

Newsletter N° 69
January 2005

CIGR on the internet:
www.cigr.org

| | |
|--|-----------|
| CIGR News | 2 |
| News from National and Regional Societies | 11 |
| News from Sections and Working Groups | 13 |
| CIGR - Sponsored Activities | 14 |
| Activities by CIGR Regional Societies | 16 |
| CIGR - Co-Sponsored Activities | 17 |
| Other Activities | 20 |
| Miscellaneous | 23 |
| Publications | 23 |

CIGR NEWS

Letter from the President

As my term as CIGR President begins, my first thoughts go to the members of our Agricultural Engineering Societies or Associations, National or Regional, and, in particular, to those members who carry responsibilities in the governing boards of these societies. It is because of them that CIGR exists after 75 years; it is for them that our activities will be developed; it is through them that CIGR will continue. I hope to serve our society in achieving our common goals in a participative manner,



Prof. Luis Santos Pereira

responding to both the ever-changing scientific and technical developments of our profession and to the social and cultural challenges posed by rural and agricultural development in our countries and regions.

I remember here all those that have devoted time and work to CIGR in these 75 years. I have had the chance to know many of the Past Presidents and I am glad that many of them continue to be present among us, and contributing valuably to CIGR. I will do my best to give continuity to their efforts, so to honour them through my work. Together with the other governing and working bodies, I will be engaged in making CIGR always more valuable for our members, for our profession and for our countries, thus providing for a world where agricultural engineering definitely contributes to food security, to the conservation of natural resources, to the preservation of the environment, to the welfare of the rural people, to peace and understanding.

The task of President is to be fulfilled by sharing responsibilities, advice and successes with the Past and the Incoming President, Axel Munack and Irenilza Nääs, as well as by collaborating with the General Secretary, Peter Schulze Lammers. I will do my best to make the Presidium an effective cooperative governing body.

The work of CIGR is mainly performed through the seven Technical Sections and, therefore, due to the efforts of the respective Boards, particularly the devoted work of their chairpersons. New rules for the operation of the Sections have been recently approved, aiming at improving the effectiveness of their work and their cooperation with other working bodies of CIGR, including the EJournal and the General Secretariat. The Presidium and myself in particular offer the best cooperation to the Section Boards and the respective chairpersons for implementing these new rules, particularly hoping that an open and effective dialogue will ensue. It is expected that each Section will find its own and free way to further develop its activities aiming at accomplishing its respective goals and those of CIGR. At the same time, all member societies are invited to collaborate with the Technical Sections by proposing new Board members, activities to be developed or sponsored, or themes to be considered.

The members of CIGR are the National and Regional

Societies or Associations that group and represent National Societies. Therefore, it is my duty to be aware of the aims and expectations of our members and contribute to strengthening them. To do so, particular attention will be paid to the relationships with the Regional Societies and Corporate Members, aiming at supporting their own activities, strengthening their member societies and creating new National Societies in their regions. I hope that a good dialogue can be developed. The first step in this direction is to hold the next annual meetings of the Presidium, Executive Board and Technical Board in St. Petersburg as a way of supporting the implementation of the Euro-Asian Association of Agricultural Engineering and to improve the ties with the Russian Federation Association. Another step is to develop ties with several Arab colleagues that may result in an Arab society. An Arab version of the CIGR Newsletter has already been created by Past President Bartali through the Moroccan Association, the ties with the Egyptian society are being renewed, and the seeds for new societies in Tunisia, Lebanon and Syria are on the ground.

The external and internal visibility of CIGR is mainly achieved through the World Congresses and Conferences, the scientific and technical meetings organized or sponsored by the Technical Sections, the CIGR EJournal, the website, and the Newsletter. Let us remember in this context the very successful Beijing Conference that was held last October. It was a splendid event! The collaboration of all Member Societies is definitely necessary not only to make such activities more successful but also to better serve our members. In this perspective, I invite everybody to contribute to the Newsletter with news about their own societies and scientific and technical meetings, as well as with their opinions and suggestions.

The website is aimed to serve the Member Societies. If they have their own websites, links with the CIGR website should be developed; if such facilities are not available, timely information to the General Secretariat should be produced in such a way that the CIGR website will be their own web contact. Many activities are already announced on the website and in the Newsletter, but many more could be included if Member Societies made full use of these facilities. Thus, I strongly invite the National and Regional Societies to contribute and use the website to publicize their activities and to establish links with their members and other societies of CIGR.

Due to the efforts of many people, particularly Past President Bill Stout, the EJournal keeps improving, and solid steps are being pursued to have it recognized by the ISI. But contributions by many others - authors, reviewers and editorial members - are also necessary. If authors are essential for the EJournal to have papers, reviewers and editorial members are definitely required because they guarantee the quality of the Journal. Volunteer reviewers are needed!

The next Congress will be held in Bonn, Germany, from 3 to 7 September 2006. For further information, see p. 15 of this Newsletter and look up <http://www.2006cigr.org/>. The

German organizers, EurAgEng, FAO and the Technical Sections of CIGR are co-operating to guarantee the success of our Congress. However, the collaboration of other member societies, particularly of non-European ones, is desirable to make the event a true World Congress. I am fully confident that such success will be achieved, and I am

pleased to offer my contribution following the wishes of the organizers.

This letter will appear in the Newsletter early 2005. It is therefore my pleasure to wish you all the best for this year.

*Prof. Luis Santos Pereira
CIGR President 2005/06*

Glance Back by the Past President at the Presidency 2003/04

Dear Members of CIGR:

It is both my privilege and duty to give a summary of the development of our society during my term of office, which means the years 2003 and 2004. The following text is based on my activity report presented to the General Assembly of CIGR in Beijing.

One of the major responsibilities of my term – as in every CIGR President's term – was to find a successor for the Incoming President. Professor Luis Santos Pereira has already left this position in order to become President of CIGR for the years 2005 and 2006. I am glad and proud that we could win Professor Irenilza de Alencar Nääs as new Incoming President. She will become CIGR's 17th President and will be the first woman in this office as well as the first President from South America. This demonstrates the truly international profile that CIGR has gained during recent decades.

Another task – and this task has to be solved within a longer time interval – was to find a location for the General Secretariat and a person willing and able to represent CIGR as Secretary General after 2005 (when the second four-year term of Secretary General Professor Peter Schulze Lammers will be over). I am very glad that we found a successor in Japan, with the strong support of Honorary President Professor Osamu Kitani. Secretary General for 2006-2009 will be Professor Takaaki Maekawa; he will run the General Secretariat in Tsukuba. I appreciate very much that we also had an offer from Europe to host our headquarters. But the Presidium felt a certain preference, if not an obligation, to emphasize the international character of CIGR by transferring the General Secretariat of our organization to a non-European country for the first time in CIGR's history of almost 75 years.

Some people have asked why CIGR is not planning to celebrate its 75th anniversary. My answer is always the following: we celebrated the 70th anniversary in Tsukuba in the year 2000. This was an extraordinary event, and, at the same time, a shift by CIGR to holding a large event every two years, not only a World Congress every four years. Thus, the Tsukuba congress opened the door for last year's 2004 CIGR International Conference and its follow-ups. Coming back to the celebrations: The habit of celebrating what is sometimes called 'round' birthdays every five years after reaching a certain age, say 60, is a very human habit, and oriented at the average human lifespan. However, CIGR is neither male – so that it would have an expected lifespan of 76 years (in Germany), nor is it female (with an expected lifespan of 82 years), but it is an organization that will, I hope and expect, live on into the future for at least as long as it has already existed. Therefore, we shouldn't panic

and celebrate a special event every year ending in a "0" or a "5." The Technical Sections should mention the 75th anniversary if they organize session workshops or other events during the next year, and could drink a toast to CIGR – but this is the level that we think is appropriate.

Let me address in some detail the developments in CIGR services:

The CIGR website has been maintained by the General Secretariat in recent years. It is a permanent task to keep the calendar of events and all the links contained therein updated. Moreover, some new features have been added to the site, including a short history of CIGR, explanations of the CIGR awards system, and an updated list of member organizations and their links.

The newsletter is now appearing in its 69th edition. It is a very valuable means of communicating forthcoming events as well as reports on past events to the members of CIGR. We are particularly committed to Mme Manchon from the French Ministry of Agriculture, who has done the translations into French for many years, and to our Chinese and Moroccan colleagues who recently started to translate the newsletter into Chinese and Arabic.

The CIGR Handbook of Agricultural Engineering with more than 2,400 pages in five volumes has sold very well; it is among the bestsellers of our publisher, ASAE. In fact, almost 3,000 paper copies have been sold so far, and more than 200 complete sets on CD-ROM. Some of the volumes are already out of stock. I am quite confident that Volume 6 on "Information Technology" will be published soon. Moreover, the presentation of a Chinese version of



Picture 1: left: Prof. Chen Zhi (President of CSAM);
right: Prof. Fu Zetian, Vice-President of CAU)

Volume 4 during the CIGR International Conference in Beijing marked a further great achievement for the CIGR Handbook series. Picture 1 shows the handing over of the first copies of the Chinese editions of both the CIGR Handbook and the newsletter to CIGR President Axel Munack at the Beijing conference

The CIGR-FAO Global Network is now co-sponsored by EurAgEng. However, it is used much less than expected. The Technical Sections of CIGR are still quite hesitant to use it extensively for their communication purposes.

The CIGR E-Journal: "Agricultural Engineering International: the CIGR Journal of Scientific Research and Development" is a real success. Thanks to the continuous work of Bill Stout, 138 peer reviewed articles and 64 invited overview articles with authors from 40 countries have been published to date. The journal has an ISSN, it is included into the Cornell Open Library System (thus being accessible via *google*), and we are working hard to have it included in the ISI database. This would enhance the value of the journal by assigning an impact factor to it. The E journal is probably the most important achievement and service of CIGR during recent years.

The inclusion of new members into our scientific



Picture 2: His Excellency, Mr. Hui Liangyu, Vice Premier of the State Council of the People's Republic of China

community developed more slowly in my term of presidency, as compared to the term of Houssine Bartali. However, we were proud to announce the new memberships of the Israeli Agricultural Engineering Society as well as the United Nations Industrial Development Organization, UNIDO.

With respect to relations to our Regional Member Societies and our Technical Sections, I started my term with the intention of taking part in at least one event in each of our Regional Societies and of attending an event or a Technical Board Meeting for each of our Technical Sections. With some exceptions, I was successful in fulfilling this intention. I hope that I was able to contribute to a strengthening of the relationships of these bodies to the Presidium of CIGR through my attendance. Let me address two events that I attended recently. One is the 2004 CIGR International Conference in Beijing. This was a real highlight of the Agricultural Engineering discipline, and perfectly organized by our Chinese colleagues. With over 1,000 participants it was the largest conference ever

organized under the leadership of CIGR. The importance of the event was underlined by the fact that His Excellency, Mr. Hui Liangyu, Vice Premier of the State Council of the People's Republic of China, carried out a reception for officials from CIGR, the organizers and sponsors (picture 2 shows his meeting with CIGR President Axel Munack), that he attended the Opening Ceremony, and that he delivered a welcome address of the Chinese Government. Further details concerning this extraordinary conference can be found in the conference report in this Newsletter (see p. 7). The other event was the Conference of ALIA (Latin American and Caribbean Association of Agricultural Engineering) in San José, Costa Rica (see p. 8). Especially in the light of the forthcoming CIGR International Conference in 2008 (in Rio de Janeiro) an intensification of the relations between CIGR and ALIA is very welcome from both sides.

Let me mention here one serious disappointment that I experienced with one of our Regional Societies. I am referring to the dispute with ASAE about the financial settlement of the joint Congress in the year 2002 in Chicago. After several mails and personal talks the case has still not been solved in an acceptable way – and probably will never be. This is deeply regrettable.

However, let's look forward to future events that are planned under the umbrella of CIGR. We have settled on World Congresses to be held in Bonn (2006) and Québec (2010). In Beijing, we decided to hold the 2008 International CIGR Conference in Rio de Janeiro, Brazil. Besides these big events, the CIGR Technical Sections will organize many workshops and conferences in the near future. These events form an essential part of CIGR's international networking system.

