

**Newsletter N° 65**  
**January 2004**

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## CIGR NEWS

### News from the President

At the beginning of this new year 2004, I wish you all a Happy New Year and all the best for a prosperous 366



days. 2004 will be the year of the Olympics (in Athens) and the *Olympics of Agricultural Engineering* (in Beijing), as our Chinese colleagues have called the 2004 CIGR International Conference which will be held in Beijing from October 10 to 14. This name is intended to stress both that 2004 is an Olympic

year, and that the Olympics 2008 will take place in Beijing. Thus we all should be strongly motivated to travel to Beijing this year. Please visit the corresponding web site [www.2004cigr.org](http://www.2004cigr.org).

Although we are looking forward to several important events in 2004, some events in the second half of last year should also be addressed. I took the opportunity to attend the XXX CIOSTA/CIGR V Conference in Turin, Italy, from Sep. 21 to 24. I gave a short address during the opening ceremony in the Aula Magna Rettorato of the main building of the University of Turin. While there, I also attended the CIGR Technical Section V Board Meeting and the official meeting of CIOSTA (Commission Internationale de l'Organisation Scientifique du Travail en Agriculture), where I made a presentation on CIGR and its aims, organization, and services.

The further parallel sessions of the conference were held in the Faculty of Agriculture in Grugliasco. There was a total of 17 sessions with 113 oral lectures and 61 posters, and about 250 scientists attended the conference (cf. the report in this newsletter). Thanks to the President of the Organizing Committee, Prof. Pietro Piccarolo, and his team, everything went very well, including the extraordinary evening events in the National Museum of Cinema and the Villa Sassi. It will be a challenge for the new chairman of CIOSTA, Prof. Siegfried Kleisinger from the University of Hohenheim, and Prof. Tadeusz Juliszewski, Chair of CIGR Section V, to organize a comparable event in 2005 (Dates: September 12 to 14).

Another event at which I was able to represent CIGR with a welcome address and a key-note speech was the International Congress on Information Technology in Agriculture, Food and Environment (itafe '03), held October 7 to 10 in Izmir, Turkey. About 95 oral presentations, 35 posters and 140 participants--half of them from abroad--were counted at this event. The whole event took place in the modern conference centre of Ege University in Izmir. The conference was structured into 25 sessions and well-documented in the proceedings volume. In addition, the Organizing Committee, headed by Prof. Kamil Sindir, had arranged a very attractive and informative accompanying programme with visits to modern Izmir, historical monuments and some of the ancient sites in its vicinity. The participants were mainly from South-East Europe and adjacent countries. This was a good chance to establish new relationships and discuss possible future cooperation, in particular with the Association of Agricultural Engineers in South East Europe

(AESEE), whose president, Prof. Nicolay Mihailov, attended the conference.

Another major event at the end of 2003 was the meeting of the Club of Bologna, held in Bologna, Italy, on November 16 / 17. Since all presidium members of CIGR were present, we held our regular presidium meeting on November 15 in the same location. The most relevant topics of the meeting are addressed briefly in the following.

- As *President*, I gave a report on my recent activities; among the items discussed was also a proposal for the next Incoming President of CIGR (to succeed Luis Pereira) and possible locations for the CIGR General Secretariat after the year 2005.

- *Secretary General* Peter Schulze Lammers reported on the financial situation of CIGR.

- The role of the *Technical Sections* was discussed in some detail. There is some discrepancy to be observed when comparing the activities of different sections, respectively their chairs. The Presidium will encourage all Sections to raise their level of activity to that of the most active ones.

- The impending *CIGR International Conference 2004* in Beijing was discussed in detail. Prof. Li Shujun was present in Bologna and gave a report on the state of the preparations. CIGR Sections I, VI, and VII will organize special sub-events. It must be pointed out that some of the deadlines for these special events originally differed from those of the International Conference. Also, the terminology caused some confusion. In order to avoid such confusion in the future, the CIGR Presidium agreed on the following terminology:

> CIGR World **Congress** only for 2006, 2010, ...

> CIGR International **Conference** only for 2008, 2012, ...

> CIGR Section X Technical **Symposium** for occasional or repeated events besides Congresses and Conferences or parts of these,

> CIGR Section X **Workshop** for small occasional events or parts of Congresses, Conferences, or Symposia.

- The *XVI CIGR World Congress* in Bonn (September 3 – 7, 2006) is under preparation. It will presumably host five events: the CIGR World Congress, the AgEng Conference of EurAgEng, the VDI Conference on Agricultural Engineering, an FAO Workshop, and a pre-conference on Off-Road Vehicles.

- The next presidium meeting will take place in Braunschweig, Germany, at the end of March 2004.

As already indicated, the CIGR presidium was present at the Club of Bologna Meeting in its entirety. Moreover, we were happy to welcome Prof. Irenilza Nääs from Brazil as a guest, and we were glad to meet with former CIGR presidents. The following people attended the meeting: Luis Pereira, Axel Munack, Bill Stout, Irenilza Nääs, Peter Schulze Lammers, El Houssine Bartali, Egil Berge, Giuseppe Pellizzi and Osamu Kitani (see picture p. 3).

A report about conclusions and recommendations of the Club of Bologna is contained in this newsletter (see p. 3f.). Therefore, I will not report here on the oral presentations and discussions.



I must, however, comment on the final speech of the president of UNACOMA, Dr. Guglielmo Gandino. In this speech he critically dismissed the results of the Club Meeting and found serious fault with the topics that had been discussed. The forum for his speech and his choice of words must be regarded as an affront to the President of the Club of Bologna, Prof. Giuseppe Pellizzi. Consequently, Prof. Pellizzi later resigned from his post as president of the Club, whereupon Dr. Gandino proclaimed the appointment of a new president of the Club. At that point, the CIGR

presidium sent a letter to the UNACOMA president, pointing out its great concern about recent developments in the relationship between UNACOMA and the Club of Bologna and voicing its expectation that Dr. Gandino apologize to Prof. Pellizzi for his unjustified criticism. Furthermore, as members of the Club of Bologna, the CIGR presidium members pointed out that decisions concerning the presidency of the Club can only be made by the Club's management committee, UNACOMA being regarded as the *sponsor*, not the *owner* of the Club. Finally, the CIGR presidium declared its willingness to act as a mediator with the aim of keeping the Club of Bologna alive and to support a continuation of its fruitful and beneficial work.

After a reasonable interim, the letter was distributed to the members of the Club of Bologna. I am thankful for many positive comments by the Club members, but I am still waiting for an answer from Dr. Gandino or UNACOMA. But let's start the New Year with optimism – also as regards the future of the Club of Bologna!

*Axel Munack*  
CIGR President 2003/04

### 13th Club of Bologna Meeting: Conclusions and Recommendations

66 experts from 33 countries and representatives of FAO, CIGR, AIT and UNIDO took part in the XIV Club of Bologna meeting, held on 16 and 17 November 2003 on the occasion of the XXXIV EIMA show, under the aegis of CIGR and with the sponsorship of UNACOMA. There were three topics under discussion, all to a certain extent interrelated:

1. Reducing the production costs and running costs of tractors and agricultural machinery
2. Strategies for the development of agricultural mechanisation in African countries: role of governments and the private sector
3. Strategies for the development of agricultural mechanisation in African countries: role of governments and the private sector

1. "Reducing the production costs and running costs of tractors and agricultural machinery" was discussed on the basis of contributions from Club members representing three major equipment manufacturers J. Deere (USA), Kverneland (Norway), and Yanmar (Japan) as well the Institute of Agricultural Machinery and Hydraulic Power of the University of Braunschweig (Germany). The first of three introductory papers setting forth the perspective of industry was given by *J. Reid* (USA) in collaboration with *W. Norris* (USA) and *J. Schueller* (USA); the second by *E. Niemeijer* (Holland) and the third by *T. Kobayashi* (Japan). All three presentations focused on industrial aspects, underlining that production costs can be effectively reduced through specific modern management methods. In particular, significant advantages may be obtained from: a more rational internal organisation of factories; standardisation of machines and their components; modularisation; increased component interchangeability for



lower cost of after-sales service and spare parts. One area of increasing interest, according to *Reid*, is the use of electronics and mechatronics for more appropriate and cost-effective agricultural management. In addition, *Reid*, *Norris* and *Schueller* noted the necessity of differentiating design approaches for industrialised and emerging countries. *Niemeijer* stressed the importance of improving internal organisation to reduce R&D costs, and of great care in selecting dealers offering the most modern and appropriate equipment for answering purchaser needs. *Kobayashi* emphasised the importance of modularity, and of electronics and IT as means of reducing costs at both the industrial and agricultural level. *H.-H Harms* (Germany), reasserting the need to shorten the development cycle of innovative products, described the "S.E. Simultaneous Engineering" method: the various phases of production are carried forward concurrently by interdisciplinary teams working in collaboration. The greatest advantage of the S.E. method is a faster development cycle for products that must be extensively tested in the field. This field work, coupled with the involvement of dealers, becomes more and more important as the complexity of machines increases.

2. "Strategies for developing agricultural mechanisation in the African countries: role of governments and the private sector" was dealt with in a keynote paper by *L. J. Clarke*, representative of FAO.

*L. J. Clarke* began by recalling FAO's contribution to the definition of guidelines on the proper role of mechanisation in agricultural development, based upon observations in developing countries, where farmers have had difficulties accessing mechanisation and related services. Hence, the private sector must take into consideration the needs of farmers, dealers, manufacturers and importers, with the aim of determining the most appropriate forms of

mechanisation as a function of: the farms' specific organisational and economic situation, possible forms of credit, the role of contractors and agricultural machinery user groups, the available level of technical service, and the existence of local support organisations. The collaboration of agricultural machinery importers, manufacturers, distributors and dealers is of course a necessity. Government policies should promote a more rational development of local industry and agriculture, address infrastructure and employment issues, and provide assistance for research, development, testing and technical training.

3. "Progress made and activities completed in relation to traceability" was discussed on the basis of an introductory presentation by *Y. Sarig* (Israel) on behalf of a working group comprising *H. Auernhammer* (Germany), *L. Bodria* (Italy), *H. Cetrangolo* (Argentina), *I. De Alencar Nääs* (Brazil), *J. De Baerdemaeker* (Belgium) and *Ph. Marchal* (France). The presentation was a logical continuation of discussions during the Chicago and Bologna sessions in 2002. Traceability now being incorporated in regulations of ISO and of various nations including the USA, EU and Japan, the report was divided into the following sections: definition of traceability, reasons why it is needed, and means by which it can be achieved; practical aspects of its application, including innovative electronic and IT systems, sensors and computerised field logs installed on the various agricultural machines for traceability at both the production and post-harvest stages. The role the Club of Bologna should play was discussed, also with regard to strengthening links between producers and consumers to assure food safety. An essential prerequisite for the validation of traceability systems is the definition and adoption of innovative technologies developed specifically for that purpose.

