

CATALOGUE OF AGRICULTURAL TOPICS IN THE GEORGIAN LIVESTOCK SECTOR



Introduction

Agriculture is a main source of income for the majority of the rural population in Georgia, livestock husbandry a universally important component. It is important to provide good quality, reliable information to people involved in this field for the further development of the sector. Media can be hugely influential in supporting this development.

This present catalogue of agricultural topics has been developed for journalists and those interested in covering and reporting on agriculture, who report on the lives or issues related to the lives of those for whom agriculture is an important livelihood. This catalogue covers topics related to the dairy, meat, wool and honey sectors.



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MEAT AND DAIRY PRODUCTS

Meat and dairy products are foods at high-risk of contamination. These products can be the source of food poisoning and various infections if they are not properly produced or if the temperature regime or hygiene norms are not followed correctly at the various stages of production, distribution and sale.

- Uninspected, infected meat can infect humans with diseases, such as Brucellosis¹ and others transmitted from animals to humans. These types of diseases are called *Zoonoses*
- Milk or meat from an infected animal, unpasteurized milk or improperly produced milk may cause Brucellosis, foot-and-mouth or Anthrax disease in humans.
- Products produced in an unhygienic environment may result in food poisoning and intestinal diseases.

It is important to cover information from different sources such as consumer, meat seller, slaughterhouse and farmer.



Period: throughout the year, especially close to the hot season

WHAT DOES THE *FROM FARM TO TABLE* APPROACH MEAN?

All the stakeholders in the food supply chain including farmers, producers, processors, distributors, transport, trading companies and retailers should be fully aware of the raw materials being used, and the manufacturing processes of the products to accurately determine at what stage food safety problems can occur and what type of problems they can be.

It is important and necessary to protect, implement and follow the *From Farm to Table* food safety concept with roles and responsibilities of all players involved in the food value chain to promote and encourage food safety and conduct traceability.

¹Please refer to the Diseases section, p.14

MILKING PRACTICE

A farmer must take into account the following information at each stage of milking:

Before milking:

- Clean a cattle-shed and especially a place of milking;
- Clean a cow's body;
- Put on clean clothes;
- Wash your hands;
- Diseased animals should be separated. They should be milked the last. In case of revealing mastitis or some other disease, a decision should be taken whether to boil/sell the milk, use it for calves or pour it out;
- Wash udder with warm water, massage it: half of the udder, fourth part and the tits. This increases milk quantity;
- A tail is bound to a leg. Drying of the udder is performed by a single usage cloth, or clean and dry cotton cloth, which should be boiled after each usage.

During milking:

- Before starting milking the first portion of milk from each tit is milked separately, collected in a dark container and checked whether there are lumps or blood or what color it is. The first portion of milk is poured out;
- During milking only a preliminarily washed clean and dry inventory is used (bucket, etc.).
- The process of milking is fulfilled in the shortest period to avoid milk pollution caused by long contact of the milk with the air. Besides that, a cow stops giving milk. Milk which is retained in the udder is the source of mastitis and inflammations;

After milking:

- After milking the udder is washed, the tits are checked, then they are washed by a bactericide solution.
- After milking utensil is washed by hot water, processed by a bactericide solution and dried properly;
- Milk is filtered and poured in containers, which are closed hermetically and are taken to an enterprise.

Milk should be kept in the following way:

- Milk should be kept into hermetically locked containers. In this process filters are used;
- The milk must be cooled about 8-10 ° C. It can be kept at this temperature max. for 24 hours;
- The milk must be kept at the homogenous temperature before transferring;
- It is desirable to deliver the milk to a cheese enterprise within 2 hours;

The vessel which is used for milk should be closed. After milking all the used things should be washed. For this purpose, it is desirable to use alkali liquid. Containers and other utensils should be put in clean places.

MILK POWDER

In recent prohibition of milk powder is not a solution, the main task is to undertake proper labeyears, the use of milk powder has significantly increased among cheese producers. The main reason is the low cost of production. One of the major problems is the unclear labelling of products containing milk powder. Unclear labelling of products containing milk powder means that consumers may often buy cheese and thinking it is made from raw milk when it is not. It also causes unfair competition as dairy products using milk powder are so much cheaper to produce. The prohibition of milk powder is not a solution, the main task is to undertake proper labelling which will not mislead consumers. Consumers should be able to make a choice and decide whether to buy a product made of natural milk or milk powder. Consumers should also know that palm oil and other vegetable oils used in dairy products can be harmful to human health when they are trans fats, this will read as 'hydrogenated vegetable oil - dangerous substances for humans'.

The following questions are suggested for further research:

- What is milk powder? What is the difference between milk powder and raw milk?
- Who uses milk powder and why? Where is the milk powder imported from? Quantity?
- What are the advantages and disadvantages of milk powder?
- Labelling of products containing milk powder.
- Are there any rules in this regard?

Note: Some cheese producers have also started to use imported pasteurized evaporated whole milk from Iran, which not only threatens local production but also contains some of the harmful additives, like Carrageenan, Lecithin, Calcium citrate, triphosphate. Unfortunately, local

Pasteurized Evaporated Whole Milk

Recently in 2020, import of ***pasteurized evaporated whole milk*** and pasteurized concentrated milk with high and low-fat contents from Iran has been caused unfair competition in the dairy sector.

