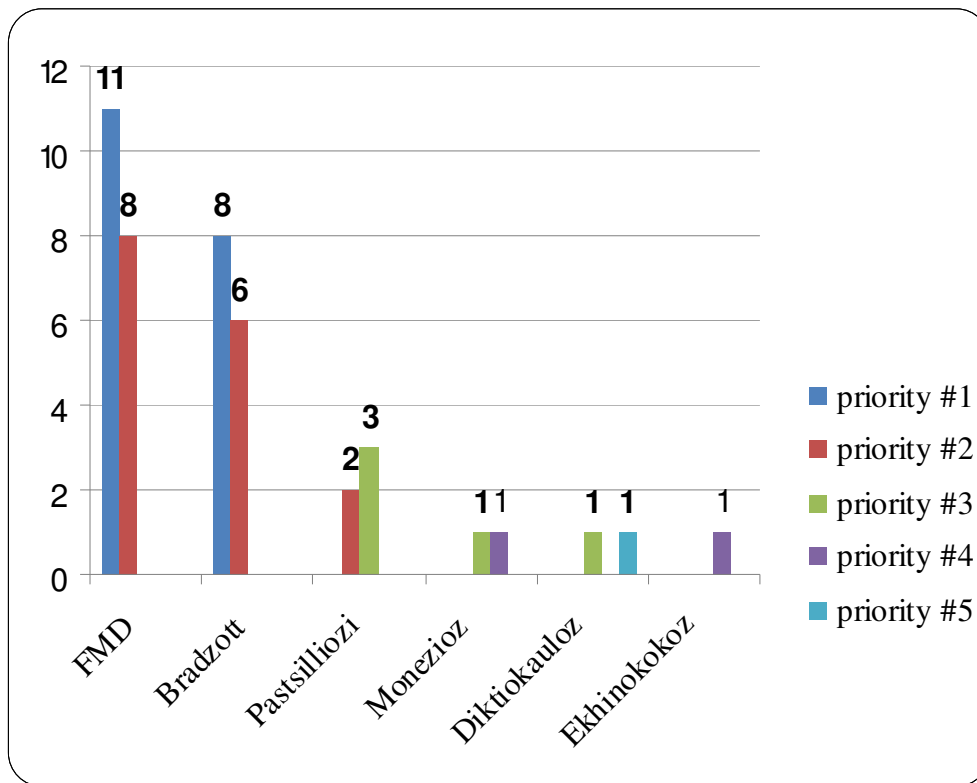


Chart 7: Typical winter pasture veterinary problems faced in 2010/11

Evaluation of the outreach programme

All 21 participants indicate that the information was useful with the most useful information identified as that relating to Brazzot and FMD. Examination of animals by teeth was also identified by two respondents as important.

Only one respondent expressed a willingness to learn about a specific issue; necrobacillosis. However, all others indicated their willingness to acquire more new information but, due to a significant lack of knowledge of the discussed issues, were unable to indicate specific topics. They underlined that all the issues are of utmost importance to them. The project team also disseminated handouts to the participants, provided to them by GAHP during the training of trainers delivered to the selected VRA members. All the participants were interested in receiving information in print and learning about diseases and their control measures that are common to sheep.

Livestock guarding dogs

Activity was planned according to HCC mitigation strategy component Livestock Guarding Dogs, which has aim to improve effectiveness of LGDs and reduce losses to predators; We wanted to select one or two livestock owner who had not effective dogs, and propose to give them purebred LGD pups; Farmers would agree to neuter their existing dogs to avoid interbreed quality pups with ineffective ones and also improve their attentiveness; Interested farmers would be trained how to raise pups and may get some financial support for raising pups;

We gave this information to livestock owners and same time tried to gauge their interest towards LGDs and estimate with following considerations:

- Farmer is cooperative and open to trying new things;
- Is open about their existing dogs and their faults;
- Flock and number of dogs should not be too big (less than 1000 sheep and no more than 5 dogs);
- His dogs should be less than effective and we are interested particularly in dogs that are inattentive and/or overly aggressive;
- Are reliable; we need to feel sure that they will not sell the pups at the first opportunity.

