

ISSCT AGRONOMY WORKSHOP

KHON KAEN, THAILAND 23 - 26 May 2006

Hosted jointly by

THAILAND SOCIETY OF SUGAR CANE TECHNOLOGISTS

Thailand Department of Agriculture, and Thailand Department of Agricultural Extension

Theme "Integrated agronomic practices to improve/sustain cane productivity"

• Programme

• Abstracts

• Report

PROGRAMME

Theme: Integrated agronomic practices to improve/sustain cane productivity

It covered mainly the following aspects in 6 sessions:

- New and refined technology to ensure sustainability
- Ratoon yield decline
- Modelling sugar cane growth and production
- Soil management & the utilization of plant residues
- Environmental pressure challenge and strategy for the cane growers
- Technology transfer and sustainable agronomic practices for small scale sugar cane growers

Monday 22 May
Registration
Welcome party
Tuesday 23 May
Registration Opening Session
Opening Ceremony , with address by Mr. Chalernpol Lairungrueng , Chairman, Thailand Society of Sugar Cane Technologists
Keynote address by Dr. Jan Meyer , South African Sugarcane Research Institute on <i>Advances and challenges in sugar cane nutrition research: a review of four decades</i>
Poster Session* during Coffee break
Travel to Mitr Phol Cane Complex and Field visit
Return to Hotel
Wednesday 24 May
Session 1 - New/refined technologies for sustainable sugar cane production
<ul style="list-style-type: none">• International applications of electromagnetic induction measurements for understanding the impact of soil properties on cane growth. <i>G. Kingston, N. Gopang, Y. Luo, J.M. Shine, I.V. Ezenwa and R.W. Rice</i>• Development of a controlled traffic, minimum till, legume based sugarcane cropping system. <i>A. L. Garside, M.J. Bell and B.G. Robotham</i>• Increased cane yield and economic return by dual-row planting in cane grower fields. <i>T. Klomsa-ard, C. Prasantree, S. Jomsri, A. Tenglowlai and P. Weerathaworn</i>• Sugarcane response to chip bud method of planting. <i>N. Tamilselvan</i>

- **Use of Trinexapac-ethyl to improve seed quality in mechanically planted sugarcane in Florida.**

C.R. Rainbolt, J.M. Shine, G. Powell, P. Grose, J. Larsen and R. Rice

Discussion on topic

Session 2 - Ratoon yield decline and its management

- **The effect of trash on the growth of sugarcane in high altitude areas.**
R. Van Antwerpen, M. Van Den Berg and A. Singels
- **Post-harvest management of sugarcane residue in the temperate climate of Louisiana.**
R.P. Viator, R. Johnson and E.P. Richard, Jr.
- **Fertilizer nitrogen as a factor to prevent sugarcane yield decline in organic soil.**
D.R. Morris, R. Perdomo, G. Powell and G. Montes
- **Increasing ratooning ability of sugarcane in Northeast Thailand through genetic and cultural improvement approaches.**
P. Jaisil and C. Apornrat
- **The adverse effects of poor soil health can be masked in high input sugarcane production systems-but at what long-term cost?**
A.L. Garside

Discussion on topic

Session 3 - Modeling sugarcane growth and production

- **Evaluating production strategies for sugarcane biomass using a crop model.**
A. Singels, M. van den Berg and M. Jones
- **Tactical and operational irrigation scheduling in the Australian sugar industry.**
N.G. Inman-Bamber, S.J. Attard, S.A. Verrall, W.A. Webb and C. Baillie
- **The future of sugarcane modeling.**
M. van den Berg and A. Singels

Discussion on topic

Poster Session* during Coffee break

Thursday 25 May

Field trip to see agronomic practices in sugarcane

Visit Khonkaen Field Crops Research Center (DOA)

Visit leading cane grower's model farm

Visit Naka silk villages (OTOP)

Friday 26 May

Keynote address by **Mr. Kukiatt Soitong**, Department of Agricultural Extension, on ***Experience of Thailand in Promoting Participatory Extension Approach to Integrated Plant Nutrition System.***

Session 4 - Soil management and the utilization of plant residues

- **Innovative management of organic matter.**
R.G. Quirk and T. Zwemer
- **Sustainability of sugarcane yield through organic farming.**
A. Jeyabal
- **Effects of tropical legumes on nitrogen dynamics, carbon emission and on growth and nutrient content of sugarcane.**
S. Thippayarugs, B. Toomsan, P. Vityakon, V. Limpinantana, A. Pathanothai and G. Cadisch

