

AgEng2009 / LAND. TECHNIK / AGRITECHNICA

Agricultural Engineering International Conference and Fair
6-14 November 2009

This year, the conference AgEng2009 will be held jointly with the 67th LAND. TECHNIK conference in Hanover, Germany on 6-7 November. It will lead directly in to the large agricultural engineering fair AGRITECHNICA, which will be open to the public on 10-14 November. Tickets for the Preview Days on 8-9 November, will be available at the conference.

The conference is being organised jointly with the Max Eyth Society for Agricultural Engineering of the VDI (VDI-MEG), on the theme **Agricultural Engineering - Innovations to meet Future Challenges**. It will emphasise the responsibility of agricultural technology to deal with future demands in satisfying basic needs of humanity, especially the sufficient production of food and energy.



The topics will include all the important fields of agricultural engineering such as tractors, power train, electric drives and mobile hydraulics, electronic components, software

engineering and data handling, automation technology, locating, tracking and navigation, soil protection, tillage and sowing, harvesting technology, crop protection and fertilizing, energy from biomass, industrial product development and market service. It will give agricultural engineers the opportunity to

present the results from their research and product development, within the technical innovation background of AGRITECHNICA. For registration and more details visit www.vdi.de/landtechnik-ageng

The exhibition which follows the conference, AGRITECHNICA, will be attended by most of the world's agricultural machinery companies. At the last AGRITECHNICA in 2007 more than 2,200 companies and organisations from all over the world took part. This year, AGRITECHNICA will be devoting special attention to the topic of soil and water which are two key production factors in agriculture with great influence on yields. For more information and the complete exhibition programme please visit www.agritechnica.com.

Visiting Hanover

With a population of some 500,000 the city is a major centre of northern Germany, known for hosting annual commercial expositions such as the Hanover Fair and CeBIT.



Hanover Town Hall

For information on sightseeing in Hanover and the history of the city see: <http://en.wikipedia.org/wiki/Hanover> www.hannover.de/english/index.html www.tourism-hannover.de

Field Robot Event at the Joint International Agricultural Conference (JIAC) Wageningen, The Netherlands

The **Field Robot Event (FRE)** will be held during the **Joint International Agricultural Conference (JIAC)** conference on 6-8 July at Wageningen. Registration is still open but if you can't get a team together then do go and give the teams your support. Even better try to provide additional support by offering to sponsor the event, as you will appreciate costs to get student teams to the event are always difficult. A small revolution is



Field Robot navigating maize

working in a field? The Field Robot Event proves this is possible! Please check the FRE website at www.fieldrobot.nl.

currently taking place and FRE shows the way modern precision farming could go. A new breed of robots will soon be able to carry out a variety of tasks in row crops, such as weeding, spraying and disease monitoring. Completely autonomous agricultural robots

The 4th Newsletter for the JIAC conference was published recently. Over 569 abstracts from 49 countries have been received, so there has had to be some major selection to reduce it to the 288 papers and 155 posters for which there is time and space. The accepted authors will have got their full papers

in by now. Feedback from the scientific committee will be by 1 April with final (revised) papers being needed on 15 April. The conference will release a CD with all the papers at the start of the conference and will publish the oral presentation papers on various websites. Registration, including accompanying people, is via the JIAC 2009 website (www.jiac2009.nl) with the early booking discount ending on 1 May.

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From the Secretary-General

David Tinker

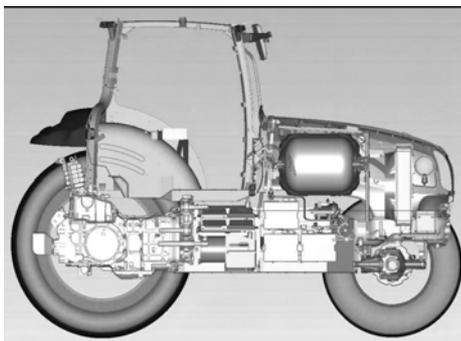


David and Nicky Tinker will be going to the SIMA Exhibition in Paris at the end of February (so they will have been by the time you receive this

Newsletter). They will be there to attend the third meeting of the AgEng2010 organising committee. David of course will do his best to look around the exhibition, see what's interesting for agricultural engineers and try to spread the word about EurAgEng.