We also collected information about existing dogs according to datasheet prepared before (see app. #7)

Average number of LGDs in surveyed farms is 7 individuals per farm; Most of them are adults (See table).



A pair of LGD pups

When asked about their guard dogs (LGD), 60% described them as “common shepherd dog”, 20% as “mixed”, 15% as “Georgian sheep dogs” and only 5% (one respondent) as “Caucasian sheep dogs”.

When asked to rate their dogs in terms of trustworthiness, attentiveness and protectiveness, 19 owners gave their dogs full marks for all three.

Most livestock owners don't remember when they got their dogs with many claiming that they generally exchange dogs between themselves. No one claimed to have bought their dogs.

Most owners claim that their dogs do not need training as the dogs train each other. However, five respondents admitted that they shout at their dogs in order to make them stay with the flock or to chase wolves.

Many respondents think that the effectiveness of their dogs may be improved by better nutrition, improving health and by selecting better pups. However, they also said that they don't have enough resources to train dogs and most said that they don't need help. Only seven person said that they need help with providing proper food and with vaccines for their dogs. Of these only one said that he would be willing to train his existing dogs if food for the dogs was provided. However, he would need to know more about any proposed methodology of training;

The level of interest about pure-bred shepherd dogs was low and the general consensus was that no one wanted these dogs as they are too big, lazy and slow. Only four owners were interested in pure-bred dogs and of those, two were against neutering their existing dogs. Two owners, (Besik Gatsiridze and Bidzina Lekaidze, admitted that they wanted to change their dogs and would agree to neuter their existing dogs.

Vaccination program

Under HCC mitigation toolbox component – Improving Livestock Health, is planned vaccination program in Vashlovani; Brazzot was selected as target disease according to VA consideration, HCC RT vet Zaza Bostashvili also agreed and considered Brazzot as one of problematic disease in our study area; As VPA central entrance is place which gathers most flocks coming from Tusheti, it was selected as presumable place for implementing vaccination program; Was prepared MoU which could be signed by interested farmers and which regulated percentage of their financial participation in vaccination program (see app. #8);

During the outreach program most of the interest of the respondents was focused on the proposed vaccination program; particularly for Bradsot.

All respondents were interested in it and were ready to share the costs of delivering the vaccination. However, most preferred to make any payment at the vaccination site with only two agreeing to make payments via a bank.

An MoU (**Appendix ??**) was signed by 11 persons and a further four owners said that they would speak to their families before giving an answer. Five were willing only to make a verbal commitment.

When talking to the owners about the technical details of the vaccination program several important considerations were raised. There was some concern over the proposed delivery date (December) as the second dose (four weeks later) would be made when many of the sheep were pregnant. Another option is to make the vaccination near village Lechuri where all the flocks from Tusheti will pass. However, the second dose would then be difficult to administer as flocks will be on the migration spread along Alazani River. Further thought as to how to administer the vaccination program is needed.

Table 2. Number of Sheep that should be vaccinated by steps were taken during outreach program

Steps were taken	Number of owners	Number of sheep/goats
Memorandum of understanding	11	9435
Follow up required	4	5110
Verbal commitment	5	3700

Also notice that there are three farms near Gazelles pan, which are not going to Tusheti but it's important to be vaccinated because of gazelles; They are Tushetians and because they were in Pshavi we could not surveyed them; We have figures from 2nd survey which are approximately 2500-3000 head;



Livestock Insurance

Livestock insurance is one of the tools of mitigating human carnivore conflict and helps livestock owners to reducing economic loss; Searching for livestock insurance possibilities was discovered that such product does not exists in Georgian insurance market; Finally one of the insurance company 'Aldagi BCI' said that they would like to prepare packet for livestock insurance; They send us the proposal with general terms and figures which we use to give general idea to sheep owners about sheep insurance;

Currently there is no practice of livestock insurance in Georgia and livestock owners were generally dissatisfied with insurance schemes implemented under the Soviet Union. Interest in the proposed insurance scheme was, then, low. Some of the respondents recognize the importance of insurance but they have seen no evidence recently of how this might work for them. It may help to increase their confidence in such a scheme if they were to meet with representatives of an insurance company.