- **Minimum tillage: ten years of experience.**
P. Prammanee, C. Lairungreang, P. Prasertsak and A. Boomthum
- **Should nitrogen fertilizer be managed differently following trash blanketing?**
P. Thorburn, J. Biggs, H. Horan and E. Meier
- **Comparison of nutrient sources for mineral nutrition of Florida sugarcane.**
R.A. Gilbert, D.R. Morris, R.E. Perdomo, G. Powell, B. Eiland and C.R. Rainbolt
- **Filter cake applied on top of the cane row and between rows in ratoon cane.**
R.A.B. Soares, G.H. Korndorfer and L.A.Oliveira
- **Mulching press mud for controlling weeds and increasing productivity.**
N. Tamilselvan, M.N. Budhar, M. Suresh and R. Durai
- **Responses of sugarcane to irrigation application at different growth stages on a clay soil.**
W. Thanomsub
- **Sodic soil management in the western sugarcane area in Thailand.**
J. Khodphuwiang, P. Kongyoo, P. Prammanee, U. Pliansinchai and P. Weerathaworn

Discussion on topic

Session 5 - Challenge of environmental pressure and strategy for the sugar cane grower

- **The better sugarcane initiative - Impacts and benefits on the global sugarcane industry.**
R. Quirk, H. Morar, R. Perkins, G. Kingston and W. Bernquist
- **Sustainable sugarcane farm management system (SUSFARMS): an innovative approach to environmental management of sugarcane in South Africa.**
Maher G.W., Scotcher J.S.B., Koopman V and Schulz L
- **Losses of farm chemicals from fully irrigated sugarcane systems in Australia.**
P. Thorburn, L. Dawes, J. Kemei, P. Charlesworth, S. Attard and R. Cairns
- **Integrated weed management: strategies to reduce costs and amount of herbicides in the Mauritian sugarcane industry.**
S. Seeruttun, C. Barbe, F. Ismael and A. Gaungoo

Discussion on topic

Business meeting and closing

Farewell party

List of posters

- **Agronomic practices for better ratoon yield.**
N. Tamilselvan, M.N. Budhar, M. Suresh, and R. Durai
- **Dissemination of "Seedling transplanting technique in sugarcane" to cane growers through demonstration and training.**
N. Tamilselvan, M.N. Budhar, M.Suresh, and R. Durai
- **Diclosulam: A new pre-emergence herbicide to substitute for atrazine in sugarcane.**
C. Barbe, S. Seeruttun and A. Gaungoo
- **Estimation of root distribution based on growth direction of shoot roots in sugarcane (Saccharum spp. hybrid).**
T. Sakaigaichi, Y. Terajima, S. Irei, S. Fukuhara, K. Ujihara, A. Sugimoto, J. Abe, R. Tajima and M. Matsuoka
- **Nitrogen accumulation by sugarcane and its potential as a feed.**
S. Ishikawa, S. Ando, Y. Terashima and M. Sugiura
- **Evaluation of changes in physico-chemical properties in soils under sugarcane or rotation cropping, and in non-cultivated soils in Haft-Tappeh, Iran.**
J. Siroos, M. Baghernejad, and M. Chorom
- **Comparison of two trash incorporators to solve the post harvest burning problem.**
A. Boonthum, P. Prammanee, C. Lairungreung and N. Kajonpon

- Impact of root cutting management and nitrogen application on yield of sugarcane ratoon in sandy soil.
K. Paisancharoen, T. Sansayawichai, S. Thippayaruk, T. Maolanon and N. Matsumoto
- A proteomic approach to analyze drought tolerant proteins in sugarcane leaf.
S. Kitthaisong, P. Jaisil, S. Daduang and S. Thammahirak
- The response of sugarcane to six irrigation rates on a clay soil in Thailand.
W. Thanomsub
- Modified nitrogen guidelines for the Australian sugar industry.
B. Salter, B.L. Schroeder, A.W. Wood, P.W. Moody and A.L. Garside
- Soil loss and declining sugarcane yields on sloping land in Fiji.
A.N. Ram, J.S. Gawander, K. Garan and D.V. Kumar