Following an extensive and in-depth discussion of all three topics, the participants formulated the following

*Conclusions and Recommendations:*

**Topic 1:**

- Having noted that the representatives of industry limited their analysis to the manufacturing-related aspects, and did not mention the problems of optimisation at farm level, which would require choices geared to the specific local conditions of different agricultural systems;
- acknowledging that standardisation and modularisation of components is a primary route for reducing costs; that fundamental contributions can be made by novel CAD and CAM solutions--an area still remaining uncovered; that considerable attention should be devoted to the application of "Simultaneous Engineering" systems for the concurrent development of new products by interdisciplinary teams, with dealer networks involved from the outset;
- concurring on the importance of localised approaches geared to the mechanisation needs of developing countries, especially with regard to the ease of use of machines, whereas in industrialised countries component standardisation should simplify maintenance;
- Confirming the necessity in all cases to shorten the development cycle of new products and improve the marketing of spare parts and the training of dealers and sales staff;

*the participants recommend* the introduction of "teleservice" remote technical support as a means of reducing costs; and

*underline* the need to: upgrade the quality level of dealers by providing them with improved and up-to-date technologies; give maximum importance to feedback from end consumers (farmers and contractors); develop machines suitable for precision farming; encourage technology transfer to countries with lower labour costs; foster wider-ranging collaboration between manufacturers, farmers and research and development institutions.

**Topic 2:**

- Having recognised the need to define precise guidelines enabling governments in Africa to facilitate the access to mechanisation that is appropriate, simple and low cost;
- underlining the importance of acquiring sufficiently detailed information about the agricultural systems of the various countries, the available forms of financing and credit, and the utilisation of labour by both the private and public sector;
- reasserting the overarching need to: provide countries with efficacious irrigation systems, means for transporting farm inputs and crops, product storage technology and simple manual or animal-drawn tools, while promoting the establishment of machinery sharing centres (cooperatives, etc.) that can directly aid farmers;

*the participants recommend* that the Club of Bologna contribute by assisting developing countries, in particular by promoting technical meetings and field demonstrations, as well as training workshops on the maintenance and repair of the most appropriate machines, and through the establishment of local dealer networks. The participants *underline* that such actions must be capable of delivering tangible benefits to the economies of both emerging and industrialised countries, by helping define appropriate technical-economic solutions for the transfer of specific technologies.

**Topic 3:**

- Having recognised the need to promote further research and development on the instruments that must be installed on tractors and agricultural machines, and in particular sensors, I.T., electronics, and computerised field logs necessary for the traceability of plant and animal production;
- recalling that traceability is now a requirement under ISO regulations, as well as those of the USA, the EU, Japan and other major countries;

*the participants recommend* that the Club of Bologna set up working groups of its members charged with:

- helping to establish--in collaboration with chemists and biologists--the physical, chemical and biological parameters to which each product must conform;
- defining the requirements of international standardisation aimed at the assurance of food safety;

*The participants emphasise* the importance of close collaboration between industry and research for the practical implementation of product traceability, and of keeping farmers, contractors and processing factories fully informed of decisions taken concerning the appropriate use of these new, essential technologies.

*Giuseppe Pellizzi, November 2003  
Honorary President CIGR  
President Club of Bologna*

## NEWS FROM REGIONAL AND NATIONAL SOCIETIES

### Cooperation between ESA and EurAgEng

The European Society for Agronomy (ESA) and the European Society of Agricultural Engineers (EurAgEng) are international associations with the common aims of:

- setting up and improving networking systems to promote the roles of the sciences of Conservation Agriculture and Forestry and Rural Environment for Sustainable Food and Fibre Production in Europe;
- seeking cooperation from other regional and world-wide organisations whose interests impinge on similar issues.

In this endeavour, ESA and EurAgEng have reached agreement on close cooperation and mutual assistance for the transfer of knowledge within Europe. The two Presidents, Prof. John Roy Porter of ESA and Prof. Daniele De Wrachien of EurAgEng, have signed a Memorandum of Understanding which provides for the following:

- cooperation between the ESA and EurAgEng networking systems;
- nomination of representatives and deputy representatives to each other's relevant working bodies as observers;
- publication of each other's announcements in their own media on a reciprocal basis, free of charge;
- cooperation in the planning and implementation of enterprises of common interest such as research projects, guidelines, workshops, conferences, training courses, etc.

*Prof. Daniele De Wrachien  
EurAgEng President*

### The 9<sup>th</sup> International Drainage Workshop

Irrigated agriculture is expected to play a major role in reaching the broader development objectives of food security and improvements in the quality of life while conserving the environment. This is especially so because we are faced with the prospect of global population growth from almost 6 billion today to at least 7 billion by 2025.

In this context, and in the Integrated Water Resources Management (IWRM) process, drainage is a vital link to secure adequate food for the expected growth in world population. Proper control of groundwater table, alleviation of waterlogging, reduction of soil salinity and environmental protection are some of the benefits achieved by drainage of both irrigated and rain-fed lands.

These issues were dealt with at an International Workshop with the theme “**Drainage for a Secure Environment and Food Supply**” in Utrecht, The Netherlands, from 10 to 13 September 2003. The Event was organized by the Alterra-ILRI of Wageningen, with the patronage and scientific support of ICID, CIGR, EurAgEng and ASAE.

The workshop, attended by 120 participants from 25 countries, focused on the following subjects:

- Innovative drainage technologies in agriculture
- Drainage: a tool for IWRM in agriculture
- Drainage institutions for participatory development
- Capacity building in drainage.



85 papers and 30 posters were submitted for discussion during the workshop, and an internet discussion was organized. During the event these papers were not presented: instead and based on these preparatory activities the role of drainage within the IWRM process was discussed using a participatory approach.

In the Closing Session of the workshop, the following statements were agreed upon:

- Drainage is an integral part of IWRM
- Knowledge and technologies to make drainage an integral part of IWRM have advanced. The drainage community, however, needs to be more open to include these tools in a broader perspective, come up with new innovative ideas, build up capacity for drainage in the wider context of IWRM and communicate the result achieved both within and without the drainage community.
- Although drainage is recognised as an integral part of IWRM, food production is one of the driving forces for drainage development and should not be put out of sight. To highlight the role of drainage, drainage experts should get more involved in the agenda setting of water policies.
- The drainage community should play an active role to invite organisations and individuals from within and without, to get involved.
- To highlight the role of drainage, “IWRM ambassadors” should be appointed at both international and national levels, e.g. ministries, policy-making bodies, etc.
- Drainage experts should broaden their knowledge on drainage as part of IWRM process and should get more involved in agenda setting of water policies.
- Long-term partnerships are effective conduits for joint actions to solve critical water management problems.

The draft of the declaration is available on the IDW 2003 Website at <http://www.ilri.nl/> along with the outcomes of the internet discussion.

*Prof. Henk Ritzema  
Chairman of the Scientific Committee  
Prof. Daniele De Wrachien  
President of EurAgEng  
Chairman of the Field of Interest on Soil and Water*

### Recommendations of the 11<sup>th</sup> Annual Conference of the MSAE

Dealing with “**Agricultural Engineering Role in Reducing Losses and Maximizing Production,**” this conference was held in Kafr El Sheikh Governorate, Egypt, from 15 to 16 October 2003. It was held under the auspices of H.E. the Egyptian Minister of Agriculture, with representatives from the “Kafr El Sheikh Governorate”, MSAE, AENRI (Ag. Eng. Res. Inst.), and other supporting organizations. Activities included machine shows and other presentations of the most prominent achievements in agricultural mechanization, processing, and irrigation. Attendants also visited a sugar beet processing plant in the area. About ninety papers were presented, dealing with



agricultural mechanization, irrigation, renewable energy, processing of materials and residues, and rural development. Presentations were delivered in ten general or special sessions, in addition to poster gatherings. On the basis of deliberations and discussions, recommendations were agreed upon for the different sectors of agricultural engineering.

#### ***Agricultural Mechanization***

The conference recommends a continuation of research and technology transfer in:

- Different plow types, especially those currently in limited use in Egypt, specifically rotary and inverting types, since they could become instrumental in incorporating plant residues into soil, especially rice straw, thus increasing fertility, and avoiding environmental pollution from disposal by burning.
- Seeders and transplanters for optimum planting uniformity and growth conditions, thus saving seeds, and enhancing yields, while reducing labor effort.
- Pest-control equipment for rationalized use of chemicals, thus conserving of human health and environment.
- Harvesting and post-harvesting equipment, particularly for special-purposes such as harvesting tubers, peanuts, vegetables, and fruits, to reduce sizable losses. Local development of grain combines is advised to consider concerns of local agriculture and industry.
- Concentrating on multi-operation machines for special purposes, for instance: palm-tree servicing, as dates are an important national crop. Also, machines for landscape turf servicing, necessary for urban life, equipment for animal and fish production, and other combined machines for multi-operations in planting or harvesting.
- Pacing with the fast progress in electronics for measurements, automatic control, and using laser technology, as these means have become practical and economical leading to optimum productivities. Pacing should also go along with the modern computing models, among which are artificial neural networks, and fuzzy logic techniques.
- Setting standards for agricultural machinery and equipment, for the benefit of the end users and local manufacturers, as well as importers of foreign makes. Specifications include testing, maintenance, replacement, repairs, and appropriate operation.

#### ***Field Irrigation and Drainage***

The following subjects are brought to attention:

- Accurate estimation of the water requirements, evaluation of system performance and components for efficient water utilization.
- Re-circulation of treated sewage water to irrigate forestry and landscapes.
- Evaluation of the subsurface irrigation method in different situations, and effects on salinity accumulation, water losses, and reuse of water for environmental conservation.
- Effects of modern irrigation systems and fertigation on efficiency of water and fertilizer efficiencies in growing various crops.
- Evaluating landscape turf-irrigation based on microclimatic and plant conditions to estimate water requirements, and use of wetting materials to help in

conserving soil moisture, and their possible use in general agriculture.

#### ***Materials Handling, Processing and Residue Recirculation***

The contributions aimed at enhancing the product quality, reducing losses, and recycling residues:

- Cleaning and grading of seeds, efficient sowing by machines for uniform placement of seeds at optimum rates and depths, with seeds saving and better plant stands.
- Using of local materials in production of equipment for utilizing agricultural products and residues in making nontraditional animal and poultry feeds.
- Post-harvest engineering, and development of locally manufactured machines to be used in threshing and processing of materials for higher outputs and reduced losses.
- Paying more attention to packaging and handling methods, and effects on the farm produce for intact storage and marketing to suit the consumer with added value.
- Investigating radio-active means for conservation of grains and other stocks, and utilization of laser technology in performing grading and sorting of agricultural materials.

#### ***Applications of Traditional and Renewable Energies***

Utilization of traditional forms of energy may lead to environmental pollution. Thus it is recommended to avoid the misuse of energy, through the following:

- Encouraging the utilization of the clean and environmental friendly forms of renewable energy, such as solar and biological energies, with supported research in this area.
- Searching for new sources of fuel, especially from plant residues.

#### ***Role of Agricultural Engineering in Rural Development***

Agricultural engineering plays an important role in the development of the rural society. The research presented concentrated on the following:

- Re-planning of the agricultural equipment operations to make up for their transport from rural to urban areas.
- Rationalizing of planning and management in agricultural mechanization service-stations to improve their economy, train technicians in appropriate operation, maintenance, and repairs. Role of technicians should be emphasized in extending the activities of the stations in different governorates for raising the standard of production and reducing operation expenses.
- Supplementing the role of technology transfer specialized in agricultural mechanization, and airing a plan for future mechanization.

