1000 Farmers Endless Prosperity Program Social Impact and SROI Report 2019 - 2021

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Positive Impact on the Future

Social Return on Investment (SROI)

In recent years, significant changes have occurred in the business world and across all sectors in parallel with changes in lifestyles. The importance of accountability, compliance, transparency and sustainability has risen in all sectors. A variety of different measurement and reporting methods have been developed in line with stakeholders' expectations of projects and in line with the visions and goals of the participating institutions.

Social Return on Investment (SROI) is a framework for measuring the change and value produced by socially based projects. "It seeks to reduce inequality and environmental degradation and improve wellbeing by incorporating social, environmental and economic costs and benefits."

In this SROI report, we examine the social impact of our "1000 Farmers Endless Prosperity" Program. Cargill Turkey commissioned the Program three years ago and, in that time, it has significantly increased farmers' productivity.

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The Purpose of the Program

The 1000 Farmers Endless Prosperity Program was introduced in 2019 by Cargill Turkey in order to support environmental, social and digital transformation in agriculture.

The 1000 Farmers Endless Prosperity Program was introduced in 2019 by Cargill Turkey in order to support environmental, social and digital transformation in agriculture. The Program is a corporate social responsibility program that focuses on increasing the productivity of farmers in their fields and raising farmers' welfare by disseminating sustainable agricultural practices, and providing training and consultancy support to farmers.

Since the start of the Program, there has been consistent engagement with more than one thousand corn, sunflower and canola farmers every year in a total of 12 provinces during a three-year period. The farmers have received free access to digital agricultural tools, face-to-face and online trainings, access to agronomist via the technical support line, and field-specific consultancy services.

The impact of the 1000 Farmers Endless Prosperity Program – in other words, the change and social benefits accrued in the Program's third year as of 2021 – has been measured in accordance with the resources and guides of the 'Social Value International'[1].

The Social Return on Investment (SROI)[2] study aims to measure and report the change and social impact produced as a result of the Program's activities in 2019, 2020 and 2021.

[1] *Home - Social Value International*
[2] *A Guide to Social Return on Investment*

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Program Stakeholders

Leader farmers have high influence within their farmer groups and engage in all the activities conducted within the scope of the Program.

The stakeholder groups, the number of stakeholders and the areas of interaction and communication methods included in the activity period of 2021 under the 1000 Farmers Endless Prosperity Program are presented in Table 1.

Program Stakeholders	Number of Stakeholders	Interaction Areas	Communication Methods with Stakeholders
Corn Farmers	513	Corn farmers are among the key stakeholder groups involved in the activities carried out under the Program. The goal is to ensure the professional and personal development of farmers with various training, consultancy services and digital application support provided within the scope of the Program.	• Face-to-face interviews • Field visits • Online farmer meetings and training • Survey studies
Sunflower Farmers	399	Sunflower farmers are among the key stakeholder groups involved in the activities carried out under the Program. The goal is to ensure the professional and personal development of farmers with various training, consultancy services and digital application support provided within the scope of the Program.	• Face-to-face interviews • Field visits • Online farmer meetings and training • Survey studies
Canola Farmers	103	Canola farmers are among the key stakeholder groups involved in the activities carried out under the Program. The goal is to ensure the professional and personal development of farmers with various training, consultancy services and digital application support provided within the scope of the Program.	• Face-to-face interviews • Field visits • Online farmer meetings and training • Survey studies
Leader Farmers	50	Leader farmers have high influence within their farmer groups and engage in all the activities conducted within the scope of the Program. Leader farmers are regarded as pioneers due to their ability to spread their knowledge and skills in their environment. With various training, consultancy services and digital application support provided within the scope of the Program, the goal is to increase the professional and personal development of the farmers and to set an example for other farmers.	• Face-to-face interviews • Field visits • Online farmer meetings and training • Survey studies

A Significant Impact

We have achieved important and concrete results with the SROI study. The Program produced significant changes for farmers compared to the previous year:

88% change ratio

in agricultural technical information

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A Practical Impact

In 2019, we implemented the 1000 Farmers Endless Prosperity Program to support environmental, social, and digital transformation in agriculture. We conducted the SROI (Social Return on Investment) study to measure the value added to different areas of life by the Program.