David has been asked to give a talk to mechanical engineers about the upcoming topics, developments and technologies in agricultural engineering. A convenient way to find some information has been to look at SIMA's Innovation Awards. Two Gold Medal winners which are likely to attract a lot of attention and discussion will be the CNH hydrogen powered tractor and the Massey Ferguson dynamically controlled tractor cab. The Massey Ferguson cab is connected to the tractor's CAN-Bus. It takes position, braking and acceleration information into account in order to control bounce, roll and pitch effects. The driver can control the smoothness of the damping directly in the cab as required.

The CNH hydrogen powered tractor is an attempt to look at energy self-sufficient farming and to address climate



CNH Hydrogen powered tractor

change and reduce greenhouse gas emissions. It has technologies based on the use of hydrogen and fuel cells that are generally regarded as clean alternatives to traditional fossil fuels. The New Holland fuel cell is powered by hydrogen and emits only water vapour. It is planned that the hydrogen required to

operate the New Holland will be produced by an energy self-sufficient farm. The hydrogen will be generated on the farm using electrolysis of water, with the electricity required for the electrolysis being supplied by wind power, solar power or the use of biomass technologies.

These and other Innovation Award winners can be found on the SIMA website <www.simaonline.com> where there are many languages available (look under Events/Animations for a link to SIMA Innovation Awards 2009).

The EIMA Exhibition was held at Bologna, Italy in November 2008. 1600 exhibitors from 40 countries attended and details of the many technical innovations are available on the UNACOMA "Machinery World" website <www.unacoma.it/mmacchina/16-31_nov_2008.pdf>. From an agricultural engineering point of view there are many interesting devices that are unusual in much of northern Europe including olive harvesters and a remotely controlled skyline carriage. Enjoy having a look at the innovations from EIMA and SIMA to see what your agricultural engineering colleagues have been doing elsewhere in Europe.

There were similar Innovations at the Agritechnica Exhibition in Hannover during November 2007. The Innovations are still on the website at <www.agritechnica.com/innovations.0.html> and there will be the Innovations for Agritechnica 2009 in a few months.

Don't forget that the Land. Technik-AgEng 2009 conference will be held immediately before Agritechnica 2009 so all our members can discuss and listen to current research and development and then visit the show to see how close industry is to putting these developments into practice. We hope to see many of you at the conference. There are full details on the front page of this newsletter.

A further source of information on recent developments in agricultural engineering is the German/English "Agricultural Engineering Yearbook 2009 / Jahrbuch Agrartechnik" edited by EurAgEng members Prof Dr Hans H Harms and past-president Dr Friedhelm Meier with many other EurAgEng members involved in preparing chapters.

This is the 21st Volume of the Yearbook which first appeared in 1988. It summarises research in the field of agricultural technology over the past year and also discusses the market for equipment and emerging topics such as Bioengineering and Renewable Energies. It will certainly be available at Land. Technik AgEng 2009 in November. However many of you will want to check what has been happening in agricultural engineering before then so I can confirm that the Yearbook is a new release on the DLG Bookshop for €49.90 (including German sales tax). The website is at <www.dlg-verlag.de/shop/product_info.php/info> then follow the new-release link.



Many agricultural engineers, like me, have become much more involved in bio-engineering and involved in food processing, handling of wastes and similar issues. Woodhead Publishing has a range of books that move into these areas. One such book that I had a small part in is the "Handbook of water and energy efficiency management in food processing" edited by Jiri Klemes, Robin Smith and Jin-Kuk Kim. This large and comprehensive book is aimed at ensuring that food processing plants comply with legislation and achieve reductions in cost. Much of the book is general and can be applied to many food processing operations but the final section talks about specific sectors including those closer to agricultural engineering such as fresh meat and poultry processing, cereals, sugar and brewing and winemaking. The website is at <www.woodheadpublishing.com>. Unfortunately the publisher does not yet have a Bioengineering heading so it is necessary to look under other links such as [Food Science, Food Technology, Nutrition] and [Environmental Technology] to find titles of interest. If

you do buy books from here please send an email to the Secretary General and I will use the information on sales to try to negotiate a deal with Woodhead Publishing.