Georgian cheese must be made from Georgian raw milk. Ingredients are added in the evaporated milk, such as carrageenan and triphosphate, high consumption of which may cause cancer. It is important to control the evaporated milk import and sales, and protect Georgian raw milk, farmer, producers who are making cheese from raw milk and consumers who must be informed about the origin and ingredients of the cheese to protect our health and life. Consumers have a right to have information about the origin of the cheese through proper labelling.



For the protection of consumers to ensure fair competition between dairy enterprises, the following is required:

- Clear labelling: all ingredients which are used in cheese and other dairy production must be written on the label.
- All producers who are processing *Iranian Milk* should be identified by the NFA.
- Strict control of unregistered dairies by the NFA.

Period: throughout the year, keep an eye on inspections and violations published by the National Food Agency in order to ensure permanent control and situation reporting.

GEORGIAN MILK MARK

The new *Georgian Milk Mark* was introduced in January, 2019. The new *Georgian Mark Mark* distinguishes dairy products made from natural raw milk. Products produced from Georgian natural raw milk and which do not contain milk powder and/or any vegetable oils. The purpose of the mark is to promote products made from Georgian natural raw milk, which will help consumers make informed decisions while buying milk and other dairy products.



A large national consumer survey of urban consumers by *the Caucasus Research Resource Centre* across Georgia showed that consumers want to be able to buy 'ecologically clean' dairy products, meaning clean milk that comes from healthy grass fed cattle and dairy products produced in clean regulated enterprises. The research found that the majority of consumers had difficulty in identifying or being able to buy such products as these products are currently undifferentiated in shops. The *Georgian Milk Mark* will therefore solve this problem.

All registered and HACCP certified dairies have the right to apply to use the *Georgian Milk Mark* if they produce dairy products using natural raw milk that meets the criteria of the mark. These dairies will then be regularly audited by an independent body and transparent results and enterprise data published online on www.georgianmilk.ge. Ultimately, this will help enterprises to overcome unfair competition arising from dairy products produced from milk powder.

The ***Georgian Milk Federation*** was created from a coalition of dairies currently using the mark facilitated by the *Business Institute of Georgia* to lobby for the *Georgian Milk Mark* in Government and supermarkets; plus, for issues related to the dairy sector. The first meeting of the federation voiced the use of the evaporated milk, developed advocacy and action points to government and the public. The federation will continue its work, advocating for concerns regarding its members.

Who Can Apply

- The business should be registered at the Public Registry
- The dairy enterprise should have recognition from the NFA
- The dairy enterprise should have HACCP in place
- The dairy enterprise should be fully operational when applying for the Georgian Milk mark
- The dairy enterprise should have a minimum of three month experience working in the dairy sector
- The dairy product should be made only from Georgian natural raw milk, collected from farmers/suppliers whose cattle have access to grazing for a minimum of six months a year. The majority of winter feed should be grass based
- The dairy product does not contain milk powder or vegetable oil.

CHEESE LABELLING RULES

The rules for labeling cheese were defined after the introduction of milk and dairy products regulations in 2017:

A product containing vegetable fat cannot be called 'cheese'.

Points of Interest:

- How do entrepreneurs follow this regulation?
- What kind of cheese is for sale?
- What are the statistics?
- How much has the number of fines decreased/increased during the last year?
- What are the problems in this regard?

Cheese labels must include the following information:

- ✓ Identification details of a producer (name, address, identification code, enterprise recognition number)
- ✓ Standard number
- ✓ Manufacturing date
- ✓ Expiration date and storing conditions
- ✓ Energetic cost in 100 gr product and weight

From September 2019, ***a new law on the labelling of food products (Decree N301)*** started implementation, which requires clear listings of all ingredients used in a product.

Period: throughout the year, you should regularly address this topic

WHAT DOES A CONSUMER NEED TO KNOW?

Cheese produced by milk powder or that contains vegetable fat cannot be considered cheese according to the milk and dairy product regulations. Entrepreneurs sell it under the name “Sakhachapure” (for Khajapuri), “Extra” and “Chkinti Cheese” (raw cheese) misleading consumers if they do not read cheese labelling carefully and only pay attention to the name. Also, a large amount of cheese is sold without any labelling and packaging, it is placed in a single polyethylene bag, so a consumer does not get any information about the ingredients. In most cases, such cheese is sold in unhygienic conditions. Consumers must try to avoid buying falsified products in streets, fairs and stores. Also, they should pay attention to the environment in which the milk and dairy products are stored and sold.



If the cheese has no label, a consumer has a right to ask for information about the cheese: origin, laboratory analysis, and producer. If the seller fails to provide this information, it is a violation of the labelling rules. If cheese is sold in non-compliant conditions, a consumer has a right to call the hotline (*number 1501*) of the *National Food Agency* and leave a notice about the violation(s) (anonymity is protected).