*The conference representatives urge all interested parties to follow the recommendations for increasing productivity and reducing losses, for the benefit of the nation and of rural society.*

*Prof. Dr. M.N. El Awady  
President, Misr Society of Agricultural Engineering  
(MSAE)*

## NEWS FROM SECTIONS AND WORKING GROUPS

### XXX CIOSTA – CIGR V Conference: Management and technology applications to empower agriculture and agro-food systems

This Conference was held jointly with EurAgEng and the Italian association of CIGR (AIIA) Grugliasco at the School of Agriculture of the Turin University in Grugliasco, Italy, from 22 to 24 September 2003 under the presidency of Prof. Pietro Piccarolo.

The eleven topics of the Conference were

- Work science and management for agriculture, forest and landscaping
- Farm, forestry and agro-food logistics
- Machinery and traceability for crop production
- Management for crop processing and storage
- Decision support systems for farmers and extension services
- Management for sustainable and organic farming
- Work science and precision agriculture
- Greenhouse operation management and control
- Ergonomics and safety for agro-food and forestry
- Water management in sustainable agriculture and in water scarcity conditions
- Miscellaneous

The 113 oral presentations and 61 posters are published, in English, in the three volumes of the Conference Proceedings.

The Conference was an important event where a scientific and technical synthesis of the main innovations in agro-forest and agro-food systems was achieved with the aim of increasing efficiency of production processing, safety for human health and environment protection.

The opening session, which was chaired by Prof. Piccarolo as CIOSTA President, was attended by Prof. Munack (CIGR President), Prof. De Wrachien (EurAgEng President), Prof. Julizewski (Chair of CIGR-Section V), Dr. Viviano (on behalf of councilor of Agriculture of Piedmont), and Prof. Bertolino (rector of the University of

Turin).

Three international experts participated in the plenary session, which was chaired by Prof. Pellizzi (Club of Bologna President). Prof. Maier of Purdue University dealt with quality assurance and source verification issues of post-harvest grains and oilseeds. Prof. Ess, also from Purdue University, spoke on precision agriculture as a tool to empower machinery efficiency and work organization. Marianne Van der Schilden's oral presentation regarded future scenarios of agro- entrepreneurship.

In the oral presentations, the 250 participants were offered debates on very topical subjects, and they were informed on future scenarios of agro-entrepreneurship and the needs of innovation to guarantee quality and safety in production processes and products.

During the four parallel sessions, which were distributed over three days, researchers from 32 different countries engaged in scientific exchanges.

At the beginning of the Congress, on 21 September, CIGR-Section V held a board meeting that was attended by CIGR President Prof. Munack. The agenda included the cooperation with CIOSTA and other organizations, the status of working groups, an outlook for the years 2003–2004, etc. Prof. Munack encouraged the members of CIGR-Section V to contribute to the CIGR E-journal. For the near future, he envisaged publishing the proceedings of conferences held by CIGR sections in the CIGR E-journal.

During the closing session, a minute's silence was respected in honor of CIGR Honorary President Fiepkool Coolman, who had died on 21 September.

The Conference Proceedings are now sold at the price of 60 € for all three volumes and 25 € for single volumes. For further information contact Dr. Cristina Tortia, Dipartimento di Economia e Ingegneria Agraria e Forestale, Via Leonardo da Vinci 44, Grugliasco–Turin, Italy. Tel.+390116708845, Fax +390116708591, E-mail: ciosta.2003@unito.it

## CIGR – SPONSORED ACTIVITIES

A chronological list of events in the field of agricultural engineering can also be found in our Events Calendar which can be consulted on CIGR's Website:

<http://www.cigr.org/>

### "New Trends in Farm Building"

#### International Symposium of CIGR Section II

CIGR-Section II invites you to participate in the International Symposium "New Trends in Farm Building" that will be held in **Évora, Portugal** from **2 to 6 May 2004**. The objective of the Symposium is to bring together scientists from different countries working in agricultural engineering and related areas, particularly those involved with structures and environmental control for animal and plant production. Research findings, legislation, technical solutions and future trends concerning farm buildings, systems and equipment for animal and plant production

will be shared and discussed.

The scientific program will include poster sessions, plenary sessions, and oral sessions on the following topics:

- Farm building design and rural landscape
- Housing design and animal welfare
- Agriculture waste management
- Sustainable outdoor systems for animal production
- Greenhouse structures and environmental control
- Livestock environmental control in hot climates

Registration fees are Euro 400/500 (before 31 January 2004/ 15 April 2004) for CIGR members, 320/400 for participants from developing countries, 250/300 for

students. Participation in technical sessions, book of abstracts, CD-ROM with proceedings, coffee, lunches, and technical tour included.

For further Information on technical tours, social program, etc., consult [www.der.uevora.pt/fb2004.htm](http://www.der.uevora.pt/fb2004.htm) Scientific issues are handled by Prof. J. Meneses; E-mail [jmeneses@isa.utl.pt](mailto:jmeneses@isa.utl.pt); other issues by Ms Paula Sequeira, Phone: +351 266 760823, Fax: + 351 266 711189, E-mail: [pcf@uevora.pt](mailto:pcf@uevora.pt)

### **International Conference CIGR Section IV "Electricity and Energy, Especially the Renewable Energy Sources in Agriculture, in Rural Development and Habitation Management"**

Organised by the Hungarian Electrical Association, this conference will be held in **Budapest, Hungary**, from **17-22 May 2004** in the House of Technics (H-1055, Budapest, Kossuth Lajos tér 6-8). The conference language will be English. The main themes are:

- The possibility of agricultural farms becoming energy producers instead of energy consumers by the use of regenerative energy sources
- The possibilities of using new wind technology in agriculture
- The economic possibilities of using regenerative energy sources in agriculture and habitation management in developed countries
- The economic possibilities of using regenerative energy sources in agriculture and habitation management in developed countries

- Problems in the use of electrical energy in agriculture

Deadlines:

Abstract submission 31 January 2004

Full papers/final registration 28 February 2004

Papers should be submitted in English, with a one-page abstract. Registration fees are (before/after 15 March) 380/410 Euro (including 25% VAT), 350/380 Euro for CIGR members; participants from developing or former socialist countries: 300/330 Euro; students: 150/165 Euro. Payment upon registration: add 30 Euro. Participation in technical sessions, summaries and full texts of the papers, coffee included for all participants; welcome party, cultural event, one-day study tour not included for students. The two-day study tour after the conference is 160 Euro.

For further information on the conference and on the possibility to rent advertising space in the conference documentation, please contact the Conference office: Elitexpo Ltd., "CIGR-Conference", H-1056 Budapest, Belgrád rkp. 22., Hungary. Tel./Fax: +36 1 318-3710 or -0937 E-mail: [eexpo@axelero.hu](mailto:eexpo@axelero.hu)

### **2004 CIGR International Conference "The Olympics of AgEng"**

This major international CIGR conference will be held from **11 to 14 October 2004** in the International Meeting Centre of **Beijing, PR China**. With the sponsorship of CIGR, the Chinese Society for Agricultural Machinery (CSAM), the Chinese Society of Agricultural Engineering (CSAE), and co-sponsored by AAAE and AOC, the conference is organised by the Chinese Agricultural

University (CAU), the Chinese Academy of Agricultural Mechanisation Sciences (CAAMS), and the Chinese Academy of Agricultural Engineering (CAAE). The conference language will be English.

Human beings are facing the new challenge of the growing of knowledge-based economy that affects our daily lives. Agricultural engineering knowledge and technologies have spread throughout the world with the development of information technology and multi-disciplinary activities.

As we move into the new millennium, advanced engineering technologies are being rapidly applied in agriculture, food and bio-systems. The need for increased cooperation and face-to-face exchanges among engineers, scientists, and commercial companies in the global village is evident.

The 2004 CIGR International Conference aims to provide opportunities for researchers, scholars, managers and other professionals to exchange the latest information, and to provide a discussion forum on how to promote scientific and technological innovations on agricultural engineering into the new millennium.

The product shows, poster sessions and other academic activities of this conference will deal with subjects such as:

- Modern agricultural equipment and facilities (plant and animal production)
- Soil, water and environment
- Post harvest technology and biomass engineering
- Information technology for agriculture.

Agricultural engineers, institutions and companies are invited to participate in this congress and to submit a paper to the academic committee. Papers presented at the meeting will be available to the meeting participants on CD-ROM, and abstracts will be published officially for the participants.

Dates and Deadlines:

Abstracts 1 April 2004

Notification of acceptance 15 April 2004

Full papers 1 June 2004

Failure to submit a written paper by 1 June 2004 will not preclude the author from presenting, but the paper will not be included in the proceedings available at the meeting. Further information is available on the internet at <http://www.2004cigr.org/> or from the Conference Secretary Dr. Renjie Dong, PO Box 184#, China Agricultural University, No. 17 Qinghuadonglu Haidian district, Beijing 100083, PR CHINA. Email: [2004cigr@bjaeu.edu.cn](mailto:2004cigr@bjaeu.edu.cn) or [2004info@bjaeu.edu.cn](mailto:2004info@bjaeu.edu.cn) or [info@2004cigr.org](mailto:info@2004cigr.org)

### **1st CIGR Section VI International Conference on "Bioproducts Processing and Food Safety"**

CIGR-Section VI deals with the engineering principles and technologies in post-harvest and processing of agro-food products. It is intended to follow the trends, promote the advancement and enhance the dissemination and the transfer of technology in post-harvest and processing at a global scale. Its missions are

- To bring together all those that are working in post-harvest and processing;
- To stimulate international experiences, exchange and cooperation, for the advancement of knowledge in this area, world-wide
- To stimulate participation in CIGR activities, especially

## Congresses

- To define the areas that are in need of research and /or of transfer of technology
- To advance in knowledge for the assurance of safety of all products for human consumption.

In order to better fulfil its missions, CIGR Section VI is organizing the 1st Technical Symposium of CIGR Section VI on food and bioproduct processing and food safety in **Beijing, P.R. China from 11 to 14 October 2004**, as part of the 2004 CIGR International Conference. This symposium will feature a series of presentations and discussion in plenary, scientific and poster sessions, and informal gatherings to highlight most recent developments in food and bioproducts processing and food safety. Selected papers presented at this symposium will be published in a special issue of Journal of Food Engineering, an international leading and SCI cited academic journal published by Elsevier. The full Proceedings of the Symposium will be published in CD-ROM and provided to all participants at the registration desk during the Symposium.

The symposium is jointly organised by National University of Ireland, Dublin, CIGR Section VI (Postharvest Technology and Process Engineering) and China National Packaging & Food Machinery Corporation (CPFMC) and sponsored by the International Association for Engineering and Food (IAEF), the Institute of Food Technologists (IFT) and the Chinese Academy of Agricultural Mechanization (CAAMS).

