

# REBUILT

REENGINEERING BUSINESS UNDER CLIMATE CRISIS

## Action Plan Implementation

### COMPANY NAME AND WEBSITE:

Agro KP Ltd  
www.agrokp.com

### COMPANY DESCRIPTION:

AGRO-KP EOOD was founded in 1999. in the village of Gradeshnitsa. Rapid growth followed, and for 3 consecutive years the arable land increased from 3,000 to 60,000 decares. For more than 20 years, we have been cultivating our own and leased agricultural lands in Northwestern Bulgaria, producing wheat, barley, rapeseed, oilseed sunflower, sunflower for direct human consumption, corn for grain and silage, peas, alfalfa. The company has its own grain warehouse, located on an area of 90 decares. The grain depot owns a silo complex with a capacity of 24,000 tons of wheat with its own highly productive grain drying and cleaning machine. On the territory of the base there are 3 agricultural sheds and 5 warehouses with a total capacity of 18,000 tons. The total capacity for grain storage is 32 thousand tons of wheat. The company has its own repair workshop. There are 42 permanently employed personnel on employment contracts. The grain base owns a high-tech park of agricultural machines of leading world manufacturers - JOHN Deere, CASE, FENDT, VADERSTAD, NEW HOLLAND. Our company is one of the first to apply the principles of regenerative agriculture on a large scale. We use nature-friendly processing techniques / minimal processing, direct and semi-direct sowing/. We fertilize crops alternately after a detailed soil and leaf analysis. We use biological fungicides and insecticides and apply them based on high-tech digital models. In this way, we save huge amounts of fertilizers and pesticides, producing safe food and taking care of soil health. Regenerative agriculture is agriculture that not only does no harm, but adds benefits by producing food and increasing soil fertility for future generations. We are proud to have been selected by ABNT and EIT Food /Institute for Food Innovation of the European Union/ to implement the "Revolution of Regenerative Agriculture" project. AGRO-KP is a member of ABNT/Association of Bulgarian But - Tillers/.

### COMPANY'S CURRENT SITUATION (PROBLEMS):

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Conventional seeding and fertilization can contribute to a high carbon footprint for several main reasons:

**Fossil fuel use for machinery and transport:** Tractors and other farm machinery used for sowing and fertilizing generally run on fossil fuels such as diesel. Fuels from their burning release carbon emissions into the atmosphere.

**Fertilizer production:** Fertilizer production, especially ammonia, requires a large amount of energy and often uses fuels that lead to carbon dioxide emissions.

**Use of synthetic fertilizers:** Some of the ingredients in synthetic fertilizers can be produced through processes that use a lot of energy and generate carbon emissions.

**Intensive farming and use of heavy machinery:** Intensive farming techniques often used in conventional methods can involve extensive use of heavy machinery that requires large amounts of fuel.

#### **PROCESSES THAT HAVE BEEN DISCUSSED TO BE REENGINEERING:**

Reducing the consumption of diesel fuel, fertilizers and preparations.

#### **PROCESS THAT WILL BE REENGINEERED**

- ✓ **USE OF MORE EFFICIENT AND CLEANER TECHNOLOGIES: SWITCHING TO MORE EFFICIENT AGRICULTURAL MACHINERY AND TECHNOLOGY CAN REDUCE FUEL CONSUMPTION AND CARBON EMISSIONS.**
- ✓ **USE OF SUSTAINABLE FARMING METHODS: CHANGES IN FARMING METHODS, SUCH AS MIXED FARMING, ORGANIC FARMING OR AGRO-ECOLOGICAL METHODS, CAN CONTRIBUTE TO REDUCING THE CARBON FOOTPRINT THROUGH MORE EFFICIENT USE OF RESOURCES AND INCREASED RESILIENCE OF ECOSYSTEMS.**

#### **ACTIONS TO BE TAKEN FOR THE REENGINEERING OF THE PROCESS:**

**Reduction of soil tillage by using direct seeding which conserves soil moisture as well as using direct sowing seeds.**

**The sowing of intermediate cuts after harvest which winter and therefore protects the soil from erosion. Before sowing, these intercrop crops are mulched and a green manure is obtained**

**Benefits: using less fertilizers and better soil and reducing carbon emissions and using less fossil fuel.**

## MONITORING

### RESULTS OF THE IMPLEMENTATION

USING A STANDARD TILLAGE WHICH IS EXPRESSED IN  
DEEP PLOWING 3 LITERS/DECARE DIESEL  
DISCING 2 PROCESSES 2 LITERS/DECARE DIESEL  
SOWING 0.8 LITER/DECARE DIESEL  
SPRAYING 2-3 BR 0.7 LITER/DECARE DIESEL  
FERTILIZER 2 BR 0.2 LITER/DECARE DIESEL

After applying the new methods to reduce the energy footprint, the results are:

~~DEEP PLOWING 3 LITERS/DECARE DIESEL~~  
~~DISCING 2 PROCESSES 2 LITERS/DECARE DIESEL~~  
SOWING 0.8 LITER/DECARE DIESEL  
SPRAYING 2-3 BR 0.7 LITER/DECARE DIESEL  
~~FERTILIZER 2 BR 0.2 LITER/DECARE DIESEL~~

Most of the tillage steps are omitted.

### FURTHER RECOMMENDATIONS