

REPORT ON THE SECOND ISSCT MANAGEMENT WORKSHOP, MAY 2008

By

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**KEYWORDS: Management, Workshop, Research,
Supply-Chain, Markets, Renewable Energy.**

Abstract

THE SECOND ISSCT Management Workshop held in Townsville, Australia in May 2008 attracted 41 delegates from 10 countries. The Management Commission and its workshops aim to enlarge the role of senior industry managers in the ISSCT, particularly to integrate management aspects into research and technological initiatives. The workshop format comprised presentations around a particular theme followed by interactive discussion where problems were contextualised and pragmatic solutions sought. A forum for CEOs and senior staff of research organisations followed the Workshop. Overall, the workshop was a success with helpful outcomes emanating from the four sessions: renewable energy, supply chains, research and development (R&D), and special projects. Suggested topics for future workshops include: (1) the R&D fraternity should identify three or four R&D priorities for the next 10 years; (2) experience and business strategies of large sugarcane-related companies should continue; (3) technology transfer and extension needs to be revisited; (4) human resource issues related to attracting and retaining talent in the organisation and change management tools; (5) investigating the use of 'economic/commercial' skills in the R&D context; (6) cane-payment approaches applicable to the renewable energy paradigm; and (7) environmental concerns.

Introduction

The second ISSCT Management Workshop held in Townsville, Australia in May 2008 attracted 41 delegates from 10 countries. The Management Commission and its workshops aim to enlarge the role of senior industry managers in the ISSCT, particularly to integrate management aspects into research and technological initiatives. In this regard, the workshop format of the first ISSCT Management Workshop held in Durban, South Africa in July 2006 was considered by the delegates then as appropriate, *i.e.* presentations around a particular theme followed by interactive discussion where problems were contextualised and pragmatic solutions sought. A similar format was adopted in Townsville where full scientific papers were not requested from presenters, only a PowerPoint presentation, the focus of the workshop being the interactive discussion. Although some delegates at the Durban Workshop suggested the inclusion of breakaway groups to address special interests with a plenary report back, this was not adopted at the Townsville Workshop because the plenary was of a size that (1) facilitated inclusive discussion and (2) diverse expertise and experience facilitated 'fresh' approaches to problem solving.

Following this workshop, Eoin Wallis (Chief Executive Officer, BSES Limited, Australia) coordinated a forum for CEOs and senior staff of research organisations to brainstorm common issues.

This paper gives a précis of the proceedings and the main lessons learned from the perspectives of both the organising committee (the authors of this paper) and the delegates (from a questionnaire).

Field Trip

The field trip involved a bus tour to the Burdekin District, 80 km south of Townsville, where the first stop was with the HCL Harvesting Group (120 000 t cane). Insights were shared on the group's organisational structure and workforce complement, its equipment and operations, and its farming systems, including controlled traffic using GPS guidance, minimum tillage and break crops. A cane-planting operation was observed before leaving for BSES Burdekin near Ayr, where cane variety trials were explained and innovative cane-planting practices demonstrated. This was followed by a short visit to an independent grower's farm where the challenges of cane farming were frankly explained in the context of aspiring to Australia's acclaimed Sugar Yield Decline Joint Venture Program.

The delegation then returned to BSES Burdekin for lunch, followed by a visit to Pioneer Mill, which is owned by CSR (collectively across its seven mills, CSR produces approximately 40% of Australia's sugar). The focus of the mill tour was its cogeneration capability (68 MW with 50 MW export capacity) and bagasse-handling facilities (> 110 000 t), as additional bagasse is sourced from nearby mills.

There was general consensus among the delegates that the field trip was appropriate despite the diverse backgrounds of delegates; *i.e.* the mixture of growing and milling, research activities and practical operations. Some delegates indicated that more attention needed to be given to areas such as cane breeding, farm related research, farm equipment suppliers and milling.

Most delegates appreciated the frank discussions regarding agronomic challenges, the insights into grower/miller relations, the hospitality of the hosts, and the expert commentary on the bus.

