The study of Improved Animal Feed Market in Kakheti (2012 – 2017)




Kakheti, 2017

AGRO SOLUTIONS
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Content

Foreword

At the first stage of the project "MOLI in Kakheti" (hereinafter " MOLI-Project"), a baseline survey of farmers was conducted in May 2012, more than 1,000 farmers were surveyed in Kakheti. The baseline survey showed that less than 20% of farmers have access to vitamin-rich concentrated animal feed and only 8% of farmers use it.

The MOLI-Project has implemented several interventions in this direction, through such stakeholders as (I) Feed mills in rural areas and (II) suppliers of agricultural products. At the end of 2015, local feeds stated that more than 600 farmers are constantly buying improved (concentrated) feed; as well, suppliers of agricultural products followed MOLI-Project partners' and started supplying sales points with locally produced and imported the concentrated feed and vitamins for animal feed.

As a result of the interventions implemented by the MOLI project, a the concentrated feed is now widely available in Kakheti region, and more and more breeding farmers are using it.

MOLI-Project commissioned a the study on trends of the concentrated feed market in Kakheti region from 2012 to 2017 to the consulting organization Agro Solutions. The study was aiming identification and analyzing the following:

1. Users and their behavior trends;
2. The trends of availability of concentrated food market in Kakheti (2012 - 2017);
3. Geographical (municipal) access to concentrated food;
4. Monetary benefits of farmers as a result of usage of concentrated foods (separate pig and cattle).

Introduction

Most of the population of Kakheti region is employed or self-employed in the agricultural sector. The climate and soil conditions of the region are favorable for the development of livestock and plant-growing farming.

Food base is one of the leading factors for the development of livestock farming. There are very few large cattle and pig farms in Georgia. Therefore, a significant portion of milk and meat production in the country is produced by small farms, family farms, and households.

There is a similar situation in pig farming. We do not have large commercial farms. There are no commonly established methods and standards of animal feeding. Therefore, peasants and farmers have unorganized approached to feed pigs; this negatively affects the weight of a pig.

Cattle are mainly fed by grass in Kakheti region, while modern breeding farms use the concentrated feed. A the concentrated feed increases the productivity of the milking cows, and it supports rapid weight increase of pigs and a cattle.

Consequently, the concentrated feed has no alternative for the increasing profitability of breeding farms and households.

1. Value Chain

The value chain of the concentrated feed in Kakheti region consists of:

- The concentrated feed and supplements producers and importers;
- Grain manufacturers and importers;
- Animal feed shops and veterinary pharmacies;
- Feed Mills;
- Feed Users.

1.1. Producers and importerს of feed supplements and the concentrated feed

Producers and importers are mainly located in Tbilisi and Gardabani. These companies have started to appear on the market since 2001; the number of companies of such profiles is increasing yearly. These companies are quite large and supply not only the Kakheti but also other regions of Georgia. These companies provide feed supplements to shops, veterinary pharmacies and feed mills. Producers and importer carry out sales of ready-made products through brand shops, dealers and partner shops.

Producers and importers are the primary raw material providers of the market.

It is important to mention that producers and importers often provide large farms with the concentrated feed directly without intermediaries.

1.2. Producers and importers of cereals

The concentrated feed includes a variety of cereal cultures, along with feed supplements.Locally produced and imported grains are used for the concentrated feed. Cereals are produced by farming households (small quantities) as well as by cereal producing farms. In some cases, the user produces own cereals. In many cases, cereal importers are producers of feed supplements and the concentrated feed.

1.3. Feed shops and veterinary pharmacies

Animal feed shops and veterinary pharmacies are one of the key players that provide users with ready-made feed. Animal feed shops and veterinary pharmacies are supplied by feed producers and local feed mills. Their role is quite important in the value chain; there are two following reasons:

- They widely represented in all municipalities and in large villages in Kakheti;
- They are one of the main partners of manufacturers and importers.

1.4. Feed mills

Feed mills are a very interesting link in the value chain of the concentrated feed. This segment of value chain was not present on the market a few years ago.

Since 2014, the role of feed mills has been actively increasing the supply of the concentrated feed. Feed mills are mainly located in Dedoplistskaro, Sagarejo and Lagodekhi districts.

The current the study shows that the most of the owners of the feed mills learned about the essence, potential and opportunities of this business though MOLI-Project.

Moreover, MOLI-Project provided feed mills with important information and practical knowledge on feed production.Feed mills received additional information from other sources: trainings, experience, and online sources.

Feed mills have four interesting functions:

1. They buy feed supplements from producers and importers, mix them with cereals and sell the concentrated feed to customers;
2. Their produced the concentrated feed is sold at shops and veterinary pharmacies;
3. They provide services to feed users, mix and prepare the concentrated feed and they get the service fee. Users bring feed supplements and cereals to mills, mills grind and mix feed for users.
4. Feed mills successfully carry out a role of information providers on the concentrated feed. They provide information to users on benefits of the concentrated feed. They support users to set up ration and provide with individual consultations.

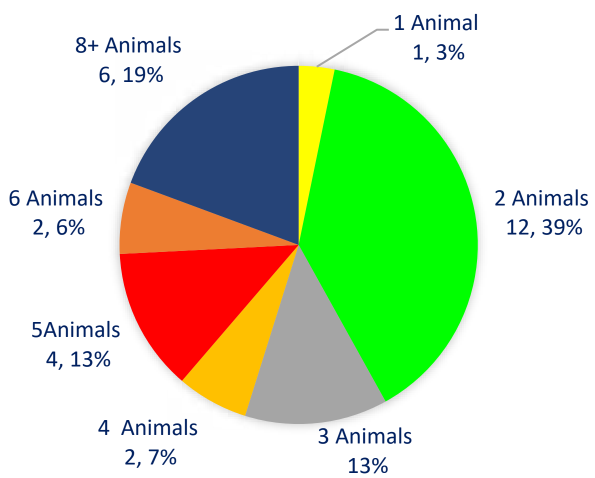
Some of the feed mills opened own shops. By doing so, they have direct access to users and increased their profits. This caused a competition between feed mills and animal feed shops/veterinary drugstore. Feed mills offer a delivery service to veterinary pharmacies and users.