Appendix I: Outreach Training participant farmer information

#	Village	Participants
1	Dartlo	Zaza Idoitze
2	Kvavlo	Alex Gatsiridze
3	Dano	Iusup Tsukhurkaidze
4	Tchesho	Zviad Bugridze,
5	Tchesho	Tamaz Tilidze
6	Tchesho	Zuro Tilidze
7	Parsma	Kakha Qadze
8	Girevi	Vazha Azikuri
9	Shenaqo	Badri Buqvaidze
10	Diklo	Koba Osorauli
11	Begela	Giorgi Imedidze
12	Begela	Giorgi Gubakelidze
13	Begela	Mirza Kizilashvili,
14	Bochorna	Badri Otiuridze
15	Dotchu	Vaso Tsomikuridze
16	Qumelaurta	Gocha Rainauli
17	Bigoet satibe	Irakli Itchirauli
18	Vakisdziri	Jamal Uturgaidze,
19	Vakisdziri	Khvicha Antaidze
20	Sabue	Anzor Gutanaidze
21	Sakhare	Jijur Jijuridze

Appendix II: Details of specific sessions to be delivered by Kakheti VRA members on summer pastures

ANIMAL HEALTH ISSUES

1. Introduction and prevention measures adopted for implementation on pastures for Infectious Diseases:
 - a. Brazzot
 - b. FMD
 - c. MKR
2. Introduction of parasites: ekhinokokoz; diktiokauloz; pastilliozi; monezioz; and prevention measures adopted for implementation on pastures
3. Sheep lameness – treatment measures that can be implemented by shepherds
4. Identification of pox occurrence, correct diagnosis of pox, similar symptoms in other diseases, prevention and treatment

ANIMAL HUSBANDRY ISSUES

1. Lambing, bringing up lambs
2. Dealing with injuries (dog, wolf and snake bites, lameness)
3. Nutrition, how to assess “fat” and “thin” condition of lambs
4. How to examine teeth and impact of good/bad teeth on the growth of animals
5. Sanitary conditions for livestock and general prevention measures

INTRODUCTION TO VACCINATION:

1. Importance of delivering the vaccination by veterinary specialist – impacts and risks
2. Importance of proper storage of vaccine
3. Importance of purchasing the quality vaccine
4. Where can you buy quality vaccine (veterinarian, veterinary pharmacy)

IMPORTANCE OF CORRECT DOSAGE AND ADMINISTRATION OF VACCINE

Appendix III: Checklist of questions to be asked and information to be gathered

Introduction: Information to be provided by GCCP about the activity

Introduction: Information about Veterinarians' Regional Association in Kakheti, its involvement in the activity (limited to delivering given training sessions at the moment).

Name of participant: _____

Location of training (village/pasture): _____

Names of trainers: _____

_____ Date: _____

Questions for sheep owners:

1). How many sheep do you own? # of adult sheep____ # of lambs ____# of rams____

2) Are you a: Hired shepherd Owner Owner and shepherd

4) Please list the common diseases that bother your sheep:

a). _____

b). _____

c). _____

d). _____

e). _____

5) Please list any veterinary problems that you faced during the last full summer season:

a). _____

b). _____

c). _____

d). _____

e). _____

6) Please list any veterinary problems that you have faced during the last winter season:

a). _____

b). _____

c). _____

d). _____

e). _____

After collecting the information about most problematic issues, provide brief consulting on the matter interesting for sheep owners/shepherd, making sure that it is brief, concentrate on

providing the information on previously agreed topics and please mark topics given below after you share information about them:

ANIMAL HEALTH ISSUES

INTRODUCTION AND PREVENTION MEASURES ADOPTED FOR IMPLEMENTATION ON PASTURES FOR INFECTIOUS DISEASES:

BRAZZOT

FMD

MKR

INTRODUCTION OF PARASITES: EKHINOKOKOZ; DIKTIOKAULOZ; PASTSILLIOZI; MONEZIOZ; AND PREVENTION MEASURES ADOPTED FOR IMPLEMENTATION ON PASTURES.

