



Herbert workshops dig dirt on soil health

IN SEPTEMBER, SRA'S INVESTMENT IN SOIL HEALTH WAS SHOWCASED TO OVER 80 GROWERS AT A SERIES OF HERBERT CANE PRODUCTIVITY SERVICES LIMITED (HCPSL) 'DIGGING THE DIRT' SHED MEETINGS.

Growers throughout the Herbert have discussed soil constraints and potential solutions while looking at real scenarios through a recent series of soil pits, field walks and presentations.

"We need to think deeper than our topsoils," said SRA Researcher Davey Olsen, who is leading one of SRA's soil health investments. The soil pits help explain the full picture for cane plant health by looking at the conditions of the root environment including soil profile characteristics, soil compaction and other restrictions to root penetration. Growers already understand that soil is compacted under the wheel traffic area but, depending on harvesting conditions, the area in the row can be compacted as well.

The six project demonstration sites which have been functioning for a year compare the soil health, productivity and economics of conventional farming systems to new farming systems in a side by side comparison. The sites compare practices such as mounding versus furrow planting, various break crop

systems, and 1.65 metre to 1.8 metre wide rows. During the trial, extension officers will measure the nutritional, physical, chemical and biological levels within the blocks at various stages. The team will conduct soil tests, root sampling, water infiltration, bulk density, penetrometer and gravimetric soil tests and six month bio-mass sampling of the cane. Importantly, a full costing of the different farming systems is being conducted by economists at the Queensland Department of Agriculture and Fisheries. These sites will run for five years (plant and four ratoons). The trial is not to say one system is better than the other, but to see the benefits of adjustments to farming systems and how they can improve soil health resilience and manage costs.

The project will also test and analyse soils collected from long term paired site farms. These farms are located close to each other where one farmer has implemented an improved farming system for the past ten plus years, while the other has maintained a conventional

farming system. The project team will measure the long term changes on soil health and farm economics arising from these contrasting farming systems.

With collaboration from growers, productivity services, millers, harvester operators, university researchers and SRA, this project brings experts from various fields together to determine what chemical, physical and biological indicators are the most relevant to our soils and crop. The project aims to benchmark soil health based on specific regional conditions. ■

SRA acknowledges the funding contribution from the Queensland Department of Agriculture and Fisheries towards this research activity.

(Above) Soil Health Project lead, Davey Olsen examines the soil from a soil pit at the Kicking the Dirt Shed Meetings.