A feed mill located in Dedoplistskaro started to distribute and sell ready-made feed in Shida Kartli region.

1.5. Users

Users, which purchase the concentrated feed from feed mills, feed shops, and veterinary pharmacies, are mainly small-scale farming households (diagram #1).

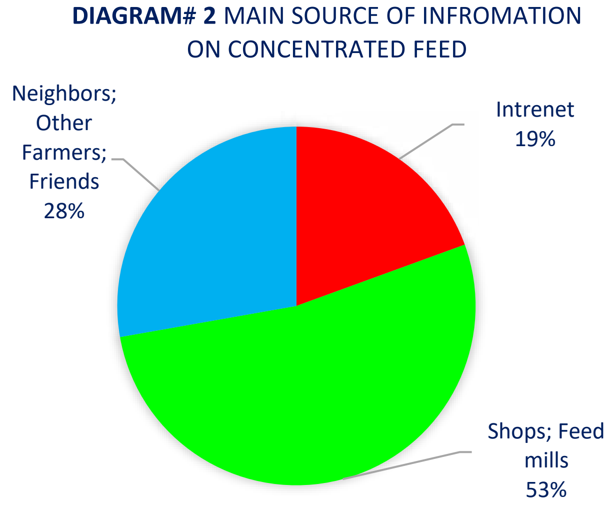
DIAGRAM # 1 - NUMBER OF ANIMALS IN HOUSEHOLDS



In order to get the concentrated feed, user address following 2 ways:

1. Users purchase ready-made the concentrated feed at shops, veterinary pharmacies and feed mills
2. Users purchase feed supplements at shops and veterinary pharmacies and take supplements along with their cereals to feed mills. Feed mills grind, mix and makes the concentrated feed for users.

2. Concentrated feed usage

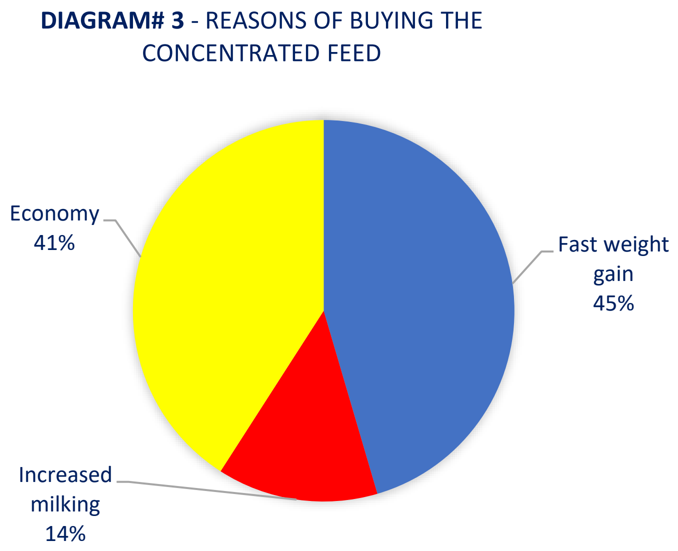


Competition is increasing in all fields of agriculture day by day. It is especially strong in the meat market; it is hard for local raw materials to compete with the imported meat as it costs less. Consequently, the detainees started searching for how to reduce the cost of their production. Livestock growth and fast weight are important in breeding. The main factor in the reduction of weight is the reduction in cost.

The user receives information on the concentrated feed from many sources: mainly from feed shops and feed mills (diagram #2).

This information supports development and raise awareness on the concentrated feed among users.

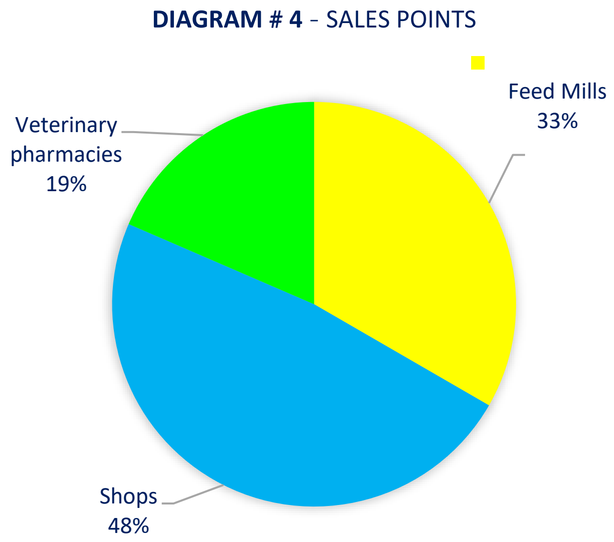
The study showed that users buy the concentrated feed for a higher monetary profit, this is expressed in various forms (diagram #3).



76% of users use the concentrated feed for pigs and 24% for cattle. There are several reasons behind this. Users think that the concentrated feed has a negative impact on quality of the product. Therefore, users, who have a small livestock in their household use milk every day, refuse to use the concentrated feed. Pigs are primarily grown for sale, and therefore users actively use the concentrated feed for pigs.

However, most of the users have a positive attitude toward the concentrated feed, and 92% of them would advise other farmers to use the concentrated feed.

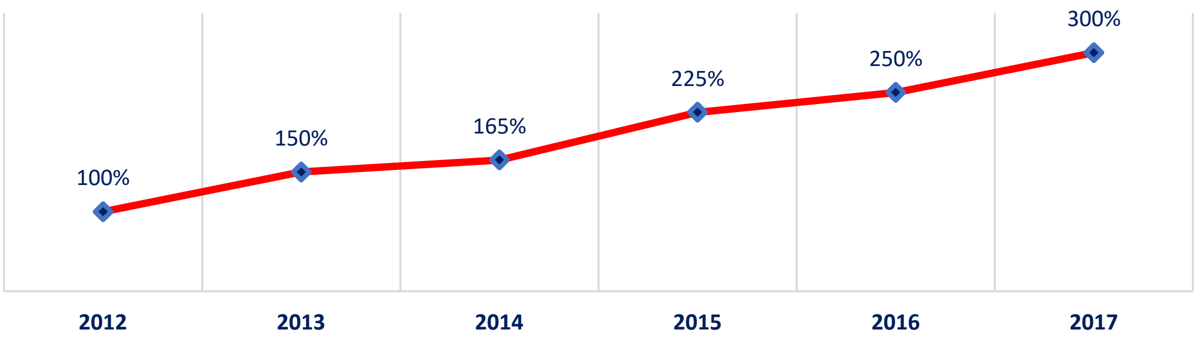
Users purchase the concentrated feed at shops, veterinary pharmacies and feed mills. A third of users buy food at feed mills, this is a very important indicator, as feed mills are a relatively new in the value chain of the concentrated feed (diagram #4).