SHEEP LAMENESS – TREATMENT MEASURES THAT CAN BE IMPLEMENTED BY SHEPHERDS

IDENTIFICATION OF POX OCCURRENCE, CORRECT DIAGNOSIS OF POX, SIMILAR SYMPTOMS IN OTHER DISEASES, PREVENTION AND TREATMENT.

ANIMAL HUSBANDRY ISSUES

LAMBING, BRINGING UP BABY LAMBS

DEALING WITH INJURIES (AN ATTACK BY DOG, WOLF, SNAKE BITE, LAMENESS)

NUTRITION, HOW DO YOU ASSESS “FAT” AND “THIN” CONDITION OF LAMBS

HOW DO YOU EXAMINE TEETH AND IMPACT OF GOOD/BAD TEETH ON GROWTH OF ANIMALS

SANITARY CONDITIONS FOR LIVESTOCK AND GENERAL PREVENTION MEASURES

INTRODUCTION TO VACCINATION:

Importance of delivering the vaccination by veterinary specialist – impacts and risks

Importance of proper storage of vaccine

Importance of purchasing the quality vaccine

Where can you buy quality vaccine (veterinarian, veterinary pharmacy)

Importance of correct dosage and administration of vaccine

After finalizing provision of above listed information, please proceed with questions:

7) Was the provided information helpful for you?

Yes No

8) Which part was of most interest to you? List five and prioritize them by numbering:

- a). _____
- b). _____
- c). _____
- d). _____
- e). _____

9) Which part was new to you? List five and prioritize them by numbering:

- a). _____
- b). _____
- c). _____
- d). _____
- e). _____

10) Which practices are you going to change based on provided information?

- a). _____
- b). _____
- c). _____
- d). _____
- e). _____

10a) In case of negative response, please ask:

What additional resources would you need to change your farming practices based on provided information?

- a). _____
- b). _____
- c). _____
- d). _____
- e). _____

11) What other information would you be interested in learning in future? Please provide list and prioritize by numbering

- a). _____
- b). _____
- c). _____
- d). _____
- e). _____

Appendix IV:

#	Date	Location	project members	team	beneficiaries from the list provided by GCCP HCC	Addition of beneficiaries on site	Notes
	29-Jul-11		Akaki Elanidze, Zaza Midelauri from Vet association, GCCP HCC mitigation field officer Temur Popiashvili				arrival at Dartlo
1	30-Jul-11	Dartlo			Zaza Idoitze	Kviria Idoitze	original list of beneficiaries provided name of Zaza Idoitze, brother of Kviria Idoitze, who participated in the program
2	30-Jul-11	Dartlo				Otar Pareulidze	beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the GCCP HCC officer to include him in the program
	31-Jul-11						Due to local celebrations the project team was unable to travel to the sites.
3	1-Aug-11	Kvavlo			Tamaz Tilidze	Giorgi Tilidze	Giorgi Tilidze same as Zuro Tilidze, participated in the meeting, his father is Tamaz Tilidze who was in the original list,
4	1-Aug-11	Dartlo			Gocha Rainauli		beneficiary was not in Bigoet Satibe (expected location), because he accompanied tourists with horses and agreed to meet with project team in Dartlo rather than bigoet satibe

5	2-Aug-11	Dartlo		Usup Tsukhurkaidze		Project team could not reach him on estimated location and agreed to meet in Dartlo. beneficiary is going to Vashlovani area, but bsaed on GCCP HCC officer's information, still did not fall in the immediate target area
6	2-Aug-11	Dartlo		Vazha Azikuri		Beneficiary was in Alvani instead of Mtatusheti at this time. Over the phone He agreed to meet the project team in Dartlo.
7	2-Aug-11	Dartlo		Zviad Bughridze		Project team could not reach him on estimated location and agreed to meet in Dartlo.
8	3-Aug-11	Dartlo		Aleksi Gatsiridze	Besiki Gatsiridze	Aleksi Gatsiridze, from the original list, is the father of Besiki Gatsiridze, who participated in the outreach program. Project team should meet beneficiary in Kvavlo, but he seemed to leave Mtatusheti for a while and agreed to meet project team in Dartlo on his way down to Alvani village.
9	3-Aug-11	Dartlo			Bidzina Lekaidze	Beneficiary was in Dartlomta and came down to Dartlo village. He attended with his son Shio Lekaidze. beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the team to include him in the program
	4-Aug-11					walk up to Dano and Kvavlo, in order to hold the meeting with Iusup Tsukhrukaidze and Aleksi Gatsiridze, but the beneficiaries were not on site