It is important to cover information from different sources, such as dairy producers, supermarkets, suppliers and public bodies. If a consumer buys a dairy product that has gone bad, they must react immediately and take it back to a vendor. But if a consumer cannot go back and return this product, then they should call the *National Food Agency* hotline and leave a message. It may be no fault of a producer but of a distributor or a selling point itself.

While reporting it is necessary to report the opinions of all stakeholders: consumer, salesperson, distributor and producer.

Period: throughout the year, you should regularly address this topic





BUTTER OR SPREAD?

We often see what seems to be butter named 'spread'. The word *spread* means that it is made from vegetable oils and is not butter. Consumers are often not aware of this and buy spread when they want to buy butter.

According to the *Technical Regulation on Milk and Milk Produce (N152)*:

It is prohibited to use the name *butter* on the label if the product is made from vegetable oils or other trans fats.

There are also cases when cheese and butter are made from imported frozen cheese and butter and the label does not indicate origin.

WHERE AND HOW SHOULD ANIMALS BE SLAUGHTERED?



- A slaughterhouse must issue a document called Form #2 covering all the following information: place, location and time of slaughter, whether a veterinary control before slaughter was carried out or not, the type and volume of meat, how the meat was transported i.e. by a refrigerator/freezer (where the appropriate temperature is regulated) or by other means of transport.
- Form #2 is signed by a slaughterhouse vet.
- The slaughterhouse must then label all meat.
- The labeling should include the following information: location of the slaughterhouse, where the animal was slaughtered, as well as the meat sell-by date, temperature and type of meat.
- While buying meat a consumer has the right to ask for Form #2.

There are still problems in many regions, where people try to avoid using slaughterhouses, which poses a great threat to human health since animal and meat are not inspected by a vet and the health of cattle and sheep is therefore unknown. Uncontrolled meat can cause human disease/infection with potentially dangerous.

Period: the slaughtering season is different in different regions, so a journalist must prepare information accordingly. However, the process is taking place throughout the year and requires special attention.



MEAT SELLING

- Transporting meat from a slaughterhouse to a shop or market must be done by a special refrigerated car with proper temperature control.
- Veterinary certificate Form #2 must accompany all consignments.
- Meat must be sold in refrigerators at the mandated temperature and not hung in the open.
- While buying meat, a customer has a right to ask for Form #2.

While buying meat, a consumer should pay attention to: **Carcass labeling and Form #2**
A consumer can ask Form #2. Where a consumer does not receive the document, the consumer has a right to call the National Food Agency hotline and leave a message concerning the situation.

Period: throughout the year, you should regularly address this topic

THE ROLE OF THE NATIONAL FOOD AGENCY

The *National Food Agency* has a commitment to provide business operators involved in food production with information about amendments in legislation and to monitor/inspect the fulfillment of legal requirements and the production of safe products. The *National Food Agency* periodically publishes a list of restaurants, enterprises, agrarian markets and other business operators inspected by the Agency providing information on Food Safety and Hygiene in compliance.

If any violation is detected (spoiled, expired products, unfit for sale, etc.) a consumer has a right to inform the *National Food Agency's* hotline: 1501. Then the *National Food Agency* will send an inspector to carry out an unexpected inspection.

Period: throughout the year, keep an eye on inspections and violations published by the National Food Agency in order to ensure permanent control and situation reporting

NEW REGULATIONS IN THE SECTOR



A moratorium in the 2012 law, which required all 'who produce and sell dairy products in a regular and organized manner' to register at the National Food Agency and public registrar ended in January 2020 and the Government approved **Decree #14** which defines *un-regular production*. The main goal of this Decree is to support household production having un-regular production of food/animal feed and primary production, efficient operations of internal markets, consumers' rights protection.

According to the new Decree un-regular production is households having:

- No more than 5 registered/identified cattle producing milk and other dairy products
- No more than 15 registered/identified small ruminants producing milk and other dairy products
- No more than 10 beehives producing honey
- No more than 2 Ha agricultural land producing food and animal feed
- No more than 300 poultry and producing meat and eggs.

The above listed households' production must be registered at the NFA and have the same ID number which the farmer has. They are not a subject to control by the NFA, however they have obligations to cooperate with the NFA and fulfill the NFA's recommendations on animal identification/registration, animal diseases, movement/transhumance of the cattle, welfare and other issues related to animal diseases, episodic prevention and other issues listed in Decree #14.



From September 1st, 2019 it became mandatory for all businesses to have a person responsible for employees **Health and Safety according to an amendment in the 'Occupational Safety' code**. According to another change in the code, the Ministry of Health and Social Affairs of Georgia now has a right to carry out inspections in the enterprises without Court decision, which was obligatory before.

Period: throughout the year, keep an eye on inspections and violations published by the National Food Agency, the Ministry of Health and Social Affairs in order to ensure permanent control and situation reporting

WHAT DOES BIOSECURITY MEAN?

