Industry news

Sugarcane will be biofactory of the future

The sustainability of the Australian sugarcane industry in the future will depend as much on producing new high-value biomaterials for food and industrial applications as it will on low-cost production of raw sugar and ethanol.

A profitable cane industry will be based on value adding by producing, extracting or modifying biomaterials and biodiversity from renewable resources within a sustainable and efficient production system.

That was the clear message delivered by two leading Queensland sugar scientists to the 350 delegates at the annual conference in Cairns of the Australian Society of Sugar Cane Technologists (ASSCT).

The conference theme ‘Sugarcane: the future biofactory’ focused on the potential for the Australian sugar industry to develop new income streams based on alternative processes and products now being developed.

Keynote speakers Dr Lars Nielsen and Prof. Robert Birch told delegates that sugarcane was an ideal source of renewable biomaterials suitable for a wide range of industrial applications and Australia was well placed to capitalize on emerging commercial opportunities in this rapidly developing area of research. However, the industry must collaborate with other interest groups and actively seek to create new markets rather than simply wait for customers to come to it.

Queensland University and involved in research being undertaken by CRC for Sugar Industry Innovation through Biotechnology.

They referred to the increasing pace of international research into new high-value compounds that can be made from simple renewable feedstocks like sugarcane using metabolic, enzyme and genetic engineering. Products that can be made from these carbon building blocks include high-value sugars, waxes, pigments, antioxidants, biofuels, bagasse and improved fibres, industrial enzymes, aromatics, nutraceuticals, biodegradable plastics and biopolymers.

He said that achieving sustainability was the greatest scientific challenge in human history and the next generation must solve this problem. Renewable bioenergy and biomaterials could be an important part of the solution. Plant biotechnology was a key area and sugarcane was one of the most promising crops.

Because of the high cost of research and establishment of viable facilities to develop and market these new products and processes, our industry needs to chose priority targets and develop strong working partnerships with commercial entities and governments.

Prof Nielsen said production of bioproducts from renewable resources would represent a large and expanding part of industry in coming years. Renewable sources of process energy were as important as feedstock in delivering bioindustries and sugarcane had unique advantages for producing cheap renewable energy, he said. Australia could compete successfully in the global biotechnology stakes.
ASSCT delegates at the Cairns conference included (l to r) Evan Shannon, Area Development Manager, BSES Burdekin, Clyde Hubert, Bundaberg grower and former CANEGROWERS board member, Joe Russo, CANEGROWERS Senior Vice Chairman, Childers and Neil Sing, DPI&F FutureCane, Innisfail.

CANEGROWERS Chairman Alf Cristaudo (left) caught up with ASSCT President David Calcino at the Cairns conference and Ross Blanco (right) who was 2006 Herbert River Grower of the Year.