Workshop Session 1—Renewable Energy

Three presentations were made: 'Dombe ethanol and cogeneration project in Mozambique' by Graeme Bullock (Adjunct Professor and Consultant to Principle Energy, Australia), 'The EID Parry experience with renewable energy' by Ramesh Ponnuswami (Vice President: Refinery, EID Parry Ltd, India), and 'Next generation technologies towards a sustainable biofuels future' by Emile Van Zyl (Chair of Energy Research: Biofuels and Alternative Clean Fuels, South Africa). Questions raised in the subsequent discussion were:

- (1) What are the drivers of global renewable energy and why?
- (2) What are the renewable energy options from sugarcane, current and future, and what is their technology status?
- (3) Where does sugarcane fit into global renewable energy planning and how can this status be improved?
- (4) What fundamental changes are needed for sugarcane operations to sustainably embrace renewable energy?
- (5) What are some of the 'gaps' or 'short comings' in fast-tracking implementation programs?
- (6) What options are available to narrow these 'gaps' and 'short comings'?, and
- (7) How can the change process or paradigm shift be fast tracked?

Some of the salient points emanating from the discussion and questionnaires received were:

- There are four fundamental global drivers of renewable energy that are not specific to sugarcane: (1) global warming and environmental factors; (2) national energy security in terms of a supply and demand imbalance; (3) national balance of payment concerns where the importation of energy is often a nation's single biggest cost; and (4) job creation and socio-economic factors.
- Simplistically, 'clean' sugarcane currently delivered to a mill comprises water, fibre, sucrose and dissolved solids including sugars other than sucrose. Inherent energy sources are approximately 30% from sucrose, 13% from dissolved solids and 57% from fibre. Converting the sucrose and other dissolved sugars into energy is well established through fermentation and distillation. Efficient and economic conversion of fibre into energy remains a challenge. Research around the world is currently focused in the following 'second generation' energy from fibre areas: (1) combined cycle cogeneration to produce electricity; (2) gasification to produce multiple products in a bio-refinery; (3) pyrolysis to produce a crude bio-oil; and (4) hydrolysing the cellulose, hemi-cellulose and lignin into their constituent sugars for fermentation into ethanol (lignocellulosic ethanol). Commercial viability and role-out of some technologies are expected within 3–5 years.
- In terms of existing 'first generation' renewable energy harvests from sugarcane, cogeneration (the combustion of bagasse to produce high-pressure steam that in turn drives turbo-alternators to produce electricity) is the most prevalent; the production of ethanol from sugar streams is second. Generally, the viability of cogeneration depends on either an inherently high local electricity price, or a premium paid for its 'renewable' attributes that is facilitated through legislation.
- The 'greenfields' Dombe ethanol and cogeneration plant currently being established in Mozambique by Principle Energy demonstrates that the business model: (1) is economically viable and internationally cost competitive; (2) provides significant 'spin-offs', such as job creation and infrastructure development, benefit neighbouring communities; and (3) provides balance of payment advantages to the Mozambique nation as a whole.
- The success of EID Parry in India as a company is based on the following principles: (1) ensuring international competitiveness; (2) continuous improvement and innovation; (3) building a strong home base; (4) staying informed with best practice and latest trends; and (5) networking and collaborating in the global arena. Investing in the renewable energy sector is considered strategic. Their inventiveness in maintaining a credible cane supply from approximately 100 000 small-scale farmers in a difficult business environment is remarkable.
- It was affirmed that sugarcane is likely to be the commercial energy crop of the world in the not too distant future, but its momentum to-date has been constrained by: (1) the complex nature of the value chain and the quantum of change required; *i.e.* linking agriculture to agri-processors to petro-chemical companies or electricity distributors and to the consumer or public at large; (2) inappropriate government legislation and ill-informed politicians and government officials in terms of reviewing legislation; (3) indecision or ignorance on the part of sugarcane growers and millers in terms of which technology to invest their capital; and (4) unforeseen risks associated with new technology and immature markets. Sugar industries around the world should consider embarking on a marketing campaign to inform all stakeholders of renewable energy advantages of sugarcane.

- Little focus has been given to researching appropriate agronomic practices associated with ‘energy’ cane, their linkages with the processing facilities and associated institutional frameworks. For example, what are the soil-health impacts of delivering most of the biomass to the mill, how will the high bulk/density biomass be economically transported to the mill, how will the mill manage the initial volumes of biomass without compromising other products, and how will growers be paid for biomass?

