

Dear Reader,

Electronic communication and a common language make it possible to cooperate closely with people on the other side of the globe. For this issue, it is a pleasure to present an update on organic research in India, written by senior researcher Arun K. Sharma at the Central Arid Zone Research Centre in Jodhpur. With a personal touch, he describes the challenging situation that scientists interested in organic agriculture research often face. The chemically based agriculture has strong proponents, also among scientists, and it may be a tough and lonely task to defend the organic principles and practice. Still, research, also from India, shows the potential of these practices to solve important problems like declining soil quality and biodiversity, so the debate has to go on!

The editor welcomes very much this type of contributions, where general information is combined with reflections, and also with pictures to show us the beautiful diversity of the living world.

ISOFAR and its local partner NOARA (Network for Organic Agriculture Research in Africa) contributed to the 2nd African Organic Conference in Lusaka, where about 300 participants from 40 countries enjoyed the successful event. You can read more about the conference in this newsletter.

Meeting regularly on Skype and Adobe Connect, the ISOFAR board works steadily towards two large future events: The next OWC in Istanbul, Turkey (2014) and the ISOFAR World Organic Expo in South Korea

Editorial

(2015). Board member Gerold Rahmann will coordinate the efforts from our side to arrange the scientific part of the OWC in cooperation with IFOAM, local organizers and other partners. For the ISOFAR World Organic Expo, a preparation meeting will be arranged in Korea in September this year, and combined with a board meeting and several public symposia presenting research within organic food and farming.

The database for memberships is currently under reconstruction, which means that invoices for 2012 will be submitted later this year. However, the member area of the ISOFAR website features the possibility to pay the membership by [PayPal](#). Why not register for a [PayPal account](#) now, to be prepared for the invoices?

Our journal [Organic Agriculture](#) is in good progress with 21 published papers in 4 issues by now, and more are in the pipeline. Please consider this journal when you select the place to publish your next scientific paper. The high relevance for organic food and farming is an important quality of this journal.

The next issue of the newsletter is planned for October 2012. All members are welcome to use the newsletter to inform about relevant activities!

Wishing you all a great summer, Anne-Kristin Løes
Vice president of ISOFAR and editor of the ISOFAR newsletter





Fig 1. A typical picture of an organic farming system in a medium rainfall area. The precipitation is 500-1000 mm per year. Long-term research is needed on how to improve soil and human health, economic viability vs. sustainability, and lively-hood support to the farm family. Photo: S.Subhash.

Innovative organic farming in India

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India is the seventh largest country in the world, and in terms of agricultural land, diversity in climate and terrain, and long tradition of farming systems, it has a very high potential for organic farming. Further, 68 % of the agricultural land is rainfed, and in these areas inputs of intensive agriculture have so far not been too much applied. Increasing export demands of organic produce such as cotton, oilseed, processed food and spices compelled policy makers to promote organic farming in India. Consequently, the Indian Agricultural and Processed Food Products Export Development Authority (APEDA) launched

a National Program on Organic Production in 2002. Since then APEDA is working as apex body for regulation of certification and export of organic produce, and produce statistics of organic production in India.

Statistics of organic farming in India 2010-11 (Source: APEDA)

- Total organic production : 3.88 million MT
- Quantity export: 69837 MT
- Export Value: 157.22 million US\$
- Share of export to total production: 4 %
- Certified area (including wild harvest): 4.43 million ha
- Certified area under cultivation: 0.24 million ha
- Increase export (form 2010 to 2011): 33 %

In 2004, the National Centre of Organic Farming was established near New Delhi to promote organic farming by capacity building and control the quality of organic inputs.

Research on Organic farming

Although research related to organic farming started in 1950's, a majority of researchers hesitate to brand themselves as organic researchers and instead use terms such as research in eco-friendly farming technologies or conservation of natural resources. At most of the research institutions, work is done on integrated use of eco-technologies with chemicals. In 2004, the Indian Council of Agricultural Research, ICAR, started a network project on organic farming at 13 centers all over the country. Almost all the agricultural universities offer some education in organic farming, and some offer a full course. Recently, Himachal Pradesh Agricultural University in north India and University of Agricultural Sciences in south India opened departments of Organic Agriculture.