Based on a proposal made by Luis Pereira as Incoming President, we were able to define the relationships between the CIGR Presidium and the Technical Sections more precisely. In particular, the very important role of the Section Boards in the reviewing process for the CIGR E journal was elaborated in the necessary detail. I am not going to comment on the performance of single Technical Sections of CIGR. Some of them are very well organized – in other cases it was sometimes very complicated to exchange e-mails with the Section Chair because of unreliable infrastructures. In any case, I appreciate the good will of the many colleagues who are devoting their time and resources to fruitful work within the Section Boards for the benefit of the whole agricultural engineering community.

Recently I spent a great deal of time on activities related to the future of the Club of Bologna. The Club is, of course, not a part of CIGR, but it performs its activities under the auspices of our organization. All recent CIGR Presidents have had close relations with the Club of Bologna. Therefore, I felt strongly committed to assisting the Club in its recent struggle. In Newsletter No. 65, I had reported on some turbulence that occurred during the closing session of the last Club meeting and thereafter. After the exchange of a considerable number of e-mails, a number of meetings with different persons at different locations, and with the extensive support of Prof. Karl Renius from Munich, Germany, a situation was achieved that can be regarded as

a solution for the survival of the Club. UNACOMA has guaranteed to maintain the central aims of the Club and to give further financial and service support. Because the Club had no president, an Interim Presidency Board (consisting of Prof. Karl Renius, Dr. Alessandro Laurenzi from UNACOMA, and myself) carried out all the preparations for the recent Club of Bologna members' meeting on November 12/13, 2004, and the Management Committee meetings before and after the Club meeting. The members' meeting was attended by 36 colleagues from 16 different countries, and four oral contributions were presented during three sessions. The discussions were as lively as meetings of the Club of Bologna have always been. In the Management Committee meetings, the Internal Rules of the Club were revised, and Professor Ettore Gasparetto was appointed President of the Club. Let me take the opportunity to thank Professor Giuseppe Pellizzi for his outstanding leadership of the Club for about 15 years. Furthermore, I wish the new President every success. Let us all be confident in expecting a further prosperous future for the Club's activities!

My overall amount of work for CIGR can roughly be estimated by the number of e-mails that I received and sent during the past two years. This number (counting identical mail to more than one recipient as one mail, of course) has in the meantime reached 5,500 – an amount that I had never expected when taking over the presidency. But I am confident that, not least through these numerous contacts, I was able to contribute to CIGR's aims, which are:

- to stimulate the advancement of science and technology in the field of *Agricultural Engineering*;
- to facilitate the exchange of research results and technology;
- to encourage education, training and mobility of young professionals;
- to represent the *Agricultural Engineering* profession world-wide;

- to perform any other activity that will help develop the *Agricultural Engineering* profession and allied sciences.

Please keep in mind that CIGR's definition of *Agricultural Engineering* is quite comprehensive: "*Agricultural Engineering* is the application of science and technology in agriculture, food and biological systems, for the benefit of humans." My work for CIGR would not have been possible without the support given to me by many colleagues. Let me mention personally the members and associated members of the CIGR Presidium: Bill, Houssine, Luis, Irenilza, and Peter. As Past President, I am still a member of CIGR's Presidium. I wish Luis every success for his term as President, and I want to assure him of my full support.

Special thanks for help with the CIGR Handbook go to Honorary President Osamu Kitani.

Furthermore, I want to thank Mrs Frauke Beeken and Mr Ludger Tolksdorf from the General Secretariat in Bonn for their continuous support. Almost everything passes through this central agency of our society and is very efficiently handled by the Secretary General, Prof. Peter Schulze Lammers, and his co-workers. CIGR gratefully acknowledges in this context the funding of the General Secretariat by the Ministry of Consumer Protection, Food, and Agriculture of the Federal Republic of Germany. We have almost arrived at the end of the second four-year period in which this ministry grants considerable financial support to this institution.

In addition I want to thank the staff members of my institute, who might have had the impression that I changed my affiliation during the term of my presidency.

And last but not least I would like to thank my wife for her support and continuous sympathy for the additional workload that left only little time for leisure during the past two years.

Axel Munack

CIGR President 2003/04

CIGR Ejournal /Agricultural Engineering International: the CIGR Journal of Scientific Research and Development ISSN 1682-1130

Under the aegis of Editor-in-Chief Dr Rosanna Moreira, the CIGR electronic journal has now entered its seventh year of publication. It has grown from a modest beginning and is now attracting many quality manuscripts. Here is a summary of the number of papers published to date:

Peer reviewed original research papers (total-138) in Volumes I (1999) to VI (2004):

I-7, II-10, III-23, IV-25, V-29, VI-44

Invited overview papers (total-64) in Volumes I (1999) to VI (2004):

I-2, II-4, III-8, IV-20, V-24, VI-6

As you might expect the published papers come from a broad international base (40 countries):

Peer reviewed original research papers: Australia-2, Belgium-3, Brazil-2, Canada-6, Cameroon-2, China-3, Czech Republic-3, Denmark-10, Estonia-1, France-1, Germany-6, Greece-4, India-2, Indonesia-2, Ireland-1, Iran-1, Israel-2, Italy-4, Japan-22, Lebanon-2, Lithuania-3, Mexico-1, Netherlands-3, Nigeria-4, Poland-6, Portugal-6,

Spain-5, Thailand-2, United Arab Emirates-1, Turkey-2, USA-17.

Invited overview papers(Including Club of Bologna keynote presentations): Australia-1, Brazil-3, Canada-2, China-2, Denmark-1, FAO-3, France-1, Germany-6, Greece-1, India-2, Israel-1, Italy-6, Japan-3, Kenya-1, Mexico-1, Morocco-1, Netherlands-3, Nigeria-1, Oman-3, Palestine-1, Poland-1, Russia-1, Taiwan-1, Thailand-1, UK-1, USA-15, Zimbabwe-1.

Check it out by accessing the website at cigr-ejournal.tamu.edu under "published papers". I invite all of you to submit manuscripts for peer review and publication. There is no cost to publish or to access and print papers. The website has all the details regarding manuscript format, submission instructions, etc. If you have any questions, please send me an email at stout@tamu.edu

Dr B.A. Stout, Coordinator

CIGR Honorary President

January 20, 2004

CIGR Elections 2004

Composition of the CIGR Boards 2005/2006

Presidium

| | | | |
|--------------------|--------------------------------|-----------------------------|-----------------------------|
| President | Prof. Luis Santos Pereira | Secretary-General | Prof. Peter Schulze Lammers |
| Incoming President | Prof. Irenilza de Alencar Nääs | Secretary-General 2006-2009 | Prof. Takaaki Maekawa |
| Past President | Prof. Axel Munack | | |

Executive Board

| | |
|--------------------------------------|----------------------------|
| Prof. Wayne Coates, ASAE | Prof. Lal Kushwaha, Canada |
| Prof. Vilas M. Salokhe, AAAE | Prof. El Houssine Bartali |
| Prof. Daniele De Wrachien, EurAgEng | Co-opted: |
| Prof. Irelniza de Alencar Nääs, ALIA | Prof. Pierre Abeels, |
| Dr. Nuhu Hatibu, SEASAE | Prof. Jan Daelemans, |
| Prof. Yohei Sato, Japan | Prof. Bill Stout |
| Prof. Gao Yuanen, China | Yoshisuke Kishida |
| Philippe Marchal, France | |

Auditing: P. Abeels (BE), Y. Seo (JP), F. Bakker-Arkema (US)

Section Boards:

| | I | II | III |
|---------------------|----------------------------|--------------------------|-------------------------------|
| Chair | Sato Y. (JP) | Pedersen S. (DK) | Marchenko O.S. (RU) |
| Vice Chair | Musy A. (CH) | Berckmans D. (BE) | Bourarach H. (MA) |
| Secretary | Brasa Ramos A. (ES) | Banhazi T. (AUS) | Pinto F. (BR) |
| Members | Howell T.H. (US) | Kuczynski T. (PL) | Faust D. (HU) |
| (* Liaison Members) | Falciai M. (IT) | Jacobson L. (US) | Nishizaki K. (JP) |
| | Hann M. (UK) | Flaba J. (BE) | Sundell B. (SE) |
| | Huang Guanhua (CN) | Cascone G. (IT) | Sutton D.K. (UK) |
| | Alves Soares A. (BR) | Meneses J. (PT) | Snobar B.A. (JO) |
| | Taylor P. (US) | Sällvik K. (SE) | Lara-Lopez A. (MX) |
| | Tyagi, N.K. (India) | Gates R. (US) | Schueller J. (US) |
| | Maiga A. (EIER)* | Hartung E. (GER) | Salokhe V.M. (TH) |
| | De Wrachien D. (EurAgEng)* | Monteny G. -J. (NL) | Mantovani E. (BR) |
| | Ragab R. (ICID-Water)* | Honorary Members: | Jasinski B. (PL) |
| | Tarjuelo J (WG-WMIS)* | De Alencar Nääs I. (BR) | Febo P. (IT) |
| | Jaarsma C.F. (PIARC)* | Maekawa T. (JP) | Fang Xianfa (CN) |
| | Loudon T.L. (NOWRA)* | | Co-opted: |
| | Rubio J.L. (ESSC)* | | Chancellor B. (US) |
| | Honorary Chair: | | |
| | van Lier H.N. (NL) | | |
| Pereira .L. S. (PT) | | | |
| IV | V | VI | VII |
| Kamaruddin A. (ID) | Julizewski T. (PL) | Sun D.W. (IE) | Sigrimis N. (GR) |
| Papadakis G. (GR) | Piccarolo P. (IT) | Grochowicz J. (PL) | Zazueta F. (US) |
| | | Li Shujun (CN) | |
| Akdeniz C. (TR) | Soerensen C. (DK) | Ruiz Altisent M. (ES) | Murase H (JP) |
| Faust D. (HU) | Szeles G. (HU) | Sei Ichi Oshita (JP) | Turner L. (US) |
| Umeda M. (JP) | Goense D. (NL) | Soponronnarit S. (TH) | Roger M. Clouaire (F) |
| Riva G. (IT) | Weiershäuser L. (DE) | Kapseu C. (CM) | Mantovani E. (BR) |
| Ghaly A. (Can) | Singh G. (TH) | Menesatti P. (IT) | Wang M. (CN) |
| Blatin D. (FR) | Hilmersen A. (NO) | Javadi A. (IR) | Sindir K. (TR) |
| Piechocki J. (PL) | Luder W. (CH) | Opara L. (NZ) | Moltó E. (ES) |
| Russel (MX) | Luoma T. (FIN) | Nicolai B. (BE) | Reid F. (US) |
| Heier S. (GER) | Marchal P. (F) | LeBail A. (FR) | Blackmore S. (DK) |
| Ramdani A. (MA) | Cazorla A. (SP) | Zude, M. (GER) | Auernhammer H. (GER) |
| Tomson T. (EE) | Li Minzan (CN) | Pan Z. (US) | Mazzetto F. (IT) |
| | Horio H. (JP) | Luchsinger Lagos L. (CL) | De Baerdemaeker J. (BE) |
| | | Kadlec P. (CZ) | Honorary Chairs: |
| | | Artes Calero F. (ES) | Munack A. (GER) |
| | | | Hashimoto Y. (JP) (Hon Chair) |

Report from the Secretariat of the 2004 CIGR International Conference Beijing

The 2004 CIGR International Conference was successfully held at the Beijing International Convention Center from October 11-14. Over 1000 officials, scientific researchers and representatives of the agricultural engineering industry from 64 countries and regions came for three days of oral and poster presentations. The conference was sponsored by CSAM (Chinese Society for Agricultural Machinery), CSAE (Chinese Society of Agricultural Engineering) and CIGR. The organisers were CAU (China Agricultural University), CAAMS (Chinese Academy of Agricultural Mechanization Sciences), and CAAE (Chinese Academy of Agricultural Engineering).

