

FARMING INNOVATIONS TAKE CENTRE-STAGE

Kerisha Raghunandan

As we progress to inventions such as the self-driving car, 3-D printing and pilotless aircraft, it's fair to say that the changing topography of technology is quite impressive.

Technology has definitely made navigating through the terrain of everyday life that much easier, however, keeping up with its fast-paced evolution is a marathon in itself. So this year, the South African Sugar Industry Agronomists' Association (SASIAA) decided to bring fellow members up to speed with some of the latest farming innovations by focusing on "the benefits of new technology" at both their annual symposium and field day.

Drone technology and precision farming have now become the global trend in agriculture and, while they may seem to have all the answers to monitoring and accurate remedial action, there are still a lot of questions about their application in South Africa. The Agronomists' Association annual field day took place at the Tongaat Hullet farm at Hillhead Estates hosted by SASIAA Chairperson Dr Rian van Antwerpen and THS's Kevin Drew. The agenda included talks focused on yield mapping and there was an impressive turnout of approximately 65 attendees. The speakers at this year's symposium held at KwaShukela, gave a very practical outlook on the advantages of adapting these technologies in the South African landscape. There was also much focus on satellite imagery and emerging technologies such as NDVI.

This year's guest speaker was Adam Mostert, former CEO of FERTASA. His talk focused on the various components of the fertiliser supply chain. He also discussed the evolving fertiliser market globally and the need for products to change according to the particular feedstock available in each country. A brief overview on product strategy was also discussed along with fertiliser use efficiency and the importance of minimal impact on the environment.

Richard Howes (SACGA - Felixton) demonstrating the latest drone technology.





Above: Dr Neil Miles (SASRI Senior Soil Scientist) addressing attendees on current methods to quantify soil variability and development of maps for precision agriculture.



Above: Dr Rian van Antwerpen (SASRI Senior Soil Scientist and SASIAA Chair) presenting current research on quantifying soil variability.



Above left: Russel Longhurst and Ross Walters from Agrisense presenting on the use of their drone technology.
 Above right: Dr Peter Tweddle (SASRI Agricultural Engineer) giving an informative talk on quantifying yield variability.

Other speakers included:

- **Richard Cole**, an enthusiastic grower from the South Coast, who presented a brief summary of his farming success story. Richard's passion for ensuring environmental sustainability and enhancing biodiversity was well-received. He has managed to produce substantial yields with the minimal use of agrochemicals for several years. He also advocated the significant benefits of green cane harvesting, a 12 month fallow and the use of various green manure crops.
- **Neil Miles**, SASRI soil scientist, who once again provided the audience with an insightful perspective on soil health. Neil clearly explained the inter-relatedness between the chemical, nutritional, physical and biological aspects of soil health and provided much scientific evidence to encourage adoption of best management practices.
- **Alasdair Harris**, an Agricultural Engineer at Tongaat Hulett Limited, who impressed the audience with his presentation on mapping yield variability and its implications for precision agriculture. He discussed the various technologies used to improve accuracy in diagnosing and addressing weak points in a field.
- **Brent Griffiths**, ABSugar Cane Centre of Excellence Manager at Illovo Sugar Africa (Pty) Ltd. gave the audience an insightful presentation on a project that has recently been completed at Illovo. It involved the use of eLeaf remote sensing technology to improve farming operations, monitor biomass accumulation and yields, and make management decisions. Brent also discussed the strategies used to ensure that the outcomes of the project were adopted by end users.

Each year the symposium attracts many industry stakeholders including Extension Specialists, scientists and growers. It creates an excellent platform for the free exchange of knowledge and ideas to influence investigative thinking and development of farming practices. By the number of presentation requests at this year's symposium, it is evident that the theme has inspired many to engage with an array of technologies available for use in the industry.

Kerisha Raghunandan, SASRI Publications Officer, SASA