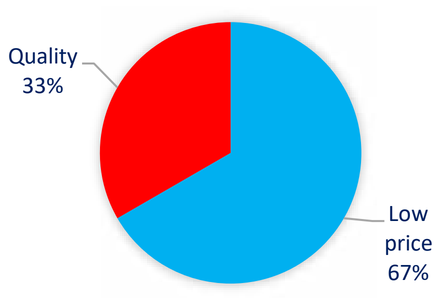
The study showed that 21% of users purchase feed supplements and 79% purchases ready-made the concentrated feed. 21% of user use services of feed mills: brings own cereals and feed supplements, grains, mixes them and makes the concentrated feed at mills.

Consumption of the concentrated feed naturally increases together with a raise of knowledge of users on the concentrated feed and study has shown that consumption has been increased by 300% from 2012 to 2017 (chart #1).

CHART# 1 - USAGE OF CONCENTRATED FEED IN KAKHETI



DIAGRAM# 5 - PREFERENCES OF USERS



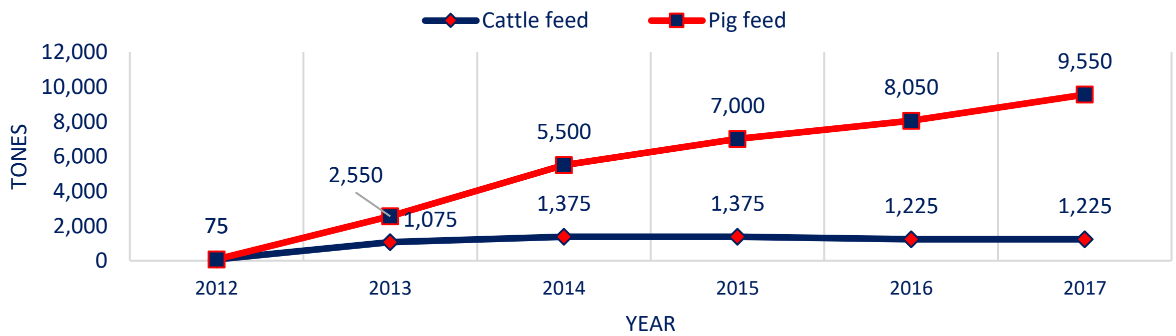
Research has revealed another interesting aspect - users choose lower prices over quality (diagram #5).

These can be explained by the lack of knowledge on the concentrated feed among users. Although in recent years user awareness on the concentrated feed has grown, there is still a lot of work to be done to provide more information to the broader public.

3. Concentrated feed sales

As mentioned previously, consumption of the concentrated feeds increases annually and therefore increases sales volume of the concentrated feed. Sales of producers and importers of feed supplements and ready-made significantly increased, as well as sales of feed shops, veterinary pharmacies and feed mills (chart #2).

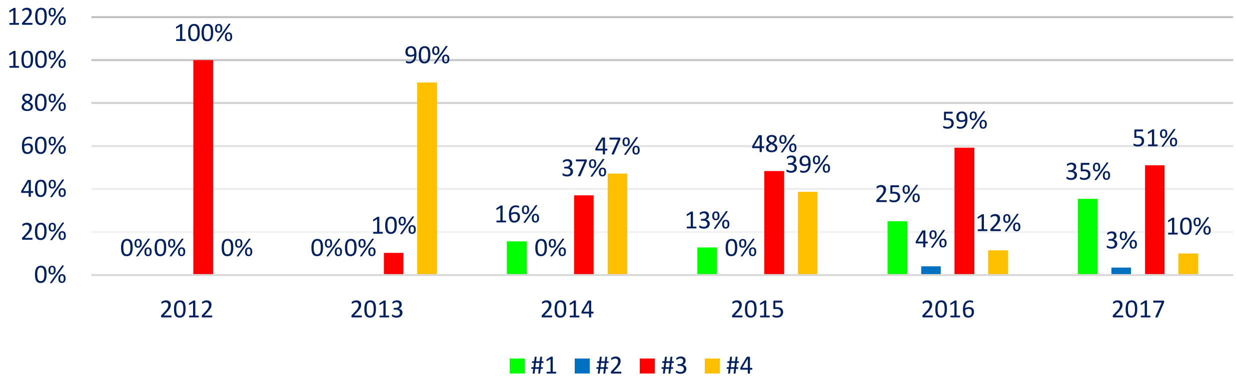
CHART# 2 - SALES OF PRODUCERS AND IMPORTERS IN GEORGIA



As the chart shows, the rate of growth of the concentrated feed sales is quite high, however, though this growth is mainly due to sales of feed for pigs. The total volume of cattle and pig feed sales increased by almost 300% in 2017, compared to 2013. Producers and importers sell about 20% of the concentrated feed in Kakheti and the rest is mostly sold in Kvemo Kartli, Shida Kartli, Samtskhe-Javakheti, Imereti and Samegrelo.