Prof. Chen Zhi, Chairman of the Organizing Committee, President of CSAM and President of CAAMS, chaired the Opening Ceremony. His Excellency, Mr. Hui Liangyu, Vice Premier of the State Council of the People's Republic of China, was present at the Opening Ceremony and delivered an address on behalf of the Chinese Government. He offered his warm congratulations on the opening of the conference and welcomed all the participants who had come from all over the world to be in China to engage in academic exchange for the purpose of promoting agricultural engineering worldwide. Prior to the Opening Ceremony, His Excellency, Mr. Hui Liangyu, had met members of CIGR Presidium, representatives of international organizations, co-sponsors as well as representatives from the industries. During the Opening Ceremony His Excellency, Vice Premier Hui Liangyu, Mr. Zhang Baowen, Vice Minister of Ministry of Agriculture, P. R. China, Mr. Cheng Jinpei, Vice Minister of Science and Technology, Mr. Huang Shuhe, Vice Director of State-owned Assets Supervision and Administration Commission of the State Council P. R. China (SASAC) and Shen Guofang, Vice President of the Chinese Academy of Engineering were seated on the podium along with CIGR President Prof. Axel Munack, CIGR Incoming President Prof. Luis Santos Pereira, CIGR past President Prof. El Houssine Bartali, AAAE President Prof. Vilas M. Salokhe, and Dr. Gavin Wall, Chief of the Agricultural and Food Engineering Technologies Service of the FAO. Prof. Wang Maohua, Chairman of the Organizing Committee, Academician of the Chinese Academy of Engineering, President of CSAE, Honorary President of CSAM, Prof. Chen Zhi, Chairman of the Organizing Committee, President of CSAM and CAAMS, Prof. Qu Zhenyuan, Chairman of the University Committee of China Agricultural University, Prof. Zhu Ming, Co-Chairman of the Organizing Committee, President of CAAE, Executive Vice President of CSAE, and Mr. R. M. Khan, Ambassador of Pakistan, were all seated on the podium.

During the Opening Ceremony CIGR President Prof. Axel Munack delivered a 20-minute welcome address on behalf of CIGR. He welcomed all the participants and explained briefly the functions of CIGR. Prof. Wang Maohua made a speech on behalf of the Organizers. Prof. V. M. Salokhe delivered an address on behalf of the international co-sponsors of the conference. At the subsequent plenary keynote session, Vice Minister Zhang Baowen made a

keynote speech on *The Development of Chinese Agricultural Engineering*.

Chinese copies of Volume IV of the CIGR Handbook and of two issues of the CIGR Newsletter had been finished in time for the conference. A ceremony celebrating the publication of the Chinese versions of the CIGR Handbook and the CIGR Newsletters was held during the welcome reception of the conference. Prof. Chen Zhi, President of CAAMS, which had handled the translation of the CIGR Handbook, and Prof. Fu Zetian, Vice President of CSAE, which had handled the translation of the CIGR Newsletters, handed CIGR President Prof. Axel Munack Chinese copies of the respective publications.

Apart from the Opening Ceremony, the Plenary Session, the Keynote Speeches and a visit to the 2nd China Ag Trade Fair, the four-day conference consisted of oral and poster presentations in the following five parallel sessions:

- Soil and Water Management - in conjunction with the 7th Inter-Regional Conference on Environment and Water
- Bioproduct Processing and Food Safety - in conjunction with the 1st International Conference of CIGR Section VI
- Information Technology for Agriculture - in conjunction with the 1st Technical Symposium of CIGR Section VII
- Conservation Tillage and Sustainable Small Farming
- Modern Agricultural Equipment & Facilities

The following table lists the number of presentations held at the conference:

| Sessions | Oral Presentations | Poster Presentations | Total |
|--------------|--------------------|----------------------|------------|
| Session I | 131 | 28 | 159 |
| Session II | 134 | 106 | 240 |
| Session III | 84 | 117 | 201 |
| Session IV | 64 | 38 | 102 |
| Session V | 111 | 73 | 184 |
| Forum | 8 | | 8 |
| Total | | | 894 |

969 people from all over the world attended the conference, actively contributing to the success of the event. The Organizing Committee had received over 1300 abstracts from 69 countries and regions. The professors invited by the Academic Committee of the conference carefully reviewed the abstracts and accepted over 980 papers. Upon registration in October 10, all participants received a collection of 965 extended abstracts and a CD-ROM with the full papers.

Before, during and after the conference, some international organizations also held their meetings: CIGR Presidium, CIGR Executive Board, CIGR Technical Board, AAAE Executive Committee, CSAE (China) Presidium, CSAM Board, Editorial Board for CIGR Handbook, Boards of CIGR Sections I, III, VI, and VII, AOC General Assembly, CIGR General Assembly, and AAAE General Body.

At the closing ceremony and banquet, CIGR and local industrial enterprises awarded the following prizes to outstanding awardees:

The recipients of the **Armand Blanc Prize** are:

HUANG Guanzhong (CAU), LIN Yaling (CAAMS),

Annia Garcia Pereira, LIU Lijing (CAAMS), WEI Qing (CAU)

CIGR E-Journal Prizes went to J. Khzaei and D.D. Mann for their paper *Effects of Temperature and Loading Characteristics on Mechanical and Stress-Relaxation Properties of Sea Buckthorn Berries. Part 1. Compression Tests* and to M.A. Massoud, M. El-Fadel, M.D. Scrimshaw, J.N. Lester for their paper *Land Use Impact on the Spatial and Seasonal Variation of Contaminant Loads to Abou Ali River and Its Coastal Zone in North Lebanon*. S. Pedersen, P. Sousa, L. Andersen, and K.H. Jensen received E-Journal prizes for their paper *Thermoregulatory Behaviour of Growing-Finishing Pigs in Pens with Access to Outdoor Areas*.

The recipients of the **China Yituo Prize** are:

Liu Dagong (agricultural machinery designing and manufacturing), Zhu Ming (agricultural engineering), Prof. Gao Huanwen (technology of conservation tillage), Xiang Guanfan (agricultural machinery application and extension), and Kang Shaozhong (water resources management and utilization)

The recipients of the **CLAAS Prize** are:

Prof. Luo Xiwen (education in agricultural engineering), Mrs. Pan Xuefen (agricultural machinery application and extension), and Mr. Wang Zequn (harvesting and post harvesting technology research).

JOHN DEERE Prizes went to:

Mr. Li Jun (agricultural machinery application and extension), Prof. Tong Jin (researching of agricultural engineering technology), Zhao Yun (education in agricultural engineering)

The **UNACOMA Award** was presented to Prof. O. Kitani.

CIGR President's Citations were presented to the



CIGR Presidential Citations, Beijing 14 October 2004:

Prof. Luis Santos Pereira (CIGR Incoming President), Prof. Li Shujun (Vice President CAAMS), Prof. Chen Zhi (President CSAM), Prof. Wang Maohua (President CSAE), Prof. Fu Zetian (Vice President CAU), Prof. Zhu Ming (President CAAE), Prof. Axel Munack (CIGR President), Prof. El Houssine Bartali (CIGR Past President)

following representatives of outstanding Chinese organisations:

Dr. Prof. Chen Zhi (CSAM), Prof. Wang Maohua (CSAE)
Prof. Fu Zetian (CAU), Dr. Prof. Li Shujun (CAAMS),
Prof. Zhu Ming (CAAE).

The conference closed on October 14, 2004. Both overseas and local participants highly praised the marvelous organizing work. CCTV and China national newspapers reported on the conference. It was the largest conference ever held by CIGR, and it was the Olympics of Agricultural Engineering in terms of conference scale and impact.

Secretariat of the 2004 CIGR International Conference

Report on CLIA 2004

The Latin American and Caribbean Association of Agricultural Engineering (ALIA) was founded in November 1994, during the International Congress of Agricultural Engineering, in Chillan, Chile. This federation was organized in order to unite all associations in Latin America and the Caribbean for the promotion of agricultural engineering.

The VI Latin American and Caribbean Congress of Agricultural Engineering was organized by the Costa Rican Association of Agricultural Engineering (ACIA), presided over by Eng. Roger Garcia with the support of the Agricultural College of the Humid Tropic (EARTH)/International University of Costa Rica, the University of Costa Rica through the Agricultural Engineering College, and the Agricultural Engineering College of the Technological Institute of Costa Rica (TEC). The organizing Committee was formed by Ing. Roger Garcia, president, and Eng. Edgar M. Navarro, Eng. Alfonso B. Gamez, Dr. Omar Ulloa and Eng. Warner Rodriguez.



Prof. Irenilza Nääs

The technical sessions dealt with: *Agricultural mechanization*, covering the aspects of design, construction and test of machinery, maintenance and repair, production technology, administration, ergonomics, security and occupational health; *Soil and water* including drainage and irrigation engineering, soil and water conservation; *Post harvesting engineering* covering the aspects of technology and processes, equipments and process design, and selection and classification of packaging. In the field of *Construction*, the major subjects were structural design for agricultural constructions, controlled environment for both animal and crop production, use of residual waters, and alternative sources of energy for rural areas. The *Engineering aspects of biological systems* included the following items: physical properties of biological materials, use of residue in animal and crop production, forest product processing; and aquaculture. The area of *Information technology* covered precision farming, input dosage and application; and *Research and Teaching* covered the topics of curricular arrangements and occupation profile for agricultural engineering for both undergraduate and graduate courses.

The congress was attended by around 200 delegates from several countries, among them Mexico, Chile, Nicaragua,

Cuba, Colombia, Panama, Spain, USA, Germany and Brazil.

During the Congress CLIA2004 the 10th anniversary of ALIA's foundation was celebrated, and in the General Assembly this fact was emphasized, distinguished this congress from previous congresses held in Brazil, Argentina, Mexico and Cuba. The new president Dr. Omar Ulloa was elected during the General Assembly, as well as

the new Board of Directors with representatives from several countries. Also during the General Assembly the future Congresses were programmed for the next years as follows: 2006 in Chile, 2008 in Nicaragua, and 2010 in Brazil.

*Prof. Irenilza De Alencar Nääs
CIGR Incoming President 2005/6*

Club of Bologna Presidency and Management Committee Conclusions and Recommendations

I. Presidency and Management Committee

After the 14th Meeting of the Full Members of the Club of Bologna in 2003, Prof. Giuseppe Pellizzi resigned as President of the Club.

Before the 15th Meeting of the Full Members in 2004, the Management Committee (MC):

- confirmed the two new MC members designated in 2003: Prof. El Houssine Bartali, replacing Prof. Ali M. El Hossary; Mr. Yoshisuke Kishida, replacing Prof. Osamu Kitani;

- elected four new MC members: Mr. Jacques Dehollain, Secretary General of CEMA (European Agricultural Machinery Manufacturers); Prof. Ettore Gasparetto, University of Milan (Italy); Prof. Luis Márquez, Universidad Politécnica of Madrid (Spain); CIGR President (2003/04) Prof. Axel Munack, FAL (Federal Agricultural Research Centre, Germany).

- unanimously accepted the updated Club of Bologna Internal Rules.

After the 15th Meeting of the Full Members, the Management Committee unanimously endorsed the new President of the Club, appointed by UNACOMA, Prof. Ettore Gasparetto. Both the Full Members' Meeting and the Management Committee expressed their gratitude to Prof. Giuseppe Pellizzi for his long activity as President of the Club of Bologna.

II. Conclusions and Recommendations

36 experts from 16 countries took part in the 15th Club of Bologna meeting, held on 12 and 13 November 2004 within the XXXV EIMA Show, under the aegis of CIGR and with the sponsorship of UNACOMA. There were three topics under discussion, of which the first was **"China Agricultural Machinery and Mechanisation"** with contributions by a guest, Prof. Yuan Jiaping, "Actual State of China's Agricultural Machinery Industry and Prospects for International Cooperation" and by a Club member, Prof. Li Shujun "Agricultural Mechanisation Promotion in China – Current Situation and Future". The second topic was **"Cost Benefits of the Platform Principles for the Tractors and other Agricultural Machinery"**, with a keynote paper by Dr. Giuseppe Gavioli, representing the CNH tractor and equipment manufacturer. The third topic was **"EU (European Union) Enlargement and its**

Influence on Agriculture and Mechanisation", with a keynote report by Prof. Andrea Segrè of the University of Bologna.