The current research relevant for organic farming in India can be structured into three major groups: Revalidation of traditional technologies, Development of ecofriendly inputs and Organic system research.

1. Revalidation and standardization of traditional technologies

Here, traditional knowledge and technologies developed during millenniums are studied and documented by various research organizations. Tamil Nadu Agricultural University and University of Agricultural Sciences are the leading institutes in this. One example is the utilization of Panchgavya and Amrit Pani as a soil amendments. These products belong to the Ayurvedic medical tradition, where (indigenous) cow products (dung, urine, milk, ghee (cleared butter) and curd) are central ingredients, in addition to medical herbs. The products may be used to treat human sickness, but also as an elixir or promoter of soil health and plant growth. Several other preparation form botanicals as plant growth promoter or as biopesticides have also been revalidated and standardized. The beauty of these traditional technologies is the cost effectiveness, local availability and that they are socially acceptable.



Fig 2. Honey bee (on sesame crop) is a great indicator of developed organic systems. We need more research on how organic systems may help to protect and support the bees, and vice versa.

2. Development of ecofriendly organic inputs

In this field, research is popular because it does not require a conversion period for a system development, it is linked to basic science and possibly biotechnology, there are easy funding availabilities and the products may be commercialized. Several such products have been developed by universities as well as private entrepreneurs. Some of the examples are enriched compost (with natural minerals and microbes), neem or other botanically based biopesticides, and isolation of local effective fauna for biofertilisers or biopesticides.

3. Organic system research

This field is the most difficult and time consuming, and hence this type of research is conducted only at a few locations. One interesting work is a recent survey of productivity, soil health and economics of selected organic farms conducted by Ramesh et.al. (2010). One organic system has been developed for the low rainfall areas at Central Arid Zone Research Institute in Jodhpur, and aims at developing an organic production protocol for high value –low water requiring crops (Sharma, 2011). Crop based organic protocols have already been developed for basmati rice, cotton, tea and spices at various universities or at ICAR's institutes. In comparison to the

rapid growth of organic production in India, research has grown slowly. Possible reasons are that organic system research requires a conversion period of 5-6 years, which limits the interest from researchers, students and funding bodies. Further, significant climatic variations induced high variations, especially in rainfed areas in the response to the organic inputs from year to year. This challenges a logic interpretation of the results. Variation in the quality of organic inputs further aggravates this problem.

As discussed by Ramesh et al. (2010), organic farming may be economically superior in spite of somewhat lower yield levels provided that premium prices are paid. Without premium prices, organic farming is less economically viable. However, benefits such as positive environmental and health effects of organic production are difficult to assess economically, and subsidies for conventional fertilizers and pesticides may be ignored. Many times the question is raised why organic systems do not compare too well with chemically based systems. Lower and less stable yield levels, especially during the 2-5 year conversion period, are often criticized. Replying such queries requires good knowledge and experience, which is becoming rare since too little long-term research is carried out.

Organic researchers often have to face several questions while presenting results which diverts the discussion towards a debate on organic vs. chemicals. Some common arguments are that plants cannot differentiate between different sources of nutrients; that organic inputs are not available in sufficient quality or quantity; that organic farming is labor intensive; that 100 % organic food is impossible anyway given the present pollution status in air and water etc. Often the debate takes over so that the presentation of research results is set at side, and very few researchers dare to indulge in such

Fig 3. The population of beneficial insects and predators like lady bird beetle, here on a cumin crop, should be maintained the year round in organic farming systems where crops are grown continuously. To achieve this, multidisciplinary research is required.



discussions. Instead, they divert their work towards integrated use of organic and chemicals, because this approach is regarded as safer and more readily accepted.

Still research is conducted on various aspects as mentioned above by dedicated workers, who have reason to believe that organic systems have a lot to contribute to the current challenges in agriculture such as climate change, high cost of chemical inputs, deterioration of soil health etc. Fortunately at national level, an increasing awareness about soil health may further support organic farming research in one or the other way.