Workshop Session 2 – Supply Chains

Five presentations were made: ‘Integrating the Mauritian supply chain’ by Kassiap Deepchand (MSIRI, Mauritius), ‘Legislative versus contractual miller/grower relationships in Australia’ by John Pollock (Mackay Sugar, Australia), ‘Harvesting and transport logistics in Thailand’ by Kanchana Sethanan (Khon Kaen University, Thailand), ‘Transport scheduling and related issues in South Africa’ by Peter Lyne (SASRI, South Africa), and ‘An holistic approach to new farming systems in Australia’ by Alan Garside (BSES, Australia). Questions raised in the subsequent discussion were:

- (1) What is the role of government policy within sugarcane supply chains?
- (2) How can incentives and relationships be aligned in the absence of legislation?
- (3) What are the relative roles of legislation, contracts, trust and integration in terms of improving supply-chain efficiencies?
- (4) How will renewable energy and other products impact supply-chain efficiencies?
- (5) How can harvesting seasons be extended for the benefit of all stakeholders?, and
- (6) How can incentives be given to sugarcane growers to deliver feedstock that optimises downstream value-adding activities?

Salient points emanating from the discussion and questionnaires received were:

The Mauritian experience demonstrates that a crisis is an excellent change agent! A 36% sugar price reduction in the EU was the catalyst to re-engineer the Mauritian sugar industry where all stakeholders were forced to make compromises in order to survive!

A re-engineering of the supply chain in the quest for efficiencies and optimisation requires a good understanding of the supply chain and its interrelationships. Effective logistics planning necessitates that ALL supply-chain components are integrated effectively.

The sugarcane supply chain was defined by the workshop as ‘on-farm sugarcane production, sugarcane harvesting and transport to the mill and sugarcane processing at the factory’. Most sugarcane supply chains are fragmented in terms of different segments having different decision-making authorities, causing a breakdown in communication among stakeholders. This fosters misunderstandings about common problems, resulting in little or no commitment to jointly address problems, which ultimately manifests itself in high costs and an inefficient supply chain. The fundamental element of any efficient supply chain is transparency of factual information derived from measurement and benchmarking. Sound information facilitates collective understanding of common problems and develops trust among stakeholders. Trust is the essential element needed for stakeholders to make meaningful commitments in addressing common problems.

EID Parry (India) and Mitr Pol (Thailand) are helpful case studies demonstrating that innovation happens in an environment where millers and growers constructively work together. In essence, a secure, viable and consistent cane supply is a critical success factor for any sugarcane-processing facility.

Distrust between millers and growers appears to be a global problem, which can partly be ascribed to the miller being a monopsony; *i.e.* the mirror image of a monopoly, where the miller is a

single buyer from many sellers (growers), who as individuals have little or no negotiation leverage with the miller in price setting. In recognition of this disproportionate economic ‘power’, governments have historically legislated local sugar industries. In Australia, abolished legislation was simply replaced with commercial agreements, achieving the same result. However, commercial agreements provide more flexibility; they are more easily changed to adapt to a dynamic market environment. Nevertheless, commercial agreements must provide a fair and robust conflict-resolution mechanism if such changes are to transpire in reality.

The concept of ‘best’ practice is a misnomer because different environments inherently require different management practices. This is particularly evident among countries, but also among on-farm fields. Effective supply chains make continuous incremental improvements in an effort to chase ‘better’ practice. In this regard, raising the performance of below average stakeholders can make significant improvements, *i.e.* by simply reducing performance variation.

Innovative technology, such as vehicle scheduling, GPS, *etc.*, is available to streamline supply chains. However, difficulties associated with the effective implementation of technology are often underestimated; systems generally need to be adapted or even tailor-made for specific applications, as was the case with vehicle scheduling and logistics in Thailand and South Africa.