1. China Agricultural Machinery and Mechanisation.

The first paper, presented by Prof. Yuan Jiaping, former Vice-President of the CAAMS (Chinese Academy of Agricultural Mechanisation Sciences), pointed to the present state of Chinese agricultural machinery industry and to the prospects for international cooperation, focusing on the industrial side of the problem. After a period of self-development in the field of agricultural machinery, China began to cooperate with foreign manufacturers and now foreign-funded machinery ventures are an important part of China's agricultural machinery industry. As a result of both autonomous development and collaboration with outside manufacturers, the output of tractors and agricultural machinery increased, putting China's agricultural machinery industry among the top world entities, at least in produced units. Anyway the highest percentage of agricultural machinery is produced in private units, followed by state-owned manufacturers, while the foreign funded enterprises represent a small percentage (5-6%). Following economic liberalisation, both imports and exports increased repeatedly in the last years. Up to almost 20 projects introducing foreign manufacturing technologies for farm machinery have been signed or are at present under study.

The second paper was presented by Prof. Li Shujun, Vice-President of CAAMS. Prof. Li presented a study on the current situation and the future of the agricultural mechanisation promotion in China. With 8% of the world's farmland, China's agriculture is able to sustain 23% of the world's population. The total output of national agricultural products reached the first place in the world and the ancient long-term shortage of food changed into a basic balance and into a surplus in good harvest years. Of course this positive change has been the consequence—among other factors—of agricultural mechanisation development. Nevertheless, agricultural machinery utilisation in China is still in its elementary stage with a great market and development potential; there is a big difference between a more developed East China and a West with less favourable conditions. Anyway, the agricultural machinery industry in China is developing fast, with the output and sales value increasing by 20% per year in the last period.

Having noted that the successful modernisation and mechanisation of Chinese agriculture is the most important



Prof. Ettore Gasparetto

issue in the 21st century for all the world, because of its big population and surface; **having recognised** that Chinese Government policy and laws strongly influenced the trend to agricultural mechanisation, such that agricultural mechanisation in China may be regarded more as a consequence of the rural development than as a catalyst to it; **having noted** that both the Chinese policy of granting more privately owned equipment and the new law for the promotion of agricultural mechanisation will lead to an increase in larger scale equipment; **having recognised** that China offers a big market with large potential for foreign investors and that the political climate for private investment by farmers seems to be very favourable in the moment; **the members of the Club of Bologna recommend** that an increased promotion of international cooperation is essential to further improve the already favourable conditions of Chinese agricultural mechanisation; **underline** that education will be even more important than food, energy and environment and **recommend** that the Club of Bologna should play a role to promote a more advanced education through world organisations and regional networks as well;

acknowledge that China is following a process of privatisation like in new EU countries and that a great deal of today's small farmers will be in the future part-time farmers or merge into bigger farms; **recommend** that drying, processing and storing of agricultural products be considered as an important factor of improvement of Chinese agriculture and economy, as up to now these processes have been partly left behind.

2. Cost Benefits of the Platform Principles for the Tractor and other Agricultural Machinery. Dr. Giuseppe Gavioli pointed to the world's steady or decreasing volumes of demand for agricultural tractors and machinery and to the necessity to increase the number of models, machine power capacity and automation. At the same time there is a strong demand for less pollution, for more safety and for services. To reduce or keep the cost constant it is necessary to balance the higher product differentiation with an advanced component standardisation. In addition the following measures are pointed out: develop/expand product families; develop global products; globalise the supplier base; carefully plan product development. Among agricultural machines the tractor is the most important one, both in agriculture and in the agricultural machinery industry. Consequently, special interest shall be applied to tractor development, which must consider not only off-road working but also public traffic regulations.

Having recognised that tractor and implement manufacturers seem to follow different development strategies and that there is a scarce relation between the updating of these fundamental branches of agricultural machinery; **the members of the Club of Bologna underline** that there should be for the future a better exchange of information between tractor and implement manufacturers in order to improve both the multi-functionality of the tractors and a better adaptability/fitting of equipment; **recommend** that new studies are needed to develop new tractor concepts for providing different sources of power and on-cab controls of the equipment,

with the consideration of both the off-road working and of the circulation on public roads; **confirm** that education at all levels is a fundamental factor for favouring the improvement of agricultural machinery understanding and utilisation; **having noted** that the platform principle is very useful to reduce the cost of produced machinery and that, at the same time, it is necessary to develop better systems to fit each farmer requirements and an increased need for specialised machines in case of big farms or contractor operation; **reassert** that an efficient service is necessary for the machinery performance improvement in all the sectors of production, stocking and distribution systems; **recommend** that machinery producers should combine standardisation and common platforms with innovations and advanced technologies from research institutes; **recognise** that the image and perception of agricultural machinery should be changed from "biological production" to "biological systems", including humans, animals and plants, to attract young people; **recommend** the establishment of incentives to promote innovations within the platform production lines and the cooperation between industry and research; **recommend** that the machine manufacturers should more strictly contact the farmers and other interested sectors, in such a manner to remain competitive.

3. EU Enlargement and its Influence on Agriculture and Mechanisation. The presentation by Prof. Andrea Segrè carried examined the conditions of economy, agriculture and agricultural machinery utilisation and manufacturing in 10 of the 12 countries that have just entered or will enter European Union over the next years, not taking into account Cyprus and Malta because of the relatively small importance of agriculture in their economic context. Generally speaking, fragmentation of farm structure is common in these ten countries, with an exception for Czech Republic, Slovakia and Hungary. The level of farm mechanisation is usually low. Access to new agricultural machinery is limited since farms generally do not own sufficient capital for machinery renewal and a high percentage of manpower is still employed in agriculture. Although Western European and other developed countries' products have already appeared, the machinery market is still dominated by local production and by imports from Eastern Europe. This trend is, however, likely to change due to the necessity to improve the structures for national agricultural mechanisation and to meet EU environmental requirements regarding engine emissions, ergonomics and safety. The accession of these countries will significantly influence the agricultural machinery market due, on one hand, to the higher importance of the agricultural sector and, on the other hand, to the current generally obsolete and inefficient machinery stock available.

Having recognised the fragmentation of farm structure in most of the new members of EU; **having noted** that an easier access to the EU markets after enlargement is seen as an opportunity and that, at the same time, the possibility of increased competition in domestic markets is a threat; **having noted** that demand for agricultural machinery will develop in conformity to the application of the EU rural development policy; **the members of the Club of Bologna**

underline that the purchase of agricultural machinery is expected to become increasingly dependent on real productive necessity since financial resources will be different; **recognise** that mechanisation will be in a position to develop, provided that the machines respond to the requirements imposed by the new approach and provided that incentives are given to process rationalisation, manpower qualification and environmental compatibility; **recognise** that machinery has to change, due to increased labour cost and to allow the use of renewable energies; **recommend** that the European Union supports the agricultural mechanisation in the new member countries;

recommend that a special consideration is given to the mechanisation of the small farms, to solve social problems and that part-time farming is considered as an important point; **recommend** that economic and technological conditions in the extended European Union are considered to promote a financing credit structure; **recommend** that the existing agricultural machinery manufacturers are considered for a different production in the different economic systems, changing their line into spare parts and/or other industrial items.

*Professor Ettore Gasparetto
President Club of Bologna*

NEWS FROM NATIONAL AND REGIONAL SOCIETIES

Report on the 2nd International Conference on Agricultural Engineering WASAE2004 September 20-24, 2004, Kumasi, Ghana.

The second International Conference on Agricultural Engineering was held by the West African Society for Agricultural Engineering (WASAE) and the Ghana Society of Agricultural Engineering (GSAE) under the auspices of the Ghana Institution of Engineers (GhIE) at the Great Hall of the Kwame Nkrumah University of Science and Technology (KNUST), Kumasi, Ghana from 20th to 24th September, 2004. The theme of the conference was "Hunger without Frontiers". The conference was declared open by the Hon. Minister of Food and Agriculture of Ghana, Major (Rtd) Courage Quashigah. Other dignitaries present were Prof. Kwesi Andam, the Vice Chancellor of KNUST, who delivered the welcome address, Ing. W.E.O Apatu, the President of the Ghana Institution of Engineers, Mr. Robert Van Otterdijk from the Food and Agricultural Organization (FAO); Dr. Barry Boubacar from the International Water Management Institute (IWMI); Erve M. Ouedraogo from the Regional Association on Irrigation and Drainage in West and Central Africa (RAID); a representative of the Inter-state School of Agricultural Engineering (EIER); Engr I.A. Olorunfemi as a representative of the President of the Nigerian Society of Engineers; and Engr. Mwamzali Shiribwa, the Secretary-General of the South and Eastern Africa Society of Agricultural Engineers (SEASAE). Over 100 delegates from Mozambique, Kenya, Nigeria, Burkina Faso, Sweden, Sierra Leone, Great Britain and Ghana participated in the conference, which consisted of two days of topical sessions and a post-conference technical tour. Seventy-five scientific papers and one poster were presented by agricultural engineers, mechanical and civil engineers, agricultural economists, food scientists, public health officers and development professionals in the



Eng. Emmanuel Bobobee

following areas of interest:

- Farm power and machinery
- Soil and water engineering
- Post harvest technology
- Food security
- Conservation agriculture
- HIV/AIDS and gender issues
- Agro-energy & intermediate means of transport (IMTs)

The participants noted ...

- that many technologies are being developed by researchers in the sub-region, but there seem to be gaps among technology developers themselves and between technology developers and end-users.
- efforts by development partners such as FAO, UNESCO, UNIDO, IWMI to address food security issues in the region. However, the present approach of not involving national professional bodies for programme implementation can be counter productive in the long run.
- a labour shortage in agriculture in Sub-saharan Africa due to a combination of factors including the HIV/AIDS pandemic and an ageing labour force. Agriculture in the sub-region is still full of drudgery and it has little commercial orientation.
- a low volume of trade among countries in the sub-region which creates distortions of the market system in the sub-region.
- that in a global market driven economy fuel prices would continue to rise and remain high for a long time to come.
- that products produced and packaged in the sub-region do not compete well with products from elsewhere that are better packaged. Packaging skills and capabilities in the region must be developed to combat a dearth of knowledge in packaging technology and education.
- difficulties in the commercialization of prototypes developed by researchers and a lack of an adequate incentive system for R&D work.
- a lack of agricultural engineering research centres within the National Agricultural Research Systems (NARS) of most countries in the sub-region.
- a need for technology adaptation and modification to suit local conditions.

- a lack of maintenance and an adequate management system for agricultural machinery in the sub-region.
- that some countries in the sub-region did not have delegates at the conference.

In view of the above, the conference participants resolved that

- existing national professional bodies should be strengthened and used for agricultural development programme implementation by development partners,
- agricultural engineers should develop technologies to process foods that improve the health of people with HIV/AIDS (PLWHA),
- viable and functional working groups should be established within WASAE and the national societies to network and share information on the various sub-themes among researchers, policy makers and major stakeholders.
- the concept and spirit of the Economic Community of West African States (ECOWAS) should be brought to bear on our borders in order to achieve "Hunger without Frontiers" in our sub-region within the foreseeable future.
- agricultural engineers in the sub-region should accept the challenge to mechanize other fields of agriculture like aquaculture, livestock, and snail and grass cutter breeding, etc.
- investment in renewable energy sources such as solar energy, bio-fuel, draft animal technology and wind energy should be made to alleviate suffering resulting from global oil price increases.
- packaging courses should be included in the agricultural engineering curriculum of schools.
- governments should attach importance to the judicious and sustainable use of natural resources such as soil and water.
- Agricultural Engineering Research Institutes should be established in member countries.
- the next international conference shall be held in Burkina Faso in 2006.

