News from EurAgEng

EurAgEng

Winter 2015

Heinrich Müller wins EurAgEng Award of Merit 2015

'Innovation into Practice'

Heinrich Müller, founder of Müller-Elektronik was joined by his family on Friday 6th November at the Land. Technik AgEng 2015 Award Ceremony to receive the EurAgEng Award of Merit - Innovation into Practice.

This is the society's most prestigious award and is presented to someone who has made a significant contribution to the industry during their career. The timing was particularly appropriate as it took place just before Agritechnica opened in Hannover, where Heinrich first exhibited 30 years ago in 1985 and where many of his achievements have been rewarded with medals, including his first gold medal for the UNI-Control, awarded at Agritechnica in 1987.

Heinrich Müller had taken over his father's farm where he worked for many years as a youngster but he retrained to become an electrical technician and for more than 10 years he was with a major computer manufacturer developing hardware devices and controllers for data communication. This was ideal knowledge to merge with his farming background and so it was obvious to him to design his first device, an area meter, for farmers and constructors. His agricultural experiences told him what requirements had to be met to be able to sell a practical product to farmers.

He clearly understood the demands of farmers and contractors on one hand and the huge potential of electronics on the other. So by 1984 Heinrich was able to quit his job and work full time for his Müller-Elektronik company in Salzkotten, Germany and quickly developed a range of products that he exhibited at the first Agritechnica show in 1985.

It was always in his mind that devices had to be reliable, easy to use, robust and they had - of course - to provide a benefit to the customer. Heinrich has developed very many

devices for area measurement, combine monitoring, sprayer control and regulation, terminals (especially for ISOBUS), guidance systems, steering control for trailed implements, section control on sprayers and so on.

Not all of the Müller-Elektronik devices are well known, not because they are unpopular but because they wear the brand-name of some major manufacturer!

Électronics, and especially computers, in agricultural fields must be able to survive harsh conditions

and be 'idiot-proof'. Heinrich realised that the market would be larger if the cost could be spread over many operations by being used on different machines. This led to Heinrich designing the UNI-Control, a new product with a flexible hardware interface and menu driven operation which resulted in a Gold Medal at the next Agritechnica in 1987 and that was just the first of many more to come.

In 1987 the 'BUS system ad hoc group' started to help define a 'BUS'.

Heinrich Müller greatly supported the idea and with his thorough knowledge of data communication, Heinrich ensured that Müller-Elektronik participated actively in this ad hoc group from the beginning.

This was also true when ISO 11783 (ISOBUS) was developing and he was heavily involved. It took more than 20 years of continuous work by international experts to



write this standard that started in Western Europe but now covers North America, South America and more and more of Asia!

Only when ISOBUS technology came into play did the idea of Precision Farming become a practical reality as the standardised interfaces enabled the Farm Management Information Systems to communicate with Task-Controllers on mobile systems and to transfer data. Precision Farming also improves the economics of farming and is another example of the basic understanding of Heinrich Müller. The products have to serve the customers to help them be more efficient by automating machines and to make their use easier.

Since then the company has grown by developing new products for an increasingly wide range of applications and different levels of sophistication with further success at Agritechnica, and, of course, commercially.

continues over

EurAgEng is the European Network for Engineering and Systems in the Rural Sector



There has been a huge input from Heinrich and his company to make the ISOBUS a success story and, particularly through his membership of the KTBL working group, to make Precision Farming a reality.

Heinrich Müller stepped down from company management in 2009 handing the business management over to his son Christian,

and there are many other members of the family involved in the business so we can be assured that Heinrich's strong understanding of what farmers need and want will continue.

The success of Müller-Elektronik lies in the fact that the needs of the farmers are at the centre of the company's ethos, along with the long term relationships with suppliers, dealers



Sprayer-Controller at Agritechnica 2015

and OEM manufacturers and cooperation with researchers and scientists. It is fortunate that Heinrich Müller came along with the ideas and the right experiences at the right time and helped start the Precision Farming revolution and lead agricultural engineering into a new and very important direction.

EurAgEng is very proud to present its highest award, the Award of Merit - Innovation into Practice to Heinrich Müller.

Congratulations Heinrich.

Hermann Garbers' influence on European agricultural engineering acknowledged with the EurAgEng Recognition Award

Hermann Garbers was also presented with an award during Land. Technik AgEng 2015. This EurAgEng Recognition Award is given for his outstanding efforts on behalf of European agricultural engineers, past, present and future.

