Report on Maize

General Information

One of the main purposes of arranging the demonstration plots was to improve the feed base for the farmers involved in beef and dairy sector, which is a significant problem in this sector throughout the country.

Five farmers were selected to arrange demonstration plots of maize under the FinExCoop project.

Institution	Lemagrain/Agrovita Seeds				
	Maze (number of seeds)				
	Aveline	Agrister	LG 31.695	Justin	LG 30,500
Cooperative "Young Farmer"	50,000	62,500	62,500	37,500	37,500
Cooperative "Tanadgoma"	50,000	62,500	62,500	37,500	37,500
Ltd "Shiraki +"	50,000	62,500	62,500	50,000	50,000
Individual Farmer Zurab Masurashvili	0	0	0	0	0
GBDC/FERT, Tamaz Shavadze	37,500	0	0	0	0
Total	**187,500**	**187,500**	**187,500**	**125,000**	**125,000**

One of them, Zurab Masurashvili, later refused to arrange a demonstration plot, explaining that the land allocated for the plot was used for other purposes and he no longer had enough land to sow maize, accordingly, the seed material allocated to this farmer was distributed to the rest of the farmers. Another farmer Tamaz Shavadze decided to try only one variety, which has a short vegetation period, he used this variety as a second crop. With the third farmer, despite the work done, due to climatic conditions (strong drought during the sowing period) sowing was not possible. The soil was so hardened that even the equipment could not sow seeds. Accordingly, the seed material was stored for the following year. Rest of the farmers sowed all 5 varieties.

Demo farm location

Demonstration plots were located in different regions, Kakheti, Kvemo Kartli, Shida Kartli and Samtskhe-Javakheti. Unfortunately, as mentioned before, it was not possible to arrange a demonstration plot in Kakheti due to climatic conditions.

Demonstration plot in Kvemo Kartli was organized in the village of Kumisi, plot is owned by the chairman of the cooperative "Tanadgoma" Amiran Kochalidze. In addition Amiran is a livestock farmer who uses modern technology to produce milk and then process dairy products. Because of this he had to buy food from other farmers, this had high cost for him. The village of Kumisi is located in Gardabani municipality, 500 m above the sea level. Irrigation is not a problem.

Demonstration plot in Shida Kartli was organized in the village of Agara, plot is owned by the chairman of the cooperative "Young Farmer" Nodar Gulikashvili. Cooperative had critical problems with cattle feeding, especially with nutrition. Agara is located at 640 meters above sea level. Irrigation is possible from the river.

Demonstration plot in Samtskhe Javakheti was organized in the village of Rustavi, plot of the farmer Tamaz Shavadze. Duo to shortage of arable land in the region farmer planted the maize as a second crop after barley.

Soil preparation / Soil Fertilization / Weed control

In this demo plots we had two types of soil cultivations. The first is Agra and Kumisi, where maize sowing is standard, and the second is the demonstration plot in Rustavi, where the maize was sowed for the second crop. In the first case, the soil plow started in autumn. After that, cultivation was carried out in the spring. Maize was sowed in spring and fertilized during sowing. The crop was then treated with herbicides. As for the demonstration plot in the village of Rustavi, corn was the second crop there, and sowing occurred was after the barley crop was harvested. The soil was plowed and it was lodged with cattle manure.

Rustavi

Our demo farmer is the president of the “Ertoba” breeders’ association, partner of the Georgian Business Development Center (GBDC) and of the Fert association (in support of the dairy industry).

Variery-The LG Aveline

On July 5th, 2020, in the village of Rustavi, after harvest of the barley, Tamaz Shavadze, a farmer who was a member of "Ertoba", sowed the second crop of experimental corn for silage provided by FinExCoop. This demo plot covers 0.5 ha of land. The plot was irrigated by the sprinkled irrigation. The first irrigation was carried out when the plant was sowed, next irrigation occurred after 15 days. Finally, the harvest took place on October 12th, according to the farmer, and if we compare it to the local variety of corn next to the demonstration plot, our demonstration plot showed a reasonably good rate with big amount of green mass.

Agara

Maize was sowed in Agara in the spring. The soil was treated with a plow and cultivator. The sowing rate was 75,000 grains per hectare. The total area was 3.33 ha and five varieties were sowed. However due to unfavorable weather, these varieties could not reveal the maximum biomass production. Despite this, compared to other local varieties, it also showed a high yield and demonstrated the potential to us for the development of silage maize in Georgia. Technical monitoring of the trial could not be done because of the Covid-19. Sowing density was 75,000 gr/ha. We had encountered big grass problems as well as ambrosia and lampourde.

Kumisi

Maize was sowed in Kumis in the spring. The soil was cultivated with a plow and cultivator. During sowing the soil was fertilized. The growth of the corn was extremely good but unfortunately during the flowering period hail came and damaged the leaves of the plant. Because of this reason plant had difficulty to produce biomass. Despite of this unfortunate event according to farmer the yield of green mass was still much better than other local or non-local varieties around the region.

Recommendation.

For the next year it is necessary to control the weeds with high quality already tested herbicides and also the correct selection of varieties. For example The LG Justeen variety (FAO 300) would be better suited to be used as a second crop. Also it is very important to develop irrigation on the demo plots to increase yield of green mass. It is also very important to use fertilizers which contain micro and macro elements to maximize the yield. Demo plots need to be provided with special agro equipment, because this years' experience has showed us that because of lack of equipment farmers could not harvest on timely manner, this has decreased quality of the silage. To solve this problems CUMA cooperatives must be established so that the farmers can have access to the proper equipment on time. Trainings needs to be done on production and harvest of silage maize.