Elections

At the end of the conference a new executive committee was elected to steer the affairs of the WASAE for the next two years: **WASAE Executive Council (2004-2006)**; President - Engr. Prof. Michael O. Faborode (Nigeria); Vice President - Mr. M.L Compaore (Burkina Faso); Sec-general - Ing. Ato Bart-Plange (Ghana); Asst Sec/Fin. Sec. - Engr. Dr. Yahaya Mijinyawa (Nigeria); Treasurer - Ing. Prof. Sampson K. Agodzo (Ghana) **Country Representatives:** Engr. Prof John Ohu (Nigeria), Ing. D.L Lamptey (Ghana), Rev Musa Jambawai (Sierra Leone), Dr. Ceasar Kapsue (Cameroun), Mr. Nana Robert (Burkina Faso), Dr. John E. Ashburner (FAORAF, Accra), Dr. Barry Boubacar (IWMI), Mr. Erve Marcel Ouedrago (RAID),

Ing. Emmanuel Y.H Bobobee (Ex-Officio), Ing. O.K Gyarteng (Ex-Officio).

The organizing committee would like to express its appreciation to all committee members, especially our distinguished international advisory council member, sponsors and all participants whose tireless efforts made the conference successful.

Y.H. Bobobee

WASAE2004 Conference Secretary

Co-operation between EurAgEng and the Max-Eyth Society of Agricultural Engineering within the German Association of Engineers (VDI-MEG)

EurAgEng has embarked on a programme of creating links with like-minded organisations, and in this endeavour an agreement has been reached with VDI-MEG.

The Max Eyth Society of Agricultural Engineering within the German Association of Engineers (VDI-MEG) and the European Society of Agricultural Engineers (EurAgEng) recognize that it would be of mutual benefit if the AgEng Conferences evolved over time into a permanent event in Hanover. The agricultural engineering industry would also be closely involved. To test the idea, EurAgEng agrees to link up with VDI-MEG in holding a Conference in Hanover in 2007. With this objective, VDI-MEG President Dr. Ludger Frerichs and EurAgEng President Prof. Daniele De Wrachien signed a Memorandum of Understanding in Leuven (Belgium) in September 2004. To test the idea of a merger between the Landtechnik Conference and the AgEng Conference, EurAgEng and VDI will hold a joint conference in 2007 at the Convention Centre, Messe



Prof. Daniele De Wrachien



Dr. Ludger Frerichs

Hanover, Germany. The conference shall be called **AgEng 2007 Hanover. 65 Internationale Tagung LANDTECHNIK**. A joint programme committee will be set up, and the conference language will be English. The administration of the conference will be handled by VDI Wissensforum IWB GmbH .

Prof. Daniele De Wrachien

EurAgEng Past President

Dr. Ludger Frerichs

VDI-MEG President

NEWS FROM SECTIONS AND WORKING GROUPS

Report on the 1st International Conference of CIGR Section VI on Bioproducts Processing and Food Safety Beijing, China, 11-14 October 2004

This 1st International Conference of CIGR Section VI was initiated by Professor Da-Wen Sun in early 2001. The conference was originally proposed to be held in Beijing, China, in 2002. However, as Beijing was chosen to hold the 2004 CIGR Conference, this 1st International Conference CIGR Section VI conference was later decided to be held in conjunction with the 2004 CIGR Conference, becoming Session II of that conference.

The 1st International Conference of CIGR Section VI was jointly organized by the China National Packaging & Food Machinery Corporation, the National University of Ireland, Dublin, and CIGR Section VI, and it was sponsored by the Chinese Academy of Agricultural Mechanization Sciences (CAAMS), the International Association for Engineering and Food (IAEF), and the Institute of Food Technologists (IFT).

The main theme of this 1st International Conference of CIGR Section VI was "Bioproducts Processing and Food Safety". Food and bioproducts manufacturers rely on modern processing techniques and quality management systems to ensure the quality and safety of the products that they produce, for which purpose the following three key systems have been developed: Good Manufacturing Practices (GMP) to deliver consistent high quality and safe products based on long experience; Hazard Analysis Critical Control Points (HACCP) to identify and control potential hazards during the design and production process; and Quality Assurance Standards such as the International Standard (ISO 9000) and the European Standard (ES 29000) to ensure that processing, catering and other related industries conform to prescribed and well-documented procedures. On the other hand, product quality and safety assurance have further been enhanced by the continuous and rapid development in bioproducts processing, which brings together physical sciences with knowledge on product physiology and properties. In spite of such significant advances, many fundamental issues still remain, and there is much interest in this subject, as is indicated by the large number of papers submitted to this conference.

In total, this conference received 376 abstracts from 39



Prof. Da-Wen Sun

countries and regions. After peer-review and revision, 253 full papers from 30 countries and regions were accepted for oral or poster presentation at the conference. The conference attracted as many as 238 participants, among them 97 from outside China. During the three-day period of the conference, 134 oral presentations were made in 18 oral sessions and 106 posters were displayed in 14 poster sessions.

The conference was opened in the morning of 12 October 2004. After the opening ceremony, the following keynote speeches were delivered: Prof. R. Paul Singh: "Food Processing for Manned Mission to Mars"; Prof. Da-Wen Sun: "Vacuum Cooling Technology for the Agri-food Industry: Past, Present and Future"; Prof. Brian M. McKenna: "Advances in Radio Frequency and Ohmic Heating of Foods"; Prof. Li Shujun: "High Speed Development of Agro-products Processing Industry in China"; Prof. Digvir Jayas: "Bioproducts: The Sustainable Economy of the Future", and Dr. Zhongli Pan: "Applications of Infrared Technology for Processing Foods and Agricultural Products". From the afternoon of 12 October on, papers were orally presented in three parallel sessions until the morning of 14 October. All these oral sessions were attended well by the participants. Poster papers were displayed from 11 to 13 October between 9:00 and 17:00 each day. The conference was concluded with a half-day technical tour in the afternoon of 14 October to visit the aseptic filling line for PET bottles of fruit juice and the production line of fruit juice packed with laminated paper containers in Huiyuan Fruit Juice Co. Ltd in Beijing.

The full papers presented at the conference were published in the conference proceedings in CD-RO, and extended abstracts were also available in the printed Book of Extended Abstracts. Currently a special issue of Journal of Food Engineering, containing about 25 papers presented at this conference, is being prepared. The selection of the papers for possible publication in the special issue has now concluded. An independent panel consisting of four people was assembled to select the papers. Each panel member recommended a list of about 25-30 papers, and only those (25 papers) commonly recommended by the panel were invited to submit a revised paper for reviewing and for possible publication. The panel also recommended 35 papers for possible publication in the CIGR E-Journal.

The 2nd International Symposium of CIGR Section VI will be held in April 2006 in Warsaw, Poland. Further details on the 2nd Symposium can be obtained by contacting Prof. Jozef Grochowicz at growicz@faunus.ar.lublin.pl.

*Prof. Da-Wen Sun, National University of Ireland, Dublin
Chair of CIGR Section VI; Chairman of the Conference.*

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/>

5th International CIGR Symposium on “Concrete for a Sustainable Agriculture: Agro-, Aqua- and Community Applications” 5-8 June 2005

The Polytechnical University of Madrid (UPM), the Spanish Institute of Cement and Its Applications (IECA), and the Institute for the Promotion of Certified Reinforcement (IPAC) have the honour to invite you to participate in the 5th International Symposium “Concrete for a Sustainable Agriculture”, which will be held from **5 to 8 June 2005 in San Lorenzo de El Escorial, Spain** under the auspices of CIGR Section II.

The following themes will be dealt with:

- Innovative concrete structures and infrastructures in agriculture, horticulture and livestock
- Durability and quality aspects on concrete in agriculture
- Concrete in relation to general animal welfare and energy savings
- Concrete for water management and environmental protection
- Use of precast concrete elements in livestock and rural buildings
- Other relevant topics

The official languages of the symposium will be Spanish and English with simultaneous translation planned for all sessions. All papers should be written in English.

Important Deadline:

Reception of complete papers 31 January 2005
Registration fees are 500/550/650 Euros (before 25 February 2005 / before 15 May 2005 / late and onsite) for members of CIGR and associated organisations. For further information please contact the Secretariat: Departamento de Construcción y Vías Rurales, E.T.S. Ingenieros Agrónomos, Ciudad Universitaria, 28040 Madrid, SPAIN. Tel.: +34 913 365 762 & +34 913 365 420, Fax: +34 913 365 766.

http://www.cvr.etsia.upm.es/cigr_concrete_symposium.htm
E-mail: secretariat@cvr.etsia.upm.es

8th Interregional Conference Envirowater 2005 on “Environmental Quality through Collaboration and Design” 2-5 July 2005

This event, organised by CIGR Technical Section I “Land and Water Engineering”, will be held from **2 to 5 July 2005**, at the University of Texas at **Arlington** in Dallas/Ft. Worth, Texas, **USA**. The conference will be sponsored by the University of Texas at Arlington, School of Architecture, Program in Landscape Architecture,

Department of Civil Engineering, and by the University of Texas at Austin, School of Architecture, Program in Landscape Architecture.

Main Topics:

- Water resource development, urban and rural
- Soil and land use, urban and rural
- Environmental constraints in planning and design
- Collaboration among resource planners and designers
- Information and computer technology
- Competing uses for land and water resources

For further information, please look up <http://www.uta.edu/cigr> Phone: +1 817 272 2801 Fax: +1 817 272 5098. Email: cigr@exchange.uta.edu

XXXI CIOSTA - CIGR V Congress "Increasing Work Efficiency in Agriculture, Horticulture and Forestry" 19-21 September 2005

This congress, sponsored by CIGR, CIOSTA, EurAgEng and VDI-MEG, will be held from **19 to 21 September 2005** at the **University of Hohenheim, Germany**. The congress language will be English. The scientific programme will include plenary sessions, parallel oral sessions and poster sessions on the following topics:

- Methods and modelling
- Process engineering and controlling
- Calculation and planning
- Farm management
- Ergonomics and work place design
- Work safety, prevention and risk analysis

On the basis of the submitted abstract, the scientific committee will decide whether the contribution is accepted as oral presentation or poster. Oral presentations will be limited to 20 minutes each, plus 10 minutes of discussion. The oral presentations will be supplemented by an exhibition of posters. Both will be published in the proceedings of the congress. Abstracts (2 pages / 400 words max. including graphs and figures) assigned to one of the above topics must state in a comprehensible way the scope, methods and results of the proposed presentation as well as the title of the presentation, the authors' names and full work addresses including e-mail, an indication whether oral or poster presentation is preferred. Please mail abstracts to ciosta@uni-hohenheim.de

Dates and deadlines:

Notification of acceptance: mid-March, 2005
Submission of camera-ready manuscripts: July 1, 2005
The congress fee will be around 320 Euro (provisional estimate), privileges are intended. A technical tour will be organised on demand.

For further information please look up <http://www.uni-hohenheim.de/ciosta-cigr> and contact the co-ordinator: Dr. Monika Krause E-mail: ciosta@uni-hohenheim.de Tel. +49 711 459 3231 (Tuesdays only), Fax: +49 711 459 4307

**2nd CIGR Section VI
International Symposium
"The Future of Food Engineering"
26-28 April 2006**

CIGR Section VI deals with the food engineering principles in minimally processed food achieved under process control. It is intended to follow the trends and promote sustainability in food production. Its missions are:

- to bring together all those that are working in food processing,
- to stimulate research and education in food engineering,
- to promote participation in CIGR activities,
- to determine the areas that should be investigated and implemented into food production by using friendly, non destructive technology,
- to advance in knowledge for the assurance of safety of all food products for human consumption.

In order to better fulfill its missions, CIGR Section VI is organizing the 2^d International Symposium on physical properties of food, raw materials and semi products as well as bioproducts processing and food safety in **Warsaw, Poland** from **26 to 28 April 2006**. This symposium will include a series of presentations and discussions in plenary, scientific and poster sessions, and informal gatherings to highlight the most recent developments in food processing technologies as well as sustainability in food production. The full proceedings of the Symposium will be published on CD-ROM and provided to all participants at the registration desk during the Symposium.

