

# Acquiring a combine harvester and a nitrogen testing equipment

**EAFRD-funded projects** 

A company offering agricultural services to farmers used RDP support to acquire a new combine harvester and a nitrogen testing equipment which regulates the amount of fertiliser applied across the entire crop.

# **POLAND**

# Farm's performance, restructuring & modernisation

Location

Szwarcenowo

Programming period

2014 - 2020

**Priority** 

P2 – Competitiveness

Measure

M06 – Farm & business development

Funding (PLN)

Total budget 1 048 550 EAFRD 261 058.52 National/Region. 149 217.33 Private 638 274.15

**Project duration** 

2018 - 2018

Project promoter

Ziemar Agro-Nasiona sp.zo.o.

Contact

n/a

Website

n/a

# Summary

The beneficiary of this project is Ziemar Agro –Nasiona sp. zo.o., a small company in Szwarcenowo, Northern Poland, which offers agricultural services to farmers. The company used RDP support to expand the range of its services and purchased a combine harvester, equipped with a set of headers that make it possible to harvest various types of cereals, from oilseed rape to spring cereals.



In addition, it acquired nitrogen testing equipment which measures the nitrogen demand of plants, by assessing how much sunlight is reflected by the crop. When mounted on a tractor, the equipment constantly measures the nitrogen content in the plants and adjusts the spreading of the fertiliser across the entire field.

### Results

The new combine harvester with its accompanying set of attachments, ensures full use is made of the machine and offer farmers a wide range of cereal harvesting services.

The nitrogen testing equipment has increased the efficiency of fertilisers used and at the same time it reduced the risk of plant over fertilisation, nitrogen leaching and of nitrogen oxide emissions into the atmosphere.

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## Context

The beneficiary of this project is Ziemar Agro –Nasiona sp. zo.o., a small company in Szwarcenowo, Northern Poland, which offers agricultural services to farmers. The company owner realised that there was demand in the region for harvesting services covering different crops for farmers who do not have a combine harvester. In addition, farmers needed assistance in determining the nitrogen content of the plants to help them apply appropriate fertilisation.

# **Objectives**

The project aimed to expand the range of services offered by the beneficiary company and in this way improve its competitiveness and economic sustainability. In parallel, it would contribute to the protection of the environment by reducing the excessive use of fertilisers.

## **Activities**

Support from the Polish rural development programme enabled the company to purchase a combine harvester equipped with a set of headers that made it possible to harvest various types of cereals, from oilseed rape to spring cereals.

The company also acquired nitrogen testing equipment which measures the nitrogen demand of plants, by assessing how much sunlight is reflected by the crop. The reflection of sunlight depends on the chlorophyll content of the plants and the density of the crop. This allows the spread of nitrogen to be adjusted, using a fertilisation algorithm that is appropriate for a given crop. The equipment is operated manually and can be mounted on tractors. When mounted on a tractor, the equipment constantly measures the nitrogen content in the plants and regulates the spreading of the fertiliser appropriately across the entire field.

# Main results

The new combine harvester with its accompanying set of attachments, ensures full use is made of the machine and offer farmers a wide range of cereal harvesting services.

The nitrogen testing equipment has increased the efficiency of fertilisers used and at the same time it reduced the risk of plant over fertilisation, nitrogen leaching and of nitrogen oxide emissions into the atmosphere.

Additional sources of information

n/a