80% change ratio

in financial literacy

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A Growing Impact

The data show that as goals set in social projects are achieved within time periods, their impact grows and the SROI rate rises. We are pleased to see that our investment in the 1000 Farmers Endless Prosperity Program has borne solid results, and we aim to expand the impact.

81% change

in data-based business conduct activities

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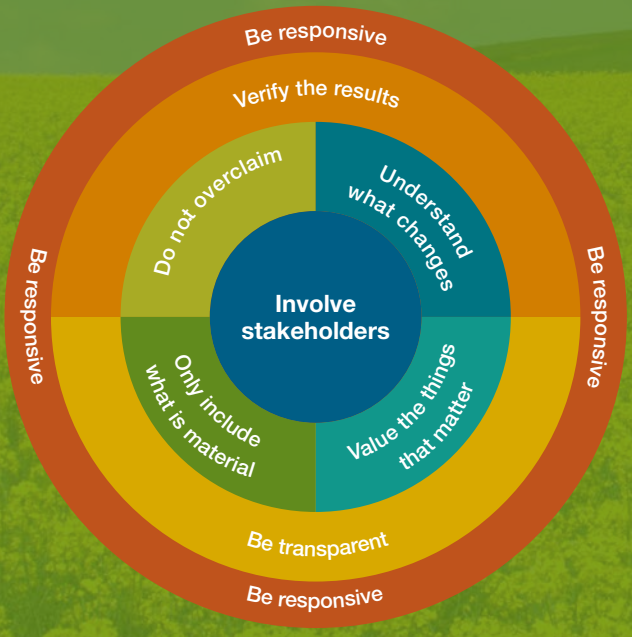
About the Social Return on Investment (SROI) Methodology

SROI (Social Return on Investment) is a method created to calculate the social impact or value created by the social investments made or planned to be made. The SROI methodology aims to measure the changes created by social projects on program beneficiaries by using financial value and to increase the welfare level of the society by adding economic, social and environmental benefits to the calculation of the benefit of the projects.

The SROI analysis is based on 8 basic principles.[3]
These are:



The SROI analysis is completed in 6 stages.[4]
These are:
1. Establishing scope and identifying key stakeholders
2. Mapping outcomes
3. Evidencing outcomes and giving them value
4. Establishing impact
5. Calculating the SROI
6. Reporting, using and embedding

[3] *The Principles of Social Value*
[4] *A Guide to Social Return on Investment*

The 1000 Farmers Endless Prosperity Program Scope of Activity for the 2021 Period

The 1000 Farmers Endless Prosperity Program aims to enable farmers to utilize digital agricultural platforms where they can apply modern agricultural techniques, manage their financial profitability, use natural resources more efficiently, and improve their knowledge and awareness in sustainability and environmental management topics via various trainings.

The 1000 Farmers Endless Prosperity Program aims to enable farmers to utilize digital agricultural platforms where they can apply knowledge based on science and technology while conducting agricultural activities. On these digital agricultural platforms, farmers can apply modern agricultural techniques, manage their financial profitability, use natural resources more efficiently, and improve their knowledge and awareness in sustainability and environmental management topics via various trainings.

This Report presents the studies conducted to support the development, profitability and productivity of farmers participating in the Program between 2019 and 2021, and the evaluations of the impacts and performances of these studies in environmental, social and economic fields.