The topics to be covered include

- Physical properties
- Sensors and sensing technology
- Process modelling, simulation and control
- Thermal processing, chilling and freezing
- Dehydration processes
- Separation processes
- Preservation and storage
- Packaging
- Emerging processing technologies
- Product quality and safety
- Biotechnology
- Waste treatment and management
- Processing equipment

You are invited to submit a paper to the Symposium.

Please note the following important dates:

Deadline for abstracts submission: 1 April 2004

Notification of abstract acceptance: 15 April 2004

Deadline for full paper submission: 1 June 2004

Technical programme available on the website: 1 July 2004

For further information, please consult the symposium web page at <http://www.2004cigr.org/en/processing> or contact Assoc. Prof. Lanfang Zhang, PO. Box 8, Chinese Academy of Agricultural Mechanization Sciences (CAAMS), No.1 Beishatan, Deshengmen Wai, Beijing 100083, P.R. China. Tel: 010-64882509, 010-64849687, 010-64882523; Fax: 010-64883508, 010-64849687; Email: [info@2004cigr.org](mailto:info@2004cigr.org)

### 1st CIGR Section VII Technical Symposium on "Information Technology for Agriculture"

A further Technical Symposium to be held as part of the 2004 CIGR International Conference in **Beijing** from **11 to**

**14 October 2004** will be organized by CIGR Section VII. Session III of the CIGR 2004 Conference calls for papers that report on progress in the development and applications of IT in food and agriculture productions, natural resources and environmental management, and rural development. In addition to the plenary session of the entire conference, Session III activities consist of two-and-a-half days of invited speeches, oral and poster presentations, technical exhibition, and selective technical tours in Beijing. The goal of session III is to provide a forum for interaction, discussion, and information exchange among scientists and engineers from developed and developing countries on the role of ICT in agricultural modernization and sustainability.

Main Topics:

1. Strategic issues related to the research, use, deployment, and adoption of IT in agriculture.
2. Information technology in agriculture, food production, resource and environmental management.
3. Spatial information technology (GPS, GIS, RS) for agriculture; precision agriculture and precision livestock farming.
4. Advanced sensing technology, instrumentation, robotics and automation systems for agriculture.
5. Biosensors & bioinformatics.
6. Information technology for food quality, safety, and traceability.
7. Machine vision and spectroscopy.
8. Modeling and simulation of agricultural & biosystems.
9. Expert systems, decision-support systems, and applied software development for agriculture.
10. Communications, networking, and wireless technologies.
11. Web-based technology and information services for agriculture.

Dates and Deadlines:

Submission of abstracts: 1 April 2004

Full manuscript due: 15 June 2004

Detailed Programme available on the Internet: 15 Aug 2004

The conference language will be English. A full version of the technical papers accepted by the conference on CD-ROM and a bound volume of full abstracts will be available to the participants on registration desk before the conference.

For further information, look up <http://www.2004cigr.org> or <http://pa.cau.edu.cn/conferences/cigr.htm> or contact the Session III secretariat: [2004CIGR\\_IT@cau.edu.cn](mailto:2004CIGR_IT@cau.edu.cn)

### CIGR Section I International Conference Envirowater 2004: "Land and Water Management: Decision Tools and Practice"

The 2004 CIGR International Conference, which will be held in the **Beijing International Meeting Center, P. R. China**, from **11-14 October 2004**, is a forum on agricultural engineering in the new millennium. As a main part of the 2004 CIGR International Conference, the 7th Inter-Regional Conference on Environment and Water, entitled "Land and Water Management: Decision Tools and Practice" will be held on the same occasion in association with CIGR-Section I: Land and Water Engineering.

The conference is organised by the China Agricultural University (CAU) and the National Center of Efficient Irrigation Engineering and Technology Research (NCEI) of

the P. R. China. The Organizing Committee is chaired by the Incoming President of CIGR, Prof. Luis Santos Pereira from the University of Lisbon, Portugal.

The conference is sponsored by CIGR-Section I, and, among others, the Chinese Society of Agricultural Engineering (CSAE), the International Commission on Irrigation and Drainage (ICID), and the Food and Agriculture Organization (FAO).

Rapid population growth and the continuous development of economic activities produce an increased demand for water. Many countries especially China are therefore facing greater and severe shortages both in water and land resources, as well as soil erosion and land desertification. Various environmental and ecological issues have been highlighted in recent decades. To improve land and water planning and management, policies, measures and practices must be identified which provide for the sustainable use of water and land resources and appropriately control the environmental risks associated with those uses. Scientists, engineers and managers from many countries have produced a variety of modern technologies and decision tools and practices that may contribute to the improvement of land and water management. These technologies include information systems, remote sensing, geo-referencing, knowledge based systems and a variety of models and decision support systems. As one of the largest developing countries, and with the largest population in the world, China has also made great progress and gained enormous experience in land and water management which can be mobilised for coping with its recent economic and social growth. However, because each country has its own characteristics and approaches, there is a strong need for cooperation and to share experiences among engineers, scientists, managers, and other decision and policy makers. This need is made even more evident by the challenges posed by globalization.

The 7th Inter-Regional Conference on Environment and Water aims at promoting exchanges and collaboration on land and water management and offers opportunities for researchers, scholars, managers and other professionals to share the latest information and findings, thus providing a discussion forum on environment and water issues approached from the global perspective. The topics of the conference include all scientific issues and technologies for improving strategies for the use and management of land and water in order to achieve improved productivity,

sustainable development in using natural resources, environment conservation and enhancement, and the minimization of risks to people and their society:

- I. Water Saving and Water Productivity
    - Models, data, and model validation and calibration
    - Modeling irrigation systems
    - Information tools for irrigation scheduling and delivery scheduling
  - II: Land Use Planning and Management
    - RS, GPS, and monitoring
    - Information systems and GIS tools
    - DSS for land use planning
  - III. Soil Erosion and Conservation
    - Models and data gathering
    - Planning for extreme events
    - Maintenance and modernization of soil conservation structures
  - IV. Water Conservation and Soil Management
    - Soil physical properties and data bases
    - Soil tillage and land forming
    - Water harvesting
  - V. Salinity, Water Treatment and Reuse, and Contamination Control
    - Monitoring to avoid land degradation and water contamination
    - Modeling salinity and contamination dynamics
    - Tools and practices for reuse of drainage and waste water
- The conference language will be English.

Deadlines:

Abstracts: 1 Apr 2004

Notification of acceptance, author instructions: 15 Apr 2004

Full manuscript due: 1 June 2004

Information to authors: 1 July 2004

Full versions of the technical papers accepted for the conference will be available to the participants both on CD-ROM and in officially published proceedings.

For further information visit the conference website at <http://www.2004cigr.org/envirowater2004> or contact the Conference Secretariat: Chinese-Israeli International Center for Training in Agriculture (CICTA); P. O. Box 151, China Agricultural University (CAU), East Campus; Qinghua Donglu 17, Beijing 100083, P. R. China. Tel: +86 10 62337154 or 62337148, Fax: +86 10 62337138 E-mail: [Ciicta@public.bta.net.cn](mailto:Ciicta@public.bta.net.cn)

## ACTIVITIES BY CIGR REGIONAL SOCIETIES

### AgEng 2004: "Engineering the Future"

This conference will be held from **12 to 16 September 2004**, at the city campus of the Katholieke Universiteit **Leuven, Belgium** (University of Leuven). The conference addresses engineering issues related to the future of agriculture, the environment, biological systems and related industries in order to serve society and all people. Engineering and technology will be dealt with not just as a driving force but also as a catalyst that enables change.

New technologies are required to enable agriculture to meet future challenges. Changes in food production and food supply must be carefully prepared both to meet the expectations of consumers and to lead to a profitable and

sustainable agriculture. Increased demands of consumers for safe food produced with techniques that are acceptable for the environment will lead to the development of advanced engineering as part of a new agriculture. This includes new technologies that are emerging for post-harvest treatments of food. All these technologies involve or incorporate engineering principles based on biological systems.

The conference will deal with the following topics:

- I. Basic Natural Resource Engineering
  - Soil properties and tillage practices
  - Soil erosion: processes & control
  - Land resources & landscape: planning & management

- Flow, transport processes and crop water requirements
- Irrigation & drainage
- Hydrology & water resources: management & pollution control

- Renewable energy sources & energy systems
- Technology for soil & water engineering
- Wastewater purification & recycling

#### II. Primary Production Technology for Food & Fibers

- Precision agriculture
- Sensors & actuation
- Combines & Harvesting machines
- Forest & nature engineering

#### III. Integrated Management Systems for Animals

- Livestock technology
- Animal welfare
- Process control & environment control for animal structures
- Modelling in precision livestock
- Aquaculture
- Laboratory animals
- Agricultural structures & design
- Particulate Matter emissions from animal production
- Manure handling

#### IV. Engineering Technologies for the Future

- Technology for organic farming
- Technological aspects of food safety & traceability
- Farming in a multi-functional environment
- Agricultural engineering in transitional & developing countries
- Agricultural engineering curricula
- Information Technology

#### V. Sustainability in Food Production

- Social aspects of food production
- Sustainable systems for food production
- Economical aspects of sustainable food production
- Education on sustainable food production

The estimated registration fees (+ 21% VAT charged to participants whose company/organisation is located in Belgium and to those within the European Union who do not have a VAT number) are (before/after 15 June 2004) 390€/440€ for EurAgEng&CIGR members/speakers 250€/290€ for students, participants from developing countries, and one-day attendance. A book of abstracts, the CD-ROM proceedings, sandwich lunches, coffee breaks, and the welcome reception are included in the registration fees.

Deadlines:

Notification of acceptance: 1 March 2004

Extended abstracts: 1 June 2004

Full papers: 1 August 2004

The collected extended abstracts will be available to

participants at the conference. Submission of conference papers to the Biosystems Engineering Journal (the scientific journal of EurAgEng) is encouraged.

For further information, contact: AgEng 2004 c/o Technologisch Instituut; Luc Baele; Desguinlei 214; BE-2018 Antwerpen, Belgium. Tel.: +32 3 2600861 Fax: +32 3 2160689; e-mail: info@AgEng2004.be The conference website at <http://www.AgEng2004.be/> contains extensive information as well as online registration facilities etc.

## VI Latin American Congress of Agricultural Engineering

Organised by the Latin American and Caribbean Association of Agricultural Engineers (ALIA) and the Costa Rican Association of Agricultural Engineers (ACIA), this event will take place from **15 to 17 November 2004** in **San José, Costa Rica**. It is the sixth in a series of congresses initiated in 1994 by ALIA and held at intervals of two years.

The purpose of the event is to bring together professionals in agricultural engineering and related fields and to gauge the potential of agricultural engineering to contribute to the growth and development of Latin America and to improve production systems and the quality of life of those who depend on agriculture.

The subjects to be discussed include:

- Agricultural mechanization
- Soil and water
- Food engineering and postharvest processing
- Constructions, environment & use of energy in agriculture
- Biological engineering systems
- Computer science and automation in agriculture
- Teaching and research in agricultural engineering

Please e-mail your proposals (.doc format MS Word 98 or later) for papers on these topics to [congresoalia@costarricense.cr](mailto:congresoalia@costarricense.cr) by 30 March 2004 or send them on a 3.5" disk to the address of ACIA given below. Works not meeting the following deadlines cannot be guaranteed to be included in the conference publication.