Finally some business news (and we have to hope that there is some good news for 2009 as well). CNH have reported strong sales (+16%) and net income (+48%) in 2008 but with a distinct

weakening in the fourth quarter. Continuing agricultural equipment sales growth combined with a favourable mix of higher horsepower agricultural tractor and combine harvester sales offset adverse construction equipment market conditions. Whilst sales of agricultural equipment rose 30% in 2008 (and 8% in Q4) sales of industrial equipment fell 11% (and 48% in Q4). In the first quarter of 2009 CNH expects worldwide

industry retail unit sales of over-40 horsepower tractors to decline by 10 to 15% and industry retail unit sales of combines to be down 20 to 25%. In North America, the Puma 135-195 HP CVT tractors were launched along with large sprayers and balers while in Europe, a range of crawler tractors was released and the T6080 (155 HP) was a winner of the EIMA "Golden Tractor for Design" award.

News from CABI

The proceedings from AgEng2008 have been available in the CAB Abstracts repository since 2 February 2009. If your institution subscribes to the database you will be able to access the full text records there.

Abstracts of the relevant proceedings will also be available in forthcoming issues of the CAB Abstracts printed journals, eg Agricultural Engineering Abstracts.

As of 1 January 2009, CAB Abstracts have automatically included access to all the full text content previously only available via a separate subscription.

To meet the need of researchers for access to full text content, CABI is continuously collecting together 'hard-to-find' material from around the globe. Previously this content was available only via Full Text Select (a separate subscription product), but we have decided to automatically include it in

CAB Abstracts. It is important that researchers have access to **all** relevant content - not just that from the major aggregators - and the full text content on CAB Abstracts helps make this a reality. It is a permanent, sustainable repository, currently containing over 35,000 documents (as at Oct 2008) and growing by over 10,000 documents per year.



The full text available via CAB Abstracts includes

- Conference proceedings
- Reports (government reports, international organisations)
- Journals articles (many not available through the major aggregators. Including English and non-English documents).

BBSRC Sustainable Bioenergy Centre (BSBEC)

The UK's Biotechnology and Biological Sciences Research Council has launched a £27M (approx €28M) Sustainable Bioenergy Centre - the biggest ever single UK public investment in bioenergy research. The centre will provide the science to underpin and develop the important and emerging UK sustainable bioenergy sector and replace the petrol in our cars with fuels derived from plants.

This is an innovative academic-industry research partnership to underpin development in the important and emerging bioenergy sector. Renewable bioenergy could make a major contribution to the UK's future energy mix, offering greater sustainability and security.

The centre provides a focus for:

- Ensuring sustainability
- Widening the range of starting materials for bioenergy
- Making plant cell walls easier to break down
- Optimising fermentation to produce fuel.

Six research programmes address key barriers to sustainable bioenergy.

Each draws on associated programme members from academia and industry. The six projects each involve academic and industrial partners (including the Scottish Whisky Research Institute - that has to be an interesting project partner!). It doesn't have a physical Centre as such, just these six collaborative projects, each with a lead body. There is plenty of agricultural involvement eg Rothamsted, British Sugar, Syngenta, SCRI (Scottish Crop Research Institute). Hopefully some of the outputs from these projects will need agricultural engineering solutions but in the meantime the partners in these projects will be well placed to be involved in the EU FP7 Research calls on Bio-refineries.

For more information about BSBEC, visit <www.bsbec.bbsrc.ac.uk>



Do you need staff?

If you look at the EurAgEng web site <www.eurageng.eu> you will see a section **Jobs**. We have had several advertisements on the site, generating income for the Society. Next time you are recruiting staff, please consider placing an advertisement with us on the web. It does not cost much and it reaches a very wide and appropriate audience. Also, it can be arranged very quickly. Contact Mike Hurst at <web@eurageng.eu> if you are interested.