Hermann Garbers started his career by studying mechanical engineering applied to tractors and earth moving machines. He then worked as a design engineer on hydraulic excavators, and at CLAAS in Harswinkel, before getting to manage the Research and Development (R&D), department at Xaver Fendt and at AGCO. He returned to the CLAAS group in 1999 quickly becoming involved in its management, especially in technology and quality, until he retired in 2014.

Currently, he still works as a consultant for CLAAS especially on the board of trustees of the CLAAS foundation, CLAAS Stiftung, where he has a major impact on the training of future agricultural engineers through the many scholarships provided to students and the strong support given to the Field Robot Event.

However his great creativity has been used well beyond his responsibilities at CLAAS. He was on the Advisory Council of VDI-MEG 1992-2003 and actively involved in the series of LANDTECHNIK conferences from 1993-1998.

For several years he has been chairman



EurAgEng Recognition Award from Emmanuel Hugo

of VDMA Landtechnik, the largest European association for the agricultural engineering industry and is a member of the board of CEMA, the European association of agricultural engineering businesses.

Apart from being involved with developing the strategy of CEMA since 2010 Hermann promotes issues important to CEMA, particularly technical ones, at the European Commission and at other international organisations.

He is involved with the world-wide Agrievolution Alliance and is regularly involved in international discussions, particularly with the American Association of Equipment Manufacturers.

His international experience is used in many committees to support the German and European agricultural engineering community in a variety of ways and to the benefit of us all.

Hermann is also particularly keen that networks involving researchers and mid sized companies are enhanced at international, and especially European, level; a theme that is common to very many members of EurAgEng and we are honoured to be able to give the EurAgEng Recognition Award to Hermann Garbers.

Well done Hermann!

EurAgEng President Emmanuel Hugo Welcome Address

"Since 2007, the VDI-Max Eyth Society for Agricultural Engineering and the European Society of Agricultural Engineers have joined together for the success of Land.Technik-AgEng which is something of a 'scientific aperitif' for Agritechnica.

All here know that the main challenge faced by agriculture is to meet the growing demand from an increasing population and a more demanding product quality. It is now time to act in order to feed almost 10 billion people by 2050 while also providing non-food production. According to studies, by 2050 agricultural production will have to increase by 50-60%, and an even greater challenge is access to water resources, land and raw materials. Moreover agriculture must limit its negative impacts on the environment, including reduced emissions of greenhouse gases. Finally, while crops are very dependent on climatic factors they must still face climate change. This is why agriculture is on the agenda of the Climate Change Conference, COP21, which opens in Paris later in November.

Designing new cropping systems is essential. These will be based on innovative technologies offering good working conditions and be environmentally friendly. It is appropriate to mention that a report has just been delivered, by high-level experts, to the French Government on 'Agriculture-innovation 2025: for a competitive agriculture that respects the environment'. The report proposes 98 actions split into three priorities:

 Develop a systems approach and make agriculture contribute to the fight against climate change

- Promote the development of new technologies in agriculture
- Bring together all stakeholders in research, experimentation and extension in support of competitiveness.

The report (see separate article) recommends encouraging robotics and developing information technologies, it promotes open innovation and it highlights the importance of education and research.

Other foresight studies carried out within the Standing Committee on Agricultural Research and the ICT-Agri ERA-NET underline opportunities given by new technologies and were discussed in the earlier workshop.

I want to also mention the charter developed by the Club of Bologna in Milan, as part of Expo 2015.

The Club of Bologna, which brings together more than 120 experts from universities, industry and a variety of research and international organizations, from nearly 50 countries, drafted the 'Milan Charter for Mechanization'. The Charter in its conclusion emphasizes the need for:

- The central role of agricultural production and related technologies in order to guarantee the availability of an adequate and safe food supply;
- Research into agricultural machinery and mechanization, and of agri-food technologies, as it is a priority in meeting the future food needs of the planet;
- Appropriate measures taken by national and international authorities to assess the environmental aspects of existing machines and to promote modern machines, with

sustainability and traceability criteria;

Developing an appropriate agricultural mechanization, consistent with the local socioeconomic conditions, as the first step to promoting agri-



cultural production and rural devel-opment in developing countries;

 Research, education, extension, personal networking, information supply and international co-operation in agricultural mechanization to get a higher political priority for the future of mankind.

