IMPACCT CASE STUDY No. 23

Integrated Management oPtions for Agricultural Climate Change miTigation

Agrár-Béta Farm, Birkamajor, Hungary

This case study is based on a large 2100 ha arable farm. The farm is located close to Birkamajor in the Somogy region of Hungary.

The main enterprise on the farm is cereal and oilseed production. This includes around 1300 ha of maize, 630 ha of wheat, 73 ha of oilseed rape, 46 ha of sunflowers and 15 ha of oats. According to the phase in the rotation peas may also be produced. The farm also has 7 ha of grassland and 30 ha of Salix (Willow) – an energy crop.

The farm has a Chernozem brown forest soil. These types of soils are humus-rich grassland soils used extensively for growing cereals or for raising livestock. The area has a continental climate.

Somogy Region, Hungary

Sunflowers

The farm has adopted several changes in its practices to improve its financial situation, mitigate climate change and protect the environment. These include:

- Recently the farm has begun to grow fast-establishing Short Rotation Coppice (SRC) Willows (*Salix spp*.) as a dedicated energy crop to provide a long-term, sustainable replacement for fossil fuels. The Willow grows rapidly in the continental climate and are well suited to the forest soils.
- Three automatic meteorological stations ('Agrár-Office') have been installed on the farm and now feed data to the National Meteorological Service (OMSZ) replacing the need for manual data collection in the region. This has improved the climate data and weather information in the region and enabled better crop management decisions such as the timing of spraying pesticides and application of manures and nitrogen fertiliser. This should help reduce polluting releases e.g. leaching of nitrate to the environment.

Salix (Willow)

Original case study content collated by SZIU Crop Production Institute, Szent István University