

Advancing resource efficient and cleaner production in Ukraine

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.

AGROLIFE TRANSSERVICE LLC - POULTRY PRODUCTION



Company overview

Location: Davydiv village, Lviv oblast

Key products: chicken

No. of employees: 53

Main markets: Ukraine

Founding year: 2010



Agrolife Transservice, LLC is specialised in raising and rearing live poultry, specifically chicken. The process of rearing chicken lasts approximately 45 days, with the majority of the demand coming from the domestic market. The enterprise is committed to improvement by increasing the conversion rate, the average live weight of the sold poultry, the poultry survival rate, and the overall weight of the live poultry. Simultaneously, it is dedicated to optimising energy consumption and decreasing its environmental impact. Motivated to improve its key performance indicators by developing and further implementing RECP options, the company participated in the RECP Demonstration Project under EU4Environment (2019-2024). This publication shows the company's experience reported after the monitoring exercise completed in 2023.

“ Our company joined the project to reduce energy consumption and poultry carrion, both equally important for our operations. We were also interested in developing RECP options (supported by the necessary calculations). The project showed us that even simple organisational measures (with minimal costs), such as adjusting the automation of the microclimate and the lighting systems can significantly contribute to reducing energy consumption. We also learned that with minimal investments and adjustments to our facilities, it is possible to achieve optimal production and maximise output, said the head of the economic department of Agrolife Transservice, LLC, Ms. Oksana Pityn. ”

BENEFITS

1

7 RECP options
(focused on
resource
efficiency)

2

Medium payback
period (less than
five years, on
average)

3

Reduction of
electricity
consumption by
899,662 kWh per
year

4

Reduction of 483
tonnes of
CO₂-eq per year

Action implemented by:

The project's approach

The RECP assessment examined the production site and identified several RECP options, out of which seven were prioritised by the company, with the following three being described below:

RECP Option 1. Adjusting the air ventilation system in the poultry houses: This measure consists of readjusting the operation of the current automation system to establish a correct balance between the air exchange rate and the number of chickens, their age, and the ambient air temperature. It would significantly reduce electricity consumption and carrion.

RECP Option 2. Replacing the existing exhaust fans with energy-efficient ones: This measure would significantly reduce electricity consumption by 211,680 kWh per year.

RECP Option 5. Installing a supply and exhaust equipment with a heat recovery unit: This measure consists of installing the supply and exhaust ventilation equipment with a heat recovery unit for each poultry house. It would help recover up to 57% of the hot air exhaust and use it for heating the supply air.

SAVING ACHIEVEMENTS

Main RECP actions

OPTION 1	Adjusting the air ventilation system in the poultry houses
OPTION 2	Replacing the existing exhaust fans with energy-efficient ones
OPTION 3	Adjusting the heating system in the poultry houses
OPTION 4	Thermal insulation of the pipeline and equipment in the boiler houses
OPTION 5	Installing a supply and exhaust equipment with a heat recovery unit
OPTION 6	Thermal insulation of the gates in the poultry houses
OPTION 7	Installation of a rooftop grid – connected PV solar plant (implemented measure)

Economic key figures

RECP OPTIONS	INVESTMENT (EUR)	SAVINGS (EUR/YR)	PAYBACK PERIOD (YR)
Option 1:	250	1,194	0.2
Option 2:	21,168	42,300	2
Option 3:	500	13,200	0.04
Option 4:	320	342	0.94
Option 5:	873,375	54,543	16
Option 6:	2,388	939	0.7
Option 7:	335,000	33,195	10

Resource savings

RECP OPTIONS	ELECTRICITY (KWH/YR)/%	NATURAL GAS (M ³ /YR)/%	WOOD FUEL (TONNES/YR)/%
Option 1:	11,942/0.2	/	/
Option 2:	211,680/18.4	/	/
Option 3:	/	/	66/7.7
Option 4:	/	/	1.7/0.2
Option 5:	/	47,178/33.5	295/3.5
Option 6:	/	738/0.5	3.1/0.4
Option 7:	676,040/58.7	/	/

Total pollution reduction

RECP OPTIONS	TOTAL CO ₂ -EQ (TONNES/YR)
Total:	483.3

The introduction of RECP has been part of the EU-funded EU4Environment Action and executed by UNIDO. In this context, **Agrolife Transservice LLC** joined the RECP Demonstration Project 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

© – 2023 – UNIDO. All rights reserved. Licensed to the European Union under conditions.



United Nations Industrial Development Organization
 Ms. Tatiana Chernyavskaya
 EU4Environment Project Manager
 Tel: +43 1 26 0 26 5520
 E-mail: t.chernyavskaya@unido.org



Resource Efficient and Cleaner Production Centre
 10G Starokyivska Str.
 Kyiv, 04116, Ukraine
 Tel: +380 44 227 83 78
 E-mail: info@recpc.org