All the above entrusts the 'Agricultural and Biosystems Engineering' community with a huge responsibility. We are at the crossroads of agricultural and engineering sciences and information technology, and no matter whether we are in industry, education or research, or that we belong to national or international organisations, we each bring unique skills for the benefit of agricultural mechanization.

So, this very fine and interesting Conference is available to us, thanks to the commitment of our colleagues from VDI-MEG, whom I greet and thank here, especially their President Professor Peter Pickel, and I wish all of us a good Land. Technik-AgEng 2015 conference."

'Agriculture - Innovation 2025': The ambitious French Plan for research in agriculture

At the intersection of the agro-ecological project for France and the French national research strategy, Ministers in charge of agriculture and research told four experts to lay the foundations of a plan; the 'Agriculture - Innovation 2025'. The experts were Jean-Marc Bourginal, Chairman and CEO of Irstea, François Houllier, Chairman and CEO of INRA, Philippe Lecouvey, Director of ACTA, and Pierre Pringuet President of AgroParisTech.

The findings of the mission were presented on October 22 to Stéphane Le Foll (French Minister of Agriculture), Thierry Mandon (French Minister of Research) and Axelle Lemaire (French Minister of the Digital Sector).

More than 300 stakeholders were consulted in collective workshops and interviews: professionals from the agricultural world, researchers, players from education, industry, business and competitiveness clusters, National and Regional Governments, not forgetting the downstream and civil society sectors.

The recommendations of the report,

through 30 projects and subdivided into nearly a hundred actions, are intended to mobilize the players in research and innovation around major unifying issues: to stimulate agro-ecological and bio-economical transitions, fostering open innovation and support training actions to develop the digital sector in agriculture and promote the development of robotics, mobilize biotechnology and support biological control.

Already the ministers have announced that the plan of action, arising from the report, will be structured around four research programs on priority themes: 'Soil - water - climate', 'sensors - health risks', 'robotic and digital technologies for agriculture', and 'alternative production by systems



using synthetic biology, biotechnology and bio-control'.

As complementary and cross-cutting programs the Ministers requested two new innovative schemes, namely, the creation of 'living labs' for agro-ecology and bio-economy and the implementation of a data portal and digital services for a competitive, open and sovereign French agriculture.

A symposium for the consulted stake-holders will be organized in early 2016 and regular consultation with the farming community on the issues of research and innovation will be through the 'Board of Governors of guidance and coordination of agriculture and food economy'. Proposed actions, will be taken jointly by the Ministry of Agriculture and the Ministry of Research.

The Ministers welcomed a highly mobilized mission whose success testifies to the vitality and expectations of the research and agricultural innovation stakeholders. Farm issues mobilize many scientific and innovation fronts which face many farmers, agricultural R&D, the world of research and French society as a whole.

From the Secretary General

Reflections around Land. Technik-AgEng 2015, Agritechnica and less-known events



Land.Technik-AgEng 2015

The organisers of Land.Technik-AgEng have done an excellent job again, organising 1100 agricultural engineers to attend 72 presentations as well as the plenaryand award sessions; not to forget the excellent 'Get-together Dinner'.

The room situation was greatly improved with an additional extra-large room available to provide bigger venues for the most popular technical sessions. As always there were a few comments about presentations being 'too commercial' or 'too conceptual' but this would have been few and should not stop anyone attending.

The sub-title for this year was 'Innovations in Agricultural Engineering for Efficient Farming' and this 73rd international conference encouraged attendees to visit presentations covering a very wide range of technological developments.

This Conference is the warmup event for Agritechnica and so attracts many design engineers and other experts

from industry as well as researchers from private and public organisations.

As always, the sessions focussed on Power and Machinery with a range of tractor based sessions on Testing, Transmissions, and Development, field equipment sessions involved Sowing, Soil Protection and Tillage, Harvest Technologies, while component sessions

included Electric Drives, Sensors, Industrial Engineering, Human Machine Interface and Navigation.

In all there were 20 sessions run in two parallel sessions, mainly with four presenta-

tions per session and all based around the central atrium so that most attendees would have been able to get to the large majority of those presentations that they would consider personally important.