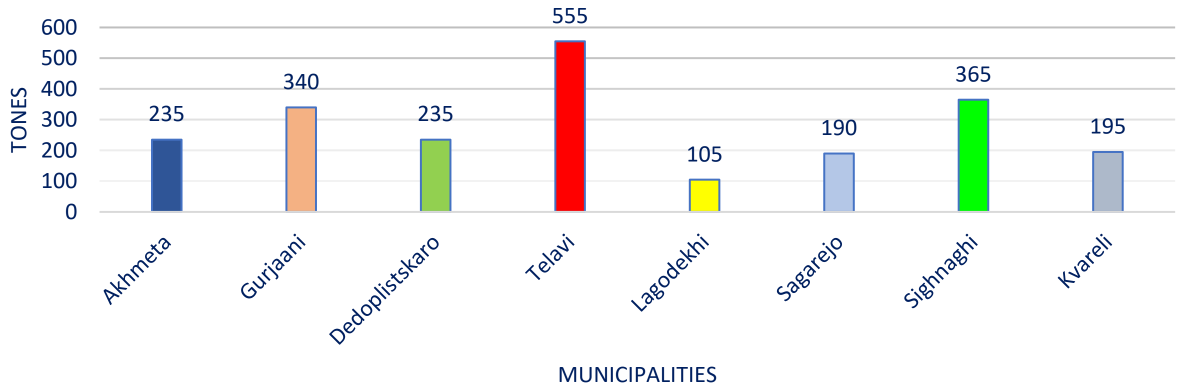
Sales dynamics are characterized by an interesting tendency since 2012. There was only one producer on the market in 2012, two producers in 2013, three in 2014, and four in 2016. Consequently, their shares of sales volume changed (chart #3).

CHART# 3 - SHARES OF SALES OF COMPANIES

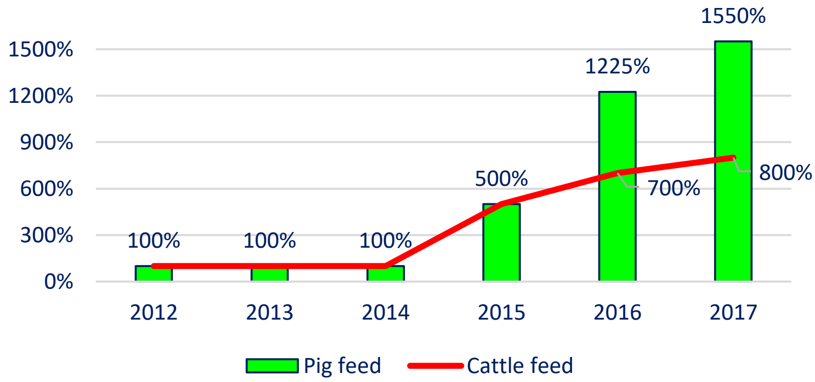


The survey results showed that the concentrated feed sales have been increasing annually in Kakheti region and in 2017, the volume of sales exceeded 2,200 tonnes (chart #4).

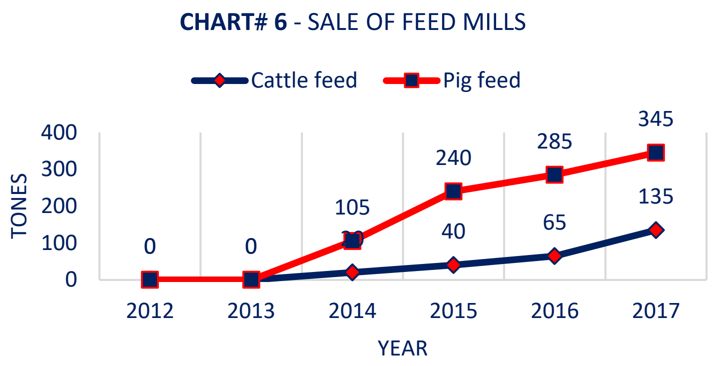
CHART # 4 - SALES OF PRODUCERS AND IMPORTERS IN KAKHETI (TONES / Y2017)



CHART# 5 - SALES OF SHOPS AND VETERINARY PHARMACIES



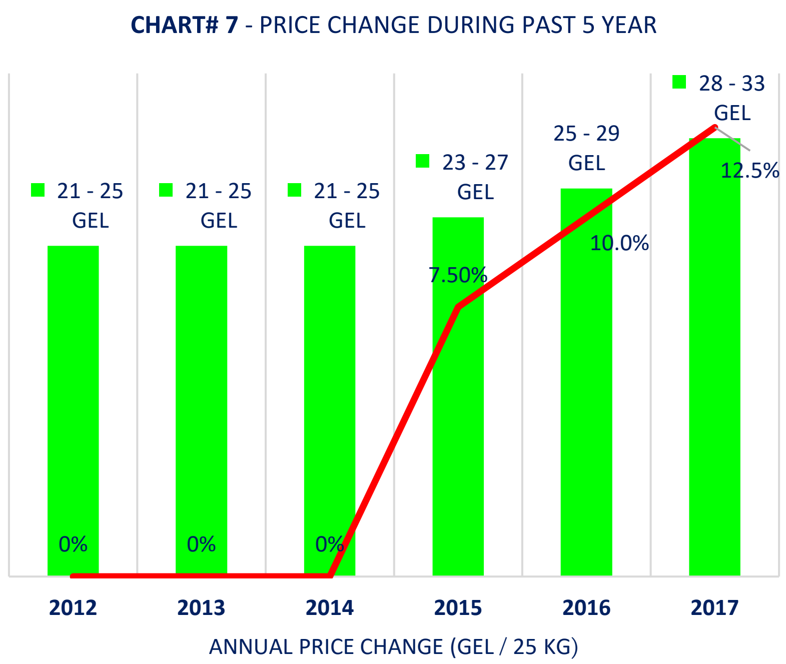
A similar trend can be observed in sales of shops and veterinary pharmacies. Pig feed sales growth is higher than cattle feed sales. However, the volume of cattle feed sales is growing as well. Pig feed sales have increased 15 times, and cattle feed sales increased 8 times, compared to 2012/2014 (chart # 5).



It is important to analyze the sales of feed mills, as there were no feed mills before 2014. Since 2014, pig feed sales have increased by more than 300%, while cattle feed sales increased by more than 650%. Despite the fact that growth rate of cattle feed sales is twice higher than pig feed sales, in 2017, pig feed sale is 2.5 times higher than cattle feed sales (chart #6).

The concentrated feed sales have increased several times since 2012-2013. This points to increase awareness on the concentrated feed among users and also points to the growth of knowledge of the sellers about the concentrated feed.