Referred papers

Ramesh, P., Panwar, N. R., Singh, A. B., Ramana, S., Yadav, S. K., Shrivastava, R., Subba Rao, A., (2010): Status of organic farming in India. *Curr. Sci.* 98, pp. 1090–1194.

Sharma, A.K. 2011. Organic System in low rainfall areas for climate resilience and returns. *Organic Farming Newsletter* 7(4), p 3-9. NCOF, India. Available at <http://www.orgprints.org/20805/>

Further reading

[http://ncof.dacnet.nic.in/Newsletters/Organic_Farming_Newsletter/Volume_2/OFNL%20Vol%202\(2\)%20June%2006.pdf](http://ncof.dacnet.nic.in/Newsletters/Organic_Farming_Newsletter/Volume_2/OFNL%20Vol%202(2)%20June%2006.pdf)

http://www.rainfedfarming.org/documents/seminar_brochure/27th_Sept/OPRupela.pdf



Fig 4. A typical picture of an organic farming system in a low rainfall area. The precipitation is less than 500 mm per year. A current research need is to quantify the benefit of agrodiversity for climate resilience.

News from the CORE Organic II Funding Body Network

Status of the proposals submitted to the 2nd call

The full proposals of the second call of CORE Organic II are currently undergoing a scientific evaluation. Three full proposals have been received for the thematic area Organic Market, and five full proposals in the area Plant Breeding. During the evaluation of the pre-proposals it became clear that some countries with allocated funds for research risked not to be able to grant the funds. Therefore, some consortia were allowed to add additional partner(s) from countries participating in the call, if they were able to identify suitable partners and the project as a whole would gain from the expansion of the consortium. Unfortunately, some projects were also asked to withdraw partners. It is very difficult to solve and settle the project funding puzzle, but having a two-step call helps a lot. The project selection will take place 6 September and the project coordinators will be notified as soon as possible thereafter, probably within two weeks.

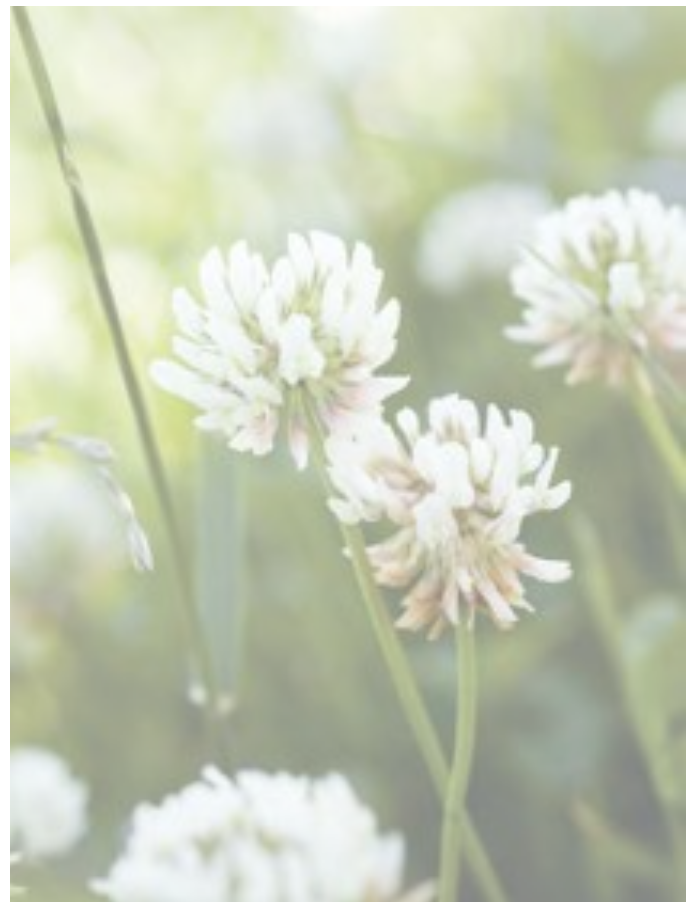
3rd call: A real common funding!