The opening plenary Session included 'Agricultural Technology - The Farmer's View' by



Hubertus Paetow at the Plenary Session.

And BELOW, in a more routine role using a drone on his farm.



Hubertus Paetow from near Rostock in North East Germany. This included a thorough description of how his farm, and business, have developed over the last few years, what the technologically advanced farmers are using, how this equipment can be extended and what the future could and perhaps should bring. This gave a really comprehensive appreciation of large-scale farming in Germany.

Although I didn't have enough time to attend all the presentations that I would have liked, I did catch up on some technological happenings. Please encourage colleagues to attend but don't be surprised if you see a 'first-come first-served' directive in future years for this very popular conference.

The thanks of EurAgEng go to the organisers, VDI-MEG and VDI Wissenforum, the Programme Committee and to Henning Meyer who was Scientific Chairman.

VDI-MEG Awards

VDI-MEG awards went to Markus Demmel and Volker Stöcklin, who were each awarded a Max-Eyth commemorative coin for their outstanding achievements in agricultural technology industry.

The Medal of Honour was presented to Prof Jürgen Hahn for his university research and teaching as well as his exceptionally high level of commitment in regional, technical and scientific committees of VDI particularly those involving agricultural technology.

ManuFuture-AET and ICT-AGRI ERA-NET Workshop

Prof Peter Pickel, President of VDI-MEG, was obviously busy with awarding the prizes and being involved with the Land.Technik-AgEng conference and its important visitors. But Peter also chaired the lesser known 'Collaborative Workshop of ERA-NET ICT-Agri and ManuFuture Agricultural Engineer-ing & Technologies (AET)'.

This workshop can be overlooked by many people since it starts earlier in the day than Land.Technik-AgEng and requires a separate registration to attend its (free) sessions, although it is in the same Conference Centre. It is particularly of value to those research engineers interested in funding from H2020 and other EU supported programmes, such as the ICT-Agri ERA-NET and includes results from many research projects.

This year's speakers included Dr. Hans-Jörg Lutzeyer, of the EC's Directorate General for Research and Innovation and Dr. Elke Saggau, Chair of the SCAR (Standing Committee on Agricultural Research) Foresight Group talking about 'Visions for the future' with other presentations on promoting research and Abdul Mouazen from the Farm-Fuse project (funded through ICT-Agri).

I suggest that those with an interest in research funds and collaborative projects remember to look for details of future ManuFuture-AET workshops (they will be on the EurAgEng Events page).

David Tinker

Agritechnica

Of course Land. Technik-AgEng is organised to attract those research, design and application engi-neers that will be attending Agritechnica whether to promote their companies' products or to look at what the competition is doing. DLG organises Agritechnica and is a supporter of Land. Technik-AgEng and, something else to remember, it offers preview tickets at a considerable discount for anyone at the Conference.

I took up my option to get a discounted ticket for Agritechnica and had a day looking at machinery, networking, finding possible speakers for other events and generally tiring out my feet!

Once again, Agritechnica 2015 leads the agricultural machinery trade fairs with 2,907 exhibitors (56% from outside Germany) and around 450,000 visitors - over 100,000 from

Engineers and farmers like to get a chance to 'look under the bonnet'

outside Germany. The mood on the stands I spoke to, even on the Sunday preview day, was encouraging and I heard later that more than two thirds of visiting farmers believe their businesses are currently in a good position and are intending to invest over the next couple of years.

Agritechnica is an excellent show to catch up on the innovations in machinery and systems and I always make an effort to look through the winners in the Innovation Competition and select some medal winners to look at in more detail.

I am sure that I don't need to say that systems to help with Precision Agriculture, or connected farming, were frequently winners but so were many more obvious engineering solutions to either improve machine performance such as Fendt's VarioGrip Pro to

ease the task of having the right tyre pressure for field and road, or to offer new solutions for farming systems such as Krone's Gold Medal Premos mobile pelletiser which is able to work in-field. Using inter-locking dies it efficiently produces pellets for fuel or feed directly from a straw swath left by a combine.

Will your company join the innovation medal winners in 2017? This year there were 311 innovations with five winning Gold Medals and 44 Silver Medals (see www.agritechnica.com/en/innovations/innovations-2015).

The research establishments and



Prof Peter Pickel taking a close up look at the LfL autonomous robot in the i-LEED project for pasture quality funded via ICT-AGRI

Universities are there and are also worth a visit to see what projects are producing results; many have hardware to show as well.