Technology adoption should preferably be guided by a supply-chain strategy because technology is the ‘accelerator/enhancer’ of business strategy. The question that arose was ‘who drives supply chain strategy?’. The answer that emerged was R&D! For example, BSES (Australia) questioned the sustainability of sugarcane agriculture in yesteryear, which led to the development of BSES’s new cropping system as the current foundation of the Australian sugarcane supply-chain strategy. In practice, R&D organisations need to work concurrently on business strategies and new technologies, but the first should provide a lead for the second, where at some point a consolidated ‘package’ is presented to industry for adoption (this could be ‘turn key’ or ‘iterative’ in nature).

The new BSES cropping system advocates: (1) green-cane harvesting and trash blanketing; (2) breaking the monoculture with increased fallow periods and/or legume break crops (given recent fertiliser prices, ‘free’ legume nitrogen has significant value); (3) controlled infield traffic; and (4) minimum tillage. If heavy infield machinery is used, it is unlikely that the full potential benefits of this system will be realised. Improvements in precision guidance technologies for harvesting and haul-out operations have accelerated/enhanced this strategy. The system is management intensive.

Supply-chain R&D should identify current and future challenges/opportunities, and then provide a suite of solutions to enable industry to meet/capture these challenges/opportunities. It was noted that ‘breakthrough’ R&D is uncommon, and meaningful progress is more often achieved through trial and error, so it is important to make a start! Actual implementation preferences are usually the sole preserve of industry itself.

This session was criticised as having too many diverse speakers that made it difficult to integrate the subsequent discussion. Two shorter sessions would have been more appropriate.

Workshop Session 3—Research

Three presentations were made: ‘Experiences from Mitr Phol, Thailand’ by Pipat Weerathaworn (Mitr Phol, Thailand), ‘Experiences from CTC, Brazil’ by Nilson Boeta (CTC, Brazil) and ‘Experiences from BSES, Australia’ by Eoin Wallis (BSES, Australia). Questions raised in the subsequent discussion were:

- (1) research organisations lead change but how do they ascertain the direction they take?
- (2) research is an investment not a cost; how can this message best be communicated to stakeholders?
- (3) human capital is ‘everything’ to a research organisation; how can this resource be optimised for best effect?

- (4) how can researchers best influence the strategic intent of an organisation, or vice versa?
- (5) research is worthless if results are not implemented; how can technology transfer be improved?
- (6) is collaboration relevant in an environment of intellectual property protection?

Some of the salient points emanating from the discussion and questionnaires received were:

Mitr Phol (Thailand) and EID Parry (India) are both large, independent milling companies that own and operate sugarcane research facilities and that make substantial investments in the sustainability of sugarcane supply. This is necessary to maintain the viability of their milling operations because both milling companies are largely supplied by resource-poor small-scale farmers who have been unable to collectively establish effective sugarcane research and sustainability programs of their own.

Mitr Phol (Thailand) started as a single sugar factory and is now a multi-national (significant investments in China), multi-faceted (includes raw and refined sugar, cogeneration, ethanol, paper milling, logistics companies and others) conglomerate, including its Sugarcane Research Centre. The company's Board of Directors largely dictates strategic direction for the Sugarcane Research Institute within the context of the larger conglomerate, driven by the mandate to maximise shareholders' profit. The result is a focused and accountable Sugarcane Research Centre involving a wide range of research activities, such as agronomic practices, development of new cane varieties, processing properties associated with different varieties, processing of sugar and ethanol, production of cogeneration and biodegradable plastics, *etc.* Strategic focus and accountability is more difficult for research organisations that do not have a profit maximisation mandate and/or a relatively homogenous Board of Directors that mostly operate within the context of one organisation.

Research centres that have a governing body comprising individuals from diverse backgrounds with varied interests (*e.g.* independent miller and grower fraternities) often result in little or no strategic direction being agreed by the governing body and/or increasing reliance on the management team to guide strategy through the ranking and allocation of research funding, with the governing body having an oversight and approval role. However, management teams cannot formulate a strategic research direction effectively if they have to compete with other research organisations for limited funding from numerous funding agencies with different agendas. Strategic research direction can be absent or vague or unrelated to stakeholder profits that often remain confidential. In such an environment, fewer 'industry'-funded research centres are expected to facilitate better strategic research direction. Without this, industry 'needs' are unlikely to be met, resulting in a 'disconnect' between industry and the research centres.