CORE Organic is a co-operation among research funding bodies in many European countries to strengthen the research in organic food and farming, and the cooperation between funding bodies is very useful to learn and develop the research funding procedures. Recently, for the first time a CORE Organic real common pot pilot call was launched, with six countries participating. The real common pot allows the applicant to freely build a consortium with partners from the countries involved without being constrained by the funding contributions of the respective country. The funding bodies will pool the funds within a common and centrally

administered pot and distribute from there to the partners of the project granted the funds. These countries take part: Austria, Denmark, Germany, Norway, Switzerland, United Kingdom. The thematic research area is: Sustainable and efficient management of phosphorus and use of secondary fertilizers within organic agriculture.

Funds available: 860,000 euro. The call has a one step procedure with a deadline of 7 November 2012.

Please see the call announcement and the guideline for more details: [Call announcements](#) and [Guideline for applicants](#)



Successful Second African Organic Conference

Text & Photos: Gunnar Rundgren, Senior Partner, Grolink, Sweden

"Organic agriculture is one of the best practices in ensuring environmental sustainability. It sustains the fertility of soils, ecosystems and sustains the health of people. It relies on locally adapted improved ecological processes and cycles, and natural biodiversity rather than the use of synthetic inputs and genetically modified materials. It is therefore, important that our farmers are encouraged to practice organic farming[...]. I have no doubt that organic agriculture has potential to contribute to food security, increased incomes and generation of employment for our people," said Honourable Emmanuel T. Chenda, MP, Minister of agriculture and livestock at the official launch of the second African organic conference in Lusaka 2-4 May 2012.

The conference attracted some 300 scientists, activists, policy makers and farmers from 40 countries. It was organized by the Organic Producer and Processors Association of Zambia and Grow Organic Africa, in cooperation with the Ministry of Agriculture, UNCTAD, FAO and IFOAM with technical assistance and support from among others ISOFAR. More than 60 papers and 35 posters were presented. ISOFAR produced the abstract book, which can be downloaded [here](#).

The conference conclusions, in the Lusaka Declaration, welcomed the strengthened networking within African subregions as well as the Network for Organic Agriculture Research in Africa (NOARA). It further stated that: *"We agree that organic agriculture plays a key role in sustainable development, food security, poverty reduction, environmental security, climate change adaptation, human health, preservation of indigenous knowledge, plant varieties and animal breeds as well as socio-cultural development. We shared international research results confirming that the adoption of organic agriculture practices significantly increases yields and improves livelihoods and food security in Africa."*

The specific workshop on the development of the research identified an Interim Steering Committee to develop NOARA to produce a critical mass of researchers; to produce scientifically sound evidence to support organic agriculture and to connect with the ground, and influence policy.

More information about the conference can be found on: <http://africanorganicconference.com/>



The first steps taken towards developing a research and innovation agenda for organic agriculture in Africa

Dr. Niels Halberg, ICROFS, Director
Photos: Gunnar Rundgren

At the occasion of the 2nd organic conference in Lusaka a number of organizations (ISOFAR, NOARA, ICROFS, TOAM, ISD) arranged a side event with the objective “to initiate a process for developing a common research agenda for Africa based on needs for the organic sector”. As an activity under the EOA project (Implementing Ecological Organic Agriculture in Africa) the workshop attracted more than 50 stakeholders to discuss the purpose and process towards establishing research agenda’s for different African sub-regions. The forum recognized that research and innovation with strong stakeholder involvement is a critical component of any action plan designed to promote ecologically sustainable development in agriculture in Africa. During the main conference these ideas and discussions were carried on and resulted in the formation of a steering committee with the mandate to design and formulate a framework and develop a focus strategy and research agenda for promoting ecological organic research in Africa.