The Symposium is jointly organized by Lublin Agricultural University and Warsaw Agricultural University.

The topics to be covered include:

- Properties of raw materials influencing process and final product quality
- Quantified methods for food quality evaluating and standardization
- Postharvest preprocessing & on-farm analysis technology
- Small-scale and regional food processing
- Gastrotechnology and catering
- Theory of unit operations and processes
- Mechanical and thermal processing
- Emerging technologies
- Modelling of food texture and composition
- Extrusion and expanded products technologies
- Sensors in precision processing
- Tracking and traceability in controlling of food safety
- Energy saving in food chain
- Education and training for new challenges in food processing and quality management

You are invited to submit a paper to the Symposium on the Future of Food Engineering. Please not the following dates:

Deadline for abstract submission: 15 September 2005
Notification of abstract acceptance: 30 September 2005

Deadline for full paper submission: 31 December 2005
Technical programme on website: 30 December 2005

For further information, please consult the Symposium web page at <http://www.cigr.pl> or contact the Conference Secretaries: Dr Agnieszka WIERZBICKA, Dr Andrzej POLTORAK and Dr Wojciech GOLIS, Warsaw Agricultural University, at ul. Nowoursynowska 159c, 02-776 Warsaw, Poland. E-mail: cigr2006@cigr.pl or info@cigr.pl

**World Congress Bonn 2006
"Agricultural Engineering for A Better
World"
3-7 September 2006**

CIGR, EurAgEng, VDI-MEG and FAO are delighted to invite you to their joint World Congress, which will be held from **3 to 7 September 2006** at **Bonn, Germany**. The World Congress will combine the "XVI CIGR World Congress" with "AgEng2006" and the "64th VDI-MEG International Conference Agricultural Engineering". As part of the congress, FAO will hold a workshop on "Agricultural Engineering Contributions to Solve Future Agricultural Problems" covering two half days. Moreover, a preconference on "Automation Technology for Offroad Equipment" will be held immediately before the World Congress.

The following topics and sub-topics will be discussed:

- I. Land & Water Use and Environment
- II. Power and Machinery
 - Tractors
 - Tillage & seeding
 - Fertilising & plant protection
 - Harvesting
 - Automation technology
- III. Information Systems and Precision Farming
- IV. Livestock Technology
 - Structures
 - Environment
 - Precision livestock farming
- V. Processing & Post Harvest Technology and Logistics
- VI. Energy and Non-Food Production Technology
- VII. Systems Engineering and Management
 - Emerging industrial products
 - Marketing
 - Service systems
 - Traceability
 - Work safety and ergonomics
 - Farm management, calculation and planning
- VIII. Fruit & Vegetable Cultivation Systems
 - Protected cultivation
 - Greenhouses
 - Equipment for tree crops
- IX. Global Issues
 - Meeting needs of global markets for equipment
 - Technologies to enable agri-food exports

Dates and deadlines:

Submission of abstracts 1 February 2006
Notification of acceptance 15 March 2006

List of Papers made available 15 April 2006
 Submission of full papers 1 June 2006
 For additional information please look up
<http://www.2006cigr.org/> or contact: VDI-MEG, Graf-

Recke-Strasse 84, 40239 Düsseldorf, Germany. Phone: +49
 211 6214266 Fax: +49 211 6214177 E-mail:
info@2006cigr.org

ACTIVITIES BY CIGR REGIONAL SOCIETIES

Seventh International Livestock Environment Symposium 18-20 May 2005

Hosted by China Agricultural University and sponsored by ASAE, this symposium will take place from **18 to 20 May 2005** in **Beijing, China**. Its purpose is to foster exchange of research discovery and networking among animal scientists, engineers, veterinarians and other professionals interested in animal-environment interactions. The technical program addresses interrelated current and emerging issues regarding the assessment and refinement of animal environment, as well as production systems that aim to enhance animal health/well-being and production sustainability.

The symposium will address a broad range of topics including the following:

- Animal behavior
- Animal welfare and environmental stressors
- Economic considerations
- Environmental control systems
- Feeding systems
- Food quality and safety effects
- Heat and moisture generation
- Heating, cooling & tempering systems
- Human health and safety
- Hygiene, biosecurity, and disease control
- Indoor air quality
- Innovative housing and production systems
- Interactions w/nutrition, reproduction, etc.
- Lighting and Acoustics
- Management systems and practices
- Measurement & monitoring systems
- Modeling of animal systems and response
- Socialization & feeding behavior
- Transportation of animals
- Ventilation systems and performance

Dates and deadlines:

Final camera-ready manuscript 15 February 2005

Advance registration and program mailed 15 March 2005

The published proceedings of the conference symposium papers will be distributed at the conference. A registration deposit will be due with final paper submission. The official language of the symposium will be English. A visa and passport may be required of presenters to facilitate travel into and from China.

For further information contact: Yuanhui Zhang, Symposium Chair, University of Illinois, Dept of Agricultural Engineering, 332-C 1304 W Pennsylvania

Ave, Urbana, Illinois 61801 USA. Tel. +1 217 333 2693
 Fax: +1 217 244 0323 Email: iles7info@asae.org
<http://www.asae.org/meetings/iles7/index.html>

ASAE Annual International Meeting 2005 17-20 July 2005

The American Society of Agricultural Engineers will hold its Annual International Meeting 2005 from **17 to 20 July, 2005**, at **Tampa, Florida**.

The subject areas discussed at the meeting will be:

- Power & Machinery
- Soil & Water
- Information & Electrical Technologies
- Structures & Environment
- Ergonomics, Safety and Health
- Food Processing & Engineering
- Biological Engineering

Dates and deadlines:

Complete programme available on www 1 April 2005

Full papers for CD-ROM & Tech. Library 15 May 2005

End of early-bird registration 27 May 2005

For conference and exhibit information contact: Sharon McKnight Meetings and Conferences ASAE 2950 Niles Road St. Joseph, Michigan 49085 Tel. +1 269 428 6333
 Fax: +1 269 429 3852 E-mail: mcknight@asae.org

<http://www.asae.org/meetings/am2005/index.html>

International Agricultural Engineering Conference 6-9 December 2005

Under the auspices of AAEE, this conference on the theme "Agricultural Engineering–Technologies and Future Trends" will be held at the Asian Institute of Technology in **Bangkok, Thailand**, from **6 to 9 December 2005**.

Topics:

- Power and machinery
- Food engineering and biotechnology
- Soil and water engineering
- Energy in agriculture
- Agricultural systems
- Structures and environment
- Electronics in agriculture
- Agro-industry
- Agricultural engineering education
- Agricultural waste management
- Ergonomics
- Terramechanics

- New materials and emerging technologies

Important dates:

| | |
|---------------------------------------|-----------------|
| Deadline for submission of abstracts: | 1 March 2005 |
| Notice of acceptance: | 31 March 2005 |
| Full papers due: | 1 August 2005 |
| Early registration with payment due: | 12 October 2005 |

For more information, please contact: The Secretariat, Attn.: Dr. Emmanuel C. Canillas, International Agricultural Engineering Conference, ASE SERD Asian Institute of Technology, P.O.Box 4 Klong Luang, Pathumthani 12120, THAILAND. Tel.: +66 2 524 5494 Fax: +66 2 524 6200 E-mail: aaae@ait.ac.th emann@ait.ac.th

CIGR C O - S P O N S O R E D A C T I V I T I E S

International Conference on Postharvest Technology & Quality Management in Arid Tropics 24-26 January 2005

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

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 and shyam@squ.edu.om.

33rd International Symposium "Actual Tasks on Agricultural Engineering" 21-25 February 2005

Co-sponsored, among others, by CIGR, this symposium will be held from 21 to 25 February 2005 in Opatija, Croatia. "Actual Tasks on Agricultural Engineering" have been held for 32 years now, gaining in international standing in recent years thanks to the co-sponsoring by

CIGR, EurAgEng, and AESEE. The official languages of the symposium will be English and Croatian.

The aim of the Symposium is to present the latest scientific results on all aspects of research, design and development work in the various disciplines of agricultural engineering. Papers dealing with the following topics, or with other aspects of agricultural engineering, are invited:

- Farm mechanisation
- Power and machinery
- Ergonomics
- Energy in agriculture
- Soil and water
- Pre-harvest technology
- Crop harvesting
- Post-harvest technology
- Livestock buildings and equipment

The proceedings are indexed and abstracted in leading international databases. The registration fee of 100 € (minus 20 % for CIGR, EurAgEng, and AAEE members) covers proceedings and farewell banquet.

For further information, look up <http://www.agr.hr/ae> and contact the Symposium Secretariat: Faculty of Agriculture, Agricultural Engineering Department, Svetosimunska 25, HR-10000 Zagreb, Croatia. Tel.: +385 1 2393819 Fax: +385 1 2315300 E-mail: skosutic@agr.hr

CIACH 2005: The Agricultural Engineering Specialization in a Globalized World 10-12 May 2006

Co-sponsored by CIGR and organised by the Agricultural Engineering School of the University of Concepción and the National Agricultural Research Institute, the 5th International Congress of Agricultural Engineering will be held from 10 to 12 May 2006, at the University of Concepción, Chillán Campus, Chile. The main topics to be covered in oral or poster presentations are:

- Computer aids and automation in agriculture
- Agricultural mechanization
- Energy in agriculture
- Water resources in agriculture
- Food engineering
- Post-harvesting processing
- Civil work for agricultural use
- Sustainable agriculture and environment
- Biological system engineering
- Teaching on agricultural engineering

Important dates:

Abstracts: 31 March 2005
 Notification of acceptance: 30 April 2005
 Extended papers: 31 July 2005
 The conference fees are US \$ 140/160 (before/after July 30, 2005) and US \$ 50 for students. Further information: "V Congreso Internacional de Ingeniería Agrícola", Av. Vicente Méndez 595, Casilla 537, Chillán, Chile. Tel.: +56 42 208709 Fax: +56 42 275303 Email: ciach@udec.cl <http://www.udec.cl/ciach>

IV International Scientific and Practical Conference on "Ecology and Agricultural Machinery" 25-26 May 2005

This conference will be held at the North-West Research Institute of Agricultural Engineering and Electrification in **Saint Petersburg-Pushkin, Russia**, from **25 to 26 May 2005**. The conference languages will be Russian and English (translation provided). In the context of this conference CIGR will hold Presidium, Executive Board and technical Board meetings.

The aims and objectives of the conference are:

- to present and discuss the latest and the most efficient developments in agricultural engineering and production aimed to reduce the negative impact of agricultural techniques and machinery on the environment
- to stimulate the wide extension of the most advanced concepts, experiences and investigation results as well as to promote international cooperation and «know-how» transfer
- to give researchers, agricultural machinery manufacturers and farmers from Russia, CIS and Western countries an opportunity to establish personal contacts and exchange opinions and ideas.

The organizers have the honour to invite you to participate in the conference within the framework of the following sections:

- New environmentally friendly cropping technologies and devices
- Ecology and energy saving in soil tillage
- Designing methods for site-specific technologies, machinery and equipment
- New environmentally friendly technologies and devices in livestock management
- Designing and reconstruction of farm buildings for animal keeping
- Animal wastes management
- Optimization of energy use in agriculture
- Renewable energy sources and their agriculture application
- Electrical safety
- Automation in farming
- Microclimate control
- Development of new, more effective agricultural machines, implements and equipment
- Agricultural tractors and power devices
- Manufacturing and testing of agricultural machinery

- Repairs and maintenance
- On-board microprocessors

Important deadlines:

Registration fee payment: 31 January 2005
 Final manuscripts due: 31 January 2005

The Conference Proceedings will consist of revised versions of the papers submitted. The registration fee of 200 euro will cover admission to technical sessions, coffee/tea breaks and welcome party, Conference Proceedings, communication expenses, invitation required to obtain the entry visa to Russia, arrival and departure transfer.