10	5-Aug-11	Diklo		Koba Osorauli		after holding the outreach meeting, beneficiary indicated that he is not going to winter pastures in Vashlovani area and that he is not interested in current or future cooperation, therefore, he did not participate in the survey as well
11	5-Aug-11	Diklo			Anzor Betsunaidze	same as Gocha Betsunaidze, beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the team to include him in the program
	6-Aug-11					travel down to Alvani for replacing the second veterinarian
	7-Aug-11					Vehicle maintenance works; Logistical issue: Since old vehicle of A. Elanidze had broken down and GCCP HCC mitigation field officer Temur Popiashvili did not consider old vehicle as a safe means of transportation, the team rented a private SUV with driver for trip to Omalo. Based on the reached agreement between contractors, Mr. Popiashvili would be covering his own transportation expenses for the unforeseen incident.
	8-Aug-11		Karlo Aivazashvili substituted Zaza Midelauri during trip #2. GCCP HCC mitigation field officer Temur Popiashvili			travel back to Tusheti
12	9-Aug-11	Bochorna		Badri Otiuridze		

13	9-Aug-11	Omalo		Irakli Ichirauli		Project team has visited Irakli Ichirauli at his guesthouse, in Omalo
14	10-Aug-11	Dochu		Vasil Tsomikuridze		
15	11-Aug-11	Jvarboseli		Badri Bukvaidze		Beneficiary was not accessible by phone and the team went to Shenaqo to find him on site, but beneficiary was not there either and project team went back to Dartlo. Finally, the project team met beneficiary in Jvarboseli.
16	12-Aug-11	Dikiurta		Jemal Uturgaidze		located in (Vakisdziri) .
17	12-Aug-11	Vakisdziri		Khvicha Antaidze		located in (Vakisdziri), beneficiary from the original list has cows and is not going to Vashvlovani area. He attended the training, but did not fill the survey per recommendation of GCCP HCC officer
18	12-Aug-11	Tsovata		Tedo Kizilashvili		same as Mirza Kizilashvili, the meeting originally was supposed to be held in Tsovata; for logistical reasons it was moved to Vakisdziri
	13-Aug-11					travel back to Dartlo
	14-Aug-11					Trip to Alvani
	15-Aug-11		Akaki Elanidze and Karlo Aivazashvili returned to Dartlo to finish the project. GCCP HCC mitigation field officer Temur Popiashvili			Trip back to Tusheti, Elza Pitskhelauri, the fourth selected trainer could not join the team due to family problems, thus Akaki Elanidze and Karlo Aivazashvili returned to Dartlo to finish the project
	16-Aug-11					Sheep owners were missing In Tchesho and because of no phone access. the project

						team walked surrounding villages to set up next day training time arrangements.
19	17-Aug-11	Girevi			Gela Mozaidze	beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the team to include him in the program
20	17-Aug-11	Parsma		Kakha Kaadze	Archil Kaadze	Kakha Kaadze, from the original list, is the father of Archil Kaadze who participated in the outreach program
21	17-Aug-11	Girevi			Adamo Mozaidze	beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the team to include him in the program
22	18-Aug-11	Dano			Iuri Lukhumaidze	beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the team to include him in the program
23	18-Aug-11	Chesho			Levan Tataraidze	beneficiary was not originally in the list, but as he declared, he is going to Vashlovani area for winter pastures, therefore, decision was made by the team to include him in the program

NB: THE FOLLOWING PARTICIPANTS WERE DROPPED FROM THE PARTICIPANT LIST, AS AGREED WITH BY MR. POPIASHVILI, AND DID NOT PARTICIPATE IN THE OUTREACH PROGRAM:

location	beneficiary	Rationale:
Sabue	Anzor Gutanaidze	Beneficiary's relative diseased and he was not on site.
Sakhare	Jijur	Traveling to Sakhare for one beneficiary only was not reasonable,