Sponsored Events

Full details on sponsorship of events and how to apply can be found at <www.eurageng.eu/events.htm>

1-3 June 2009

**16th International conference
KRMIVA 2009 in the field of animal
nutrition and feed**

Organiser: Krmiva d.o.o. Zagreb and
Croatian Association of Feed Producers,
Technologists and Nutritionists
Venue: Opatija, Croatia
Web: www.krmiva.hr/index-en.htm

10-11 June 2009

**Sustainable Rural Life - Engineering
Solutions for neo-Rural Areas**

Organiser: EurAgEng working group
RD27, HAMK University, Finland
Venue: Hämeenlinna, Finland
Web: www.hamk.fi/sustainable rurallife

17-19 June 2009

**XXXIII CIOSTA-CIGR Section V
International Conference "Technology
and Management to ensure
Sustainable Agriculture, Agrosystems,
Forestry and Safety"**

Organiser: DISTAFA - Università
Mediterranea di Reggio Calabria
Venue: Reggio Calabria, Italy
Web: www.ciosta.unirc.it

30 June -2 July 2009

**6th Research and Development
Conference of Central and Eastern
European Institutes of Agricultural
Engineering**

Organiser: Lithuanian University Institute
of Agricultural Engineering
Venue: Raundonvaris, Lithuania
Web: www.mei.lt

6-8 July 2009

**International Conferences - ECPA
(European Conference on Precision
Agriculture), ECPLF (European
Conference on Precision Livestock
Farming) and EFITA conference
(European Federation for Information**

**Technology in Agriculture, Food and
the Environment)**

Venue: Wageningen University and
Research centre, Netherlands
Web: www.jiac2009.nl

30 August - 2 September 2009

**Two conferences - 31st International
Conference of CIGR Section IV
"Rational Use of Energy in Agriculture
and the Economical Use of the
Renewable Sources in connection with
Environmental Protection", and
"Synergy and Technical development
in the Agricultural Engineering"**

Organisers: CIGR Hungarian National
Committee, the Hungarian
Electrotechnical Association and the
Mechanical Engineering Faculty of the
Szent István University
Venue: Gödöllő, Hungary
Web: www.synergy2009.szie.hu

31 August - 2 September 2009

**5th International Technical
Symposium on Food Processing,
Monitoring Technology in
Bioprocesses and Food Quality
Management**

Organisers: CIGR Section VI (Postharvest
Technology and Process Engineering) &
Leibniz Institute for Agricultural
Engineering Potsdam-Bornim (ATB), Dept
for Horticultural Engineering
Venue: Potsdam, Germany
Web: www.atb-potsdam.de/CIGRPostharvest2009/

23-25 September 2009

**Disaster Management 2009 - First
International Conference on Disaster
Management and Human Health**

Organiser: Wessex Institute of
Technology, UK & University of Toronto
Venue: Ashurst, Southampton, UK
Web: www.wessex.ac.uk

28-30 September 2009

**Agrolingeniería 2009 - 5th National
and 2nd Iberian Conference**

Organiser: Spanish Society of
AgroEngineering
Venue: Lugo, Spain
Web: www.aging2009.org
Tel: +34 982 285 900

6-7 November 2009

**Conference LAND.TECHNIK AgEng
2009 - Innovations to meet future
challenges**

Organiser: VDI Wissensforum and
EurAgEng
Venue: Hanover, Germany
Web: www.vdi.de/landtechnik-ageng
Email: wissenforum@vdi.de

25-27 May 2010

**2nd International Conference FRIAR
2010 on Flood Recovery, Innovation
and Response**

Organiser: University & Polytechnic of
Milan, Wessex Institute of Technology and
University of Wolverhampton, UK
Venue: Milan, Italy
Web: www.wessex.ac.uk/conferences

26-28 May 2010

**3rd International Conference DEBRIS
FLOW 2010**

Organiser: University of Milan, Italy and
the Wessex Institute of Technology, UK
Venue: Milan, Italy
Web: www.wessex.ac.uk/conferences

6-8 September 2010

**AgEng2010 - International
Conference on Agricultural
Engineering "Towards
Environmental Technologies"**

Venue: Clermont-Ferrand, France
Organiser: Cemagref, SitmaAFGR, AFEID
Web: www.ageng2010.org
Email: info@ageng2010.fr

Other Events

12-13 April 2009

Energy Farming Summit - 2009

Organiser: Growdiesel Climate Care
Venue: New Delhi, India
Web: www.growdieselevents.com

15-19 June 2009

**18th Triennial ISTRO Congress -
ISTRO 2009**

Organiser: ISTRO - International Soil
Tillage Research Organisation
Venue: Izmir, Turkey
Email: istro2009@mail.ege.edu.tr
Web: www.istro2009.ege.edu.tr