This 'disconnect', according to most delegates, is prevalent to some degree in most industries. Such 'disconnects' can be mitigated by: (1) researching economic value-adding industry 'needs'; (2) eliminating research on uneconomic industry 'wants'; and (3) quantifying the economic return of R&D outcomes (*i.e.* R&D is an investment and not a cost). This can be achieved by employing 'economic/commercial' skills at research centres that can better communicate in the 'language' of industry. Further mitigation measures include increased participation of stakeholders at strategic stages in the iterative R&D planning process.

Part of the Australian 'disconnect' arises from industry's dissatisfaction with limited productivity improvements arising from R&D, where productivity is defined as tonnes cane per hectare. This is also true of other industries around the world. In this context, research centres need to reinvent their marketing/communication approaches because in the absence of R&D and its associated technology transfer, productivity would otherwise have been in decline, and productivity

benchmarks should be used in conjunction with economic related benchmarks to ensure that research centres speak the same language as industry. Economic benchmarks might be more meaningful, but are more elusive; they require a clear definition and explanation. A growing international trend is to replace historical productivity R&D objectives with a 'vision of sustainability', from a collective economic, environmental and social perspective. More attention needs to be given to this topic at future ISSCT Management Workshops.

CTC (Brazil) has a unique challenge in that its membership base and demand for its services is growing at an accelerating rate (CTC had 29 member mills in 2004 and 155 in 2008). Its principal response has been to decentralise its technology transfer operations to: (1) improve response times by reducing travel times (and associated travel costs); (2) improve relationships with local millers and growers; and (3) develop regional specialists to meet regional needs. The disadvantage with this approach is that regionalised technology transfer is isolated from centralised R&D, which CTC have countered by implementing a sophisticated web-based intranet that provides remote web-based training of staff, millers, growers and other stakeholders through e-learning programs and technical seminars. As a consequence, CTC has been able to partially outsource some technology-transfer functions.

Some of CTC's key focus areas are to: (1) better identify and address sustainability needs of the industry; (2) hire, train and retain motivated staff; (3) foster partnerships and collaboration at all levels of the business; and (4) better market the value of CTC to existing and new potential members.

The effectiveness of technology transfer was raised as a concern in most industries. CTC's web-based services are appropriate in the current 'electronic era', but more sociological research needs to be undertaken to increase the effectiveness of this approach as it is expected to be context specific. A global challenge for technology transfer is overcoming grower perceptions that extension advice is 'quasi' academic, having little bearing on the real challenges of growing sugarcane and, therefore, advice is discounted. Context specific web-based services might be helpful in this regard, because technology transfer becomes demand-led as opposed to supply-led!

Workshop Session 4 – Special Projects

Four presentations were made: 'Biotech sugar crops and their market dynamics' by Charley Richard (Sugar Processing Research Institute, USA), 'A strategy to facilitate the commercialisation of GM sugarcane' by Warren Males (Queensland Sugar Limited, Australia), 'Managing multiple environmental challenges in Florida' (Canegrowers Cooperative, USA) and 'Accreditation for sustainability: proposals for international concern' by Tim Wrigley (CANEGROWERS, Australia). Questions raised in the subsequent discussion were

- (1) what can be done to prepare the international sugar market for sugar production from GM sugarcane?
- (2) what role is there for international collaboration in promoting market access for sugar from GM sugarcane?
- (3) is 'consumers are becoming increasingly aware of their environmental footprint,' a valid statement?
- (4) what are some of the important environmental challenges facing sugar value chains?
and
- (5) how can 'better management practices' be marketed in an effort to promote sugar?

Some of the salient points emanating from the discussion and questionnaires received were:

Potential sugar industry benefits through biotechnology include increased sugar and by-product revenue per tonne of cane, together with increased stability of production, and lower cost of

production per tonne of cane (*e.g.* weed, pest and disease resistance, drought tolerance, *etc.*).

Many markets across the globe are sceptical of biotechnology. As a consequence, a Sugar Industry Biotech Council (SIBC) has been established in North America, with its core leadership comprising the American Sugarbeet Growers Association, Beet Sugar Development Foundation and the National Sugar Cane Research Effort. Further representation comprises all North American sugarbeet growers' associations, sugarbeet processors and marketers, sugarbeet seed companies, beet by-product marketers, sugarcane growers and processors, and technology providers. This entire group meets twice a year, but the leadership has conference calls every second week on issues related to strategic planning, issue management, information development and 'sugar is the same' (more about this later).