Important dates and deadlines:

Abstracts due 30 March 2004

Notification of acceptance 31 July 2004

Complete work due 31 August 2004

Information about registration fees is not yet available.

For further information, please contact the Costa Rican Association of Agricultural Engineers (ACIA), P.O. Box 2346-1000, San José, Costa Rica. Tel.: 506 253 5428, Fax: 506 224 9598. E-mail: [congresoalia@costarricense.cr](mailto:congresoalia@costarricense.cr). <http://www.cfia.co.cr/congresoalia>

## CIGR CO-SPONSORED ACTIVITIES

### 32nd International Symposium

#### "Actual Tasks on Agricultural Engineering"

This symposium will be held from **23 to 27 February 2004**, in **Opatija, Croatia**. Symposia of this series have been organised for over 30 years now, gaining a lot of international standing due to sustained co-sponsorship of CIGR, EurAgEng, and AAAE.

The Symposium is intended to present the latest scientific results on all aspects of research, design and development in the various disciplines of agricultural engineering.

The main topics to be covered are:

- Automation & emerging technologies
- Animal production technology
- Information technology

- Precision agriculture
- Post-harvest technology
- Power & machinery
- Rural development & communication
- Structures & environment
- Soil and water

The registration fee of 100 € (80 € for members of CIGR, EurAgEng, AAAE or AESEE) covers proceedings and farewell banquet. Only papers of authors paying the registration fees will be published in the conference proceedings. The official languages of the symposium will be English and Croatian.

For further information please check [http://www.agr.hr/aed/aed\\_symposium.htm](http://www.agr.hr/aed/aed_symposium.htm) or contact Prof. Silvio Kosutic, Faculty of Agriculture, Agricultural Engineering Department, Svetosimunska 25, 10000 Zagreb, Croatia. Tel.: +385 1 2393819, Fax: +385 1 2315300 or +385 1 2393724, E-mail: [skosutic@agr.hr](mailto:skosutic@agr.hr)

### **AIA'2004: 5<sup>th</sup> International Workshop on Artificial Intelligence in Agriculture**

Co-sponsored by CIGR, this workshop will be held from **8 to 10 March 2004 in Cairo, Egypt**. It is intended to attract individuals from academia and industry who will present new research results and applications of Artificial Intelligence in Agriculture and related domains (in particular, environmental sciences). As an important part of the workshop, the program will focus on new research challenges and ideas in the following areas:

1. Fundamental representation issues
  - Management of spatio/temporal knowledge
  - Management of uncertainty and imprecision
  - Modelling of Multi-agent systems
2. Tools, techniques, algorithms
  - Use of emerging technologies
  - Fusion of multiple sources of information
  - Rise of AI in simulation tools
  - Integration/combination of AI approaches with other approaches
3. Applications and practical issues
  - Successful or novel AI decision support approaches for planning, scheduling, control, monitoring, prediction or diagnosis problems in agriculture and related domains
  - Commercialized and routinely used AI-based systems, in particular expert and knowledge-based systems
  - Critical analysis of project failures
  - Validation issues for AI-based decision support systems
  - Intelligent information systems, and web intelligence

Dates and Deadlines:

Camera-ready manuscripts: 31 January 2004  
 For additional information look up <http://www.claes.sci.eg/aia04/> or contact: Secretariat of the AIA'2004 Workshop, Dr. Soliman Edrees, The Central Lab. for Agricultural Expert System, El-Nour Street, P.O. Box 438, Dokki Giza, Egypt. Tel.: +20 2 7614727 Fax: +20 2 7617628. Email: [soliman@claes.sci.eg](mailto:soliman@claes.sci.eg)

### **V International Conference on "Microprocessor Systems in Agriculture"**

This Conference will be held from **25 to 26 May 2004 in Plock, Poland**. It is organized by, among others, the

Institute of Mechanical Engineering of the Warsaw University of Technology, the Institute of Production Engineering and Building Research of the Federal Research Centre of Agriculture Braunschweig-Völkenrode (FAL), Germany, the North-West Research Institute of Agricultural Engineering and Electrification, Saint-Petersburg, the Russian Federation. The purpose of this Conference is to provide a forum for the presentation and discussion of the state-of-art and future developments of microprocessor systems in agriculture and related areas. Papers for presentation are expected from universities and research institutes, industry as well as out of practical farming. The official languages at the Conference will be English, Russian and Polish.

The main topics will include:

- Modelling of processes, use of artificial intelligence
- Designing, programming and testing of microprocessor systems
- Development of sensors and actuators, data transmission
- Microprocessor monitoring and automation of working processes in agricultural machinery
- Microprocessor systems for automation of plant production and storage
- Contribution of microprocessor systems to development of precision and pro-ecological farming
- Application of microprocessor systems in livestock production
- Application of microprocessor systems in agricultural research
- Advances in agromechatronics, development of agrobots
- Economic and ergonomic aspects of the application of microprocessor systems
- Information technologies

Deadlines:

Full paper submission (in English): 15 April 2004  
 Papers will be reviewed by the Scientific Committee and published in the Conference Proceedings available at the Conference. Submission of Conference papers to the "Problems of Agricultural Engineering" (the scientific journal) will be encouraged.

For further information please contact Dr. Bogdan Jasinski, Institute of Mechanical Engineering of the Warsaw University of Technology, ul. Lukasiewicza 17, 09-400 Plock, Poland, Tel/Fax: +4824 2626542, E-mail: [bogdan@pw.plock.pl](mailto:bogdan@pw.plock.pl), Further information is available at <http://www.mria.pw.plock.pl/conference/>

### **Energy Efficiency and Agricultural Engineering 2004**

This conference will be held at "Angel Kunchev" University of **Rousse, Bulgaria**, from **3 to 5 June 2004**. The Conference is organized by the Bulgarian National Society of Agricultural Engineers, with the support of CIGR Section IV, AESEE (Society of Agricultural Engineering of Southeastern Europe), EurAgEng Special Interest Group 23, the Union of Scientists, Rousse, and the Federation of the Scientific Technical Unions, Rousse. The main topics are:

- Renewable energy sources
- Plant and animal production engineering

- Land, water and agro-processing engineering
- Information technologies
- Advanced technologies for crop and animal production
- Other allied topics

The official languages of the Conference will be English and Russian.

For further information contact the Secretariat: Milena Popova, 8 Studentska str. "A.Kunchev" University of Rousse, Faculty of Electrical and Electronic Engineering, Tel. 0035982-845536, 0035982-888 ext.665, 843, 442; Fax: 0035982-845 708; E-mail: mivanova@ecs.ru.acad.bg; mihailov@ru.acad.bg; vezirov@ru.acad.bg; http://octus.ru.acad.bg/baer/EE&AE-2004/conference.htm

### ISCO 2004: 13<sup>th</sup> International Soil Conservation Organization Conference

Organised by Australian Soil Science Society Inc. (ASSSI) and the International Erosion Control Association (IECA) and co-sponsored by CIGR-Section I, this conference will be held at the Brisbane Convention & Exhibition Centre in **Queensland, Australia** from **4 to 9 July 2004**.

ISCO 2004 is meant to provide an opportunity to share the solutions, knowledge and experience we have accumulated across the world and across our diverse backgrounds.

The program will be designed around three broad areas:

- Science and information on the conservation of soil and water resources
- Effective communication, learning and sharing environments
- Examples and case studies of strategies that operate across social, environmental and political boundaries, empowering people and communities

It will include general and special sessions with oral papers and posters covering activities from research to facilitation, from modelling to measurement, from science to policy and practice which move us forward in meeting society's needs. It is expected that there will be an increased emphasis on the role of women in conservation, management and conservation of arid and semi-arid lands and on conservation in urban and other high intensity land management situations as well as the strong topics which have developed through recent ISCO meetings.

For further information check [www.isco2004.org](http://www.isco2004.org) or contact the conference secretariat: ICMS (Qld) Pty Ltd, 82 Merivale Street, South Bank Queensland 4101, Australia. Tel. +61 7 38441138 Fax: +61 7 38440909. E-mail: [isco2004@icms.com.au](mailto:isco2004@icms.com.au)

### “International Quality Grains Conference: A Global Symposium on Quality-Assured Grains and Oilseeds for the 21<sup>st</sup> Century”

This conference will be held from **19 to 22 July 2004** in the University Place Conference Center **Indianapolis, Indiana, USA**. The objectives of the conference are to present current research-based knowledge on:

- 1) Measurement technologies to quantify agronomic, quality and end use traits of cereals and oilseeds,
- 2) Best management practices to assure the identity/purity and integrity/quality of cereals and oilseeds during the production, harvest, handling, post-harvest, and processing operations, and

3) Management approaches to meet customer needs for the identity preservation, certification, and tracking of cereals and oilseeds in the evolving global market place of differentiated products.

This conference will address these issues through keynote, oral and poster presentations, and special topic workshops. Commercial tabletop exhibits, and pre- and post-tours into the US Grain Belt will also be organized.

Important Dates and Deadlines:

Notification of acceptance 31 January 2004

Submission of final written papers 31 March 2004

Final communication to conference delegates 31 May 2004

All papers will be published in the Conference Proceedings. All authors will be encouraged to address the conference theme of Quality-Assured Cereals and Oilseeds for the 21st Century. Registration fees are \$425 (\$450 at the conference), for students, they are \$235 (\$250). The registration fee includes attendance at the scientific program, trade exhibition, refreshment breaks, and an e-copy of the conference proceedings. It does not include the pre and post tours.

For further information, contact: Dr Dirk E. Maier, Conference Coordinator, Post-Harvest Education & Research Center, Purdue University, 225 South University Street, West Lafayette, IN 47907-2093, USA. Phone: +1 765 4941175, Fax: +1 765 4961356. E-mail: [iqgc2004@ecn.purdue.edu](mailto:iqgc2004@ecn.purdue.edu). The conference website at <http://www.iqgc.org/> contains more detailed information as well as forms for abstract submission and registration.

### AFITA/WCCA2004

"The 4th International Conference of The Asian Federation of Information Technology in Agriculture" and "The 2nd World Congress on Computers in Agriculture and Natural Resources" will be held as a joint congress from **9-12 August 2004 in Bangkok, Thailand**.

The Organizing Committee of the Joint AFITA/WCCA Congress is pleased to invite all professionals involved in agricultural information technology to participate in the Joint Congress of AFITA and WCCA. The program will consist of pre-conference workshops, plenary sessions, concurrent topical sessions and poster presentations.