12-15 August 2009

3rd International Dry Toilet Conference

Organisers: Global Dry Toilet Association
of Finland
Venue: Tampere, Finland
Web: www.drytoilet.org/dt2009

1-4 September 2009

**CIGR V Conference - Technology and
Management to Increase Efficiency in
Sustainable Agricultural Systems**

Organisers: CADIR, UNR and INTA
Venue: Rosario, Argentina
Web: www.cigr2009argentina.org

13-16 September 2009

**Agricultural Technologies in a
Changing Climate - the 2009 CIGR
International Symposium of the Australian
Society for Engineering in Agriculture**

Venue: Brisbane, Queensland, Australia
Web: www.seag2009.com/

9-11 November 2009

**12th Inter Regional Enviro Water
Conference**

Organisers: ANAFIDE, CIGR & 2IE
Venue: Marrakech, Morocco
Web: www.anafid.org www.cigr.org

Sportsturf in India

David Hemstock

David Hemstock has recently started-up an international sports-turf consultancy company in India. Called "International Sports Turf Engineering Consultants" (ISTeC) it has several projects underway, including the first international-standard rugby pitches in the country. Eight new pitches are under construction on the Delhi University Campus, to be used for the Rugby 7's Tournament in the Commonwealth Games in October 2010. Work is pressing ahead 24 hours a day. Since the traffic is so dense during the day in the city, spoil has to be removed at night, and the large amount of imported stone and sand required in construction is also brought in at night.

Prone to flooding, several of the pitches have pumped drainage systems, and fail-safe backup provisions for every eventuality other than a total inundation. The whole project is being managed by the company's Indian consultants through the UK base, with emphasis on minimising the risk of problems developing before or during the tournament; reducing the risk of failure of the turf condition, playing quality, and the irrigation and drainage aspects that go with it.



Technical difficulties are present on each site. Logistics are always a problem with such a project, but the greatest problem is trying to communicate the concept of fine turf management for a minority sport in the country. The engineer-agronomist also needs training skills and enthusiasm for the sport in order to raise the level of management and to get the most out of those working with him.

The 7's tournament is over in two days, but with several weeks of training and build-up, and full trial games planned to test the facilities and surfaces in October 2009 and January 2010. The Games are very important to India, allowing a showcase, albeit in a much smaller way, similar to that rendered by the Olympics in China. An embarrassment at the country's poor showing in the last two Olympics, with single medal status for a population of over a billion, is stimulating action from the Government and private investors. The steel-based Mittal Foundation, for example, is dedicating resources to developing elite athletes in targeted sports for the next Games in London.

David's experience with golf course design and construction is being used to the full on the new rugby pitches. "We are in

effect forming eight huge golf greens, with the pitches being constructed to USGA (United States Golf Association) specifications. This allows an accurate testing procedure throughout the design, construction and maintenance period to ensure quality, and conformity with the Commonwealth Games Federation standards" says David.

Only the Bombay Gymkhana Club has a renowned rugby pitch in the country, despite there having been a rugby union there for almost a century. Even this club has an enduring tension between the rugby and cricket functions, the two not mixing well as far as turf-condition goes. For Delhi University, a legacy of cricket and soccer will remain, and of course rugby if anyone wants to start up a club. Three of the pitches will revert to cricket and five will become the basis of what could be a very well equipped international soccer academy.

Soccer is something that India is slowly turning to, whilst continuing to focus on the 'religion' of the bat and ball. Everyone supports a soccer team, usually English, and soccer pitches are a fairly common site in places such as Delhi, Bangalore, and the heartland of Indian soccer in Goa and Calcutta. Premiership clubs are always looking to expand their sphere of influence, and kit-sales potential, and so teams such as Manchester United and Chelsea have shown interest in developing closer links with the sub-continent. It is also not lost on many Indians that there is big money involved in such high profile international sport.

Overall, cricket rules in numbers of facilities, those playing, and money, but strangely, even the majority of cricket outfields are quite poorly presented. Typically, the red lateritic clay and local Bermuda grasses provide a weak green turf which lacks resilience, and visual quality. There is scope for improvement indeed, for both players and those areas they play on.

Rugby is destined to remain a very minor sport being somehow at odds with the culture and physique of the country. However, if soccer is taking a hold, maybe rugby can follow, at least in some small way. Indian international rugby is a very, very long way off, though!