SIBC provides science-based information regarding technological advances in both sugar beet and sugarcane crops and communicates the broad range of environmental and consumer benefits of these advances. Part of this has included the commissioning of independent and accredited laboratories to scientifically test that there is no difference between sugar derived from GM sugarbeet or sugarcane, and (2) that there is no protein and/or DNA in sugar. The robust and conclusive results were affirmative, demonstrating that 'sugar is the same'! Managing perceptions is critical.

The area planted to commercial biotech sugarbeet varieties in the US is increasing steadily. Despite the establishment of the International Consortium for Sugarcane Biotechnology (ICSB) in the early 1980s in association with the ISSCT, no commercial GM cane varieties are currently grown anywhere in the world, although South Africa, Brazil, Australia, Colombia, Argentina and the US have experimental plots. Guatemala, Mauritius, India and others are also working towards biotech varieties. A major constraint to the release of commercial biotech cane varieties is how trait providers can release a return from a vegetatively propagated crop. In the absence of commercial seed companies, industry itself needs to bear the commercialisation costs, including lawsuit insurances, countering anti-biotech campaigns and correcting market misinformation, particularly among existing and potential customers.

Commercialisation steps include: (1) obtaining regulatory acceptance in the home country; (2) building acceptance within the industry and developing market support; (3) influencing stakeholder perceptions (industry, consumer and public at large) using factual science-based information; (4) developing segregation and identity-preservation standards and procedures; and (5) facilitating commercial uptake and adoption at the local level. A helpful quote that was made in this context was 'biotech crop varieties may provide a solution to rising food prices and increasing food scarcity and malnutrition as the world's population continues to rise'.

With similar objectives as the SIBC in North America, the Australian industry has established the Sugarcane Gene Technology Group to specifically commercialise biotech sugarcane varieties (*i.e.* separate from the underlying R&D). As 'sugar is the same' and the challenges are common, the key to commercialising sugarcane biotech varieties is collaboration. Other industries are encouraged to engage in this process.

Environmental concerns and awareness is increasing in all sugarcane industries but the levels of concern and awareness differ. Such concerns and awareness are particularly acute in the south Florida (US) agricultural landscape where sugarcane contributes 73% of gross value. Current issues include: (1) water quantity and quality including high levels of phosphorus, nitrogen and pesticides; (2) air quality arising from cane burning, ash nuisance and perceived health concerns; (3) use of herbicides and pesticides and their effects on natural flora and fauna; and (4) habitat loss for indigenous species and the increase of exotic species.

The south Florida agricultural community, however, has an impressive history of proactively managing their environment. Various best management practices have been established

and coupled with a comprehensive suite of monitoring and performance evaluation systems. The result is that bird populations are larger, there are similar numbers of fish and more indigenous species of all taxa measured in agricultural fields than in non-agricultural areas. Invasive plant species are intensively controlled.

The Better Sugar Initiative (BSI), in association with World Wildlife Fund (WWF), has embarked upon a best-management-practice accreditation system for sugarcane agriculture internationally. The question was posed whether the ISSCT should be the lead agency in this regard. This was not supported because the nature of environmental concerns varies significantly among industries and within industries and, therefore, a single set of best management practices is not appropriate, and secondly, ISSCT is a voluntary, non-profit body that derives benefits for its members through collaborative activities that are of a non-binding nature. The BSI initiative has the potential for conflict, which might compromise the collaborative objectives of ISSCT. ISSCT, nevertheless, has a significant role to play in the sharing of information.

Review and future of the ISSCT Management Workshop

Qualitative and quantitative data were obtained from the workshop questionnaire, with 25 responses (61%) from 10 countries. Figure 1 indicates that all aspects of the workshop were well received.