	Jjuridze	since it would take close to three days, especially when presence of beneficiary on site was not guaranteed
Begela	Giorgi Gubakelidze	Beneficiary appeared to be a shepherd, not a sheep owner. When trying to locate his flock, the team was only able to find out they have migrated from Tsovata, but was not able to identify their next station. Therefore, visit to indicated beneficiary was cancelled
Begela	Giorgi Imedidze	Beneficiary appeared to be a shepherd, not a sheep owner. When trying to locate his flock, the team was only able to find out they have migrated from Tsovata, but was not able to identify their next station. Therefore, visit to indicated beneficiary was cancelled

Appendix V:

Survey

results: 21 respondents, all sheep owners

2. The common diseases that bother sheep – according to flock owner's understanding

#	Disease	priority #1	priority #2	priority #3	priority #4	priority #5
1	FMD	16	4			
2	Bradzott	4	16			
3	Pastsilliozi			8	3	1
4	Monezioz	1		5	1	6
5	Diktiokauloz			1	9	3
6	Necrobacillosis (causing lameness)	1		2		
7	Helminths			1		
8	Ekhinokokoz			1		
9	shedding mangy					1

3. Veterinary problems, which respondents faced on summer pastures during last one year

#	Disease	priority #1	priority #2	priority #3	priority #4	priority #5
1	FMD	6	1			
2	Necrobacillosis (causing lameness)	6		1		
3	Monezioz	2	5	2		
4	Diktiokauloz	1	3		1	
5	Pastsilliozi	1		2		
6	Bradzott	1	1			
7	Lameness	1				
8	Ekhinokokoz			1		

4. Veterinary problems, which respondents faced on winter pastures during last one

year

#	Disease	priority #1	priority #2	priority #3	priority #4	priority #5
1	FMD	11	8			
2	Bradzott	8	6			
3	Pastsilliozi		2	3		
4	Monezioz			1	1	
5	Diktiokauloz			1		1
6	Ekhinokokoz				1	

5. Was the provided information useful for you?

All 21 participants indicate that the information was useful.

6. Which topic was the most interesting?

#	disease	priority #1	priority #2	priority #3	priority #4	priority #5
1	Bradzott	8	9			
2	FMD	7	6	1		
3	selection of rams	2				
4	Ekhinokokoz	1		1	1	
5	Monezioz	1		1		1
6	Pox	1			1	1
7	Necrobacillosis (causing lameness)	1				
8	getting vaccine	1				
9	Pastsilliozi			5		
10	Diktiokauloz				3	2

7. Which topic was new for you?

#	disease	priority #1	priority #2	priority #3	priority #4	priority #5
1	selection of rams	10		1		
2	Bradzott	3	4			

3	Pox	3				1
4	FMD	2	3	1		
5	Veterinary medicines	1				
6	Ekhinokokoz	1				
7	Lameness		1	1		
8	Pastsilliozi			2		
9	Diktiokauloz			1	1	
10	Monezioz				1	1

8. Which practices are you going to change based on provided information?

	disease	priority #1	priority #2	priority #3	priority #4	priority #5
	Selection of ram by teeth exam	12		1		

9. What other information would you be interested in learning in future? Please provide list and prioritize by numbering

	topic	priority #1	priority #2	priority #3	priority #4	priority #5
1	Necrobacillosis (causing lameness)	1				

- 2 all the rest indicated that they need new information about everything in animal health, but had trouble naming specific topic

Appendix VI: Datasheet for livestock owner interviews

1. Interview #: _____ 2. Date: _____

3. Name of research assistant: _____

4. Associated village: _____

5. Exact location (GPS coordinates): _____

Farm and livestock demographics

6. Name of interviewee: _____ 7. Age: _____

8. Name of home village: _____

9. Contact details: _____

10. Description of farm buildings and facilities:

Circle all applicable: house large barn smaller barn(s) for lambs
night-time corral (give details) _____
other (specify) _____

11. Size of pastures (in hectares): _____ ha

12. Are pastures owned or leased? owned leased

13. How many livestock owners #: _____ and herders #: _____ are at the farm?

14. For how many years have you used the same farm? _____

15. Is your flock going back to Vashlovani for the winter? Yes No

If yes: What date do you plan to depart? _____

What date will you arrive in Vashlovani? _____

16. Sheep: _____ 17. Goats: _____ 18. Cattle: _____

19. Horses: _____ 20. Donkeys: _____

Habitat variables

*[*Items to be estimated by research assistant – will be confirmed later by GIS]*

*21. Altitude of farm: _____ masl

*22. Distance of farm buildings to nearest tree cover: _____ m.