"Working in India is always interesting, testing, and rewarding. The technical problems associated with high-pressure situations such as this are a challenge, but it makes life stimulating!", David says. "India is lagging internationally in almost all sports, but the will is there to develop, for the Commonwealth and Olympic Games, for soccer and golf especially. It's great to be helping to move the country on by introducing new expertise and facilities".



See the website <www.internationalsturf.com> for more on ISTeC.

Are you getting it?

Over 900 members do not have a current contact email address on our database and so are unable to receive the latest monthly updates with news, conference notices and job adverts. Please check your contact details via the members' page on the website, inform us of any changes, and make sure you are not missing out on the latest information. The address is <www.eurageng.eu> then click on Members' Login.

Conservation agriculture

- technology transfer and adaptation for Africa's smallholder farmers

Brian G Sims - Engineering for Development, Bedford, UK
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If the world seems to be facing some daunting problems on the financial and environmental fronts, then the developing world is battling for the very existence of many of its people. The first UN Millennium Development Goal pledged to eradicate extreme hunger and halve the proportion of people suffering from chronic hunger, all by 2015. We are nowhere near to achieving this goal, and in fact in **sub-Saharan Africa (SSA)** the situation is getting worse. The world's population is now up to 6.75 billion and rising (check out the sobering population clock on <http://opr.princeton.edu/popclock/>) and some 30% of sub-Sahara's 770 million population are chronically hungry today. On top of an already dire situation we can, as we allocate greater resources to biofuel production, see the impact of sharply escalating food prices especially for the world's staples of rice, wheat and maize. And we are beginning to see the impacts of climate change in SSA with its associated increase in desertification as, according to the Intergovernmental Panel on Climate Change, the continent gets set to bear the brunt of global warming (www.ipc.ch).



A Brazilian-made tractor-mounted no-till planter for CA farming

In parallel with the haunting spectre of hunger we are also witnessing a systematic destruction of the world's natural resources. Not only are we suffering rainforest destruction at unprecedented rates, but also accelerating soil erosion is unleashing sequestered C into a climate system that may already be past its tipping point. Unless we stop greenhouse gas emissions we will soon be melting our permafrost which will then spew out

methane with a climatic heating potential over 20 times that of CO₂.

So what can we do as populations increase, food supply declines and natural resources are squandered? Natural resource conservation is a worldwide concern and demands concerted action at a global level. But smallholder farmers in SSA are unlikely to be excited by the larger picture; they have the immediate concerns of family welfare to worry about. As one response to the situation, the UN's Food and Agriculture Organization (FAO) is supporting the development and adoption of sustainable **Conservation Agriculture (CA)** practices amongst smallholder farmers in SSA. CA comprises no-till planting into permanent soil cover produced with crop residues and cover crops in conjunction with judicious rotations of main and cover crops to maintain soil fertility (www.fao.org/ag/ca). The concept has been developed in South America (especially Brazil which has over 25 million ha of CA) and FAO has been instrumental in facilitating the south-south transfer of technical knowledge to several SSA countries.

An important element in the adoption process in Africa is the development of an indigenous CA equipment manufacturing ability so that equipment (in particular no-till planters) can be adapted and manufactured in accordance with local conditions. In May 2008 FAO organised a CA equipment manufacturing study tour to southern Brazil for would-be East African entrepreneurs. This was followed by a three-day workshop at the Paraná state Agronomy Institute (IAPAR) where Brazilian and African manufacturers interacted and explored future possible joint actions. The spirit of cooperation of the Brazilian manufacturers was truly remarkable and has been further enhanced by the progressive policies of the current administration in Brazil under President Luiz Inácio Lula da Silva who is particularly keen to promote

technology exchanges between his country and the African continent.