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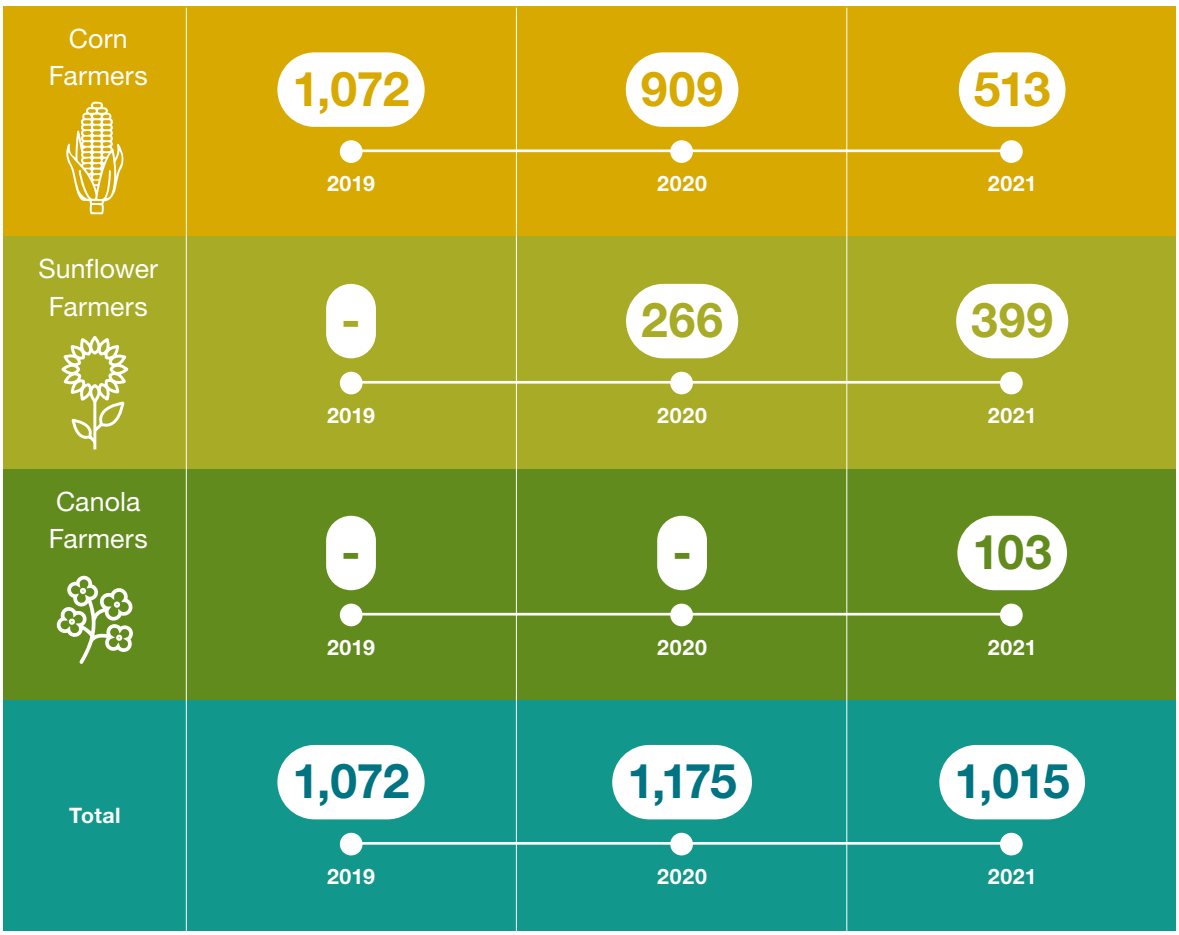

Financial Literacy Activities

With the active participation of the farmers, training sessions were provided: “Creating a Profit-Loss Statement” showed how to create a farm budget; “Actual Costs” trained farmers to create the calculations necessary to assess their fields from a business perspective.

105
Creating a Profit-Loss Statement Training Number of Participation

154
Actual Costs Training Number of Participation

263
Digital Agricultural Market (DİTAP) Training Number of Participation

522
Financial Literacy Activities Total Number of Participation

Within the scope of the Program, farmers were provided with various trainings and application supports to increase their knowledge regarding product prices. In this regard, informational activities were carried out on product pricing strategies, which are component in increasing farmers’ profitability.

With the active participation of the farmers, training sessions were provided: “Creating a Profit-Loss Statement” showed how to create a farm budget; “Actual Costs” trained farmers to create the calculations necessary to assess their fields from a business perspective.