Subjects include but are not limited to:

- Rural development and poverty reduction/knowledge based society and its strategies & policy
- Adoption and extension
- Agricultural risk management and farm management, IPM
- Decision support system and modeling
- E-AgBusiness and production chain management
- Information resource and databases
- Grid and web services
- Field Data acquisition and recording
- GIS, Remote sensing and precision agriculture
- Food safety, food security, trace ability and quality management
- Education and distance learning
- Digital library/Knowledge representation and library science
- Water management
- Multilingual services
- Aquatic resource management

- Bioinformation
- BOF's

Dates and Deadlines:

Announcement of paper acceptance: 31 March 2004

Camera-ready paper due: 31 May 2004

Registration fees are 100/150 US\$ before/after 14 June 2004. For further information, consult the conference website at <http://www.afitaandwcca2004.net/> or contact the Secretariat Office, National Electronics and Computer Technology Center, 112 Thailand Science Park, Phahon Yothin Rd., Klong 1, Klong Luang, Pathumthani Province 12120, Thailand. Tel: +66 2 564 6900 ext. 2238, Fax: +66 2 564 6772. Email: Ms. Chantita Setalaphruk, Secretariat [chantita@hydro.hpcc.nectec.or.th](mailto:chantita@hydro.hpcc.nectec.or.th)

### International Conference “Environmentally Friendly Spray Application Techniques”

This conference will be held from **4 to 6 October 2004** in **Warsaw, Poland**, as a scheduled activity of the Research Centre of Excellence in Sustainable Pomology – PomoCentre, a 5th EC Framework Programme project (project no QLAM-2001-00402). The conference is intended to present ideas and results of research and identify relevant scientific problems, necessary research and development, standardization requirements and efficient systems for technology transfer to sustainable food production.

Topics:

- novel spray application technology
- performance of sprayers
- testing and adjustment of sprayers
- filling and cleaning of sprayers
- nozzles, atomisation, adjuvants, spray quality
- precision spraying, target detection, selective application
- spray drift, buffer zones
- dose rates determination (spacious crops)
- non-chemical plant protection techniques
- decision support systems in plant protection
- risk assessment and management in plant protection
- environmental and health consequences of plant protection
- methodology of research on spray application

Important Dates and Deadlines:

Submission of abstracts: 1 March 2004

Notification of abstract acceptance: 15 April 2004

Early registration: 1 July 2004

Submission of full papers: 7 October 2004

The conference will be held in English. Abstracts (max. 600 words) of oral presentations and posters should be submitted electronically in RTF format to

[pkonopac@insad.pl](mailto:pkonopac@insad.pl) by March 1, 2004. The conference are € 200/220 (before/after July 1, 2004).

For further information, please contact convenor Grzegorz Doruchowski ([gdloru@insad.pl](mailto:gdloru@insad.pl)) or secretary Konopacki ([pkonopac@insad.pl](mailto:pkonopac@insad.pl)): Research Institute of Pomology and Floriculture, Pomologiczna 18, 96-100 Skierniewice, POLAND. Phone: +48 46 833 20 21 Fax: +48 46 833 32 28. The website <http://www.pomocentre.insad.pl/> offers further information as well as online registration features.

### International Conference on Postharvest Technology & Quality Management in Arid Tropics

This conference will be held at Sultan Qaboos University, **Sultanate of Oman**, from **24 to 26 January 2005**. The first International Conference on postharvest technology in the region, it will provide an international forum to discuss the latest technological developments and scientific innovations for reducing losses, maintaining product quality and adding value to food and agribusiness supply chains, and enhancing the competitiveness of agricultural and seafood products in the Gulf Region and Oman in particular.

The major themes of the conference include:

- Pre-harvest factors affecting postharvest quality and losses
- Postharvest handling systems and ergonomics
- Optimal refrigerated and controlled atmosphere storage systems
- Drying and packaging technology
- Postharvest treatments to maintain quality
- Focus on seafood postharvest
- Quality and supply chain innovation
- Food traceability and safety management
- Postharvest economics, market access & other emerging issues
- Education and training in postharvest technology & quality management

Important Deadlines:

Submission of abstracts: 15 March 2004

Notification of acceptance: 30 April 2004

Submission of full paper: 30 August 2004

For further information, contact: Assoc Prof. Linus U. Opara & Assoc Prof. Shyam S. Sablani, Department of Bioresource and Agricultural Engineering, College of Agricultural and Marine Sciences, Sultan Qaboos University, P.O. Box 34, Al-Khod, Sultanate of Oman. Fax: +968 513 418 Tel: +968 515 238. Email: [linus@squ.edu.om](mailto:linus@squ.edu.om) and [shyam@squ.edu.om](mailto:shyam@squ.edu.om).

## OTHER ACTIVITIES

### “HydroSalinity Abatement & Advanced Techniques for Sustainable Irrigated Agriculture”

This international workshop will take place from **22 to 27 March 2004** at the Centre of Excellence in Water Resources Engineering (CEWRE), **Lahore, Pakistan**. For information, please contact Dr. M.Mazhar Saeed, Secretary,

at [mazhar\\_cewre@yahoo.com](mailto:mazhar_cewre@yahoo.com) or Eng. Sajid Mahmood Azeemi, Co-Secretary, at [smahmoodpk@yahoo.com](mailto:smahmoodpk@yahoo.com) or contact the Workshop Secretariate, Centre of Excellence in Water Resources Engineering, UET-Lahore, Pakistan at [center@xcess.net.pk](mailto:center@xcess.net.pk)

### International Seminar on Salinity Mitigation for Water Resources Management

This seminar will be held from **26 to 28 March 2004** at the Centre of Excellence in Water Resources Engineering (CEWRE), **Lahore, Pakistan**. For further information, please contact Eng. Sajid Mahmood Azeemi, International Coordinating Secretary, Tel: +92 300 6607 290, smahmoodpk@yahoo.com or e-mail the Seminar Secretariat of CEWRE at center@xcess.net.pk

### 7th International Symposium Technology Application in Horticulture & Viticulture

Jointly organised by ATW and DWV and subtitled "Quality Management in Horticulture & Viticulture", this symposium will be held from **9 to 11 May 2004** in **Stuttgart, Germany**, as part of the international technology trade fair for wine, fruit and fruit juice "Intervitis Interfructa". The conference languages will be German, English and French (simultaneous translation provided).

Scientists and experts are invited to submit their propositions for papers (15 minutes talk + 5 minutes discussion) on the following suggested topics:

#### I. Technology & Physiology

- Canopy systems & yield regulation
- Soil water management
- Soil management systems
- Harvest technology

#### II. Plant Protection

- Target-oriented application technology
- Dosage- and guidance-technology
- Environmental sustainability concepts

#### III. "Precision Systems" in grape and fruit production

- Holistic concepts
- Data bases & mapping systems (i.e. GIS, GPS)
- Data management in companies and joint-ventures
- Mechatronic systems

Abstracts (in German, English or French) should not exceed 300 words. Please also provide the following information when submitting the abstract: Title, First name, surname; Company / institution / organisation; Address with phone and fax number; E-mail address. Speakers will be exempt from paying the conference fees.

Dates and Deadlines:

Full paper submission 1 February 2004

For further information: Dipl. Ing. Catharina Ries, Deutscher Weinbauverband, Heussallee 26, D-53113 Bonn, Germany. E-mail: crie@dwv-online.de Tel: +49 (0)228 94932515, Fax: +49 (0)228 94932523

### 2nd World Conference and Technology Exhibition on Biomass for Energy, Industry and Climate Protection

This conference will be held in **Rome, Italy**, from **10 to 14 May 2004** as a joint global event combining the 13th European Conference on Biomass with the Biomass Conference of the Americas.

Papers are invited for the following topics:

- Biomass resources
- Research and development of bioenergy conversion

technology systems

- Demonstration and market implementation of bioenergy in the heat and electricity sector
- Demonstration and market implementation of bioenergy in the transportation sector
- Combined application of biomass for energy, industrial products for climate protection
- Economics and benefits deriving from biomass process technologies, integration and simultaneous production
- International biofuels trade
- Strategy and policy issues
- International Co-operation for accelerating the large-scale worldwide deployment of bioenergy
- Biomass in the developing world

Papers will be presented in oral and poster presentations and published in the conference proceedings. For further information please use the address: ETA - Renewable Energies; Piazza Savonarola,10; 50132 Florence, Italy. Tel +39-055-5002174 Fax +39 055 573425 email: biomass.conf@etaflorence.it. Extensive information available at <http://www.conference-biomass.com/>

### „Soil conservation in a changing Europe“ 4<sup>th</sup> International Congress of the European Society for Soil Conservation (ESSC)

This congress will be held from **25 to 28 May 2004** at the Hungarian Academy of Sciences in **Budapest, Hungary**. Agriculture - one of the most delicate issues related to the extension of the EU in 2004 – relies on soils. How can soil fertility be preserved, soil erosion and other degradation processes be controlled, reduced or avoided? What are the main objectives, methods and problems of soil conservation in the present EU States and in the rest of Europe? Can soil conservation measures in Europe be harmonised?

The 4<sup>th</sup> Congress of the ESSC intends to bring together European and overseas scientists to discuss European and world wide problems of soil degradation and soil conservation; to present research results in the field of soil conservation in „old“ and „new“ EU countries; and to discuss the applicability of new scientific findings in the practice of soil conservation.

In particular, the following issues will be addressed:

- Land use and land cover change
- Soil erosion measurements at different scales
- Modelling of soil erosion
- Tillage erosion
- Wind erosion
- Land degradation and desertification
- Soil conservation and water management
- Soil pollution
- Legislation issues of soil conservation, Harmonization of soil conservation policy in the EU
- Socio-economic aspects of soil degradation

The conference language will be English. The registration fee is 370 € (ESSC members 320 €, Students 240 €). The fees for the post conference tour which will take place on 30 and 31 May are 165 €.

Dates and deadlines:

Full manuscripts due: 1 March 2004

Final circular with conference schedule: March 2004

For further information, consult the first announcement at

[http://www.zalf.de/essc/Budapest\\_2004\\_1st\\_announcement.doc](http://www.zalf.de/essc/Budapest_2004_1st_announcement.doc) or contact: Prof. Dr. Ádám Kertész, Geographical Research Institute, Hungarian Academy of Sciences, H-1112 Budapest, Budaörsi út 45. Hungary. Tel/Fax: 36-1-309-2686, E-mail: [kertesza@helka.iif.hu](mailto:kertesza@helka.iif.hu)

## 2<sup>nd</sup> Field Robot Event

This event will take place at Wageningen University in **Wageningen, NL**, on **17 and 18 June 2004**. High-school and University teams are invited to enter an international open-air field robot contest. The teams will compete with self-constructed robots, navigating and operating autonomously in a maize field. A side programme will promote networking and exchange of experience.

For further information, look up <http://www.FieldRobot.nl> or contact +31 317 484194, Fax: +31 317 484819, Email: [Info@FieldRobot.nl](mailto:Info@FieldRobot.nl)

## The First World Congress of Agroforestry

This congress will be held from **27 June to 02 July 2004** at the Hilton in **Orlando, Florida, USA**. The overall theme "Working Together for Sustainable Land-use Systems", will be developed in plenary, sub-plenary, concurrent, and poster sessions.