Biosecurity in livestock husbandry is a set of measures to prevent and reduce the risk of animal diseases. It mainly includes two types of measures - vaccinations and treatment against parasites. Currently, the National Food Agency is the main responsible body for animal disease control in the country and the part of the preventive measures are provided to farmers by the state free of charge, in particular:

- Free state vaccination against Foot & Mouth disease, Anthrax and Brucellosis
- Seasonal treatment against external parasites twice a year at six Biosecurity Points located in Telavi, Signagi, Dedoplistskaro, Rustavi, Marneuli and Bolnisi municipalities.

Besides the above mentioned, there are several preventive measures, being an essential part of animal care, that are under farmers' responsibilities.

Period: winter and spring are high-risk seasons for spreading diseases

WHAT DOES ANIMAL HEALTHY CARE MEAN?

It is important to increase awareness of farmers on the importance of animal health care emphasizing following topics:

- Veterinary examination of cattle
- Understanding how does the productivity of a healthy and a diseased animal differ (milk yield or live weight)?
- The importance of vaccination for cattle health and the production of healthy products
- How to prevent diseases
- Keeping cattle sheds clean and carry out disinfection.

VACCINATION

- **Importance of vaccination:** vaccination is the best way to avoid infection of cattle and expansion of diseases
- **Vaccination cost:** the price of treatment on nine spread diseases is approximately 30-35Gel/year/head. Five of them are invasive and four of them are infectious diseases.
- **Who to call for vaccination** – Government provides vaccination against Anthrax, Foot and Mouth, Brucellosis and Tuberculosis. Besides, there exist other diseases and vaccinations which should be done by a local vet hired by a cattle owner.
- **A dairy enterprise should know when cows have been vaccinated and which cow is under treatment to avoid receiving milk.**

ANTIBIOTICS

- **Milk which includes residues of antibiotics** negatively influences cheese processing. Antibiotics block a milk acid bacteria activity on the first stage of cheese production and hinder the process of maturing; they also change the process of cheese fermentation.
- **The influence of milk containing antibiotic** residues on a human is also very significant and should be envisaged. A farmer should agree with a vet to treat or not their cattle with antibiotics, the vet decides when the farmer can sell milk of the cattle, It is not allowed to use/sell milk or milk products during treatment of cattle with antibiotics.
- **Residues of antibiotics cause slowed reaction** while treatment of a human. It happens due to the resistance of bacteria against antibiotics.

Period: Throughout the year, we should regularly address this topic

Diseases

Diseases spread in Georgia:

- Foot and Mouth Disease <http://nfa.gov.ge/uploads/other/4/4659.pdf>
- Anthrax <http://nfa.gov.ge/uploads/other/4/4660.pdf>
- Brucellosis <http://nfa.gov.ge/uploads/other/4/4685.pdf>
- Tuberculosis <http://nfa.gov.ge/uploads/other/4/4654.pdf>
- Crimean-Congo Haemorrhagic Fever <http://nfa.gov.ge/uploads/other/4/4655.pdf>
- Rabies <http://nfa.gov.ge/uploads/other/4/4683.pdf>
- Nodular Dermatitis <http://nfa.gov.ge/uploads/other/4/4658.pdf>
- Sheep and Goat Pox <http://nfa.gov.ge/uploads/other/4/4657.pdf>

Cases should be observed, journalists should provide in-depth information related to the deceases.

BRUCELLOSIS

- Serious implication for productivity
- **Brucellosis is common in Georgia.** Brucellosis is a common disease for animals and humans. Brucella can infect cattle, goats, camels, dogs, and pigs. Brucellosis infection of cattle causes abortion.
- **Symptoms of cattle:** In most cases, this disease can develop without demonstrating any symptoms. But in general, it will be a weakness, joint and muscle pain, high temperature, abortion and inflammation of the uterus, decrease amount of milk. The incubation period lasts 1-2 weeks and sometimes even more.
- **Source of infection:** The bacteria can spread to humans if you come in contact with infected raw meat or the placenta of infected animals, or if you eat or drink raw unpasteurized milk and products made by unpasteurized milk: cheese, butter, ice-cream and cheese, which we did not keep in salted water, also smoked meat and sausages, can be danger. Brucellosis is spread from the vaginal discharge of an infected cow or from an aborted fetus. Also from mucilage, wound, childbed, when they have contact with infected cattle.
- **Clinical symptoms of brucellosis in humans:** an intermittent, "undulating" fever, headaches, chills, depression, profound weakness, arthralgia, myalgia, weight loss, orchitis/epididymitis, hepatic disease, endocarditis, colitis and meningitis in men and spontaneous abortion in pregnant woman, Brucellosis lasts for days to months, and can be quite debilitating, although the case fatality rate is very low. It can infect sheep, cattle, and sometimes humans.

If cattle have brucellosis, but after slaughter, the meat and sub-products do not have any pathology or brucellosis symptoms or changes, the meat can be used after boiling and sub-products can be disposed of. **Meat can be used after** boiling up to 70 ° C /freezing - 40 ° C. when keeping temperature and conditions of meat property meat is not hazardous for a human.

Please see table 1 below Vaccination Cycle of Brucellosis. A farmer should do a laboratory test on brucellosis twice a year, ones in every six months, and a bull laboratory test should be done once every three months.