As always, there is more going on in Hannover at the time of Land. Technik-AgEng and Agritechnica than many realise and certainly more than any of us can get to go to completely.

We have less than two years to decide which R&D results must be written into a paper for Land.Technik-AgEng, what innovations to investigate at Agritechnica, which collaborative projects and sources of research funding need to be investigated at the ManuFuture-AET Workshop and guess how many old friends and colleagues we will meet with for a beer at the 'Get-together Dinner'. See you there in 2017.

David Tinker







LEFT: And it's not just for Northern Europe CENTRE: And the more unusual. Is this harvesting grapes or people? RIGHT: And this poultry handling system of module design, with drawers, and a low height telehandler that happens to be a 'blast from my past' when I was involved with applied research on poultry handling

'Quo Vadis?' - Workshop on Future Topics at John Deere's European Technology and Innovation Centre, ETIC, in Kaiserslautern



Earlier this year leading Academics from Agricultural Engineering, Plant Production and Plant Nutrition met at the European Technology Innovation Center (ETIC) in Kaiserslautern for a workshop under the headline 'Quo Vadis?' (Where are you going?).

August Altherr, Director of ETIC invited this expert group together in order to discuss recent trends in Technology, Politics and Society and the implications on the future development of Agriculture and the Agricultural Machinery Industry. A further topic of this workshop was the Collaboration between Universities and Industry. During a dinner, Prof.Klaus Hoehn, Vice President Engineering & Technology at John Deere, emphasized the importance of a close relationship and co-operation of Science and Industry as an engine for Innovation and Research.

The 4th CIGR AgEng international conference 'Agricultural and Biosystems Engineering - Automation, Environment and Food Safety'

Aarhus, Denmark, 26-29 June 2016

If you missed submitting an abstract for Land.Technik-AgEng 2015 then be ready for CIGR-AgEng 2016 as the call for abstracts is from December 1st 2015 until February 15th 2016.

The website is:

http://conferences.au.dk/cigr-2016 and there is already a lot of detailed information for this globally important conference.

Registration will open from 1st January 2016 and includes discounted accommodation through the Conference Partner, KongresKompagniet.

Conference Topics

The conference will be organized into 7 main topics and there will be several parallel conferences and workshops. The main topics are listed below:

- I.Land, soil and water engineering
- 2. Structures, animal production and environmental technologies
- 3. Plant production technologies
- 4. Energy, biomass and biological residues
- 5. Systems management
- 6. Post-harvest technologies
- 7. Information technologies

Parallel events include:

- ERABEE education session
- Biosystems Engineering Journal how to get your papers published
- Symposium: CFD application in agriculture
- Image Analysis for Agricultural Products and Processes
- AllA project meeting Innovation in safety and health

We are looking forward to your interesting contributions!

Matchmaking

The conference is a unique opportunity to network with research and business partners in structured matchmaking events to find members for international consortia, share research results or generally network on a global scale.

Matchmaking is free of charge and registration will open January 2016.

Important dates

I Dec. 2015: Abstract submission opens
I Jan. 2016: On-line registration opens
I5 Feb. 2016: Abstract submission deadline
I5 Apr. 2016: Notification of oral and paper

acceptance

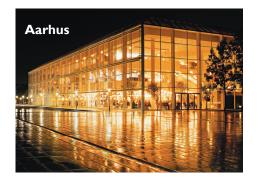
30 Apr. 2016: Farly hird registration deadline

30 Apr. 2016: Early bird registration deadline
15 May 2016: Full paper submission deadline.

Venue: Aarhus University

The host is the highly rated Aarhus University. Aarhus is an old city but young at heart!

The city was founded in the Viking age as a trading station and today the café environment along the river is one of the most popular gathering places.





Accommodation

Hotel rooms have been pre-reserved for conference participants with special rates. Please state your preference on the registration form and to get the stated room prices, on a first come, first served basis, your reservation must be made through the Conference Partner, KongresKompagniet.

Registration

All registration is online at our webpage http://conferences.au.dk/cigr-2016.
KongresKompagniet handles all conference registrations, hotel reservations and any correspondence for these.

