Funded by the European Union

European Union support to Lankaran-Astara Economic Region of Azerbaijan

REGIONAL MEDIUM-TERM AGRICULTURAL APPLIED RESEARCH AND SMART TECHNOLOGY TRANSFER PROGRAMME

AUGUST 2024

Project implemented by WEglobal and its consortium partners

Table of Contents

1. INTRODUCTION

This report presents the final outcome of a series of tasks to increase the competitiveness of the fruit and vegetable sector in the Lankaran-Astara economic region (LAER) through improving applied research and technology transfer. This included an assessment of the agriculture research sector in Azerbaijan, the development of a long-term strategy. This is the third in this series of outputs. It seeks to develop and validate a regional medium-term applied agricultural research and smart technology transfer programme in LAER. The strategy was developed over a year ago and this programme takes into account changing institutional and organizational circumstances within the Ministry of Agriculture since then with a new minister on board. The strategic priorities are now reformulated in a way, that allows the program to be designed in a practical and feasible way that is actionable within a medium term framework of in around three years. It presents the first stage of implementing the Strategy, enabling actions to be taken and results achieved, monitored and evaluated in the period 2024-2028.

To prepare this report, inputs have been collected from a wide range of sources through face-to-face and focus group meetings with related stakeholders in agriculture, online sources, private sectors, and consultations with local experts.

The district level action plan was developed for the fruit and vegetable sub-sector of the region based on the programme. A set of SMART qualitative and quantitative indicators were determined to assess and validate the medium-term programme.

1.1. The Importance of Agricultural Research

Investment in agricultural research generates significant economic and wider societal returns notably through its impact on productivity and food security. It also delivers environmental and social benefits even though these are harder to record and quantify. Research is expected to address immediate problems while at the same time anticipating future needs. Today's research will guide tomorrow's solutions in agriculture and food security, based on thorough diagnosis of the current situation. Incorporating research and innovation activities into a long-term strategy will make it easier to identify strategic areas of short-, medium- and long-term interest, and so improve their overall consistency, and impact.

Agricultural Research contributes not only to the development of agriculture but also to the improvement of the accuracy and quality of territorial economic planning in agricultural regions like LAER.

1.2. Smart Technology in Agriculture

Smart agriculture refers to application of technologies such as internet of things (IoT), wireless sensors, real-time location tracking, predictive analysis and intelligent decisions, robots, and drones on farms to increase precision, control and crop yields for better productivity and sustainability. Smart Agriculture may also play an important role in transforming and adapting agricultural development to the new reality of (and help prevent) climate change.

Artificial intelligence (AI) has emerged as a promising technology in digital agriculture. Digital agriculture relates to using digital technologies for collecting, storing, and further analysing the electronic agricultural data for better reasoning and decision-making using AI techniques. Precision agriculture is one such technique that monitors soil moisture and composition, temperature, and humidity and determines optimized fertilizer and water requirements for a specific crop and different areas of a farm.

1.3. Agricultural Extension

The provision of adequate and effective agriculture extension services is key to successful smart technology transfer. Most of the farmers in Azerbaijan are smallholder farmers and it is unlikely they would apply smart agricultural technology practices individually. Big farmers in Azerbaijan apply smart technologies especially in greenhouse production. The responsible state agencies could establish an early warning system with soil sensors for detection of soil moisture and climate changes to prevent disease and insects' damages, to improve irrigation management etc. for smallholder farmers.

Implementing the drafted measures focus on market-oriented applied agricultural research and smart technology transfer systems in Lankaran – Astara Economic region of Azerbaijan enable better coordination of the activities of different funding bodies to develop synergies with all actors in the systems. Joint efforts could provide a solid basis for sustained investment in agricultural research and advisory systems and build critical know-how and capacity over a longer period of time. Consulting with farmers and the private sector agri-food businesses would also make research arrive at solutions that are useful for the market. The proposed actions are subject to evaluation by the qualified and quantified indicators.

2. CHALLENGES IN TRANSFERRING SMART TECHNOLOGIES IN AGRICULTURE IN LAER

There are three levels of stakeholders that need to be involved in transfer of smart technologies. These are the researchers, extension service providers and the end beneficiaries, farmers and agrifood establishments. Here level I and level 2 stakeholders need to work together for the transfer of knowledge and technology to the end users that are farmers.

- Level 1 stakeholders – Researchers
- Level 2 stakeholders – Extension service providers
- Level 3 stakeholders – Farmers/agricultural producers (beneficiaries)

Table 1 Horizontal challenges applicable for all stakeholders

Differentiating features	Challenges			
	Research	Extension services	Farmer - agricultural producers	Horizontal
Availability of resources and how they are used	Limited resources for development of research based on new and SMART technology. No cooperation between research entities	Limited human and financial resources and knowledge transfer skills. Transport and communication resources inadequate to cover the scope and area for service provision	Inadequate resources for development needs	Levels 1 and 2 – adequate for services to be provided Level 3 – enabling practical use of resources (end user)
Knowledge, skills and life-long learning	Advanced knowledge. Willingness to and system to upgrade competencies	Basic knowledge and skills. Willingness to and opportunities to upgrade competencies	Significant shortage of modern knowledge and skill including digital literacy and tools including smart phones. Lack of awareness about the need to upgrade competencies	Applied at all levels

Differentiating features	Challenges			
	Research	Extension services	Farmer - agricultural producers	Horizontal
Equipment (machinery, tools, devices, buildings). Financial resources	Lack of proper buildings and laboratories and equipment for applied research	Lack of adequate tools for smart technology transfer to farmers	Lack of modern equipment for absorption of smart technologies. Basics in scarce number of farm holds for communication and networking	Level 1 – applied research and knowledge transfer Level 2 – knowledge transfer and improvement of skills Level 3 – practical application of technology
Market orientation	Feedback from Level 1 and Level 2 stakeholders	Needs assessment of level 3 stakeholders	Exposition of producer needs to Level 2 stakeholders	Farmer and agricultural producer business limited to local market and dependant to middle men. Inadequate quality of final produce to commercial market needs. Shortage of marketing skills and commercial trade behaviour

3. PRIORITIES AND MEASURES

The programme is addressing two main factors that build the capacities for the establishment of a dynamic, vibrant and functional applied agricultural research and smart technology transfer system. Such a system national food self-sufficiency, nutrition security and a self-reliant economy; generating knowledge, information and technologies that address emerging challenges of food self-sufficiency, nutrition security, climate change, rural income, and economy in the Lankaran-Astara Economic Region (LAER). The two main components of the programme are:

1. Component 1: Development of applied agricultural research
2. Component 2: Transfer of smart technology in agrifood sector

3.1. Action plan for implementation of the component 1- applied agricultural research

Priority 1.1. Improving material and technical basis for effective operations of horticultural research institutes and agricultural education units in LAER

Measure 1.1.1. Design and adaptation of the premises and adjacent land of the regional research stations of the institutes for Fruit/Vegetable in Lankaran for researching sub-tropical crops

Source of finance: Public source of finance

Result: a design of the premises and assets necessary for development of research activities. Costs calculation and justified financial application developed. The formal requirements checked and met. Adaptation of premises commenced.

Indicator: A technical design developed with number, size and location of land plots and buildings / constructions needed for improvement of research work. Financial application submitted for allocation of funding by relevant authorities. Minimum 3 land plots adapted for researching sub-tropical crops specific for LAER.

Implementation deadline: 2028

Measure 1.1.2 Establishing public – private partnership with private business entities for investment in researching of the region key value chains in fruit and vegetable sector.

Source of finance: Public and private sources of finance

Result: Identified the scope of public private partnership for researching local value chains. Established partnership agreement.

Indicator: A public-private agreement developed. At least 3 crops (value chains) agreed for the joint research by public and private partners.

Implementation deadline: 2025

Priority 1.2. Improving coordination of design and implementation of agri-food research programs and activities with adopted monitoring and evaluation mechanism.

Measure 1.2.1 Development of the comprehensive mid-term research programme and coordination plan focused on the key value chains and sub-tropical crops identified in Lankaran Astara region

Source of finance: Public sources of finance

Result: a network of research entities (institutes, universities) organised with the research aims and objectives in LAER. The research aims and objectives set up.

Indicator: Minimum 5 value chains and subtropical crops considered for researching.

Implementation deadline: 2025

Measure 1.2.2 Research of climate change adaptation and water scarcity resistance of selected crops including subtropical fruit and vegetable.

Source of finance: Public sources of finance

Result: The research implementation programme developed and tests commenced

Indicator: Minimum two methodologies reviewed, consulted and tested.

Implementation deadline: 2025

Measure 1.2.3 Development of the monitoring system of the key objectives – actions-results of the 1.2.1 programme incl. annual review of achievements

Source of Finance: public-private investment

Result: Development of the monitoring and evaluation methodology and plan to observe and measure the 1.2.1 achievements

Indicator: the Monitoring and Evaluation system designed, minimum two annual reviews of research progress conducted and presented Implementation deadline:

Implementation deadline: 2026

Priority 1.3 Modernisation of research methods in applied agricultural research institutions including application of smart technologies

Measure 1.3. Identification and testing smart IT applications for research regarding climate change adaptation, water, air and soil quality, meteorological phenomena, other critical factors

Source of finance: Public sources of finance

Result: The smart applications identified and tested for distribution and use by beneficiaries and stakeholders

Indicator: minimum 5 applications distributed for use

Implementation deadline: 2025

Measure 1.3.2 Improving accessibility of laboratories and smart testing of agricultural production resources and yield.

Source of finance: Public sources of finance

Result: laboratories identified for testing farm inputs and produce

Indicator: at least two laboratories agreed to provide testing services for LAER farmers

Implementation deadline: 2026

Priority 1.4 Initiating state research institutes cooperation and joint ventures with Lankaran university and vocational schools as well as private sector entities;

Measure 1.4.1 Identification of critical research objectives and themes for development and modernisation of fruit and vegetable crops

Source of finance: Public sources of finance

Result: LAER based research institutes and universities of Ganja and Lankaran identified aims and objectives for joint research undertakings

Indicator: at least five key themes for research identified and the research themes developed

Implementation deadline: 2025

Measure 1.4.2 Establishing an experience and result exchange IT platform for fruit and vegetable research units

Source of finance: Public sources of finance

Result: the IT platform identified for research exchange and experience gained in agrifood sector in LAER

Indicator: minimum five articles, abstracts and papers on LAER agrifood sector research themes issued and published on the identified active IT platform

Implementation deadline: 2027

Measure 1.4.3 Identification and establishment of test plots and scientific demonstration farms

Source of finance: Public – private investment

Result: Identified and organised test and demonstration plots

Indicator: minimum 5 plots planted and maintained under scientific control

Implementation deadline: stage 1/ 2025, stage 2/ 2028

Priority 1.5. Increasing the visibility and attractiveness of the research results for the region's community particularly farmers and growers (*open door policy*)

Measure 1.5.1 Active participation in Annual Caspian Agrifood fair in Baku promoting Lankaran Astara region research units and their achievements in fruit and vegetable sector

Source of finance: Public-private investment

Result: LAER agrifood research results developed and ready for display and presentation

Indicator: a stand with adequate presentation of LAER agrifood research organised and settled on Caspian Agrifood Fair in Baku

Implementation deadline: 2025 , continued in following years until 2028

Measure 1.5.2 Annual Regional Research Conference and Open Door thematic events promoting new research developments in the region especially farmer and grower community

Source of Finance: Public – private investment

Result: Open door event designed and organised promoting agricultural innovations and current research undertakings

Indicator: LAER agrifood research open door event for farm holders

Implementation deadline: 2025, continued in following years until 2028

3.2. Action plan for implementation of component 2 smart technology transfer:

Priority 2.1 Improving capacities and technical base of the Lankaran Regional Agrarian Training Centre (ATC)

Measure 2.1.1 Design and implementation of the result-oriented ESP performance assessment system

Source of finance: Public source of finance

Result: adviser certification method developed and the system designed and implemented

Indicator: Increased number of certified ATC employed and associated advisers by 50%

Implementation deadline: 2026

Measure 2.1.2 Improvement of technical, communication and transportation equipment

Source of finance: Public sources of finance

Result: Modernised technical equipment, IT hardware and transportation facilities

Indicator: increase by 50% of the present value

Implementation deadline: 2026

Priority 2.2. Networking and cooperation of Lankaran Regional ATC with research units, Lankaran University, vocational schools and State Agricultural Development Centres (DAIM) in districts.

Measure 2.2.1 Design of a joint three level ESP communication mechanism based on direct and on-line experience exchange utilising smart technologies

Source of finance: Public sources of finance

Result: Established communication channel and networking group. Periodical events associating ESP including on-line thematic seminars

Implementation deadline: 2025, continued annually until 2028

Measure 2.2.2 Cooperation platform of ESP in LAER

Source of finance: Public sources of finance

Result: Creation of a database of ESP covering private and public sector. Developed rules and draft agreement allowing for joint venture and other form of collaboration between three level ESP.

Indicator: Minimum 1 joint ESP venture developed and operational. ESP cooperation scheme and themes designed in a mid-term ESP plan of actions

Implementation deadline: 2025

Priority 2.3 Development of extension methods enabling the transfer of research results to the farming sector

Measure 2.3.1 Development of the agricultural knowledge and innovation system (AKIS model) in Lankaran Astara region

Source of finance: Public sources of finance

Result: Inventory of resources and assets, design of AKIS in LAER

Indicator: systemised AKIS scheme

Implementation deadline: 2025

Measure 2.3.2 Development of advisory methodologies for the key agricultural value chains, farm economics, marketing of agricultural produce. These should cover the fruit and vegetable sector.

Source of finance: Public sources of finance

Result: Developed fruit and vegetable value chain methodological guides

Indicator: minimum 3 manuals

Implementation deadline: 2026

Priority 2.4 Development of training and advisory capacities of public and private sector extension services

Measure 2.4.1 Training of trainers for three level ESP: ATC advisory staff, freelance specialists, community-based farmer instructors. Development of a mentoring and certification programme.

Source of finance: Public sources of finance

Result: Training of Trainers course designed, conducted and completed

Indicator: ToT course participation 20 individuals representing each of three level ESP, two courses

Implementation deadline: course 1 in 2024, course 2 in 2026

Measure 2.4.2 Design of training curricula for farmers and growers on IPM/GAP and Plant Health, climate change mitigation and adaptation of agricultural producers to changing environment, protecting biodiversity, efficient use of water and soil for sustainable and competitive agricultural production.

Source of finance: Public sources of finance

Result: Training curricula elaborated

Indicator: minimum 10 curricula

Implementation deadline: 2024, update 2026

Measure 2.4.3 Design of training curricula on farm diversification and modernisation, reorientation of farm economy, commercial business management, finances .

Source of finance: Public sources of finance

Result: Training curricula elaborated

Indicator: minimum 5 curricula

Implementation deadline: 2026

Priority 2.5 Modernisation of knowledge and innovation transfer through smart technologies

Measure 2.5.1 Upgrading digital skills and application of smart (IT based) technologies for three level ESP

Source of finance: Public sources of finance

Result: Three level ESP trained on digital skills according to needs assessment

Indicator: minimum 100 ESP trained of which 50% are farmer instructors

Implementation deadline: 2024 and 2025

Measure 2.5.2 Upgrading digital skills of farmer customers of ESP

Source of finance: Public sources of finance

Result: basic digital skill training courses and workshops organised for farmers and agricultural producers

Indicator: minimum 200 individuals trained and guided of which minimum 10% representing one district of LEAER.

Implementation deadline: 2024 and 2025

Measure 2.5.3 Improving equipment (hardware and appliances) enabling application of smart technologies in the advisory chain between ESP and farmer/grower

Source of finance: Public sources of finance

Result: Hardware provided for use of ESP and farmer customers allowing for smart communication and use of practical apps

Indicator: minimum 50 smartphones (or equivalent) distributed

Implementation deadline: 2025 and 2025

Measure 2.5.4 Improving use of software enabling effective provision of advisory services through applying smart communication technologies

Source of finance: Public sources of finance

Result: Identified practical and useful software for LAER ESP and farmer user for shared use

Indicator: minimum 10 applications or other form of software

Implementation deadline: 2025

Priority 2.6 Adopting training and advisory to the challenges of climate, biodiversity, plant and animal health and other critical factors affecting agricultural sector.

Measure 2.6.1 Provision of training courses for farmers and growers on IPM/GAP and Plant Health, climate change mitigation and adaptation of agricultural producers to climate change, biodiversity for sustainable and competitive agricultural production,

Source of finance: Public sources of finance

Result: Designed and organised training courses based on curricula developed in M 2.4.2

Indicator: 200 participants representing all 6 LAER districts

Implementation deadline: 2024

Measure 2.6.2 Provision of training courses and advisory services on farm diversification and modernisation, reorientation of farm economy, effective farm management, financial management,

Source of finance: Public sources of finance

Result: Designed and organised training courses based on curricula developed in M.2.4.3

Indicator: 200 participants representing all 6 LAER districts

Implementation deadline: 2024, continued 2026

Measure 2.6.3 Provision of advisory services on farmer collaboration and cooperation, access to market and marketing of agricultural produce

Source of finance: Public sources of finance

Result: Designed and organised advisory events

Indicator: 200 participants representing all 6 LAER districts

Implementation deadline: 2024 until 2028

4. COSTS OF THE ACTION PLAN AND FINANCIAL ESTIMATE OF THE SMART TECHNOLOGY TRANSFER PROGRAMME'S IMPLEMENTATION IN 6 DISTRICTS OF LAER FOR 5 YEAR PERIOD (2024-2028)

The cost of financial provisions for five priorities of the component 1 "Applied agricultural research" are estimated (in AZN) for a total amount of **390 000** of which:

Priority 1.1 = 150 000
Priority 1.2 = 60 000
Priority 1.3 = 30 000
Priority 1.4 = 100 000
Priority 1.5 = 50 000

The cost of financial provisions for six priorities of the component 2 "Smart technology transfer" are estimated (in AZN) for a total amount of **265 000** of which:

Priority 2.1 = 85 000
Priority 2.2 = 10 000
Priority 2.3 = 20 000
Priority 2.4 = 20 000
Priority 2.5 = 80 000
Priority 2.6 = 50 000

OVERALL COST: 655 000 AZN

4.1. Input to the smart technology transfer programme from the districts in LAER

The cost of the smart technologhy transfer programme includes financial contributions from the State Agriculture Development Centres (SADC) in each district in the programming period of 2024 and 2025. These have been proposed and calculated by the staff of all 6 district SADC offices as a result of the on-line survey conducted in July 2024. The survey revealed the interest of district authorities in supporting the implementation of the smart technology transfer to the farming community in order to accelerate the modernisation of agrifood sector.

4.1.1. Masalli district

The agronomist who works as a volunteer in the Masalli district SADC will be contracted and involved in farmer group activitie and spend some of his time to support agricultural producers to implement smart solutions and new technologies. He will focus on the use of online sources of information for transfering innovative improvements in horticultual value chains. He will maintain contact with the Regional Training Center in Lankaran and Scientific Research Institute of Horticulture. He will also share his own knowledge and experience with the farmers acting as an adviser within the system of provision of advisory services. Therefore it is assumed this agronomist will build his personal professional capacities within the programmed AAS development activities.

Expenses:

- Internet fee-20 AZN*24=480 AZN
- Travel to Baku SRIH four times- 60 AZN*4=240 AZN
- Travel to Lankaran RTC eight times- 20 AZN*8=160 AZN
- Partial payment for the Agronomist-350 AZN*24=8400

Overall costs - 9280 AZN

4.1.2. Astara district

Most of the farmers in Astara district are involved in mandarin cultivation. After the harvest the major concern of the growers is access to markets and effective sale of their yield. During the study of the mandarine value chain in 2023 it was found there are more middlemen in the mandarine market. It leads to decrease in producer income and final revenue of the farmhold. The Astara district office of the the Small and Medium Enterprises Development Agency (SMEDA) will cooperate with SADC in order to support local farmers in accessing the market directly. The regional office of SMEDA have a good business relationship with “Veyseloglu Group of Companies” and “OBA Market” LLC markets chain who are the recognized buyers known by local fruit and vegetables growers. The volunteer at SADC will support market communications. He will support the organization of a producers network and coordinate communication with mandarin producers. WhatsApp groups to link them with the market operators referred to will be formed. In addition, it is planned to select 20 farmers and fruit and vegetable traders who can offer their market services and who are reliable and fair. They will participate in the planned acquisition of skills by the producers in using electronic market platforms, how to search, take pictures, and develop the product specifications for online sales.

Expenses:

- Buying new multifunctional smartphone -1000 AZN
- Internet fee-10 AZN*24=240 AZN
- Payment for the trainer (3 days digital training on using electronic market channels for the farmers)- 300 AZN*3=900 AZN
- Training other costs(paper,pens, and tea break expences for 20 participants) 100 AZN*3=300 AZN
- Travel to agriculture product sale fairs in Baku. 100 AZN*4=400 AZN
- Payment for the KOBIA supported volunteer who will coordinate the activity- 500 AZN*12=6000

Overall costs - 8840 AZN

4.1.3. Lankaran district

Most of the small farmers operating in Lankaran district do not analyze the soil and the irrigation water used for their farms. These are due to the income from the farm operations which is not enough sufficient for the farm family budget and , in their opinion, the loss of time spent on analyses. Director of Lankaran Regional Training Center saw the use of mobile testing units during a study tour to Poland organized by FAO. He has decided to implement the concept with the participation of farmers and other stakeholders.

For this purpose, a website will be developed and mobile soil and water testers will be purchased so that the farmers can get information faster. The two experts from the Lankaran Regional Training Center and 1 IT specialist will manage this initiative. When the experts provide agrarian advisory services to farmers, they will also analyze their soil and farm water in parallel, and the results will be shared with the farmer. The final results will be posted on the webpage.

Expenses:

- Development of the website for soil and water test results indication-2000 AZN
- Buying mobile pH meter “pH meter Adwa AD12” 250*2=500 AZN
- Buying mobile water tester “EC/TDS meter Adwa AD32” 200*2=400 AZN
- Internet fee-20 AZN*24=480 AZN
- Web administrator`s salary -400 AZN*12=4800
- Additional payment for Lankaran RTC experts 2 experts*300*24=14400

Overall costs - 22580 AZN

4.1.4. Lerik district

The transportation costs required to bring agricultural products to the market are high due to the remoteness of the Lerik district from the main sales markets. Also, shortage of agricultural land and irrigation water in this region leads to fewer crops grown by farmers living in these areas. Considering the problems listed above, the most profitable sale for the farmers of the Lerik district is to sell their products in the territory of the region. The most important advantage for the Lerik district is the arrival of tourists to the area between the end of spring and the beginning of autumn. However, local and international tourists visiting the district do not have information about the agricultural products in the area. Support will be provided to establish a website for the promotion of the Lerik district for the sale of local crops produced in the district and also for the placement of rental houses needed for accommodation of visitors The web administrator will be selected among SADC volunteers who will receive training on the website administration. Later some 20 farmers from various villages of the Lerik district will receive training on digital literacy from the web administrator (mainly using electronic market platforms, how to take pictures for a website, and developing the product specifications for online sales.

Expenses:

- Development of the website-3000 AZN
- Buying new laptop -2000 AZN
- Internet fee-20 AZN*24=480 AZN
- Traing for web adminitrators cost 100*10=1000 AZN
- Training for farmers costs(paper,pens, and tea break expences for 20 participants) 60 AZN*3=180 AZN
- Web administrator`s salary -350 AZN*12=4200

Overall costs - 10860 AZN

4.1.5. Yardimli district

The project "EU for Lankaran" distributed 3015 kg of high-quality domestic and foreign seed potatoes to 8 farmers In Arvana, Avash, Deman, Khanbulag, and Kurekchi villages of the district. Of these the 4 local potato varieties and 4 foreign potato varieties were carefully selected for their adaptability to the mountainous terrain and their yield potential. These seed potatoes are grown in 1 ha demonstration plots with proper agrotechnical care with expert advice. To provide proper maintenance, soil samples were taken from farmers' fields for testing. Based on the results, individual care and cultivation schedules are made for each variety to guide farmers throughout the potato production cycle.

To spread this experience to farmers in other potato-growing villages of the region (mainly the Allar region), Farmer Field Days will be held in demonstration locations. At this event, farmers who take care of the demonstration field, Yardimli district SADC specialists, Lankaran Regional Training Center specialists, and also scientists-experts of the Scientific Research Institute for Vegetables will share their experiences with the farmers participating in the event and other interested parties.

The experience of the WhatsApp networking group created by the farmers united around the demonstration plots will be shared with farmers from other villages. Smartphones will be donated to 10 farmers who are interested in this work but do not have adequate equipment.

Expenses:

- Buying smartphones 500 AZN*10=5000 AZN
- Transportation costs for the farmers come from remote villages 10 AZN* 50=500 AZN
- The transportation cost for the scietists from Scientific Research Institute of Horticulture 200 AZN*2=400 AZN
- The event additional costs(lunch and tea break expences for 70 participants) 20 AZN*70=1400 AZN

Overall costs - 7300 AZN

4.1.6. Jalilabad district

Nearly 80% of the strawberries produced in Jalilabad region are exported, and a very large part of this export depends on the Russian market. For this reason, any issues in the Russian market will have a negative impact on the business of strawberry growers and the traders operating in the Jalilabad region.

In order to overcome this problem, strawberry traders operating in the region need to look strategically for new markets. Farmers will be required to cultivate strawberries according to the demand of newly found markets. At present, strawberry traders find the Gulf countries market more attractive. In order to develop this trade path, a delegation of 3 traders will participate in the “Gufood2025” taking place at the Dubai World Trade Center and they will establish business relations with the market participants represented at the exhibition.

In addition, for the export of strawberries to Gulf countries, the big traders will participate in HACCP trainings and trade enterprises will receive certificates. In the district and the region, the strawberry season is short. In order to make it easier to freeze and export

strawberries the traders are investigating the opportunity to pre-processing of strawberries, using the IQF (individually quick freezing) method.

An expert will be brought from one of the countries where the technology is developed to know more about this technology and equipment, sales markets, and what kind of strawberries should be planted according to this method. The IQF technology training will be provided to big traders, and farmers will be given training on new strawberry varieties (more suitable for freezing).

Expenses:

- Transportation cost for “Gufood2025” fair 1000 AZN*2=2000 AZN
- Accomadation cost for “Gufood2025” fair 400 AZN*2=800 AZN
- Payment to HACCP tranier 300 AZN* 5 days = 1500 AZN
- The IQF expert transportation cost- 1200 AZN
- The IQF expert accomadation cost- 600 AZN
- Payment to IQF expert (for the taining to big traders) 600 AZN*3 days=400 AZN
- The training additional costs(lunch and tea break expences for 10 participants* 3 days) 20 AZN*10*3 days=600 AZN
- Payment to IQF expert (for the taining to farmers) 600 AZN*1 days=600 AZN
- The training additional costs(lunch and tea break expences for 10 participants* 1 days) 20 AZN*20*1 days=400 AZN

Overall costs - 8100 AZN

4.2. Total contributions from districts

Lankaran	*22 580*
Astara	*8 840*
Lerik	*10 860*
Masalli	*9 280*
Jalilabad	*8 100*
Yardamli	*7 300*

TOTAL contribution from districts = ***66 960 AZN***