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<p>संपादक Editor डा. कृष्ण चंद्र Dr. Krishan Chandra राष्ट्रीय जैविक खेती केन्द्र, गाजियाबाद National Centre of Organic Farming, Ghaziabad</p> <p>सहायक संपादक Assistant Editor डा. सरिता मोवाडे Dr. Sarita Mowade क्षेत्रीय जैविक खेती केन्द्र, जबलपुर Regional Centre of Organic Farming, Jabalpur</p> <p>प्रकाशन सहायक Publication Assistant हरि भजन Hari Bhajan सुभाष चन्द्र Subhash Chandra</p> <p>सलाहकार Advisor डा. कृष्ण चंद्र Dr. Krishan Chandra अतिरिक्त आयुक्त Additional Commissioner कृषि एवं सहकारिता विभाग Department of Agriculture & Cooperation कृषि भवन, नई दिल्ली Krishi Bhawan, New Delhi</p> <p>संपादकीय कार्यालय Editorial Office राष्ट्रीय जैविक खेती केन्द्र National Centre of Organic Farming हापुड़ रोड, कमला नेहरू नगर, गाजियाबाद-2 Hapur Road, Kamla Nehru Nagar, Ghaziabad-2 ☎ 0120-2764212; 2764906; Fax 0120-2764901 Email : nbdc@nic.in; website : http://ncof.dacnet.nic.in</p>	<p>Editorial 2</p> <p>PGS India – A Farmer Group Centric Affordable Organic Certification System 3 – Dr. Sarita Mowade & Dr. A.K. Yadav</p> <p>India Organic News 11</p> <p>Global Organic News 16</p> <p>National and International Events 23</p> <p>Certificate Course on Organic Farming 25</p> <p>Book Reviews 26</p>
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जैविक खेती सूचना पत्र, राष्ट्रीय जैविक खेती परियोजना के अन्तर्गत जारी एक बहुभाषीय तिमाही प्रकाशन है। जैविक खेती के उत्थान, प्रचार प्रसार व इसके नियामक तंत्र से जुड़े लेख, नयी सूचनाएं, नये उत्पाद, विशेषज्ञों के विचार, सफल प्रयास, नयी विकसित प्रक्रियाएँ, सेमिनार-कॉन्फ्रेंस इत्यादि की सूचना तथा राष्ट्रीय व अन्तरराष्ट्रीय समाचार विशेष रूप से आमंत्रित हैं। सूचना पत्र में प्रकाशित विचार व अनुभव लेखकों के अपने हैं जिसके लिए प्रकाशक उत्तरदायी नहीं है।

Organic Farming Newsletter (OFNL) is a multilingual quarterly publication under National Project of Organic Farming. Articles having direct relevance to organic farming technology and its regulatory mechanism, development of package of practices, success stories, news related to conferences, seminars etc, and national and international events are especially welcome. Opinions expressed in articles published in OFNL are those of the author(s) and should not be attributed to the publisher.

From Chief Editor's Desk

Dear Readers,

India's system of organic quality assurance has already earned international respect and is growing steadily with increasing exports. But in spite of its wide acceptance in international field, it is yet to be accepted by large sections of organic farmer's community. Main reason for unwillingness of farmers to go for third party certification, even though it is an essential component for world trade, is its prohibitively high cost and complexity of its documentation requirements. To address the affordability and make the organic certification more farmer friendly, Department of Agriculture and Cooperation under National Project on organic Farming has launched Participatory Guarantee System, a unique India initiative with many innovative features. This is an unique system based on main principles of Participation, Shared vision, Trust and Transparency. It proposes to give PGS movement a national recognition and an institutional structure without affecting the spirit of PGS. A brief structure of Participatory Guarantee System of India already functional under DAC/NPOF is presented in this issue. Hope this farmer empowering quality assurance programme will further strengthen the organic movement in country and help to bring more and more farmers under organic certification. Success of this system will certainly charge up the organic domestic market and will be easily accessible by common people.

This current issue also presents standard columns of India organic news, Global organic news, National and International events and Book reviews.

To make the future issues more informative and colorful I invite your participation in the form of main articles and research papers in the field of organic farming. I also invite the active participation of our innovative farmers, who kept the flame of organic burning even in the storm of synthetic input based conventional agriculture and request them to share their experiences and innovations in the best interest of upcoming young organic farmers.

Dr Krishan Chandra
Editor

PGS India – A Farmer Group Centric Affordable Organic Certification System

Dr Sarita Mowade and Dr. A.K. Yadav*
Regional Centre of Organic Farming
Adhartal, Jabalpur (MP)

* Ex-Director, National Centre of Organic Farming

In spite of growing awareness for organic farming practices and sharp increase in demand by consumers for quality organic food, adoption of organic certification by the farmers continues to be beyond their reach due to high costs and complexity of documentation. Consumers are also seems not aware about the quality assurance systems available in the country and largely rely on their personal trusts. Keeping in view of the poor spread of the third party certification system and ignorance of consumers for certification there is an urgent need to launch massive publicity and awareness programmes. For world trade, third party certification is an essential and dominant means of organic guarantee but the inherent expenses and paperwork required in this multilevel system discourages most of the small and medium farmers from being certified. Documentation complexities and prohibitively high cost is gradually proving major deterrent to growth of organic farming sector in the country, which is visible in gradual decline of cultivated area under third party certification system.

