IMPACCT CASE STUDY No. 18

Integrated Management oPtions for Agricultural Climate Change miTigation

István Balla Farm, Karcsa, Hungary

This case study is based on a 31 ha arable farm located close to Sárospatak in the Bodrogköz region, on the north-east part of the Great Hungarian Plain that is flat and scrubby. Sárospatak is around 270 km from the capital. The farm area is predominately flat and wet on the riverside. Average precipitation is 500-600 mm per year and average annual temperatures is 9.2 ^{o}C.

The main crops are cereals (15 ha of wheat, maize and barley) and oilseeds (16 ha of rape and sunflowers). The soils are predominately of brown forest type or loose and sandy.

Cropping on the farm is fairly constant year on year.

Karcsa, Hungary

Sunflowers on the farm

Few opportunities exist on this farm to mitigate climate change. The farm has few buildings, does not use large scale machinery and there are few field operations or cultivations. However the farm undertakes the following activities:

- The farm has implemented several changes to save fuel and energy. This has included purchasing two new, multifunctional tractors to replace older machines. This has improved the quality of the field operations by, for example, improving the quality of the seed bed, uses less fuel and so produces less greenhouse gases. The new machinery is also much more reliable and so maintenance costs are lower. This has also lowered operation costs by 15-25%.
- Soil management and plant nutrition activities are reviewed regularly to optimise machinery and fertiliser use and save money.
- Fertiliser is purchased and used immediately. It is not stored on farm for any length of time.

Aerial view of the region

Maize on the farm

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