Accommodation will be booked in the "Tsarskoselsky" Boarding House located in Pushkin or the "Pulkovskaya" Hotel in St-Petersburg, with the transportation of participants to the conference venue provided by the organizers. Optional professional meetings and/or visits in Saint Petersburg and the Leningrad region as well as sightseeing tours around Saint Petersburg and its suburbs will be organised at individual request and for separate payment. Instructions for registration fee payment will be given after receipt of the registration form.

Persons needing additional financial support to participate in the conference may apply to the Organizing Committee. For further information and online registration visit <http://www.szni.ru/eng/konf/KonfGodi/2005/2005.htm> or contact Tel.: +7 812 466-7804 or -6244 Fax: +7 812 466 56 66, E-mail: nii@nevsky.net

5th ECPA and 2nd ECPLF 9-12 June 2005

The 5th European Conference on Precision Agriculture and the 2nd European Conference on Precision Livestock farming will be held as parallel conferences from **9 to 12 June 2005** in **Uppsala, Sweden**. They will deal with the following main themes:

- Feed quality management
- On-farm analysis technology
- Robotics, autonomous vehicles and controlled traffic
- Environmental effects of precision agriculture and precision livestock farming
- Precision horticulture and viticulture
- Automation in livestock farming
- Implementation, education and training

More information and updates on the conferences can be found at <http://www-conference.slu.se/ecpa/index.htm> or <http://www-conference.slu.se/ecplf/index.htm>

Contact the conference secretariat by fax under +46 18 67 35 30 or by e-mail at ecpa@slu.se or ecplf@slu.se

EFITA/WCCA2005 25-28 July 2005

Organised by EFITA and co-sponsored, among others, by CIGR, FAO, and ASAE, the 5th Conference of the European Federation for Information Technology in Agriculture, Food and Environment (EFITA) and the 3^d World Congress on Computers in Agriculture and Natural

Resources (WCCA) will be held as a joint conference in the Universidade de Trás-os-Montes e Alto Douro, **Vila Real, Portugal** from **25 to 28 July 2005**. The conference language will be English.

This conference will provide a forum for agriculture related professionals to exchange information on applications and developments in the use of Information Technology. Contributions from various countries will allow a broadened perspective for all attending, and the Organising Committee particularly encourages participation from the New Member States of the EU and from the associated Candidate Countries.

To participate as authors of a paper to be included in the proceedings and to be presented orally or as a poster session, submit an extended abstract for consideration to efita.wcca2005@utad.pt. All submissions (4 pages max.) should be in Adobe Acrobat (.pdf) and MS Word (.doc) format according to a template that can be downloaded from the conference website. To facilitate the reviewing process, authors are required to choose one or more of the following topics:

- Aquatic resource management
- Adoption and extension
- Dairy and animal production systems
- Decision support systems and modelling: farm management
- Decision support systems and modelling: environment and scientific
- Education/training and distance learning/professional accreditation
- E-AgBusiness and production chain management
- Field data acquisition and recording
- Food safety control/tracking-tracing
- GIS and precision agriculture
- Grid Applications
- Information systems and databases
- Instrumentation and control
- Internet services
- Library science and knowledge representation
- Rural and environmental development and policy
- Wireless and sensor networks

The organizing committee accepts applications for half or full day workshops. Persons wishing to organize a Workshop should submit a proposal to efita.wcca2005@utad.pt. Proposals should clearly indicate the topic, background knowledge expected of the participants, objectives and Organising and Program Committees.

Dates and deadlines:

Third announcement: 15 February 2005
Announcement of paper acceptance: 28 February 2005

Camera-ready full papers: 2 May 2005
Early registration: 1 June 2005

The conference fee will be 350/400 €(before/after June 1, 2005). This covers workshop and conference sessions, all conference materials, welcome reception, four lunches, coffee breaks and a banquet. Participants wishing to hold a presentation must register by June 1, 2005. Only papers for which the registration fee is paid by that date will be published in the proceedings.

Additional information is available from the conference secretariat or from the conference website: EFITA/WCCA 2005, Edif. Engenharias II, Universidade de Trás-os-Montes e Alto Douro, 5000-911 Villa Real, Portugal. <http://www.agriculturadigital.org/efitaandwcca2005/> Fax: +351 259 350480. E-mail: efita.wcca2005@utad.pt

7th Fruit, Nut, and Vegetable Production Engineering Symposium “Frutic 05” 12-16 September 2005

This symposium will take place from **12 to 16 September 2005** in **Montpellier, France**. Under the title “Information and technology for sustainable fruit and vegetable production” the programme comprises the following topics concerning fruit (including wine grape), nut, vegetables and fresh cut perishables:

- Precision agriculture, including acquisition of satellite and airborne geo-referenced data
- Technological assistance to fruit and vegetable production: new tools enabling a more effective and environmental-friendly plant management, variety improvement in relation to automation of agricultural practices
- Sensors for collecting information either in field or for post-harvest applications
- Information processing and decision support systems both for agricultural and post-harvest management
- Post-harvest technology: relationship between technology and quality
- Data management: information systems, databank creation and sharing, e-trading.

The official language is English. Simultaneous translation will not be provided. In a “young researcher” forum PhD students will be given an opportunity to present their studies.

Important dates:

Submission of full papers: 15 February 2005
Submission of corrected papers : 1 May 2005

For further information look up <http://www.frutic05.org/> or contact: Michèle EGEA, Phone :+33 467 046 386 Fax: +33 467 046 306 E-mail: Frutic05@montpellier.cemagref.fr

OTHER ACTIVITIES

7th International Conference on "Construction, Technology and Environment in Livestock Farming" 2-3 March 2005

The Max Eyth Society for Agricultural Engineering in the VDI (VDI-MEG), the Committee for Technology and Structures in Agriculture (KTBL) and the Federal Agricultural Research Centre (FAL) invite you to participate in this conference, which will be held on **2 and 3 March 2005** at the FAL in **Brunswick, Germany**.

The main aim of this biannual conference is to present and to discuss the latest developments in farm buildings, animal housing and animal production as well as new solutions for environmental engineering concerning emissions and process technology.

The Institute for Production Engineering and Building Research of the FAL invites scientists and experts in agricultural engineering and manufacturers to give oral, poster or video presentations in one of the three sessions of the conference. Presentations should deal with innovative developments or solutions in connection with husbandry systems for dairy cows, cattle, pigs poultry and horses, specifically:

- Farm building, building systems, constructions, building material, building costs
- Husbandry systems, animal welfare
- Milking systems
- Feeding
- Management and labour
- Quality assurance and documentation of production
- Environmental impact, emissions, immissions, air quality
- Computer based systems
- Sustainable production systems
- Waste based products, renewable energy

A volume of the papers will be distributed to the participants of the Conference. The organizers are working to keep the price to a reasonable level of around 140 €

For further information, please mail to: Prof. Dr. F.-J. Bockisch, Institute of Production Engineering and Building Research, Federal Agricultural Research Centre (FAL), Bundesallee 50, D-38116 Braunschweig, Germany.

Phone: +49 531 596 4402 / 4406 Fax: +49 531 596 4499;
E-mail: BTU-Tagung-2005@fal.de; <http://www.bb.fal.de>

4th Agricultural Engineering Conference of Central and East European Countries 12-13 May 2005

This conference will take place from **12 to 13 May 2005** in **Moscow** under the auspices of Academician Romanenko G.A., President of the Russian Academy of Agricultural Sciences. It will be held in the State Scientific Institution "All Russian Research Institute for Electrification of Agriculture", which is situated in the Eastern part of

Moscow near the "Ryazansky Prospect" metro station.

Papers are invited on the following topics:

- Energy for rural development
- Renewable energy
- Milk farm mechanization
- Non-food technologies

Papers will be presented in plenary and poster sessions; all presented papers will be published in Conference proceedings. The registration fee is 350 Euro. It covers full board and refreshments during the conference, proceedings and transportation from the airport and back.

Dates and deadlines:

Papers: 15 February 2005

For further information please contact: SSI The All-Russian Research Institute for electrification of Agriculture; 2, 1-st Veshnyakovsky proezd; 109456, Moscow, Russia. Tel.: +7 095 171 2641 Fax: +007 095 170 5101

E-mail: viesh@dol.ru

8th Workshop on Spray Application Techniques In Fruit Growing 29 June - 1 July 2005

The 8th Workshop on Spray Application Techniques in Fruit Growing will be held in **Barcelona, Spain** from **29 June 29 to 1 July 2005**.

Topics:

- Novel spray application technology
- Performance of fruit crop sprayers
- Testing and adjustment of fruit crop sprayers
- Filling and cleaning of sprayers
- Nozzles, adjuvants, atomisation and spray quality
- Precision fruit crop spraying
- Decision support systems in plant protection
- Spray drift
- Spray optimisation in plantation crops
- Risk assessment and management in fruit growing
- Dose rates determination in fruit crops
- Methodology of research on spray application
- Other related topics

Registration fees are Euro 200/220 before/after May 15, 2005. Subtract Euro 120 to calculate student fees.

Dates and deadlines

Decision of the Scientific Committee: 1 April 2005

Workshop early registration: 15 May 2005

Submission of full papers: 29 June 2005

For further information, please contact the workshop secretary: Cristina Escobar González, Universitat Politècnica de Catalunya, Escola Superior d'Agricultura de Barcelona, Departament d'Enginyeria Agroalimentària i Tecnologia, C/ Urgell, 187, 08036 Barcelona, SPAIN Tel.: + 34 93413 7548 Fax: + 34 934137501 E-mail: sprayfruit.2005@upc.es

<http://www.insad.pl/sprayfruit2005.htm>

19th International ICID Congress & 56th International Executive Council Meeting 10-18 September 2005

From **10 to 18 September 2005**, the 19th International Congress of ICID and the 56th International Executive Council Meeting will take place in **Beijing, China**.

During the Congress, papers will be presented and discussed for two Questions, besides holding a Special Session and a Symposium. For the Questions, authors can submit papers through their National ICID Committees, or through the International Organizations associated with ICID. For the Special Session and Symposium, only one paper per country can be submitted. The main topics of this congress events are:

- Improving water and land management for increasing efficiency in irrigated agriculture
- Harmonious coexistence with flood water
- Legal and institutional challenges
- Water quality/salinity management
- Management of historical/traditional irrigation projects

All congress activities will take place at the Beijing International Convention Center.

Registration fees are USD 800/850 (before / after 1 July 2005) for member country (region) delegates, USD 850/900 for non-member country (region) delegates, and USD 400 for young professionals, i.e. those under 40 years old as of 18 Sep 2005.

For further information, look up <http://www.icid2005.org/>

III World Congress on Conservation Agriculture 3-7 October 2005

This congress, organised by the African Conservation Tillage Network (ACT), the Ministry of Agriculture of the Republic of Kenya, and the Kenya Conservation Tillage Initiative (KCTI) in association with the New Partnership for Africa's Development (NEPAD), will take place in **Nairobi, Kenya**, from **3 to 7 October 2005**.

Focusing on the main theme "Linking Production, Livelihoods and Conservation", it will deal with the following sub-themes:

- CA in building communities resilience and ability to provide for own livelihood and development needs
- CA in mitigating/alleviating effects of social ills such as HIV-Aids, urbanisation and declining interest in farming, especially among the young.
- Socio-economic, cultural, agro-ecological and technical factors in sustainable adoption of CA
- Soil life, biodiversity and agriculture
- Policies and infrastructure support in enhancing CA adoption
- CA contributing to global environmental quality concerns (carbon sequestration, green-house effect, etc.)
- Empowering farmers and farmer groups/associations in development and adoption of CA
- Effective research and dissemination strategies for CA adoption

- Stakeholder partnership and collaboration, including across sectors and disciplines
- Information-knowledge management

Important dates and deadlines:

Notification of acceptance 5 February 2005

Submission of full papers 30 June 2005

Accepted papers and case studies will be published for wider distribution and some will also be selected for oral presentation during the Congress. The official languages of the congress will be English and French (with simultaneous translation). Please register online or download the congress registration form from the Congress website. For further information, please contact: IIIWCCA Secretariat, No. 9, Balmoral Road, Borrowdale, Harare, Zimbabwe.