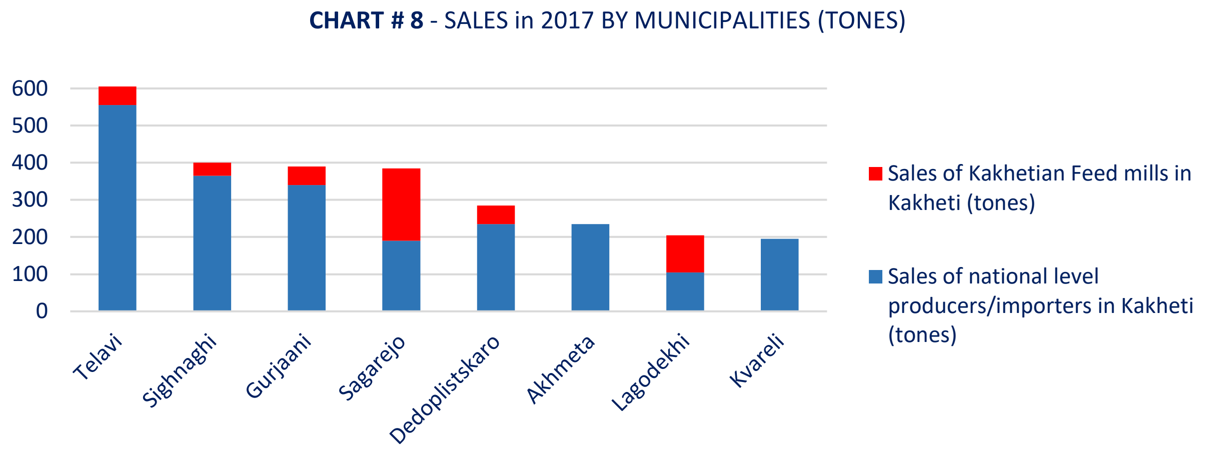
The concentrated feed prices were more or less equal in 2012-2014, but since 2015 the prices of feed have been growing. Price jumps in 2015 were cause by Georgian Lari rate change to USD and EUR. Rate changes directly impacted prices of the concentrated feed as premix and feed supplements are fully imported. The trend of strengthening of foreign currencies continued throughout 2016 and 2017. The increase of prices of the concentrated feed did not have not impact on the price increase of meat products, as consumption of the concentrated feed is not massive. Coincidentally, there has been a high demand on Georgian meet from neighboring countries and only this demand caused increase of price of meat products.



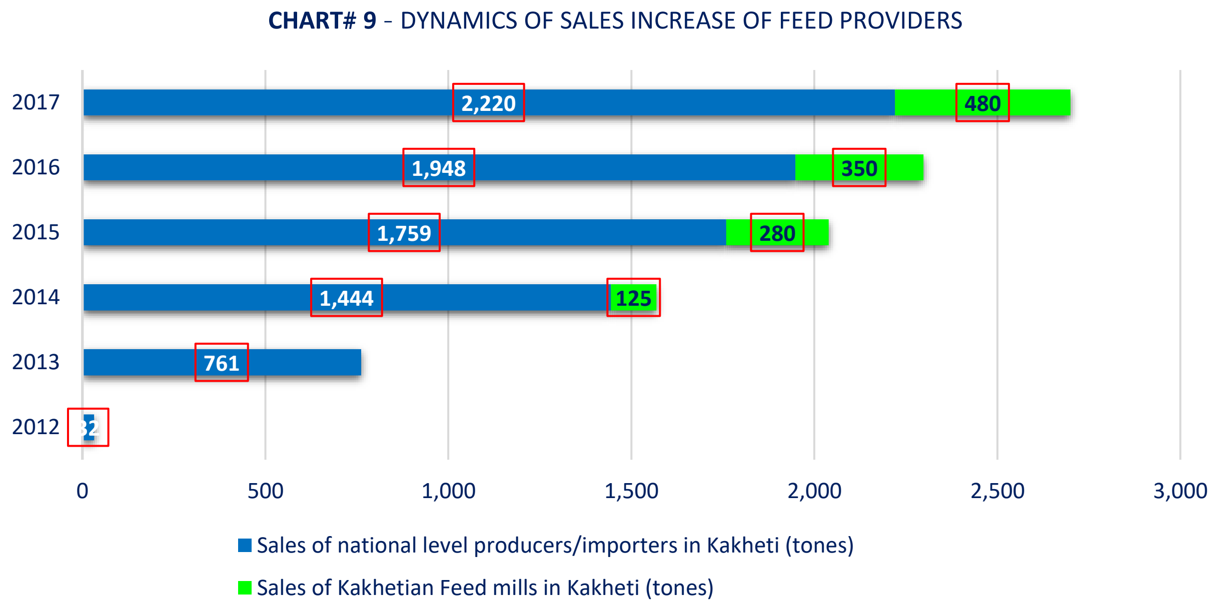
There have been annual increase of prices of the concentrated feed at feed shops, veterinary pharmacies and feed mills (chart #7).

It is also important to mention that feed mills, veterinary pharmacies and shops are in direct contact with users and sell both ready-made feed and feed supplements. Feed shops and veterinary drug stores sales consist of 60% ready-made feed and 40% of feed supplements. As for feed mills, 20% of their sales are food supplements, and 80% is ready-made feed.

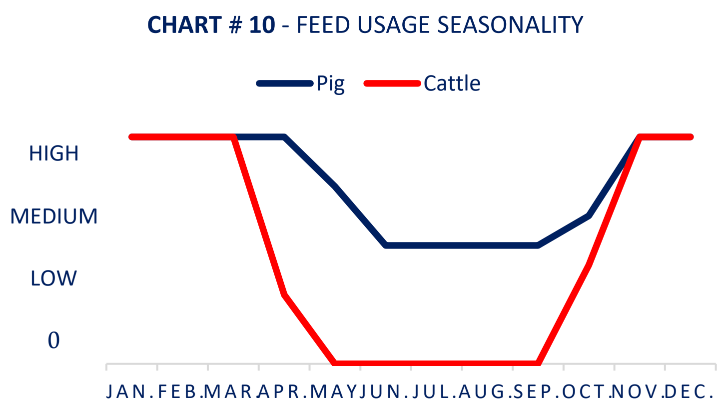
We can calculate approximate sales volume the concentrated feed sales in Kakheti based on the data of 2017. Producers and importers sell the concentrated feeds through following 2 channels: 1. Shops and veterinary pharmacies and 2. directly to large-scale farms. Therefore, if we combine annual sales of feed mills and sales of producers and importers, we get the total sales volume of the concentrated feed, which is more than 2,700 tons in Kakheti (chart #8).