Regional coordination is a key pre-requisite to establishing an efficient and effective research, training and extension of EOA. The participants recommended that this could be quickly achieved by strengthening the existing Network for Organic Agricultural Research in Africa (NOARA) and that this be supported by the Institutional Capacity Development pillar and the Networking and Partnership pillar of EOA as well as the newly revived AfroNet. NOARA’s first role will be to :

- Create an interactive platform to link all the role players in the development and implementation of the research agenda.
- Initiate the process of developing research priorities, policies and system strategies –by developing joint guidelines for the regional nodes.

A team of committee members was drawn from the various regions of Africa - Eastern (4), Western (2 Francophone, 2 Anglophone), and Southern (3 people). The Tanzanian Organic Agriculture Movement’s office will function as secretariat.



Upcoming events (co)organized by ISOFAR

Second Organic Animal Husbandry conference

Hamburg, Germany September 2012

In cooperation with IFOAM, ISOFAR organizes this event, where registration is now open. More information is available at IFOAM Contact person Dr. Gerold Rahmann: gerold.rahmann@vti.bund.de

Second International FQH conference on Organic Food Quality and Health Research Warsaw, Poland 29-31 May 2013

Together with the Food Quality and Health (FQH) network, ISOFAR organizes the next FQH conference 2013 in Warsaw, Poland. From June 5 to 7, 2013 oral and poster presentations on organic food quality from field to fork (farming, processing, packaging, consum) as well as animal and human health effects will show the newest results. The main topics are:

- A. Future of sustainable agriculture
- B. Quality of food from organic and related systems
- C. New methods for food quality determination
- D. Systemic view on food and health

More info available at <http://www.fqh2013.org>
Contact person: Dr. Johannes Kahl: kahl@uni-kassel.de

Second ISOFAR International Symposium on Asian Organic Agriculture

Dankook University, South Korea, 17. september 2012

The 2nd ISOFAR international symposium in Korea will concentrate on Organic Agriculture in Asia. 8 keynote speakers are invited to deliver a speech. Topics will relate to a wide range of agronomic issues:

- Production of organic seed and seedlings, Mohamed Ben Kheder, Tunisia

- Soil test and optimum fertilization strategy, Sang Mok Sohn, Korea
- Crop rotation and legume, Ulrich Koepke, Germany
- Agroecological weed management for organic farmers, Laszlo Radics, Hungary
- Impact of research in organic agriculture – an example from 15 years of research in Denmark, Ilse Rasmussen, Denmark
- Digesting organic waste for energy production and nutrient recycling – impacts on soil biology and fertility, Anne-Kristin Løes, Norway
- Bio-diversity and organic agriculture, Ulrich Koepke, Germany
- Organic agriculture and local development - A case study in Boshan County/Shandong/China, Wu Wenliang, China
- Future challenges in organic animal husbandry practice and science, Gerold Rahmann, Germany

Venue:

The International Conference Hall of Dankook University, Cheonan, Republic of Korea.

Contact:

For specific questions please contact Prof. Dr. Sang Mok Sohn by e-mail at smsohn@dankook.ac.kr

Other relevant events:

NJF seminar 461: Organic farming systems as a driver for change.

Vingsted Centre, Billund, Denmark August 21-23, 2013

Within the Nordic Association of Agricultural Scientists (NJF), the working group "Organic Farming Systems" organizes a 3 day international seminar for researchers and advisors.

More information available at www.njf.nu

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Membership services

- Proceedings from the OWC in 2011 and the African organic conference in 2012 are now available at our website. Members have access to the full versions by logging on to the Members' area.
- We would like to remind all ISOFAR members, and people wanting to become members: Please send to the ISOFAR Head Office (info@isofar.org) the keywords related to your professional expertise, and contact details. The Head Office needs your information for future joint research activities among members, organising lecture requests, etc.
- All members are kindly invited to provide contributions to the ISOFAR Newsletter such as reports on your on-going activities and other interesting or useful information.
- Important: Don't forget to inform us on any change of your address!

Newsletter contact:

Contributions (text files and separate picture files) should be sent to Anne-Kristin Løes by Email. anne-kristin.loes@bioforsk.no.



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