To ensure that agricultural supply and demand met the “digital marketplace” approach and contract farming practice, informational training sessions were held on the Digital Agricultural Market (DİTAP). Created by the Ministry of Agriculture and Forestry of the Republic of Turkey, DİTAP aims to enable farmers to earn more income and to realize agricultural products of the quality desired by the agricultural industry, and to enable consumers to access agricultural products at more affordable prices.

Agricultural Technical Information Activities

A Technical Support Line was established so that farmers can reach expert agronomist and get support 24/7 within the scope of the program.

631
Farming Technical Knowledge Activities Number of Participation

154
Harvest Criteria and Basic Principles in Spraying Training Number of Participation

15
1000 Farmers Endless Prosperity Technical Support Line Number of Participation

800
Agricultural Technical Information Activities Total Number of Participation

Within the scope of the Program, farmers were provided with information on technical and financial issues during field visits and online trainings. While in agricultural training, consultancy was provided on the use of fertilizers and pesticides, irrigation methods, and addressing diseases and pests. In addition, financial training for the farmers included guidance and suggestions on managing their fields from a business perspective.

A Technical Support Line was established so that farmers can reach expert agronomist and get support 24/7 within the scope of the program. By ensuring that expert agronomist could be accessed with a phone call, the farmers were able to seek consultation on all kinds of agricultural problems regarding corn, sunflower, canola and their other crops.

The goal is to ensure that farmers, whose knowledge and awareness levels have increased in line with the training, consultancy services and practices conducted on various subjects, increase their crop yield, achieve higher crop performance, gain the ability to make correct pricing, and thus increase their profitability.

Data-Based Business Conduct Activities

The field-specific crop development, field change and crop health maps were prepared by periodically assessing the cultivated product according to the plant phenological period and regional climate data, based on the field images provided via satellite through the Crop Health Monitoring application.

1,028
Digital Soil Analysis Service Number of Participation

25
Agricultural Sensor Station Number of Participation

276
Crop Health Monitoring Number of Participation

1,329
Data-Based Business Conduct Activities Total Number of Participation

During the field visits organized within the scope of the Program, the agronomist conducted digital soil analyses. The results of these analyses, tailored to each farmer's field, were reported to the farmers and, according to the results of the analysis, specific farming recommendations were offered on correct fertilization, efficient irrigation and dealing with diseases from planting to harvest. These recommendations were sent to farmers via regular messages.

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Recommendations were provided on the volumes of irrigation and spraying specific to the climate zone and product type via Agricultural Sensor Stations installed specifically for the fields of farmers within the scope of the Program. Through measuring real-time data flows of each field, the risk of diseases specific to the type of crop was combined with hyper-local weather forecasts; and pesticide suitability charts were prepared and delivered to the farmers via a mobile application.

Farmers who benefited from the Data-Based Business Conduct Activities, and who implemented the recommended irrigation, fertilization and spraying program specific to their fields by deploying these tools, saved on resources such as water and fertilizer. They also increased their efficiency in addressing diseases and pests by implementing the correct spraying recommendations. Farmers have access to this digital agricultural application support free of charge, and also gained experience in digital transformation.

Farmer Solidarity Activities

An interaction zone was created to allow farmers to make joint decisions and raise their profitability by acting together on bulk purchasing and bulk crop sales.

832
Online Communication Groups
Number of Participation

20
Field Visits
Number of Participation

852
Farmer Solidarity Activities
Total Number of Participation

Within the scope of the Program, online communication groups were created for 10 locations in order to enable farmers to actively use technological communication tools, and to increase communication and ensure information sharing among all farmers. In these groups, which also included consultants, 832 farmers received consultation in response to their questions, while other farmers were also informed regarding the relevant topics.

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Environmental Activities

In the 2021 season, trainings on Climate Change and Sustainable Life were given within the scope of Sustainable Production in the Field.