Who to approach for the blood test. If a farmer wants to do laboratory diagnostic she/he should hire vets. The farmer should pay for hiring the vet and also for the laboratory diagnostic separately price which approximately is 9 Gel/head, sometimes is more or less, it depends on the distance from village and laboratory, or village and vet.

ANTHRAX

Extremely dangerous disease. do not sell meat! A cattle/cow must be disposed of properly (burned). resistance of the bacillus is so high: In -10°C for 24 days; in frozen meat in -15°C still 15 days; in ground the bacillus of Anthrax can be kept for centuries, so the grass in this specific area can be also infected and cattle which eats this grass also can be infected.

Symptoms of cattle: high temperature ($+41 - +42^{\circ}\text{C}$), weakness, intoxication, the animal stopped eating; milk can be decreased.

Vaccination: must be provided twice a year, once every six months, in spring and in autumn. Currently, vaccination is provided by the Government of Georgia, but for preventive activities, a cattle owner should vaccinate cattle with the help of a vet. Vaccination on this disease can protect cattle 100%. A farmer should pay for hiring a vet and vaccine can cost approximately 5 Gel/head.

Source of the disease for cattle might be infected pasture and water, blood, mucus. For a human source of the disease might be blood, mucus, meat, contact infected cattle, slaughter and cattle skinning process.

When cattle died: when cattle died the first symptom of this disease is swelling and followed blood from the nose and mouth. The cut ear should be scorched, and that will avoid spreading bacillus in the environment. After a laboratory test cattle should be burned in a proper deep hole, the territory should be treated by a special disinfectant solution, should be made a sign, that place is a danger for pastures and making hay.

Symptoms of Anthrax in humans: The carrion inflates very fast. Among humans Anthrax is most revealed on the skin (which is an easy case), it itches and begins rot. It is also in an intestinal form. Gastrointestinal infection in humans is most often caused by consuming anthrax-infected meat and is characterized by serious difficulty, vomiting of blood, severe diarrhea, acute inflammation of the intestinal tract, and loss of appetite. After the bacterium invades the bowel system, it spreads through the bloodstream throughout the body, while also continuing to make toxins. Infections can be treated, but usually result in fatality rates of 25% to 60%, depending upon how soon treatment commences. This form of anthrax is the rarest form. Also, this disease can be in the lung.

FOOT AND MOUTH DISEASE

Symptoms: high temperature (41-42 ° C), weakness, cattle stop eating; milk can be decreased, rash with liquid inside the mouth, disease of hoof and udder.

Symptoms of Foot and Mouth in humans: fever, nausea, vomiting, feeling tired, generalized discomfort, loss of appetite, and irritability in infants and toddlers. Skin lesions frequently develop in the form of a rash of flat discolored spots and bumps which may be followed by vesicular sores with blisters on palms of the hands, soles of the feet, buttocks, and sometimes on the lips.

Vaccination: must be provided twice a year, in near spring and in autumn. Calves should be vaccinated from three months by a vet. The Government of Georgia provides vaccinations nationally and it covers all regions and villages.

The carcass of cattle should be burned in a proper deep hole. The territory where the cattle were fallen should be treated by special solutions.

Source of infection for the cattle might be: infected by the virus. For humans: through contact cattle: Blood, mucus, meat, slaughter and skinning process

Do not sell meat! A cattle/cow must be disposed of properly (burned)

MASTITIS

Symptoms: udder such as swelling, heat, redness, hardness, or pain. Milk has a different color.

Mastitis treatment should be carried out under the supervision of a vet. The vet must define the right diagnosis and carry out the pharmacological treatment. Self-treatment is strictly forbidden.

The Amount of milk decreases if a cattle has mastitis. Milk from an infected cow can spoil up to half a tonne of milk.

Prevention: A good milking routine is vital. This usually consists of applying a pre-milking udder dip or spray, such as an iodine spray, and wiping udder dry prior to milking. After milking, the udder can be cleaned again to remove any growth medium for bacteria. Mastitis can occur after milking because the udder holes close after 15 minutes if the animal sits in a dirty place with dung and urine. Ensuring that cows have clean, dry bedding decreases the risk of infection and transmission.

WOMEN’S ROLE IN ENSURING BIOSECURITY

Women farmers play an important role in the timely detection and prevention of animal diseases, they are responsible for their animal’s daily care and milking. Therefore, it is important to inform them about the early symptoms and the first signs of diseases to ensure treatment on time.

Research conducted by the *Alliances Caucasus Programme* on biosecurity issues has shown that the awareness between women and men is different regarding cattle diseases and women have less access to information than men. This distinction is especially evident in the areas populated by ethnic minorities, where women farmers do not call vets as they think that communication with vets is a man’s responsibility due to cultural barriers.

Period: Winter and spring are high-risk seasons for spreading diseases



ANIMAL MOVEMENT ROUTE AND ITS IMPORTANCE FOR THE SHEEP SECTOR

Sheep farming is the oldest branch of Georgia's agriculture. According to the official statistics, there are about 800 000 – 1 000 000 heads of sheep in the country. Transhumance is a major part of the livestock system for sheep and to a lesser extent cattle in Georgia. Up to a million heads of livestock move twice yearly up to summer pastures and back down to winter pastures on long-established routes in spring and early autumn. The distance between the winter and summer pastures is approximately 250-350 kilometers and covers four regions. The route which is followed by the herdsmen is called Animal Movement Route (AMR). The nomadic pasture system or transhumance is well developed in Georgia and enables sheep to use only natural pastures as the sole source of nutrition for almost the whole year.