*23. Distance of farm buildings to nearest ravine: _____ m.

24. Distance of farm buildings to pasture: _____ m.

25. Location of water for livestock [*ideally get the interviewee to point to the actual location, then go to the spot and take a GPS reading*] _____

*26. Degree to which pastures around farm are overgrown with bushes or trees:

Circle applicable: 0% 1–10% 11–25% 26–50% >50%

Livestock Guarding Dogs

27. Sheep dogs #: ____ of which adults (>1 yr): ____ juveniles (<1 yr): ____

28. Are they: *Caucasian* *Georgian* *mixed* *other (specify _____)*?

29. Do you think you have good dogs? Yes No partly

explanation: _____

30. On a scale of 1 (not at all) to 5 (completely) how would you rate your dogs on the following characteristics:

Trustworthiness (part of the flock, exhibit submissive behaviour) _____

Attentiveness (stay with the flock day and night) _____

Protectiveness (move between the flock and any threat) _____

31. Where do you get your dogs from? _____

32. How did you train them? _____

33. How do you think the effectiveness of your dogs could be improved? _____

34. Would you like help to improve your dogs? Yes No

If yes, how? _____

35. is this something you would be interested in? Yes No
36. Would you be willing to have your dogs neutered? Yes No
37. How many pups do you think you would need? _____
38. Would you be willing to contribute towards the cost of buying the pups? Yes No

Vaccinations

38. Are you interested in participating in such a vaccination campaign?
 Yes No (if no, please give reasons) _____

- 38b. If yes, are you able and willing to pay around XX% (this will depend on the size of their flock) of the vaccine costs? Yes No (If no, please give reasons)
- 38c. How could we organise the payment with you? _____

39. (If they are not interested in vaccinating against Brazzot, ask); what, if any, vaccines are you planning on giving to your sheep this year?
40. Please indicate what steps were taken with the participant:
 Signed MoU Verbal commitment Follow up required

Livestock Insurance

41. Is this something you would be interested in? (If not, why not?) _____

42. If so, would you be willing to make certain improvements in your farm? (these might include marking sheep, improving livestock health, actively protecting your flock from predators – if they are reluctant, point out that we *may* be able to help them with this)

43. How much, per head, would you be willing to pay (as a percentage of the market value)?

44. How much in terms of market value, would you expect to get back for each sheep killed?

Appendix VII: Memorandum of Understanding

Georgian Carnivore Conservation Project and

.....

This Memorandum of Understanding is made between the Georgian Carnivore Conservation Project of 12A I. Abashidze Street, Vake, Tbilisi (“GCCP”) and the

..... (“the owner”) of

.....

The aim for this document is to record an agreement by both parties to share the cost of vaccinating the owner’s sheep against “bradzott”. The cost of the vaccine is GEL1.66 per head and the portion of this that will be covered by the owner will vary depending on the total number of sheep to be vaccinated:

30% for the first 600 sheep; 50% for the next 400; 70% for any additional

In order to facilitate the fair purchase of vaccines, the owner agrees to transfer appropriate funds in coordination with GCCP. Funds will then be transferred to a third party (Kakheti Regional Veterinary Association) for the procurement of appropriate vaccines. The cost of administering the vaccines will be covered by GCCP at no additional cost to the owner.

STATEMENT OF UNDERSTANDING

This document is a statement of understanding and is not intended to create binding or legal obligations on either party.

Signed for and on behalf of the GCCP by:

Signature:

Name:

Date:

Signed for and on behalf of the owner

Signature:

Name:

Date:

Witnessed by

Signature:

Name:

Date:

