



Funded by the European Union



Advancing resource efficient and cleaner production in Moldova

The RECP methodology

Resource Efficient and Cleaner Production (RECP) is the integrated and continuous application of preventive environmental strategies to **processes, products, and services** to increase efficiency and reduce risks to humans and the environment. RECP is all about producing with fewer resources while minimizing environmental impacts and increasing overall productivity. For **Small and Medium-Sized Enterprises (SMEs)**, the RECP methodology can effectively lower production costs whilst improving the SMEs' competitive advantage and applying environmentally friendly practices. RECP is also an effective tool to introduce and promote Circular Economy principles among SMEs.

“PETRU BALAN” PE - FRUIT INDUSTRY

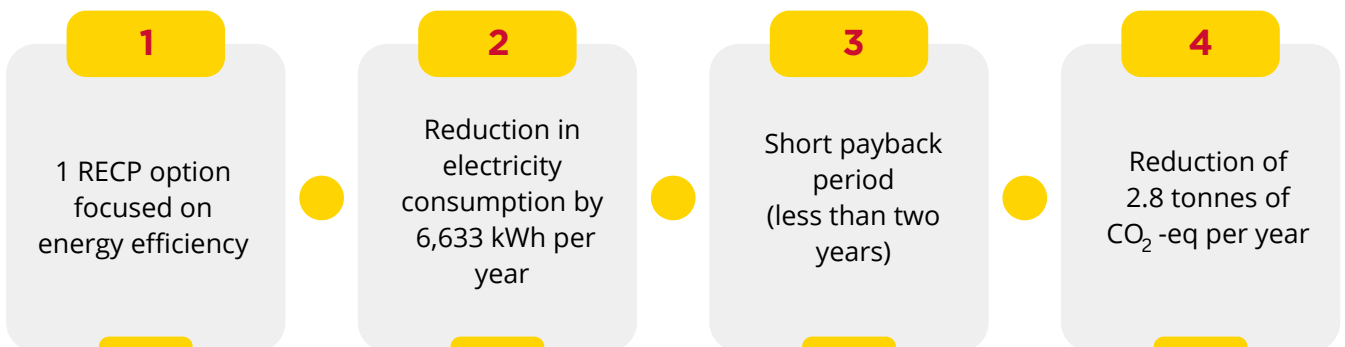


Company overview

Location: Criuleni
Key service: fruit storage
No. of employees: 10
Main markets: Moldova
Founding year: 2019

“**PETRU BALAN**” specialises in the storage, sorting, and delivery of apples. The company utilises a modern building equipped with an industrial refrigerator that adheres to contemporary thermal insulation standards. The sorting and packing processes are fully automated, ensuring customers receive reliable and prompt fruit deliveries. The primary challenge in the apple storage process revolves around the excessive use of electricity, primarily driven by the operation of the refrigeration compressor unit, resulting in heightened electricity costs. Motivated to optimise energy efficiency, the company participated in the RECP Clubs programme under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise conducted in 2021-2024.

BENEFITS FROM IMPLEMENTING RECP OPTIONS



Action implemented by:



The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which the following was prioritised. The suggested RECP recommendation requires a payback period of less than two years:

RECP Option 1. Installing an open air compressor condenser: This measure consists of installing an outdoor condenser to increase the compressor's efficiency. The air intake side of the condenser would be at least 1.5 metres away from the nearest wall or structure, and the other sides, at least 2 metres away, to prevent recirculation from the exhaust side back into the inlet. Additionally, the opening of the condenser's exhaust would be higher than the surrounding walls or structures. The correct arrangement of the condenser would reduce the condensing temperature and consequently, the compressor's pressure. The reduction in the compressor pressure is expected to reduce electricity consumption by 10-20%.

SAVING ACHIEVEMENTS

Main RECP action

OPTION 1

Installing an open air compressor condenser

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	3,000	1,831	1.6

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%
Option 1:	6,633/10

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	2.8

“ Our company expressed interest in joining the EU4Environment programme due to the substantial increase in energy prices over the past few years. Thanks to the RECP Clubs programme, we learned that there are always opportunities for technical and organisational improvement of our operations, despite our facilities being constructed with the latest technologies. Additionally, we understood how to respond to economic challenges and analyse the efficiency of resource use in the process of storing apples. As our company plans to further improve its technological processes and optimise energy consumption, the RECP project has inspired us to come up with new ideas and approaches regarding the implementation of RECP measures in the future, said the company director, Mr. Petru Balan. ”

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **PETRU BALAN** joined the RECP Clubs programme to be monitored under EU4Environment. Follow-up visits have also been conducted to check on the implementation of the recommended RECP options. EU4Environment helps the EU's Eastern Partnership countries preserve their natural capital and increase people's environmental well-being by supporting environment-related action, demonstrating and unlocking opportunities for greener growth, and setting mechanisms to better manage environmental risks and impacts. For more details, visit: www.eu4environment.org

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