As the AMR is integrated into Georgian sheep farming without preserving the transhumance system and the AMR, the sheep sector has no potential to develop considering the pasture resources of the country. During Soviet time the AMR was well maintained, the water points and resting areas of the route were well preserved. Currently, the water points and resting areas almost do not exist at the route, however the National Food Agency is working on the building of new water points at the AMR, where availability of water is critical during transhumance.

You can watch a documentary on the Road – a beautifully shot documentary capturing the reality and dichotomies of the people who use the ancient transhumance route; the lifeline of livestock in Georgia. Link: [Road](#) which shows the everyday nomadic life of shepherds creating a more obvious picture of the noted tradition.

Note: Shepherds take sheep to the movement route twice a year: once – from April to June, the second – from September to November

WHAT IS A BIOSECURITY POINT?

Nearly 1 000 000 heads of livestock travel on the routes annually, which creates a high risk for the spread of diseases during the movement period. Consequently, it is important that animal moving on the route are treated against diseases. Ticks are widely spread in such cases, which reduce the volume of animal production, decreases productivity indicators, and worsens the quality of production.

To avoid the above-mentioned threats, livestock should be periodically (twice a year) treated through special chemicals – insectoacaricides, which will protect them against ticks and other parasites.

Bio-Security and Animal Disease Control – Cattle and Sheep



Since 2016 the country has EU standard Biosecurity infrastructure for ensuring the systematic health control of migrating livestock. There are six Biosecurity Points on the Animal Movement Route (in Telavi, Dedoplistskaro, Signaghi, Marneuli, Rustavi and Bolnisi) where disinfection of migrating livestock against external parasites at special facilities - sheep dipping bathes and cattle showers take place with a safe waste management scheme and staffed by specialists hired by the National Food Agency.

Currently, apart from the Biosecurity Points, some farmers use private sheep dipping facilities. Usually, they buy chemicals themselves, which are toxic and are banned in the EU; after dipping the waste is poured directly into the soil, making irreversible harm on the environment.

Note: Sheep and cattle treatment against external parasites should be conducted twice a year, in spring - before migrating to summer pastures and in autumn - before herds are back to winter pastures



ANIMAL IDENTIFICATION-REGISTRATION PROCESS

Traceability of cattle became a legal requirement in Georgia after signing the DCFT agreement and since 2015 the National Food Agency has started a programme of animal identification & registration for the provision of traceability and creation of the database. The animal Identification-registration process implies identifying, tagging and registering cattle, sheep and goats in a unified database, which enables farmers and vets to search for the necessary information about animals (about animal species, their health condition, past diseases and owners). The database will help the National Food Agency to effectively plan the preventive vaccination of cattle, control the traceability process, conduct veterinary activities.

Since January 1, 2018, according to the order adopted by the National Food Agency slaughterhouses have been banned from slaughtering animals that have not been identified/registered, i.e. animals having no ear tags. Farmers/mediators/slaughterhouses slaughtering unidentified/unregistered animals, should address the National Food Agency, make identification/registration of animals and only after that slaughtering is allowed.

A slaughterhouse has access to the identification/registration base and it is responsible to write off the ear tags of slaughtered animals, i.e. to make a recording in the base about the date of animal slaughtering.

Since January 1st, 2019 the decree has entered into force according to which a dairy enterprise has been banned if it receives milk from a farmer whose cattle are unidentified/unregistered, i.e. it has no ear tag.



PRACTICE OF SHEEP SHEARING

Sheep breed spread in Georgia is Tushuri sheep, which is bred in Eastern Georgia. Tushuri sheep is compact, stands up to moving on the big field, eats well on thin pastures, has high-quality meat and white, clean glittering wool. Sheep are sheared twice a year (some sheep – once a year, if the sheep is old, weak and there is a probability of getting sick during the nomadic period, it is not sheared in spring, its wool is sheared only once by the end of summer). Sheep are mostly sheared in the beginning of spring and by the end of Summer. Sorting of wool is the main problem, which is a necessary term for selling wool. The problem is that the wool on sheep belly is not valuable, it is necessary to separately sort the wool taken from the back or the other parts of sheep's body, which greatly increases the price and causes fewer problems and expenses for a wool producing company. Losses are also very high as sheep shearers do not follow shearing rules and terms.

Period: beginning of spring – end of summer

WOOL EXPORT

Georgian Wool Company was the first in Georgia exported wool to the United Kingdom and India. In this regard, the following topics are suggested for reporting.

- What does a wool collecting/exporting enterprise do before exporting products?
- What are the market requirements in the countries?
- What kind of wool is received by a wool collecting/exporting enterprise?
- What problems do the enterprise face during the export of wool?
- Why is wool interesting to foreign markets?
- How has export increased in recent years?