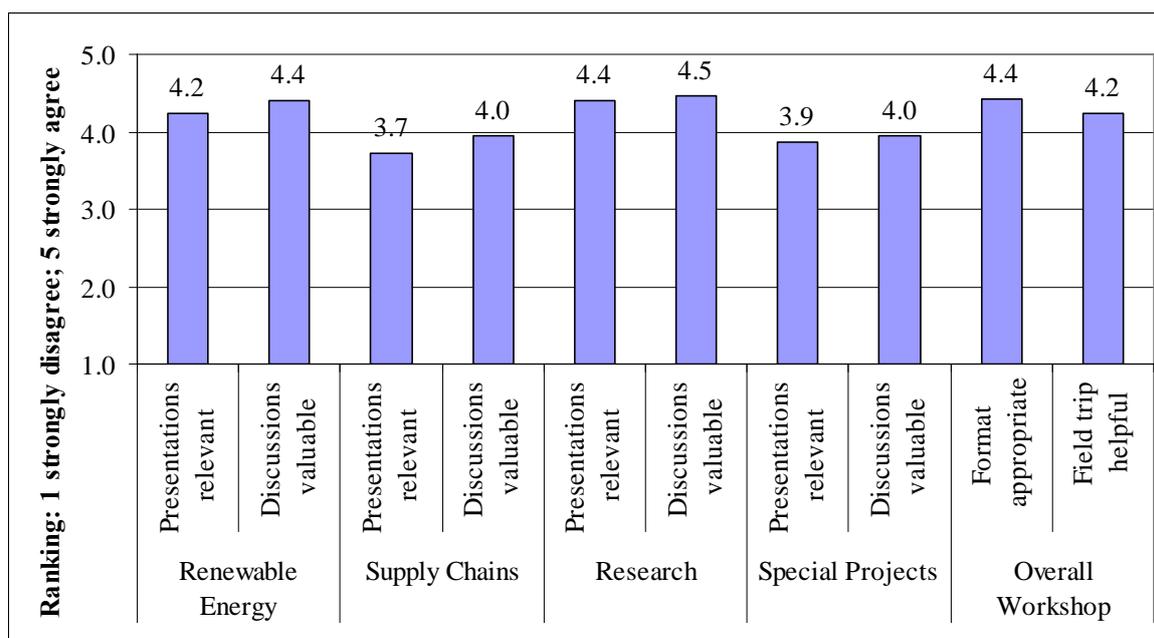


Fig. 1—Impressions of delegates from the questionnaire.

Considerable qualitative data were also forthcoming, some of which was contradictory! The principal criticisms received include:

Presenters need to be encouraged to send their presentations to the organisers earlier so that all the print outs can be made available at the meeting.

The number of presentations should be limited to a maximum of three per session, or fewer, so that discussion time is not compromised and discussion remains topic-focused.

Chairing a discussion requires strong leadership. The chair needs to both challenge the presenters more and draw 'quieter' delegates into the discussion. As an aid to providing focus and structure to the discussions, the chair should refer more often to each session's initial guideline questions, which should facilitate consensus outcomes.

The content of the discussions is valuable and, therefore, needs to be recorded better.

Despite these criticisms, delegates overall were complimentary (as supported by Figure 1) with special mention made regarding the venue, organisation and program including many delegates being complimentary of the session chairs and the outcomes achieved in the discussions. Suggested topics for future workshops include:

The R&D fraternity should drive the agenda in terms of identifying 3–4 R&D priorities for the next 10 years and expose the skills and resources that senior R&D management can use to increase the effectiveness and uptake of their R&D programs.

Sharing the experience and business strategies of large multi-national sugarcane-related companies (*e.g.* EID Parry and Mitr Phol, but there are many others), together with service providers such as Syngenta/Monsanto, Dedini/Praj, *etc.*, is helpful, particularly with reference to the adoption and role-out of renewable energy (especially co-generation and ethanol). Non-sugarcane related experiences might also be helpful.

Technology transfer and extension need to be revisited, particularly with respect to the increasing trend of ‘traceability’ for compliance to an accredited set of better management practices; *e.g.* the Better Sugar Initiative (BSI). Determining success and failure factors through case-study analyses would also be helpful in facilitating new implementation/adoption strategies for novel technologies and/or measuring extension efficiency. Benchmarking initiatives also need to be considered.