526
Zero Waste Management in the Field Training Number of Participation

228
Data Collection Information Communication in the Field Number of Participation

122
Climate Change and Sustainable Life Training Number of Participation

876
Environmental Activities Total Number of Participation

To solve the waste management problem in the field and to add value to the wastes as raw material, the “Zero Waste Management in the Field” project, carried out within the scope of the Program, and “Zero Waste Management in the Field” and “Climate Change and Sustainable Life” trainings were added within the scope of “Sustainable Production in the Field.” These trainings were designed to further provide information on the environment and climate, progressing towards the target of literate farmers. The trainings included presentations on the separate collection of wood waste, plastic waste, and hazardous plastic waste from the field at the source and creating value in the circular economy; and information on the need to ensure resource efficiency in fertilizers, pesticides, energy, and water consumption. In this manner, the correlation between consumption and production-waste-environment-climate-life was imparted.

The program has achieved the integration of business conduct management and the environmental and social aspects of sustainability management in the farmer’s field.

Social Return on Investment – SROI Values

The SROI value is calculated by the ratio of the total value created, which is then calculated by converting the total impact to a financial value, to the amount of investment made in the Program.

The Social Value International's internationally accepted Social Return on Investment (SROI) Guide [5] was used to understand and define the social impact of the 1000 Farmers Endless Prosperity Program, and to transform it into a financial value and report the same.

In calculating the value of the activities conducted for farmers, the following formula was used: the economic value provided on an individual basis was obtained by calculating the financial value of the change created in the selected impact areas. The total economic value of the change provided is defined as the 'Value Created'. The SROI value is calculated by the ratio of the total value created, which is then calculated by converting the total impact to a financial value, to the amount of investment made in the Program.

$$SROI = \frac{\text{Total Impact Created (TL)}}{\text{Investment Made (TL)}}$$

[5] *A Guide to Social Return on Investment*

In the 2021 season, the SROI ratio reached 3.03 and improvement by 20% was obtained as compared to the first period of the Program.

The base change SROI ratio created in the impact areas selected within the scope of the program was 2.53 in the 2019 season and 2.78 in the 2020 season.

In the 2021 season, the SROI ratio reached 3.03 and improvement by 20% was obtained as compared to the first period of the Program. The improvement obtained in the SROI ratio throughout the Program was achieved by reviewing the change created by the Program with a focus on impact as a result of the interaction with the stakeholders; in the subsequent periods, Program activities were planned accordingly.

SROI Components

In line with the SROI methodology, the deadweight, displacement, and attribution criteria were included in the SROI calculation and a more conservative SROI ratio was recalculated.

Deadweight

Deadweight is a measure of the amount of outcome that would have happened even if the activity had not taken place. It is calculated as a percentage. Therefore, a higher deadweight indicates a lower value from by the results.

Measurement and follow-up studies show that the deadweight value for the 2021 period was calculated as 15% for financial literacy and agricultural technical information activities, and 10% for solidarity and environmental activities. No impact was detected for data-based business conduct.

Displacement

Displacement is another component of impact and is an assessment of how much of the outcome displaced other outcomes. It can be calculated as a percentage. As the displacement value increases, the impact created by the results declines.

Participants in the 1000 Farmers Endless Prosperity Program expressed the opinion that the changes created by the Program did not lead to other consequences and changes and had no effect during the Program's duration. For this reason, the displacement value is assessed as 0%.

Attribution

Attribution is an assessment of how much of the outcome was caused by the contribution of other organizations or people. Attribution is calculated as a percentage. In other words, attribution expresses the portion of the created value that belongs to other individuals or institutions. A higher attribution value indicates a lower impact.

Measurement and follow-up studies for the 2021 period show that the attribution value was calculated as 37% for financial literacy, agricultural technical information activities and solidarity. No external impact was detected under the headings of data-based business conduct and environment.

The evaluation of these components and the SROI calculations show that a value of 2.83 was obtained for the 2021 SROI ratio.

Calculation of Sample Size and Margin of Error

The survey link was sent to the 1,015 farmers (population size) who used the application within the scope of the Program; 185 farmers participated in the survey.