The Brazilian CA equipment manufacturing industry is today highly developed. There are, for example, over 300 models of no-till planters on the market produced by more than 25 manufacturers. All farm sizes are catered for, from draught animal powered enterprises through small two and four-



East African manufacturers learn from a Brazilian counterpart in this CA equipment factory in southern Brazil

wheel tractor powered farms to large commercial producers covering thousands of hectares. The export market is also well developed. Prior to the Brazil study tour the African situation was in stark contrast to the achievements in South America. The indigenous CA equipment manufacturing capability is still in its infancy (with the possible exception of South Africa) but the first green shoots of development in the sector are now emerging. Local manufacturers are encouraged by the market being created by FAO's strategy of promoting CA via farmer field schools and by enlightened government policies which encourage local manufacture by making batch purchases of CA equipment for subsequent sale via extension services. It's early days yet, but so was it in Brazil in the 1980s, and with the tripartite cooperation between public sector policy makers, farmers and manufacturers, there are hopeful signals that SSA is on its way to sustainable agricultural production, resilient to the ravages of climate change and environmentally sensitive. Tomorrow's generations will not look back in quite so much anger.

Education and Research in Agricultural or Biosystems Engineering in Europe (ERABEE-TN): Work in progress

Pierluigi Febo - University of Palermo

The Thematic Network *Education and Research in Agricultural or Biosystems Engineering in Europe* (ERABEE-TN) was established to develop further the output of the previous Thematic Network *University Studies of Agricultural Engineering in Europe* (USAEE-TN). The goals are to adapt and restructure the Agricultural Engineering programme of studies and to contribute to the transition from traditional Agricultural Engineering studies towards a new European dimension in higher education in the broader area of Biosystems Engineering.

The tasks of the first ERABEE meeting, held in Madrid in April 2008, were to specify the main characteristics, and give a definition of the emerging Biosystems Engineering discipline. The 25 European partners also reported on any recent developments in each country, taking into account that 81% of the countries have study programmes or specialisations in Agricultural Engineering.

With reference to the revision of the Agricultural Engineering core curriculum included in the FEANI Report (output of the USAEE-TN) and to the need for transition or evolution from the traditional Agricultural Engineering programme of studies to the new emerging discipline of Biosystems Engineering, 18% of the countries reported no information, 53% of the countries reported the need for transition, 29% reported no need for transition; moreover 25% of the countries suggested new modules and 17% suggested various changes in the core curriculum.

The need for such a transition was considered to be significant at national level in 63% of the countries, and was weak or non-existent in the remaining 37%. The transition is having a significant impact on the institutional structure in 16% of the countries; the students' enrolment in 24% of the countries; the professional status in 24% of the countries; the national and international attractiveness in 36% of the countries.

Finally 40% of the countries forecast that such a transition will have a strong influence on the labour market (eg industries, companies, private and public sector, freelance work and self-employment), while 36% of the countries forecast good employment prospects for future Biosystems Engineering graduates.

The tasks of the second ERABEE meeting, held in Dublin in October 2008, were to

update and expand

the scope of Biosystems Engineering programmes of studies, placing emphasis in the areas of bio-fuels, bio-materials and quality of products. More specifically, surveys were carried out on the existence of modules-specialisations or courses in bio-fuels, bio-materials and quality of products, and on the research infrastructures that are either related to these studies or may be used to support future development of a specialisation in this emerging area of studies.

Many universities are in the process of restructuring their curricula, but there is available information about students studying bio-fuels, bio-materials and quality of products only from Hohenheim University. Other universities have a very limited number of courses and consequently of students and graduates.

Almost all partners reported high research activity in the subjects of bio-fuels, bio-materials and quality of products. The related research projects are supported by National or European funding, private companies, and universities. The research activity is focused on:

- Raw materials for Bio-fuels, Lubricants and Products
- Development of agricultural machinery
- Quality Solid, Gaseous and Liquid Bio-fuels
- Energy Conversion Technologies
- Life Cycle Analysis
- Environmental Impacts
- Biodegradability of Bio-fuels, Lubricants and Materials
- Market studies

In several universities different laboratories are now used for research on bio-fuels, bio-materials and quality of products. Some of these laboratories are well-equipped and have modern instruments. These infrastructures might be used for studies, at least, for second and third level.



Record results for AGCO

As reported in Profi (http://profi.com/news/Record_results_for_AGCO/473) the US corporate giant AGCO has this week reported record results for the 2008 financial year, with net sales of \$8.4bn, a 23% increase on the same period in 2007. According to Martin Richenhagen, AGCO's Chairman, President and CEO, this impressive performance is enabling the company to make a number of substantial investments, with Europe accounting for a big percentage of that spend. "By 2012, we will have invested approximately €170m in the factories of our premium brand Fendt in Marktoberdorf and Bäumenheim," says Mr Richenhagen. "This investment decision will prepare us for the future and position us to take advantage of the growth we see in our industry."