Finally, sales are increasing in the Kakheti region annually: 32 tons of the concentrated feed was sold in 2012 in the Kakheti region, in 2017 this number increased 85 times (chart #9).



4. Periods of usage of concentrated feed



Although consumption of the concentrated feed increases annually, users use it only when there is no other food. This sad reality was confirmed by the study.

The study shows that users do not exactly understand the importance of the use of the concentrated feed. In particular, sales of cattle feed are almost zero from May to September. Consumption of pig feed also decreased in the same period, although it does not stop (chart #10).

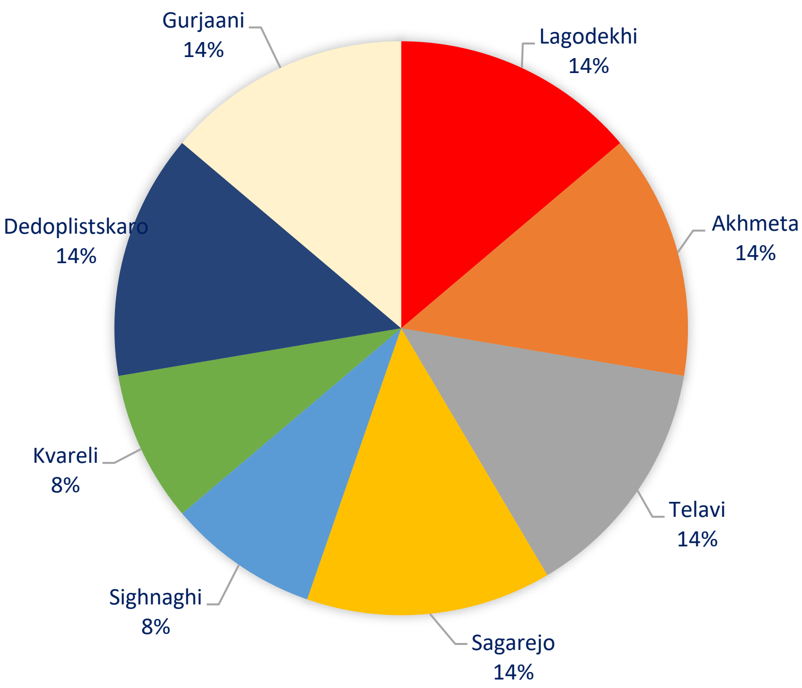
Such tendency of sales is logical, as most of the users of cattle feed are less likely to consider cattle breeding as entrepreneurship. Owners of a small number pigs are focused on pigs one-year growth and its realization. Whereas, cattle owners are mainly engaged in selling milk products.

Feed mills, feed shops, and veterinary pharmacies offer a full range of services to users: based on age and type activity (meat production or milk production). Producers and importers have the knowledge and ability to make rations; this is very important to develop field; while feed mill and shop deliver this knowledge to the end-users.

5. Geographical concentration of feed distributors

One of the crucial factors of popularizing the concentrated feed is its accessibility. The survey found that the concentrated feed is sold in all municipal and regional centers, most importantly, there are several sales points in each city. The study also showed that the concentrated feed is sold in all big villages and there are several sales points.

DIAGRAM # 6 - SALES OF SHOPS AND VETERINARY PHARMACIES IN MUNICIPALITIES



As we mentioned, feed mills, feed shops, and veterinary pharmacies have a function of directly delivering of the concentrated feed to users in Kakheti.Feed mills, feed shops, and veterinary drugstore are represented in all district centers and large villages. They supply almost equally every district with the concentrated feeds. However, there are fewer sales in Kvareli and Sighnaghi municipalities (diagram #6).

Sales of feed mills are more or less equal in all districts except Akhmeta and Telavi. The study shows that feed mills do not have sales of the concentrated feed in Akhmeta and Telavi regions.

Feed mills, feed shops, and veterinary pharmacies, in fact, sell the concentrated feed to households with 10-12 animals.

The study shows that there is a large number of feed shops and veterinary pharmacies in Telavi. Due to this fact, feed mills cannot compete with them and have no sales in Telavi. Feed mills do not have any sales in Akhmeta, as inhabitants of Akhmeta municipality often buy the concentrated feed at shops in Telavi. This also explains low sales of shops in Akhmeta.

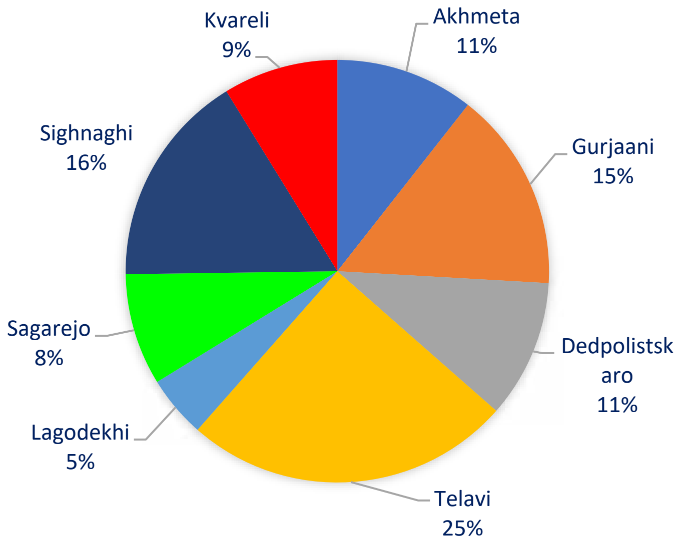
It is noteworthy that the Dedoplistskaro feed mill sells concentrated not only in Dedoplistskaro but also in Gurjaani, Sighnaghi and Kvareli products. It delivers the concentrated feed to both shops as well as directly to users. Producers and importers of their products in feed shops and veterinary pharmacies. However, producers and importers directly supply large farms with the concentrated feed. Establishment of new big farms or shut down directly impacts on volume of their sales.