Period: end of spring – beginning of September



Antibiotics in honey

Antibiotics are used in beekeeping to prevent bee diseases. However, honey containing antibiotics harm humans, their consumption over time can induce resistance to antibiotics and lead to blood-related disorders.

As part of the agreement which allows Georgian Honey to be exported to the EU, the government annually carries out a Residue Monitoring survey. Worryingly high residues of prohibited antibiotics (nitroimidazoles, chloramphenicol, nitrofurans) were found in previous years. 2019 however saw national information campaign carried by the *Georgian Beekeepers Union*, who developed and disseminated *Do's and Don'ts Antibiotic Use Infographic* (please, see the **Annex 1**) and facilitated *breakthrough legislation* (regulation #525) adopted by the *Government of Georgia* (has been enacted since the 1st of January, 2019), which prohibits registration of the beekeeping vet medicines containing restricted antibiotics, among others. As a result, this year, only eight percent of honey samples tested positive for prohibited substances, compared to fifty-four percent of the last year, according to the Residue Monitoring Plan results, made by the National Food Agency in the BIOR laboratory in Riga, Latvia.

It is a significant achievement for Georgian honey export opportunities and expanding markets

WHAT IS THE FALSIFICATION OF HONEY?

Using of syrup of sugar is referred to as honey falsification, selling inverted sugar like honey, or mixing it with honey. Falsification of honey is a simple process, but its identification is difficult, is determined only through laboratory analysis.

The Research on Behavior and Attitudes of Honey Consumers conducted throughout Ajara region in February 2017, revealed that most of the interviewed consumers consider the honey produced by a honey producer company as falsified, which is not always true. For example, most of the Georgian companies source honey directly from local beekeepers, then mix, label and pack it accordingly. It is also not true that crystallized honey is falsified since different types of honey have different periods of crystallization. For example, flower (May) honey is crystallized earlier because of the high content of fructose and glucose in it, which is not related if it is natural or falsified. Thus, it is important to deliver reliable information to consumers.

Period: Throughout the year, regularly address this topic especially while collecting honey

Do's & Don'ts Antibiotic Use Infographic



Don'ts

Do not buy or use vet drugs containing the following prohibited antibiotics: Aristolochia spp and preparations thereof, chloramphenicol, Chlorpromazine, colchicine, dapson, metronidazole, dimetridazole, ronidazole, nitrofurantoin (incl furazolidone).

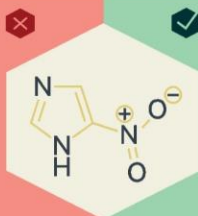
Vet drugs containing substances with established monitoring residue limits such as Tetracyclines, Streptomycin, & Sulfonamides can be used only in case of urgency and by carefully following the instructions as the risk of honey contamination is high upon use.

Do not use antibiotics for preventive/prophylactic treatment in apiaries.

Do not treat the infectious diseases: American and European Foulbrood with antibiotics. It is strongly recommended to burn the infected bee colony/hive to avoid spreading of disease in other bee colonies in your and nearby apiaries. Also, disinfect the tools/equipment used in the infected bee hive.

If bee colonies were treated with Tetracyclines (antibiotic see below) and the colonies survive, the honey may not be used for three years.

Do not use antibiotics for the prevention and treatment of the Nosema disease.



For preventive treatment of bee colonies, use vet drugs approved by the Georgian Beekeepers Union.

Avoid using antibiotics in the hive at all costs.

For disease prevention do the following:

- Place the apiary in a dry and sunny place
- Maintain sanitary-hygiene norms
- Feed bee colonies with proper feed
- Carefully remove damaged frame larvae and dead bees for disposal

Conduct preventive treatment of bee colonies against invasive diseases (Varroa, Acarapodosis) on time in order to avoid the risk of weakening of bee colonies and thus preventing the spread of infectious diseases: American and European Foulbrood.

For prevention and treatment of Nosema, use vet drugs approved by the Georgian Beekeepers Union.



Do not buy antibiotics in ordinary/human pharmacies and do not use antibiotics made for humans for the treatment of disease in apiaries.



Purchase vet drugs in veterinary pharmacies with the consultation of a trained vet pharmacist, vet or a representative of information-consultation centers.



Do not buy unlabeled vet drugs without information about the constituents and instructions for use (Dial the hotline number 1501 of the Ministry of Environment Protection and Agriculture of Georgia if such case is detected).



Buy vet drugs with a proper labelling i.e. with information on constituents and instructions for use.

Carefully follow the instructions given on the vet drug label to ensure effectiveness and avoid side effects.



Do not use vet drugs if you are not sure how to use them e.g. timing & dosage. Incorrect usage increases the risk of harming bee colonies. Do not carry out apiary treatment without professional advice or consultation



Get professional advice from vets, representatives of information-consultation centers or beekeeping associations about the treatment of apiaries.



Do not use/exchange/sell the beeswax from the hive where antibiotics were used for reprinting wax foundation. The contaminated beeswax contaminates other beeswax when mixed and contaminates future honey.



Do not consume/sell honey from the hive where antibiotics were used as it is harmful for human health.