A session related to human resources was suggested by some delegates and should address issues such as attracting and retaining talent in the organisation, understanding performance management of staff and identifying training needs and training opportunities. Aligned to this is embracing change management within R&D organisations and sugar industries that may need to adapt from sugar to energy industries.

The ‘disconnect’ between R&D organisations and their stakeholders appears to be relatively common and needs addressing. Investigating the use of ‘economic/commercial’ skills that use the ‘language’ of industry needs further investigation, together with increased participation of stakeholders at strategic stages in the iterative R&D planning process.

Alternative cane payments and other incentive mechanisms to optimise delivery of quality feedstock for processing require further investigation, particularly in the context of renewable energy.

Environmental concerns are expected to escalate and should remain on the agenda.

RAPPORT SUR LE SECOND ATELIER DE GESTION DE L'ISSCT – MAI 2008

Par

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Mots Clés: Gestion, Atelier de Travail, Recherche, Filière, Marchés, Energie Renouvelable.

Resume

LE SECOND Atelier de Gestion de l'ISSCT s'est tenu à Townsville, Australie, en mai 2008 ; 41 délégués venant de 10 pays y participèrent. Le but des Ateliers de Gestion est d'intéresser les hauts cadres de l'Industrie Sucrière à l'ISSCT et particulièrement d'intégrer la gestion dans la recherche et les nouvelles technologies. L'atelier comprenait des présentations autour d'un thème particulier, suivi de discussions interactives où les problèmes étaient identifiés et les solutions pratiques proposées. Une réunion spéciale pour les Directeurs Exécutifs des organisations de Recherches ainsi que leurs hauts cadres suivit l'Atelier de Gestion. En général, l'atelier fut un succès avec les propositions intéressantes provenant des quatre thèmes : énergie renouvelable, filière, recherches et développement (R & D) et projets spécifiques. Les sujets suggérés pour les prochains ateliers incluent : (1) l'identification de 3 ou 4 projets de R & D pour les 10 prochaines années, (2) les innovations des grosses compagnies sucrières, (3) le transfert de technologie et la vulgarisation devra être redéfinis, (4) les ressources humaines doivent être revues afin d'attirer et de retenir les bons éléments dans l'organisation et revoir le type de management, (5) évaluer les talents économiques et commerciaux dans le contexte du R & D, (6) le mode de paiement de la canne en relation avec l'énergie renouvelable, (7) les problèmes reliés à l'environnement.

REPORTE DEL SEGUNDO TALLER DE GERENCIA DE ISSCT, MAYO 2008

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PALABRAS CLAVE: Gerencia, Taller, Investigación, Cadena de Abasto o Proveedores, Mercados, Energía Renovable.

Resumen

EL SEGUNDO taller de Gerencia de la ISSCT que se llevó a cabo en Townsville, Australia en mayo de 2008, atrajo a 41 delegados de 10 países. La Comisión de Gerencia y sus talleres procuran que aumente el rol de la alta gerencia de la industria en la ISSCT, particularmente para que integren aspectos de gerencia en iniciativas tecnológicas y de investigación. El formato del taller comprendió presentaciones sobre un tema en particular, seguido por discusiones interactivas donde los problemas se contextualizaron para buscar soluciones pragmáticas. Después del taller se realizó un foro de CEOs y personal experto de organizaciones de investigación. En general, el taller fue un

éxito con diferentes contribuciones producto de las cuatro sesiones: energía renovable, cadenas de abasto o proveedores, investigación y desarrollo (I+D) y proyectos especiales. Algunos temas sugeridos para los próximos talleres fueron: (1) la fraternidad de I+D debe identificar tres o cuatro prioridades de I+D para los próximos 10 años; (2) la experiencia y estrategias de negocios para las grandes compañías relacionadas con la producción de azúcar deben continuar; (3) revisar las necesidades que existan en transferencia de tecnología y extensión; (4) temas de Recursos Humanos relacionados a atraer y retener talento en la organización y herramientas para el gerenciamiento/manejo del cambio; (5) investigar el uso de habilidades ‘económicas/comerciales’ en el contexto de I+D; (6) estrategias de pago de caña aplicables al paradigma de energía renovable; y (7) temas ambientales.