Producers and importers have highest sales Telavi municipality. There are high sales in Sighnaghi and Gurjaani. This means that there are a big number of large-scale farms in these three municipalities, compared to other districts, and producers supply these farms directly with the concentrated feed (diagram #7).

Finally, availability of the concentrated feed is more or less equal in every region. Mainly, two factors affect the volume of sales:

1. Existence / absence of large-scale farms in different municipalities;
2. Knowledge / No-Knowledge of users (Small Households) on economic advantages of the concentrated feed

DIAGRAM # 7 - SALES OF PRODUCERS AND IMPORTERS IN MUNICIPALITIES



6. Economical Effect from concentrated feed usage

The main advantage of the concentrated feed is an opportunity to receive more monetary benefits. Households that use the concentrated feed automatically increases its revenue. However, the concentrated feed consumption not only increases income, but it has several benefits, and it is primarily health of animals. A healthy animal produces a better product, needs for less veterinary intervention, and this means saving additional expenses. In this case, in addition to saving costs, the quality of the product is high.

As we mentioned, the concentrated feed in Kakheti region is actively used in cattle farming, as well as in pig farming. Farmers who constantly use the concentrated feed for cattle and pigs were surveyed during the study. The following calculations are prepared based on the information received from the surveyed farmers.

Feeding of milking cows with concentrated feed

Use of the concentrated feed increases lactation period of milking cows, which directly impacts on users' income.

Users consume the concentrated feeds for milking cows as follows:

1. Feeding with the concentrated feed only during 2 months of winter
2. Feeding with the concentrated feed throughout the year.

Below are calculations of economic effect of the concentrated feed usage

6.1. Feeding of One Milking Cow with concentrated feed during two months per year

The lactation period increases to about 52 days during winter while using the concentrated feed for two months in winter. This increases the profit from one milking cow to an average of GEL 104.0, while taking into consideration costs of feed.

Costs

Price of the concentrated feed	0.9	GEL/KG
Usage of the concentrated feed peroOne cow	2	KG/Day
Duration of usage of the concentrated feed	60	Day
Total Costs of concentrated feed per Year	**108.0**	**GEL**

Income

Extended lactation period per year	52	Day
Amount of milk from one cow	4.5	Littre/Day
Price of milk in winter	0.9	GEL/Littre
Additional Amount of Milk	235	Littre
Income from Milk Sales	212.0	GEL
Net additional income from usage of concentrated feed per One Milking Cow	**104.0**	**GEL**

6.2. Feeding of One Milking Cow with concentated feed all year around

It is possible to get more than 1,140 liters of milk from a single cow during a whole year while feeding a cow with the concentrated feed during an entire year. Cows are fed based recommended portions and periodicity. In such case, farmers earn additionally GEL 356.0 a year from a milking cow.

Costs

Price of The concentrated feed	0.9	GEL/KG
Usage of Feed per One Animal	2	KG/DAY
Period of Usage of Feed	214	DAY
Total costs of the concentrated feed per year	**386.0**	**GEL**

Income

Additional amount of milk from one cow while using concentrated feed an entire year	1,140	Littre
Avarage annual price of milk	0.65	Gel/Littre
Income from milk sales	741.0	GEL
Net additional income from usage of concentrated feed per One Milking Cow	**356.0**	**GEL**

Feeding pigs with concentrated feed

As research shows, consumption of the concentrated feed is much higher in pig farming than in cattle farming. On average a pig weights 90 kg. In the case of traditional nutrition, pig reaches 90 kg in 11 months. Pig are breastfed for 2 months and only 9 months are fed with traditional feed. While using the concentrated feed, a pig reaches 90 kilograms in just 6 months. During these 6 months, a pig is breastfed only a month and actively fed with the concentrated feed during five months. It is important to underline and pay attention to time period, as while using the concentrated feed (compared to traditional feeding) pig reaches selling weight in the half-time period , this gives an opportunity to increase the income and pass two cycles in the same time period and by spending same amount of money.

6.3. Feeding one pig during one cycle

Profit per one pig is GEL 120.0 during one cycle, while using concatred feed.

Expenses of concentrated feed during a six months cycle

Required amount of concentrated feed	275	KG
Price of concentrated feed	1.25	GEL/KG
Total expenses of concentrated feed for a 6 month cycle	**340.0**	**GEL**

Expenses of traditional feed during an 11 month cylce

Requaired amount of traditional feed	675	KG
Price of traditional feed	0.70	GEL/KG
Total expenses of traditional feed for an 11 month cycle	**460.0**	**GEL**

Income during one cycle

Sale wieght of a pig	90	KG
Price of pig meat	9.0	GEL/Kg
Total Income	**810.0**	**GEL**

Profit per one pig per cycle

Profit while using concentrated feed	470.0	GEL
Profit while using traditional feed	350.0	GEL
Additional Income per pig while using concentrated feed	**120.0**	GEL

Finally, the concentrated feed is one of the most important factors of growth of profit of households. However, the above-mentioned profit can be achieved, only in the case of the correct ratio and dosage.

7. Conclusion

The consumption of the concentrated feed increases annually in Kakheti region, and there are several factors:

- Appareance of new partis and players - feed mills
- Increase of availability of concatated feed
- Raise of awareness and knowledge among user and producers

MOLI-Project supported the development of feed mills, by doing this new player appeared in the supply chain. Feed mills transformed from service providers to feed producers and service providers.

The study has shown, that feed mills provide in-depth consultation to users than shops and veterinary pharmacies. MOLI-Project provided assistant to connect feed mills and feed producers. As a result, feed mills acquired knowledge on rations, production the concentrated feed, a dosage of feed supplements and other products, mixing and making ready-made feed. Additionally, users have a greater trust in products produced by feed mills, as everything made in front of customers and they are assured that feed is high-quality made.

MOLI-Project has an important role in raising awareness on the concentrated feed. MOLI-Project implemented trainings for feed shops, to some extent to veterinary pharmacies and users.As follow up of these types of trainings, veterinary pharmacies started to offer and sell concerted feed; this has become an effective recipe for the production of healthy products. Veterinary pharmacies are one of main recommendation and consultancy providers on the usage of the concentrated feed, this makes animals healthier and there is a less need to interfere with pharmaceutics.