The deliberations of the plenary sessions will focus on five major topics:

- Improvement of rural livelihoods
- Enhancement of the environment and landscape
- Agroforestry science and education
- Policy, social, and institutional issues
- Agroforestry: the next 25 years

There will be eight symposia on the following topics:

- Agroforestry and food security
- Biodiversity
- Carbon sequestration and environmental benefits
- Ecological basis of North American agroforestry
- Public/private partnerships
- Technology transfer
- Trees and markets
- Water issues

The official language of the Congress shall be English. The registration fees are US \$500 (by 31 March 2003) for regular participants and US \$250 for students. For further information, contact Dr. P. K. Nair, Distinguished Professor, Director, Center for Subtropical Agroforestry, SFRC, University of Florida/IFAS, PO Box 110410 Gainesville, FL 32611-0410, USA. Tel: +1 352 8460880, Fax: +1 352 8461277, E-mail: [pknair@ufl.edu](mailto:pknair@ufl.edu). Registration forms at <https://conference.ifas.ufl.edu/wca/reg.htm>.

## 7<sup>th</sup> ICPA

The 7<sup>th</sup> International Conference on Precision Agriculture and Other Precision Resources Management will be held from **25-28 July 2004** at the Hyatt Regency in downtown **Minneapolis, MN, USA**. It provides a forum for presentations on the current status of precision agriculture research and applications worldwide. There will be oral and poster presentations and exhibits, as well as opportunities for discussion and exchange of information in various aspects of precision agriculture.

Conference themes include:

- Crop quality
- Natural resource variability
- Geostatistics/sampling
- Precision management
- Engineering technology
- Remote sensing
- Information management
- Modelling
- New applications around the world
- Profitability
- Environment
- Education/Outreach

Further information is available at <http://www.precision.agri.umn.edu/Conference/>. For questions regarding registration, billing and entry and visa requirements, contact [contactus@cce.umn.edu](mailto:contactus@cce.umn.edu), for questions concerning For questions regarding hotel reservations contact the Hyatt Regency directly: Tel: +1 612 370 1234, Fax: +1 612 370 1463. For questions regarding call for papers, abstract submission, speakers, etc., contact [paconf@soils.umn.edu](mailto:paconf@soils.umn.edu).

## Interregional Conference "Food Production and Water: Social and Economic Issues of Irrigation and Drainage"

This conference will be held together with the 55th International Executive Council Meeting of the International Commission on Irrigation and Drainage - ICID in **Moscow, Russia**, from **1 to 8 September 2004**.

During the Conference, papers will be presented and discussed with regard for two Questions and one Special Session. Contributions will be presented under several sub-questions for each main theme. The topics for the Conference events are:

I: Role of irrigation and drainage in the strategy of development and maintenance of sustainable agrolandscapes

II. Present environmental and economic issues of irrigation and drainage development

III. Special session Scientific and research problems of irrigation and drainage development in the XXI century

The working languages at the Interregional Conference and meetings of the ICID and its working bodies will be English and Russian, including the provision of synchronous translation. Synchronous translation in three languages, i.e. English, French and Russian, will be provided during the official opening and closing of conference and during the session of the International Executive Council of the ICID.

The registration fees (add 50 US \$ after 1 June '04) are 600 US\$ for participants from ICID member countries and 700 US\$ for non-members. Visas to enter Russia are required for the citizens of the majority of countries, except a number of CiS countries. For further information contact: Dr. M.G. Chuelov, Secretary General, Russian National Committee on Irrigation and Drainage, C/o Ministry of Agriculture and Food of the Russian Federation, 1/11, Orlikov per., Moscow 107139, Russia. Fax : (7095) 207-8522, E-mail : [bubera@wm.west-call.com](mailto:bubera@wm.west-call.com). For further information: <http://www.vniigim.ru/conf/55/prospect.pdf>

### International Symposium on Food Production and Environmental Conservation in the Face of Global Environmental Deterioration

Organised by the Society of Agricultural Meteorology of Japan and sponsored by JAICAE, this FPEC symposium will be held from September 7 to 11 September 2004 at the Fukuoka International Congress Center, Hakata-ku, Fukuoka, Japan.

With a world population of more than 6.1 billion in 2002, the demands on the global environment, the atmospheric and aquatic environments are very important subjects for the 21st Century. The deterioration of these environments will create a food problem and has already begun to cause international disputes in some parts of the world.

This symposium will evaluate the meteorological environments ranging from the global atmospheric environment to microclimates, and discuss ways to improve and conserve atmospheric environments. To find possibilities to solve the food problem, discussion will focus on individual and/or general environmental problems with the participation of researchers, professors and administrators from around the world.

The symposium is the successor of the symposium on "Food Production and Environmental Improvement under Global Climate Change" held at Ube, Yamaguchi, in 1996. Reflection on the developments that have occurred since should bear significantly on future developments. It is hoped that the future prospect of food production and environmental conservation will be improved by the process of discussion and that the development of research and investigations will be improved.

The main areas of focus for the symposium are global environmental deterioration, aquatic resources deficit, food production problem, climatic or meteorological improvement and environmental conservation:

- Climatic change or climatic variation and abnormal climate or unusual weather
- Global problems of global warming, acid rain, ozone hole, biodiversity etc.
- From aquatic resources to deforestation or desertification and soil or land degradation
- From air pollution or environmental contamination to aeolian dust or yellow sand
- Environmental problems from local climate to micrometeorology
- Micrometeorological evaluation of momentum, heat, gas and vapor fluxes
- From meteorological environmental modification to microclimatic improvement and bio-environmental control
- From desert greening or revegetation to road and roof greenings
- From biometeorology to bio-ecological meteorology
- From controlled ecological life support systems to agricultural high technology
- Evaluation and utilization of meteorological resources (natural, solar, wind energy etc.)
- Mechanism of various agrometeorological disasters and their countermeasure
- Predictions of growth and development of crops, crop production and food production
- Relation between global environment problems and

agriculture

- Crop growth environment and agrometeorological environment and food problems

The registration fee is 45,000 yen (40,000 yen before 31 January 2004), 25,000 yen for students. Registration fees include: Attendance at all Sessions of the Symposium, Participation in Mixer and Symposium Banquet, a copy of the Symposium Proceedings. Sightseeing not included.

Deadlines:

Paper applications & advance registration: 31 January 2004

Abstracts: 31 March 2004

Full papers: 8 September 2004

For further information and a downloadable registration form and registration instructions, please check <http://www.agr.yamaguchi-u.ac.jp/users/fpec/>. All

correspondence should be addressed to Prof. Seiji HAYAKAWA, Secretary-General of FPEC, Department of Biological and Environmental Sciences, Faculty of Agriculture, Yamaguchi University, 1677-1 Yoshida, Yamaguchi 753-8515, JAPAN Phone: +81 83 933 5861 Fax: +81 83 933 5820. E-mail: [fpec@agr.yamaguchi-u.ac.jp](mailto:fpec@agr.yamaguchi-u.ac.jp)

### ISMAB 2004

The 2nd International Symposium on Machinery and Mechatronics for Agriculture and Bio-systems Engineering will be held from 8-10 September 2004 at Kobe University, Kobe City, Japan. Organised by the Japanese Society of Agricultural Machinery and co-sponsored by the Korean Society of Agricultural Machinery and the Chinese Institute of Agricultural Machinery, it will provide an opportunity for the exchange of ideas and research results and for transmitting scientific information from East Asia.

This conference will deal with the following topics:

- Bio-systems engineering
- Bio-mechatronics
- Biological engineering
- Power and machinery
- Post harvest technology
- Food and processing engineering
- Precision agriculture
- Automation in agro-industry
- Robotics in agriculture
- Agricultural informatics
- Information communication systems
- Bioinformatics
- Environmental technology
- Alternative energy
- Nano technology

Further information is available on the conference website <http://eloon.ans.kobe-u.ac.jp/JSAM/english/ismab.html> or from Prof. Horio, Hisashi; Dept. of Agricultural and Environmental Engineering, Faculty of Agriculture, Kobe University, 657-8501 Nada-ku, Kobe, Japan. Tel/Fax: +81 78 803 5916 E-mail: [ismab@eng.ans.kobe-u.ac.jp](mailto:ismab@eng.ans.kobe-u.ac.jp)

### 2nd WASAE International Conference: "Hunger without Frontiers"

This conference, organised by WASAE (West Africa Society of Agricultural Engineering) and GSAE (Ghana Society of Agricultural Engineering), will be held from 20

to **24 September 2004** at the Kwame Nkrumah University of Science and Technology, **Kumasi, Ghana**. The official Language of this conference, which is intended to serve as a forum for experts to deliberate on the issues and provide recommendations for research, development and policy directions, will be English.

Several state-of-the-art papers are expected to be presented to gain a broad up-to-date understanding of the field. Invited papers are expected in the following areas:

- Food Security, Hunger and Malnutrition in West Africa.
- HIV/AIDS and its impact on Agricultural Production
- Power and Machinery Engineering
- Soil and Water Engineering
- Post-harvest Engineering and Biotechnology
- Conservation Agriculture interventions
- Agro-energy Sources and Management
- Rural transport and IMTs
- Environmental Conservation
- Gender, Policy, Training, Extension etc.

Important dates:

Submission of full paper 30 June 2004

The registration fee is US\$ 200. Registered members of GSAE and local participants will pay a discounted rate of \$250,000. The registration fee for the conference will include the cost of proceedings, refreshments, lunch, banquets and a technical and cultural tours.

For further information, please look up <http://www.wasae.org/conference.htm> or contact: Emmanuel Y.H. Bobobee, Conference Secretary, Agricultural Engineering Department, KNUST, Kumasi, Ghana. Tel: +233 51 60242, Fax: +233 51 60137. Email: [ebobobee@yahoo.com](mailto:ebobobee@yahoo.com) or [wasae2004@yahoo.co.uk](mailto:wasae2004@yahoo.co.uk).

### **6th International Symposium on Plant Responses to Air Pollution and Global Changes: from Molecular Biology to Plant Production and Ecosystem**

The 6th APGC Symposium will be held from **19 to 22 October 2004** at the International Congress Center Epocal Tsukuba, **Tsukuba, Ibaraki, Japan**. Topics:

I. Impacts of Air Pollution and Global Change

- Molecular biology
- Plant metabolism
- Ecophysiological effects
- Plant oroduction effects
- FACE: Free Air CO<sub>2</sub> Enrichment
- Controlled-environment research
- Natural CO<sub>2</sub>-springs
- Terrestrial ecological effects and forest decline
- Eco-modelling and prediction of global change
- Ultraviolet-B radiation

II. Monitoring and Remediation

- Greenhouse gases and other trace gases
- Flux measurement
- Phytomonitoring
- Phytoremediation
- CELSS
- Nondestructive instrumentation and image sensing
- Remote sensing and GIS

III. Current Asian Environmental Problems

- Air pollution and acid rain
- Global change
- Other global environmental problems

Deadlines and Dates:

Abstracts: 31 March 2004

Advance registration deadline: 31 July 2004

Further information is available on the internet at <http://apgc2004.en.a.u-tokyo.ac.jp/> or from professor Kenji Omasa, Chairman of the International Organizing Committee, [aura@mail.ecc.u-tokyo.ac.jp](mailto:aura@mail.ecc.u-tokyo.ac.jp)

### **Agroenviron 2004:**

#### **"The Role of Multi-Purpose Agriculture in Sustaining Global Environment"**

Organised by the University of **Udine, Italy**, the fourth international symposium of the Agroenviron series will be held from **20 to 24 October 2004**. The organisers of this event hope that the series will continue in the future and provide an instrument for involving more and more scientists, engineers, planners, institutions, and countries in agro-environmental issues for sustaining the environment of this globe. The symposium will give scientists an insight into today's burning issues related to agriculture, and it should help to choose the right directions for the future in sustainable agriculture in this millennium.

