

VARIABLE PLANT DENSITY PRECISION MAIZE SOWING – UNI AGRO FOOD LTD., DIGITAL MAP-BASED PLANTING – COLLABORATION techcoachproject.eu

MAIN CHALLENGE/ OBJECTIVES

The main challenge was managing within-field site variability, protecting the soil, achieving more uniform yields, and reducing input use. To address this, the goal was to introduce precision technology that takes soil and yield

MAIN RESULTS/ OUTCOMES

Through variable rate seeding, with plant density adjusted to soil conditions, yield uniformity increased, soil stress decreased, and resource use became more efficient, resulting in lower overall costs.

PRACTICAL IMPLICATIONS / RECOMMENDATIONS

During precision seeding, soil samples were first collected (pH, humus, NPK), then a seeding map was created using Sentinel-2 satellite NDVI data and previous yield data with AgLeader SMS software. The map divides the field into zones, and for each zone, the plant density recommended by the seed manufacturer was set.

The seeder is controlled by an AgLeader monitor and control unit, which regulates the speed of the seeding disc with a hydraulic motor. Farmers were supported in decision-making by experts and advisors, and the choice of technology was based on joint consultation. The system is economical for fields of at least 10 hectares; it is not recommended for smaller areas. The collaboration involved the university, farmers, the seed manufacturer, and the technology provider. Implementation is time- and data-intensive, but pays off in the long term.



PHOTO CREDIT: SZE-AÉKK

GEOGRAPHICAL LOCATION

Mosonmagyaróvár, Győr-Moson-Sopron County, Hungary

FURTHER INFORMATION

Based on the experience of Uni Agro Food Ltd., the technology can be successfully adapted in farms with similar conditions.



TECHCOACH has received funding from the European Union's Horizon Europe research and innovation programme under Grant Agreement No. 101182908.

www.linkedin.com/company/techcoachproject

www.facebook.com/techcoachproject