Surveys were conducted with corn, sunflower, and canola farmers. These surveys were online and delivered to farmers via a link on the mobile communication application. The survey link was sent to the 1,015 farmers (population size) who used the application within the scope of the Program; 185 farmers (sample size) participated in the survey.

The margin of error was calculated in terms of the population size and sample size based on a 95% confidence level. The margin of error was calculated at the levels of 7% and 11% by using the standard margin of error calculation method in accordance with the selected measurement method.

Corn, Sunflower and Canola Farmer Survey - Number of Participants		
Number of Farmers Included in the Survey (Population Size)	Number of Farmers Completing the Survey (Sample Size)	Margin of Error[3] (95% Confidence Interval)
1,015	**185**	**7%**

In-depth Interviews with Leader Farmers - Number of Participants		
Number of Farmers Involved in In-depth Interviews (Population Size)	Number of Leader Farmers Participating in the Interview* (Sample Size)	Margin of Error[3] (95% Confidence Interval)
50	**30**	**11%**

** In-depth interview via phone*

[6] *Denscombe, Martyn. (2014). The Good Research Guide for Small-scale Social Research Projects. Fifth edition. Philadelphia: Open Society Press. https://www.researchgate.net/file.PostFileLoader.html?id=582a0dbf217e20276533f5a5&assetKey=AS:428404664213506@1479151039119*

SROI Results Between 2019-2021

The farmers' sales time, and the payment options and financial instruments they used for agricultural purchases were analyzed in measuring their level of financial literacy.

Following the studies within the scope of the Program, the corn, sunflower and canola farmers were given questions designed to assess their benefit, savings, and satisfaction levels over a one-year period in order to measure the change created. The farmers' answers indicated a significantly high level of satisfaction with the Program.

Through survey questions and in-depth interviews, the access of corn, sunflower and canola farmers to the most appropriate financial tools were measured, as were their level of knowledge and awareness in terms of agricultural technical information, solidarity and the environment, and the current status of their use of digital farming practices and their communication with other farmers on agricultural issues.

- The farmers' sales time, and the payment options and financial instruments they used for agricultural purchases were analyzed in measuring their level of financial literacy.
- The frequency of soil analysis of farmers, Agricultural Sensor Stations and the platforms on which they received consultation on agricultural issues were analyzed in measuring the level of awareness of farmers regarding their agricultural techniques and choices.
- The level of farmers' use of technological tools and their agricultural activities platforms were analyzed in measuring their ability to use digital applications.
- The zero-waste management activities of the farmers were analyzed in measuring their environmental and sustainability awareness and knowledge.

It was observed that the base change SROI ratio created in the impact areas selected within the scope of the Program increased to 3.03 in the 2021 season, an increase from 2.78 in the 2020 season. The prominent changes in the main activities of the Program are provided in the table below.