The topics proposed for presentations in Udine include:

- Land, water, and air pollution in agricultural areas
- Precision agriculture and yield forecasting
- Landscape ecology
- Forestry and range land management
- Climate changes and global agricultural environment
- Biotechnology and agricultural biodiversity
- Desertification and land degradation control
- Agricultural waste reuse and field management
- Wetland and coastal ecology in humid environment
- RS/GIS techniques in agriculture

Current advances in restoration of rural areas for sustainability  
For further information, contact Prof. Dr. Giuseppe ZERBI, *Symposium Secretary General*, University of Udine, Udine/ITALY; E-mail: [zerbi@dpvta.uniud.it](mailto:zerbi@dpvta.uniud.it)

### **WEC 2004**

The Second World Engineers' Convention will be held in **Shanghai, China, 2 to 6 November 2004**, under the auspices of the World Federation of Engineering Organizations (WFEO). The theme of WEC2004 is "Engineers Shape the Sustainable Future".

The program includes a plenary session and seven parallel sessions on:

- Network engineering and information society
- Biological engineering & healthcare
- Transportation and sustainable mega-cities
- Environment protection and disaster mitigation
- Agricultural engineering and food security
- Resources and energy
- Ecological material and green manufacturing

For more information, please consult the web page at [www.wec2004.org](http://www.wec2004.org), or contact Tel. +86 10 62173499, Fax: +86 10 62180142, Email: [wec2004sec@sino-meetings.com](mailto:wec2004sec@sino-meetings.com)

### 2004 Annual Scientific Conference and General Meeting of TSAE

The 2004 Annual Scientific Conference and General Meeting of the Tanzania Society of Agricultural Engineers (TSAE) will be held at the TANESCO Training Institute, Morogoro from **22 to 24 November 2004**. The TSAE 2004 Annual General Meeting (AGM) will be held at the end of the Scientific Conference on 24 November 2004.

The main theme of "The Role of Engineering and Technology in Poverty Reduction" will be subdivided into 13 sub-themes:

- Appropriate technology adaptation, adoption and use for poverty reduction
- Role of information and communications technologies in poverty reduction
- Water supply and sanitation
- Food production and processing
- Housing
- Energy

- Transportation
- Income generation
- Employment creation / entrepreneurship
- Education and training
- Environmental issues
- Gender issues in poverty reduction
- HIV/AIDS

Members of TSAE, IET, and the general public are invited to submit papers on any of the sub-themes listed above. Abstracts should be sent to the Secretary to reach him by 30 April 2004. Full papers for accepted abstracts should be received by 15 August 2004.

For further information contact: The Secretary, Tanzania Society of Agricultural Engineers (TSAE), P.O. Box 3003, CHUO KIKUU, MOROGORO, TANZANIA. Tel: +255 23 2604216; +255 23 2603511-4 Ext. 4433; Fax: +255 23 2603718. E-mail: [tsae@suanet.ac.tz](mailto:tsae@suanet.ac.tz) URL: <http://eng.suanet.ac.tz/>

## PUBLICATIONS

**CIGR Electronic Journal: <http://cigr-ejournal.tamu.edu/>**

### New Articles in the CIGR Electronic Journal

Since the last issue of this newsletter, four new articles have been published in Volume 5 of the *CIGR E-Journal / Agricultural Engineering International: The CIGR Journal of Scientific Research and Development*, ISSN 1682-1130

#### Peer Reviewed Technical Articles:

1) C. Sorensen. Workability and Machinery Sizing for Combine Harvesting. August 2003.

#### Invited Overview Articles:

2) R. Sims. Climate Change Solutions from Biomass, Bioenergy and Biomaterials. September 2003.

3) G. Son, E.H. Bourarach, and J. Ashburner. The Issue of Crops Establishment in Burkina Faso Western Area. September 2003.

4) X. Zhou, R. Dong, S. Li, G. Peng, L. Zhang, J. Hou, J. Xiao and B. Zhu. Agricultural Engineering in China. September 2003.

**The articles of the CIGR Electronic Journal are available free of charge on the internet at <http://cigr-ejournal.tamu.edu/>**

### Precision Livestock Farming

Contains peer-reviewed papers that were presented at the 1st European Conference on Precision Livestock Farming, 15 to 19 June 2003, Berlin. Edited by Sidney Cox. Wageningen, NL 2003. 184 pp. ISBN 9076998221. Price: (paperback) € 40.

More information: [sales@WageningenAcademic.com](mailto:sales@WageningenAcademic.com) or [www.WageningenAcademic.com/ECPLF](http://www.WageningenAcademic.com/ECPLF)

### 4<sup>th</sup> Report from Section II Working Group 13

Pedersen, S. & Sällvik, K. *Climatisation of Animal Houses – Heat and Moisture Production at Animal and House Levels: 4<sup>th</sup> Report from Section II Working Group 13*, 2002. Published by Research Centre Bygholm, Danish

Institute of Agricultural Sciences, P.O Box 536, DK-8700 Horsens, Denmark. ISBN 87-88976-60-2 Available for download at <http://www.agrsci.dk/jbt/spe/CIGRreport>

### Proceedings of the 3rd Asia-Pacific Drying Conference (ADC'03)

The official proceedings of ADC'03, held at the Asian Institute of Technology, Bangkok, Thailand from 1 to 3 September 2003, are now available. The proceedings are a compilation of 65 papers in book (725 pages) and CD-ROM formats (not available separately), incl. subject and author indexes. Abstracts can be accessed at [www.serd.ait.ac.th/adc.htm](http://www.serd.ait.ac.th/adc.htm). To order the publication, send a bank draft worth US\$36 (plus postage) payable to the 'Asian Institute of Technology'. Contact: Miss Tasana Sa-id; Food Engineering and Bioprocess Technology; School of Environment, Resources and Development; Asian Institute of Technology, PO Box 4, Khlong Luang; Pathumthani 12120 Thailand. Phone: +66 2 5245488, Fax: +66 2 5246200 Email: [tasana@ait.ac.th](mailto:tasana@ait.ac.th) or [phfpe@ait.ac.th](mailto:phfpe@ait.ac.th)

### Environmental Pollution and Agriculture

Arvind Kumar (ed.), *Environmental Pollution and Agriculture*. New Delhi: A.P.H. Publishing, 2002. This 531-page collection of 65 research articles is available for US\$ 99.70 from K.K. Agencies/Online Store of Indian publications, H-12 Bali Nagar, New Delhi-110015, INDIA. URL: [www.kkagencies.com](http://www.kkagencies.com); Tel.: +91 (0)11 5465925, Fax: +91 (0)11 5173055

### Coping with Water Scarcity

Ian Cordery; Iacovos Iacovides; Luis Santos Pereira. *Coping with Water Scarcity*. IHP-VI Technical Documents in Hydrology No. 58. 272 pages, incl. bibliography. UNESCO: Paris, 2002. (IHP-VI Document code:

SC.2002/WS/49, UNESCO document Catalogue Number:127846.) This publication is available free of charge in pdf format for at <http://unesdoc.unesco.org/images/0012/001278/127846e.pdf>

### **Agricultural Drainage Water Management in Arid and Semi-arid Areas**

Tanji, Kenneth K, and Kielen, Neeltje C.: *Agricultural Drainage Water Management in Arid and Semi-arid Areas* (FAO Irrigation and Drainage Paper 61) FAO: Rome, 2002. ISBN 92-5-104839-8. 189 pp. Incl. CD-ROM.

### **CIGR Handbook of Agricultural Engineering**

Edited by CIGR and published by ASAE. Five volumes, 2,400 pages, 110 authors. The books are available in CD-ROM and individual hardcover book format. Further information: ASAE; Dept. 1661, 2950 Niles Road, St. Joseph, MI 49085-9659; USA, Tel: 616-428-6324; Fax: 616-429-3852 E-mail: [martin@asae.org](mailto:martin@asae.org)

### **Precision Agriculture**

This substantial paperback, edited by John Stafford and Armin Werner, contains peer-reviewed papers presented at the 4th European Conference on Precision Agriculture, 15 to 19 June 2003, Berlin. Wageningen, NL 2003. 784pp., ISBN 9076998213. Price: (paperback) € 95.

More information: [sales@WageningenAcademic.com](mailto:sales@WageningenAcademic.com) or [www.WageningenAcademic.com/ECPA](http://www.WageningenAcademic.com/ECPA)

### **Proceedings of the 31st International Symposium on Agricultural Engineering**

*Actual Tasks on Agricultural Engineering: Proceedings of the 31st International Symposium on Agricultural Engineering in Opatija, Croatia, 24 to 28 February 2003.* Ed. Silvio Kosutic. Faculty of Agriculture: Zagreb, 2003. ISSN 1333-2651 The Proceedings contain more than 30 contributions on ca. 325 pages. For availability information, contact the editor: Silvio Kosutic, Faculty of Agriculture, Agricultural Engineering Department, Svetosimunska 25, 10000 Zagreb, Croatia. Tel.: 00385 1 2393819; Fax: 00385 1 2315300 or 00385 1 2393724; E-mail: [s.kosutic@agr.hr](mailto:s.kosutic@agr.hr)

### **Journal of Food, Agriculture & Environment (JFAE)**

This print (ISSN 1459-0255) and online (ISSN 1459-0263) journal publishes peer-reviewed, original research, critical reviews and short communications in agriculture, food science and human/animal nutrition & health, with particular emphasis on interdisciplinary studies on the food, and agricultural, and environmental interface. The journal also considers a limited number of relevant scholarly manuscripts addressing ethical and socioeconomic issues related to modern agricultural and environmental sciences. Vol.1 (1), January 2003 is available for trial access at <http://www.isfae.org/pdf/journal1.pdf>, [/journal2.pdf](http://www.isfae.org/pdf/journal2.pdf), and [/journal3.pdf](http://www.isfae.org/pdf/journal3.pdf). For more information, look up <http://www.world-food.net/scientjourn.php>

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All correspondence and information on forthcoming activities should be sent to:

CIGR GENERAL SECRETARIAT

Prof. Dr. Peter Schulze Lammers, Secretary-General

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**Deadline for CIGR Newsletter N<sup>o</sup> 66 is 15 March 2004**

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**Note to contributors:** From this issue onwards, the General Secretariat will print passport-sized photographs with signed contributions to the NEWS sections. We would therefore like to ask contributors of such texts who would like to have their photo printed to send us adequate photos along with their contributions (preferably in .jpg and with a resolution of 300 dpi). Thank you for your co-operation.

### **SEASON'S GREETINGS**

**The staff of the CIGR General Secretariat in Bonn  
wish all readers of the CIGR newsletter and supporters of CIGR  
a happy and prosperous year 2004**

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