Registration fees are given on the website and have a discount if booked before April 30

Additional information

Please see our website for more on the conference and scientific program, parallel conferences, PhD-courses, sponsors and exhibitions, technical and social tours and much more: http://conferences.au.dk/cigr-2016/

Contact information

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Phone: +45 2515 2755 Email: mdr@eng.au.dk

STOP PRESS - Watch 'Email Updates' for further information on these

- Plans are being formed to have another 'EurAgEng Rendezvous' and seminar at FIMA in Zaragoza, Spain on February 17th. Speakers and titles to be confirmed as well as times.
- EurAgEng is in a Horizon 2020 Consolidated Support Action project to disseminate Smart Farm Technologies. This should start early in 2016. Email Updates will have more information on the project, how you can help and how the project can help you.
- We wish all EurAgEng members all the best for the festivities and a prosperous and peaceful New Year



EURAGENG EVENTS

FEBRUARY 2016

17 Symposium at FIMA (details to be confirmed)

Zaragoza, Spain

www.feriazaragoza.com/fima_agricola_en.aspx

JUNE 2016

26-29 4th CIGR International -AgEng Conference 2016 -Robotics, Environment and Food Safety

Aarhus, Denmark http://conferences.au.dk/cigr-2016/



NOVEMBER 2017

10-11 Land.Technik AgEng 2017 Hannover Germany

JUNE / JULY 2018

AgEng 2018 Wageningen

NOVEMBER 2019

Land.Technik AgEng 2019 Hannover Germany

JUNE / JULY 2020

AgEng 2020 Évora

SPONSORED EVENTS

FEBRUARY 2016

23-26 44th Actual Tasks on Agricultural Engineering

Opatija, Croatia http://atae.agr.hr/

APRIL 2016

22 Ist International Scientific Symposium on Renewable Energy Sources

Osijek Croatiar/

JUNE 2016

14-16 Field Robot Event

Gutmariaburghausen in Hassfurt, Germany

http://www.fieldrobot.com/event/

SEPTEMBER 2016

27-29 3rd Conference Biogas Science

Ghent, Belgiumhttp://biogasconference.eu/

OCTOBER 2016

5-6 MCG2016 Machine Control and Guidance

Clermont Ferrand France

OCTOBER 2016

24-27 Engineering and Technology Innovation for Global Food Security

Cape Town Stellenbosch South Africa

www.asabe.org/meetings-events/2016/10/engi neering-and-technology-innovation-for-globalfood-security.aspx

JUNE 2017

13-15 Ciosta 2017 XXXVII CIOSTA & CIGR Section V Conference

Palermo, Italy http://www.ciosta2017.org/

OTHER EVENTS

MARCH 2016

6-9 Eco-Bio 2016

Rotterdam, The Netherlands

www.ecobioconference.com/

MAY 2016

10-11 Connected Off-Highway Machines 2016

Düsseldorf, Germany

www.vdi-wissensforum.de/en/nc/events/detail seite/event/01KO902016/

JUNE 2016

21-22 VDI-Congress Drivetrain for Vehicles 2016

Friedrichshafen, Germany

www.transmission-congress.eu

JULY 2016

12-15 12th International Farming Systems Association (IFSA) Symposium

Harper Adams University, Shropshire, UK

www.harper-adams.ac.uk/events/ifsa-conference/#.VlcfkvnhDWI

Paper submission closes 21 Dec 2015

31- 3/813th International Conference on Precision Agriculture (ICPA)

St Louis Missouri, USA

https://www.ispag.org/icpa/

JULY 2017

16-20 11th European Conference on Precision Agriculture

Edinburgh, UK

APRIL 2018

22-25 XIX World Congress of CIGR

Antalya Turkey

www.cigr2018.org

View all forthcoming events online, visit: www.eurageng.eu/events



Journals

I. Biosystems Engineering

This is the official Journal of EurAgEng and, although published by Elsevier, it is owned by the UK's National Society, the Institution of Agricultural Engineers.

Steve Parkin reported recently to EurAgEng Council that, in addition to Bill Day and himself there are three associate editors who help with the increasing numbers of submissions.

The full team is now: Editor-in-Chief: Dr. Bill Day (UK), Managing Editor: Dr. Steve Parkin (UK) and Associate Editors Dr. Dvoralai Wulfsohn (Chile), Dr. John Gowing (UK) and Dr. Stavros Vougioukas (USA).