If you have already used the above-mentioned antibiotics, change the beeswax foundation in your apiary as there is a high probability that your beeswax is contaminated with antibiotics, which can be easily transferred in honey. Following disposal, you can use and sell honey from the next harvest.



WHAT DOES HONEY LABORATORY ANALYSIS DO?

A laboratory test report of a honey sample is one of the key points for efficient market monitoring in the country as well as for export purposes. A test report includes an analysis of honey on its quality and safety. The main purpose is to identify whether honey meets with the quality parameters of natural honey and is not adulterated. The second it shows whether honey is safe for human consumption, e.g. does not include residues of antibiotics or pesticides over limited levels.

Local laboratories are offering testing services on quality parameters. Currently, the *Laboratory of the Ministry of Agriculture of Georgia* is the only laboratory testing honey on antibiotics via a screening method, which is important in the honey aggregation process. However, test results based on the screening method might not be sufficient for an importer and in this case, an exporter needs to send honey samples to an international laboratory.

The Limited capacity of the laboratories in Georgia makes it harder for honey producers/exporters to test their honey according to importer countries' requirements, it imposes higher costs and increases the time required as he/she has to send the samples for testing to an internationally accredited laboratory.

Spring: when insecticides are used and bees are fed

HONEY EXPORT

Georgia is enlisted in the third countries list providing availability for export of Georgian honey to the EU market. A honey exporter should be registered as a business operator. But there are other available markets as well. In case of export, the quality of honey should meet both local and receiver country's requirements.

The *Kakhetian Traditional Winemaking* was the first that officially exported Georgian honey to the United Arab Emirates, Canada, Japan.

Awareness of Georgian honey is very low at the international market. It is full of Chinese and other industrial honey, the price of which is considerably low (from 2 Euro) compared to the price of Georgian honey at the local market.

The following topics are suggested for further reporting:

- What kind of honey should a honey enterprise receive?
- What are the requirements it must meet?
- What are the stages for a honey enterprise to export honey?
- What is the role of the National Food Agency?

Period: honey is collected by the end of spring and summer.

Useful Links, Laws and Regulations

Georgian Milk Mark www.georgianmilk.ge

Business Institute of Georgia www.business.org.ge

Multifunctional agricultural platform www.agroface.ge

The National Food Agency www.nfa.ge

Georgian honey promotion webpage www.honeyofgeorgia.com

Jara honey promotion webpage www.jarahoney.com

Jara Beekeepers Association www.jarabeekeepers.org

Georgian Beekeepers Association www.geobeekeepers.ge

State Laboratory of Agriculture www.sla.gov.ge

Ministry of Environmental Protection and Agriculture of Georgia www.mepa.gov.ge

Rural Development Agency www.rda.gov.ge

Agroservice Center in Ajara www.agrosc.ge

Legislative Herald of Georgia www.matsne.gov.ge

Law of Georgia: 'Food /Animal Feed Safety, Veterinary and Plant Protection Code'.

Decree #714 of 2014 of the Government of Georgia: 'Technical Regulation on Honey'.

Decree #173 of 2010 of Georgian Government on General and Simplified Hygiene Rules for Food/Feed

Resolution #577 of 2015 of Georgian Government on General Principles of Tractability in the Areas of Food/Feed Safety, Veterinary and Plant Protection

Decree #639 of 2015 of Georgian Government on Approval of Technical Regulation for the Pharmacologically Active Substances and their Classification and Maximum Residue Levels in Food of Animal Origin

Decree # 301/n by the Minister of Labor, Health and Social Affairs of Georgia 'On Approval of Sanitary Rules and Norms of Quality and Safety of Food Raw Materials and Food Products'.

Decree #441 of 2016 of the Government of Georgia: Technical Regulation on 'Additional Requirements for Labeling of Food Products'.

Amendment to the *decree #441* of the Government of Georgia: Technical Regulation on ‘Additional Requirements for Labeling of Food Products’.

Decree #301 of 2016 of the Government of Georgia on Approval of Technical Regulation on ‘Provision of Food Information to Consumers’

Resolution #430 of 2010 of the Government of Georgia on Forms and Rules for Issuing Veterinary Certificates for Exporting Products Subject to Veterinary Control.

Resolution #547 of 2016 of Georgian Government on the Methods of Sampling and Analysis for the Official Control of Levels of Microelements and Contaminants in Foodstuffs.

Decree #499 of 2016 of the Government of Georgia: Technical regulation-on approval of the rule concerning the performance of analytical methods and the interpretation of results for investigating certain substances and residues thereof in live animals and in food of animal origin.

Decree #90 of 2012 of Georgian Government on Special Hygiene Rules for Food of Animal Origin

Decree #152 of 2015 of Georgian Government: Technical regulation on Milk and Dairy Products

Resolution #475 of 2020: Amendment to the technical regulation on Milk and Dairy Products

Decree #118 of 2016 of Georgian Government on Labeling of Beef and Beef Products

Technical Regulation: Rules of animal slaughtering

Technical Regulation: ‘Rules of Veterinary Inspection for Slaughtering Animals and Veterinary-Sanitary Examination of Meat and Meat Products’.