Email: actnetwork@africaonline.co.zw

<http://www.act.org.zw/Congress/index.html> Tel: +263 4 882107 Fax: +263 4 885596

HYDRO 2005: Policy into Practice 17-18 October 2005

This conference will be held in **Villach, Austria** from **17 to 20 October 2005**. Abstracts of up to 800 words, in English, are invited on the following or related themes:

- Policy into Practice
- Innovation, Best Practice and Environmental Sustainability
- Maximizing the Benefits of Hydropower
- Longevity of Hydro Plants
- Learning from Experience (Successes and Failures)

Please mail, fax or email abstracts to the address below. A short CV of each author should be included.

Dates and deadlines:

Receipt of abstracts 14 March 2005

Notification of acceptance May 2005

Full paper submission 29 July 2005

Final Bulletin June 2005

For additional information contact: Hydro 2005, Mrs Margaret Bourke, Aqua~Media International, Westmead House, 123 Westmead Road, Sutton, Surrey SM1 4JH, UK. Fax: + 44 20 8643 8200. Email: hydro2005@hydropower-dams.com <http://www.hydropower-dams.com/>

14th European Biomass Conference and Exhibition 17-21 October 2005

Subtitled "Biomass for Energy, Industry and Climate Protection", this event is scheduled to take place from **17 to 21 October 2005 in Paris, France**. It will be an excellent forum for the presentation of the latest innovative global strategies, technologies, projects and efficient practice rules for energy and environment. There will also be ample opportunity for information exchange and for discussions among scientists, policy makers, practitioners of the use of biomass for energy, industry and climate protection. The exhibition integrated into the Conference will provide an excellent opportunity for making business in the emerging biomass sector.

The five-day programme for this Conference will comprise

plenary lectures describing the state-of-the-art in biomass technology; oral and visual presentations of research, development, demonstration and commercial projects; workshops on specific Biomass issues; an exhibition of biomass products, utilisation and conversion technologies; and a social programme.

The following topics will be discussed:

- 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
 - Application of biomass for energy, and industrial products
 - Economics and benefits deriving from biomass process technologies, integration and simultaneous production
 - International biofuels trade, strategy, policy and climate protection issues
 - International Co-operation for accelerating the large-scale worldwide deployment of bioenergy. Biomass in the Developing World

Dates and deadlines:

Abstract submission: 7 April 2005
 Notification of acceptance: 31 May 2005
 Papers presented at the conference will be published in the Proceedings. For abstract submission instructions please look up http://www.conference-biomass.com/sysconf/abstract_intro.html, and submit your abstract online at: <http://www.conference-biomass.com/abstracts>. For further information, look up <http://www.conference-biomass.com/> For enquiries concerning abstract submission, please contact: ETA - Florence Attn.: Eng. Silvia Vivarelli Tel:+39 055 500 2174 Email: biomass.conf@eta.orence.it

Annual Scientific Conference and General Meeting of TSAE 21-23 November 2005

The 2005 Annual Scientific Conference and General Meeting of the Tanzania Society of Agricultural Engineers (TSAE) will be held at the former TANESCO Training Centre, **Morogoro, Tanzania** from **21 to 23 November 2005**. The TSAE 2005 Annual General Meeting (AGM) will be held at the end of the Scientific Conference on 23 November 2005. The main theme will be "Agricultural Mechanization and Industrialization in Developing Countries: Addressing the Problems of the Poor".

Members of TSAE, Institution of Engineers Tanzania (IET), and the general public within and outside Tanzania are invited to submit papers on any of the following sub-themes:

- Agricultural mechanization
- Industrialization
- Information and communications technologies (ICTs)
- Energy saving technologies
- Post harvest technologies
- Employment creation, entrepreneurship, income generation
- Education and training
- Environmental issues
- Water supply and sanitation
- Gender issues
- Role of the private sector
- HIV/AIDS.

Deadlines:

Abstracts 30 April 2005
 Full papers 15 August 2005
 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 <http://eng.suanet.ac.tz/>

XII International Winter Road Congress 27-30 March 2006

This congress will take place in **Turin, Italy**, from **27 to 30 March 2006**.

The main topics of the congress are:

- Strategies, levels of service and standards
- Performance and financing
- Safety and mobility in winter, social aspects
- Environment
- Winter maintenance managements systems
- Snow and Ice removal technology

Deadlines:

Complete papers 31 May 2005
 Exhibition space requests 30 September 2005
 Early registration 30 September 2005
 Hotel reservation 15 December 2005

For further information contact: International Congress Torino, Via Cervino 60, 10155 Turin, Italy. Tel: +39 011 2446911 Fax: +39 011 2446900 Email: piarc2006@congressiefiere.com <http://www.aipcr2006.it/>

MISCELLANEOUS

Contributions to CIGR Newsletter

The CIGR General Secretariat asks National and Regional Societies as well as Technical Sections to make contributions to the CIGR Newsletter. Please send news items, reports, etc. to the CIGR General Secretariat.

Silsoe Research Institute Library

Following the decision by the Biotechnology and Biological Sciences Research Council to withdraw their core grant, Silsoe Research Institute will be closing in March 2006. The Institute and its staff are aware of the importance of some of the material held by the Library.

Early agricultural engineering documents were written by founding members of the Institute at the Institute of Engineering Research at Oxford in the 1930s, whilst a larger series (Divisional and Departmental Notes) refers to research undertaken during the 1950s, 60s and 70s as the National Institute of Agricultural Engineering at Silsoe. The Library also holds complete sets of farm machinery and tractor Test Reports from 1949 and historical

agricultural engineering information published in journals, handbooks and report literature largely, but not exclusively, from the UK.

The Institute is exploring ways of ensuring that this agricultural engineering collection can be managed and made available for research in the future at a suitable location.

The photographic and film collection dating back to the 1950s will also be transferred to an appropriate public archive.

Any organisations that have an interest in either funding or housing the collection should contact the Institute Director.

The main book collection on science subjects, other than agricultural engineering, is being offered along with science journals for transfer to other research libraries. The journal holdings list and any subject lists for classified literature can be provided by the Librarian on request.

Contacts: Librarian: Anne Jarvis, anne.jarvis@bbsrc.ac.uk
Institute Director: Professor Bill Day, bill.day@bbsrc.ac.uk

PUBLICATIONS

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

CIGR Electronic Journal: ISSN 1682-1130

Since the last issue of the CIGR Newsletter the following papers have been published in Volume VI (2004) of the *CIGR E-Journal / Agricultural Engineering International: The CIGR Journal of Scientific Research and Development*, ISSN 1682-1130

Peer Reviewed Technical Articles:

25.) J. Montero, P. Galletero, C. Neumeister, and J. Diaz. Comparative Study Between Rigid Frames and Truss Steel Structures. Manuscript BC 03 010.

26.) B. Hermiyanto, M. Zebisch, G. Singh, S. Ranamukhaarachchi, R. Clemente and F. Agus. Comparing Runoff, Soil and Nutrient Losses from Three Small Watersheds in Indonesia. Manuscript LW 04 007.

27.) G. Tomaselli, G. Pappalardo, M. Di Marco, and P. Russo. Building Design Solutions for Sheep and Goat Breeding in the Protected Areas of Sicily. Manuscript BC 03 026.

28.) Y. Yuan, A. Hansen, and Q. Zhang. The Specific Gravity of Biodiesel Fuels and their Blends with Diesel Fuel. Manuscript EE 04 004.

29.) A. De Montis and S. De Montis. Mandatory and Spontaneous Processes of Impact Assessment: A

Comparative Study Referred to Sardinia, Italy. Manuscript LW 04 011.

30.) S. Dasyilva, C. Cosandey, D. Orange, and S. Sambou. Rainwater Infiltration Rate and Groundwater Sustainable Management in the Dakar Region. Manuscript LW 04 004.

31.) C. Bravo, D. Moshou, R. Oberti, J. West, A. McCartney, L. Bodria and H. Ramon. Foliar Disease Detection in the Field Using Optical Sensor Fusion. Manuscript FP 04 008.

32.) S. Korfali and B. Davies. The Relationships of Metals in River Sediments (Nahr-Ibrahim, Lebanon) and Adjacent Floodplain Soils. Manuscript LW 04 010.

33.) H. Sun, H. Keener, W. Deng and F. Michel, Jr. Development and Validation of 3-D CFD Models to Simulate Airflow and Ammonia Distribution in a High-Rise Hog Building during Summer and Winter Conditions. Manuscript BC 04 004.

34.) P. Kai and A. Schafer. Identification of Key Odour Components in Pig House Air using Hyphenated Gas Chromatography Olfactometry. Manuscript BC 04 006.

35.) L. Jacobsen and O. Frosig Nielsen. Modelling Airflow Rate through Perforated Benches in Greenhouses. Manuscript BC 02 006.

36.) J. Khazaei and D. Mann. Effects of Temperature and Loading Characteristics on Mechanical and Stress-Relaxation Behavior of Sea Buckthorn Berries. Part 3. Relaxation Behavior. Manuscript FP 03 014.

37.) M. Sangha, P. Gupta, V. Thapar, and S. Verma. Storage Studies on Plant Oils and Their Methyl Esters. Manuscript EE 03 005.

38.) M. Islam, B. Marks, and F. Bakker-Arkema. Optimization of Commercial Ear-Corn Dryers. Manuscript FP 04 007.

39.) B. Pathak, F. Kazama, and I. Toshiaki. Monitoring of Nitrogen Leaching from a Tropical Paddy in Thailand. Manuscript LW 04 015.

40.) C. Noeme and R. Fragoso. Evaluation of Alternative Policies of Irrigation Water Price. Application to Large Farms in Alentejo Region. Manuscript LW 04 006.

41.) P. Sousa and S. Pedersen. Ammonia Emission from Fattening Pig Houses in Relation to Animal Activity and Carbon Dioxide Production. Manuscript BC 04 003.

42.) M. Fadel. Performance Assessment of VRT-based Granular Fertilizer Broadcasting Systems. Manuscript PM 03 001.

43.) S. Saptomo, B. Setiawan, and Y. Nakano. Water Regulation in Tidal Peatland Agriculture using Wetland Water level Control Simulator. Manuscript LW 03 001.

44.) J. Perez, M. Santamarina, J. Valles, A. Pena, D. Valera, and A. Carreno. Optimal Layout for Milk Goats Livestock Farms Using Genetic Algorithms. Manuscript BC 03 019.

All papers in the CIGR Electronic Journal are available free of charge on the internet at <http://cigr-ejournal.tamu.edu/>

Long-term Development Strategies for Iran's Water Resources

Published by the Public Relations and International Affairs Bureau of Iran Water Resources Management Company, Ministry of Energy; available for download in .pdf format at <http://www.wrm.or.ir/Serie1%5Clatin.pdf>

4th Report from Section II Working Group 13

Pedersen, S. & Sällvik, K. *Climatisation of Animal Houses – Heat and Moisture Production at Animal and House Levels: 4th 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>

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

Yearbook Agricultural Engineering 17 (2005)

Volume 17 (2005) of the *Jahrbuch Agrartechnik / Yearbook Agricultural Engineering*, edited by F. Meier and H.-H. Harms, is now available. Contributions appear in English as well as German. The publication is available for Euro 50.50 from the publisher: Landwirtschaftsverlag Münster-Hiltrup, Germany. Tel.: +49 (0) 2501 80 13 00, Fax: +49 (0) 2501 80 13 51, EMail: Service@lv-h.de. Purchase order number 75065. ISBN 3-7843-3345-1

Recommandations internationales pour le logement des bovins viande: Synthèse des connaissances de la Commission Internationale du Génie Rural

This publication, the French version of the "CIGR Design Recommendations for Beef Cattle Housing" by CIGR WG 14, which appeared in September 2002, can be ordered from: Technipel, 149 rue de Bercy, F75595 PARIS CEDEX 12. The price per unit is 18 € plus postage. <http://www.inst-elevage.asso.fr/> E-mail: technipel@inst-elevage.asso.fr

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