Prominent Changes in Activities Within the Scope of the Program

The Main Activities of the Program	2019	2020	2021
Stakeholder Groups	• The Program was started with corn farmers.	• Sunflower farmers were included in the Program.	• Canola farmers were included in the Program.
Financial Literacy	• Face-to-face training was provided. • Financial literacy training was provided by the Financial Literacy and Inclusion Society (FODER). • Licensed warehousing system training was provided by trainers from the Turkish Mercantile Exchange.	• Online training was provided. • DITAP training was provided by the Ministry of Agriculture and Forestry of the Republic of Turkey. • Financial literacy training was provided by Doktar consultants.	• Online training was provided. • DITAP training was provided by the Ministry of Agriculture and Forestry of the Republic of Turkey. • Financial literacy training was provided by Doktar consultants. • The "Actual Costs Training" was included in the scope of the Program.
Agricultural Technical Information	• OHS training was provided by Occupational Health and Safety (OHS) experts from the Ministry of Family, Labor and Social Services of the Republic of Turkey. • "Occupational Safety and First Aid Training in the Field" was provided by academicians from1 9 Mayıs University.	• Online farmer trainings called "There is Life at Home" were provided in place of farmer meetings.	• The "Harvest Criteria and Basic Principles in Spraying Training" was held.
Data-based Business Conduct	• Agricultural Sensor Stations were installed in the fields of 10 farmers. • 21 people benefited from the Crop Health Monitoring Application.	• Agricultural Sensor Stations were installed in the fields of 20 farmers. • 74 people benefited from the Crop Health Monitoring Application.	• Agricultural Sensor Stations were installed in the fields of 25 farmers. • 276 people benefited from the Crop Health Monitoring Application.
Solidarity	• A total of 16 Field Visits were conducted: six in Çukurova, eight in Central Anatolia, and two in the Aegean Region.	• 378 farmers actively used Online Communication Groups. • 20 Field Visits were conducted.	• 832 farmers actively used Online Communication Groups. • 20 Field Visits were conducted.
Environment		• "The Zero Waste Management in the Field" training was provided by Prof. Filiz Karaosmanoğlu, the supervisor of the Cargill İTÜNOVA Technology Transfer Office Project, which is carried out in cooperation with Turkish Plastics Manufacturers Research Development & Educational Foundation (PAGEV).	• "Zero Waste Practice Training" was provided by the Ministry of Environment, Urbanization and Climate Change of the Republic of Turkey. • "Zero-Waste Management in the Field," and "Climate Change and Sustainable Living" training was provided by Prof. Filiz Karaosmanoğlu, the supervisor of the Cargill İTÜNOVA Technology Transfer Office Project, which is carried out in cooperation with Turkish Plastics Manufacturers Research Development & Educational Foundation (PAGEV).

SROI Results Between 2019-2021

With the expansion of the Program's scope in its third year, the change created on the farmers, compared to the previous year, increased by 15% in agricultural technical information, 6% in financial literacy and 3% in data-based business conduct activities.

With the expansion of the Program's scope in its third year, the change created on the farmers, compared to the previous year, increased by 15% in agricultural technical information, 6% in financial literacy and 3% in data-based business conduct activities. The change created on farmers by year is provided in the table below.

The Rate of Change Created by the Program Activities on Farmers by Year (%)

The Main Activities of the Program	Change in 2019 (%)	Change in 2020 (%)	Change in 2021 (%)
Financial Literacy	**65%**	**74%**	**80%**
Agricultural Technical Information	**69%**	**73%**	**88%**
Data-based Business Conduct	**67%**	**78%**	**81%**
Solidarity		**79%**	**80%**
Environment		**79%**	**78%**

While the change created during the Program is largely due to the agricultural technical information activities, the second main activity that creates change is the data-based business conduct activities.

The Ratios of the Program Activities in the Total Change by Year (%)

Main Activities of the Program	Share of Activities in 2019 Total Change (%)	Share of Activities in 2020 Total Change (%)	Share of Activities in 2021 Total Change (%)
Financial Literacy	32%	19%	7%
Agricultural Technical Information	34%	19%	21%
Data-based Business Conduct	33%	20%	31%
Solidarity		21%	20%
Environment		21%	21%
Total	**100%**	**100%**	**100%**

When evaluated numerically, the SROI value at a 1:1 ratio indicates that a social value in the amount of 1 TL is created for every investment in the amount of 1 TL. Hence, SROI ratios calculated based on 1:1 ratio indicate the Program's success: the SROI value of 1:3.03, obtained via SROI calculations for the 1000 Farmers Endless Prosperity Program, is a successful result. It can be interpreted that the increasing impact of the Program on SROI value develops in direct proportion to the increase in the number of people reached, the social impact areas, and productivity.

SROI Values by Year of Program Activity

Program Impact	2019	2020	2021
SROI Value ₺	2.53	2.78	3.03

In social projects, as goals are determined and accomplished in a time period, the impact generated grows and the ratio of SROI increases. In evaluating the qualitative and quantitative results of the Program's SROI analysis, the investment made in the Program is considered positive in terms of the resulting impact. It is anticipated that proceeding with the investment will provide an even greater impact.

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