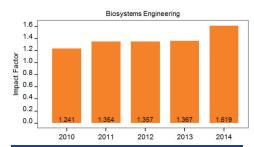
Both the Impact Factor and Number of Citations continue to rise and Biosystems Engineering is in the top quartile of agricultural engineering and technology journals. The increased popularity of Biosystems Engineering as a journal to publish in perhaps means that the rejection rate remains at, or above, its former level but this is in order to maintain the quality of the papers published.

Special Issues are encouraged but can take time to put together as there is a limited number of reviewers as many of them are involved in the papers submitted and so the remaining ones have a higher work load with more submissions to review and fewer col-

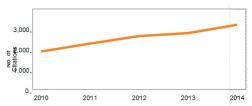
leagues to share the extra work load.

However don't let this stop you discussing a special issue if arranging a conference, or even a comprehensive review.

The time between submission and publication is mainly determined by reviewers so, please, if you are asked to review a paper, then accept and give it as high a priority as you can - your fellow agricultural engineers will thank you for that.



Impact Factor for Biosystems Engineering



Number of Citations

ABOVE RIGHT: Top 10 most cited articles (published in 2010-2014)
RIGHT: Top 10 most downloaded articles from Science Direct in 2014

No. of citations	Article title	Author(s)	Publication year	Vol/Issue	Document type
52	Evaluation of a strawberry-harvesting robot in a field test	Yamamoto S.,Kamata J.,Kurita M.,Kohno Y.,Shigematsu K.,Hayashi S.,Kobayashi	2010	105/2	Article
46	Conceptual model of fleet management in agriculture	Sørensen C.,Bochtis D.	2010	105/1	Article
45	Drying kinetics and quality of Monukka seedless grapes dried in an air-impingement jet dryer	Pang C.,Xiao H.,Gao Z.,Bai J.,Wang L.,Yang W.	2010	105/2	Article
39	Developing postharvest disinfestation treatments for legumes using radio frequency energy	Tang J.,Johnson J.,Wang S.,Tiwari G.,Jiao S.	2010	105/3	Article
39	Design and control of an apple harvesting robot	Jidong L.,De-An Z.,Ying Z.,Yu C.,Wei J.	2011	110/2	Article
38	Development of a low-cost agricultural remote sensing system based on an autonomous unmanned aerial vehicle (UAV)	Tian L.,Xiang H.	2011	108/2	Article
37	Production of high-starch duckweed and its conversion to bioethanol	Stomp A., Cheng J., Xu J., Cui W.	2011	110/2	Article
37	Twenty five years of remote sensing in precision agriculture: Key advances and remaining knowledge gaps	Mulla D.	2013	114/4	Article
35	Estimation of plant nutritional status by Vis-NIR spectrophotometric analysis on orange leaves [Citrus sinensis (L) Osbeck cv Tarocco]	Intrigliolo F.,Menesatti P.,Pallottino F.,Antonucci F.,Roccuzzo G.,Allegra	2010	105/4	Article
33	Vis/NIR spectroscopy and chemometrics for the prediction of soluble solids content and acidity (pH) of kiwifruit	Aghkhani M.,Moghimi A.,Sarmad M.,Sazgarnia A.	2010	106/3	Article

Downloads	Article title	Author	Year	Vol/Issue
3153	Traceability issues in food supply chain management: A review	Dabbene, F.; Gay, P.; Tortia, C.	2013	NA
3025	Twenty five years of remote sensing in precision agriculture: Key advances and remaining knowledge gaps	Mulla, D.J.	2012	NA
2193	Agrifood supply chain management: A comprehensive hierarchical decision-making framework and a critical taxonomy	Tsolakis, N.K.; Keramydas, C.A.; Toka, A.K.; Aidonis, D.A.; lakovou, E.T.	2013	NA
2006	Development of a low-cost agricultural remote sensing system based on an autonomous unmanned aerial vehicle (UAV)	Xiang, H.; Tian, L.	2011	108/2
636	Finite element method model of the mechanical behaviour of Jatropha curcas L. seed under compression loading	Petru, M.; Novak, O.; Herak, D.; Simanjuntak, S.	2012	111/4
480	An Overview of Microwave Processing and Dielectric Properties of Agri-food Materials	Venkatesh, M.S.; Raghavan, G.S.V.	2004	88/1
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