New from Biosystems Engineering

Members of EurAgEng are already able to subscribe to Biosystems Engineering at a reduced rate. In 2009 personal subscriptions cost £229 (sterling) + local value added tax (vat) for a hardcopy delivered by post.

However from January 2009 we have been able to offer a fantastic offer for a personal on-line subscription to Biosystems

Engineering for just €90 (euro) + vat. To qualify for this deal you must be a member of your National Society and a member of EurAgEng.

If you are interested in more details about this deal or a personal hardcopy version for 2009, please contact Nicky Tinker at secgen@eurageng.eu.

Whatever happened to ENGAGE?

ENGAGE, the European Network of Engineering for Agriculture and Environment, is the strategic arm of EurAgEng. It has the mission of looking forward to new challenges and possibilities as well as high priority issues. At the 29th Full Club Meeting of ENGAGE held at AgEng2008, a number of changes were made to the organisation:

- ENGAGE will continue to be the strategic arm of EurAgEng
- Membership will be opened up to all individuals who are active and in leading positions in agricultural engineering and who want to shape the future of the agricultural engineering profession. A membership fee will be established
- The chairman of ENGAGE will be appointed by the Executive of EurAgEng
- The secretariat will be merged with the secretariat of EurAgEng.

Prof Reiner Brunsch of ATB (Institut für Agrartechnik - Bornim) was appointed Chairman of ENGAGE and along with Prof Aad Jongebreur, the Immediate Past President of EurAgEng will be creating an action plan defining the role of ENGAGE, its activities and how these will be

funded. If you have any ideas or issues that you would like this group to consider please contact the secretariat at <secgen@eurageng.eu>.



It was felt that one of the key roles of ENGAGE was to promote the profile of the agricultural engineering profession within the European Community and contribute to the EU Research and Technology Development activities such as the 7th Framework Programme, FP7. Already work has started on merging the Publicity Promotion Toolbox with a new look EurAgEng website. This will be a user-friendly one-stop website to encourage, amongst other things, engineers into the field of agricultural and biosystems engineering. We would like to include information and case studies from the various European institutes and organisations to show the diversity and interest in the profession of agricultural and biosystems engineering. If you have any suitable material, please get in touch with the secretariat.

Over the last four years, ENGAGE has been managed by Hannu Haapala and Kim Kaustell of Finland, and they are to be congratulated for their hard work and commitment.

Keeping up to date

From time to time, our Secretary-General, Dave Tinker, sends email messages to members updating them with information which may be of interest. The messages are short and informative, and no information is passed to anyone who should not have it. Please would you make sure your email address is correct on the database by logging in as described below and making any corrections. If you do not wish to receive the updates, please send a message to <secgen@eurageng.eu> with *Unsubscribe to Updates* as the subject heading.

Logging in to the Members' Area

First, go to <www.eurageng.eu> click on Members' Login and enter the first four letters of your surname and your password. Initially your password is the same as your membership number, which is the 4 or 5 digit number on your address label. If you would like a reminder of your membership number, contact Dave Tinker on <secgen@eurageng.eu>. Once you have logged in, you can change your password to any combination of up to ten letters and numbers.

Finding members

To search for a particular member, enter the person's surname (or part of it), or the country (or part of it), or the field of interest. The more you enter, the closer the search will be. A list of members who fit the search criteria will then be displayed. Click on the surname of the required member to give fuller details. The search facility can also be used to find all the members in a particular field of interest or in a particular country.

Updating your own membership details

Enter any details which should be changed in the boxes. When you press the Submit button, a message containing the new information will be sent to the secretariat.

Joining a discussion forum

There is a general forum for members' discussion but if you would like to create a discussion forum for a new subject, please contact Mike Hurst on <web@eurageng.eu>



Published by European Society of Agricultural Engineers, Barton Road, Silsoe, Bedford, MK45 4FH, UK
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Opinions contained in this Newsletter are not necessarily those of EurAgEng
Email: newsletter@eurageng.eu Tel: +44 (0)1525 861096
Web: www.eurageng.eu Fax: +44 (0)1525 861660
Editor: Michael Hurst ISSN 1462-0669