Department of Agriculture and Fisheries

Queensland Government

Alternative farming practice can sweeten soil health

Department of Agriculture and Fisheries (DAF) economists are working with the sugarcane industry to identify profitable farming practices that also improve long term soil health.

DAF agricultural economist Caleb Connolly said three different treatments for the fallow period (when the land is rested from growing sugarcane) were analysed at a Sugar Research Australia (SRA) Soil Health Project trial site in the Burdekin.

“The most economical treatment at fallow stage included permanent beds with minimal tillage, controlled traffic and legumes,” Mr Connolly said.

“After accounting for income from legumes sales, this alternative farming system was also found to be the least expensive of the three treatments.

“The other two treatments included a bare fallow system with narrow rows, heavy tillage and no legumes and a system with a mixture of heavy tillage practices and practices such as controlled traffic and legumes.

“Future work in the trial will consider further stages of the production cycle and encourage growers to master soil health for long term profitability.”

Mr Connolly said the practices examined were recommended by the Sugarcane Yield Decline Joint Venture (SYDJV) after earlier research indicated that conventional sugarcane growing practices may result in poor soil health and a decline in sugarcane yields.

“Understandably, the sugar industry has a strong interest in soil health,” Mr Connolly said.

“The SRA Soil Health Project provides opportunities to measure changes in soil health and consider economic outcomes after adopting alternative practices.

“As economists, we contribute to this project by working with industry and growers to improve profitability and sustainability and to evaluate the economics of improved practices and technologies.

“Soil health is a complex matter and the project team hopes to identify a suite of measures that could form a Soil Health Toolbox and encourage the adoption of improved practices.”

SRA’s Soil Health Project is funded by SRA and DAF. Partners also include Burdekin Productivity Services, Herbert Cane Productivity Services Limited, Wilmar, the University of Queensland, and the University of Southern Queensland.