One of the key outcomes of activities of MOLI project is established communication between producers and distributors. Consequently, distributors acquire da new function of the distribution of knowledge, as they have direct communication with users. They learned how to prepare rations, to determine the nutrition regime, to select food dosages for various age groups, and so on. Professional delivery of information has increased trust and knowledge among users.

The study shows that the WORD OF MOUTH policy is more effective than all advertisements in the region. Accordingly, a satisfied user involves few neighbors in the list of the concentrated feed users.

Producers increase the number of dealers, more actively distribute as interest in the concentrated feed grows; this leads to better access to the concentrated feed.

Large-scale animal farms use solely the concentrated feed because zootechnology and feeding specialists employed at farms recommend using the concentrated feed. That is vital to continue to provide trainings and information, to widen audience (especially, among households with up to 10 animals). It is important to provide users with accurate information about advantages of the concentrated feed.

The study shows that user who owns cattle/pigs for own consumption, do not feed animals with the concentrated, they believe it will spoil the quality of the product. Therefore, it is important that trustworthy specialists/sources would provide specific recommendations, and to take more actions to increase users' awareness.

The lack of information and knowledge could cause other problems. There are many instances when farmers use wrong feed. For example, purchase of the concentrated feed for meat production instead of feed for milking cows. The study also revealed instances when poultry feed was purchased instead of cattle and pig feed. Poultry feed is rich in protein and grows weight of pigs and cattle rapidly. However, meat and milk quality are very low. Such cases negatively affect the development of the field. It is also important that users would emphasize on quality of the concentrated feed. To reach it, it is necessary to know how to distinguish high-quality and low-quality types of feed. It is also important to inform a user that quality of meat and milk products worsen by non-consecutive usage of feed (late start or early termination).

As popularity and usage of the concentrated feed grow among users, it is even more important to have quality control. The increase in demand may cause higher risks of food falsification (production of poor quality feed). Households will not get a whole chain of benefits, mentioned in the study, in case usage of fraudulent feed; and an entrance of falsified / poor quality the concentrated feed into the market will automatically reduce trust level among user.

7.1. Recommendations for informational and consulting service centers

- Ω To select several farmers from the villages of municipalities, who will be active multipliers of information in their villages, and to organize meetings with trustworthy specialists in order to provide information on the concentrated feed;
- Ω To showcase success stories in the district and actively provide information to customers on these cases;
- Ω To introduce simple calculations of economic benefits of the concentrated feed and actively spread it among users;
- Ω To invite large and successful farmers and organizing a meeting in order to share their experience and knowledge with interested persons;
- Ω To emphasize on the quality of products (as a result of usage the concentrated feed) while giving recommendations on economic benefits;
- Ω To support users to acquire knowledge on how to distinguish between a high-quality and low-quality the concentrated feed.

7.2. Recommendations for feed providers

- Ω To provide information not only on rations and economic benefits but also on the positive impacts of feed on health of animals. To explain and prove how the concentrated feed improves health of animals;
- Ω To present success stories of usage of the concentrated feed by small households in rural areas and villages;
- Ω To practice better marketing of feed mills and sales points (billboards, slogans and etc.);
- Ω To share experiences and success with users (if any);
- Ω To explain to customers and provide information that use of the concentrated feed increases both productivity and product quality;
- Ω To introduce / develop and offer product delivery services;
- Ω To communicate with producers and receive new knowledge / technologies; to receive information on feed supplement and vitamins and use them in production;
- Ω To interact with customers, pay visits to households and promote products. It is recommended to give feed for testing, distribute small amounts as gift or with discounted prices.

ANEX 1 – Methodology and Structured of The study

The first phase of the research was conducted in Tbilisi and Gardabani with animal feed producers and importers. These companies are the largest suppliers of animal feed in the region.

At the second stage of the research, "Agro Solutions" team worked in eight municipalities of Kakheti: Telavi, Akhmeta, Gurjaani, Kvareli, Dedoplistskaro, Lagodekhi, Sagarejo, Sighnaghi. Local animal food producers (feed mills), sales points (animal feed stores, veterinary pharmacies) and farmers were surveyed.

4 types of questionnaires were prepared:

- Animal feed producers and importers;
- Local feed mills;
- Sales points - feed shops and veterinary pharmacies
- Users

With semi-structured interviews, the team gathered the following information:

- Customer behavior;
- Users' attitude towards animal feed;
- Production volumes of last 5 years
- Sales volumes of last 5 years
- Forms of realization and distribution of concentrated animal feed;
- Knowledge on consumption of animal feed;
- Knowledge of distributors on feed;
- Main player in value chain of the concentrated feed

Questionnaires are an effective tool for the collection of relevant data, as each respondent received the identical set of questions. These supported to standardize the data, increase the response rate, and increase the efficiency of measurement. The follow-up questions provided broader information.

The Producers and Importers were contacted through referrals. The interviews were administered by the 2 team members, to undertake quality field data collection.

The team visited each producer on the production facilities or the head offices of the companies

Local producers(mills) were contacted through referrals. The interviews were held at the production facilities or the sales points.

"Agro Solutions" visited feed shops and veterinary pharmacies in all 8 municipalities of Kakheti Region.

Local farmers were contacted with the help of local feed mills, feed shops, and veterinary pharmacies. The team contacted and visited farmers and household in eight municipalities.

Agro Solutions identified key players in the value chain.

Producers and importers[1]: SANO Ltd., Nutrimax Ltd., Geofeed Ltd., INVET Ltd.

Feed mills: Sagarejo, Dedoplistskaro and Lagodekhi municipalities (one in each municipality)

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[1] The order of the companies in the charts and diagrams of the present study is not the same as above

Shops and veterinary pharmacies: 8 municipalities of Kakheti

User: 25 farmers across Kakheti, who use the concentrated feed.

The list of the concentrated feed producers / importers and feed mills, interviewed during the study, was provided by the MOLI-Project.

The percentage and volumes of sales and usage of the concentrated feed for 2017 are estimations and planned sales and usage.