Around the world organic producers are developing methods to guarantee the organic integrity of their products. These alternative methods are now collectively referred to as Participatory Guarantee System. It is a quality assurance initiative that is locally relevant, emphasizes the participation of stakeholders including producers and consumers and operates outside the framework of third party certification. PGS is a process in which people in similar situation assess, inspect and verify the production practices of each

other and collectively declare the entire holding of the group as organic. In PGS system, participation is an essential and dynamic part, with basic elements which embraces participatory approach, shared vision, transparency and trust. The idea of participation embodies the principle of collective responsibility for ensuring the organic integrity of the PGS.

PGS India

National Project on Organic Farming, DAC, Govt of India has launched PGS India programme with the objective to make the organic guarantee system affordable and for empowering farmers with participatory decision making. PGS India also aims to give PGS movement a national recognition and institutional structure without affecting the spirit of PGS by networking the group under common umbrella through different facilitating agencies, Regional Councils and Zonal Councils.

The programme was officially launched during March 2011 under the following adhoc National Advisory Committee (NAC).

1. Joint Secretary (INM), DAC - Chairman
2. Director, NCOF - Executive Secretary
3. Regional Director, RCOF Bangalore - Member
4. Regional Director, RCOF Bhubaneswar - Member
5. Dy Commissioner (INM), DAC - Member

National Centre of Organic Farming, Ghaziabad was declared as the secretariat of the programme with its six Regional Centers of Organic Farming (RCOFs) located at Hissar, Imphal, Bangalore, Bhubaneswar, Nagpur and Jabalpur as Zonal Councils (ZCs) for their respective

states in country. In the first phase 20 agencies were authorized as Regional Councils.

Roles and Responsibilities of Network Institutions

1. **PGS - National Advisory Committee** - PGS-NAC being apex policy making body shall be responsible for:

- a. Defining operational and policy guidelines and PGS India Standards. In case of changes the committee shall ensure that the amendments/modifications are considered "through intensive consultation with the base".
- b. Make changes, improvements and amendments to the programme and national coordination structure as a whole without interference in the autonomic functioning of Regional councils and local groups. Co-ordinate and monitor national level capacity building, education, outreach and surveillance activities.
- c. Selection and Authorization of Zonal and Regional Councils
- d. Surveillance and monitoring on the functioning of Zonal and Regional councils
- e. Sanction/ withdrawal of authorization to Zonal/ Regional councils on being found not functioning or not functioning according to the guidelines.

2. **NCOF as PGS Secretariat** - National Centre of Organic Farming will be the Secretariat of the PGS programme with Director NCOF as the Executive authority. Key role and responsibilities of the Secretariat will be as follows:

- a. All executive and secretarial responsibilities related to execution of the programme, NAC meetings, implementation of the decisions of NAC, matters to be put up to NAC and coordination with NAC members
- b. Advise NAC on all technical and implementation issues

c. Capacity building, education, training and outreach activities for Zonal and Regional councils.

d. Training of local group leaders through RCOFs in collaboration with Zonal Council and Regional Councils.

e. Surveillance and monitoring of Zonal and Regional Councils

f. PGS India Website design, hosting and maintenance

g. Custodian of entire PGS India database

h. Receipt and processing of applications for authorization of NAC as Zonal/Regional Councils

i. Facilitate election of members from RCs for nomination to PGS-NAC.

j. Facilitate and maintain positive relationship with controllers of Third party certification system to ensure the compatibility of PGS programme with NPOP.

k. Coordinate and liaise with different State Governments for promotion and popularization of PGS programme.

l. Surveillance of PGS products through residue testing including collection of PGS samples, getting those samples tested for residue analysis and hosting of residue analysis results on PGS website.

m. Appellate authority for local groups against the actions and decisions of Regional Councils/Zonal councils and for Regional Councils against the action of Zonal council.

n. Literature development, publicity, technology dissemination and awareness creation through print and electronic media.

3. Zonal Councils :

a. Receipt, processing and authenticity verification of application for authorization as Regional Council. On being found suitable forwarding of applications to PGS secretariat for approval of PGS-NAC.

- b. Provide up-dated documents, policies, literature and other technical input to RCs for further information of local groups.
- c. Coordinate Regional Council Training workshops
- d. Coordinate national level education and outreach activities in collaboration with PGS Secretariat.
- e. Surveillance and monitoring on the functioning of Regional councils.
- f. Complaint redressal of farmers and local groups against the functioning and actions of Regional councils
- g. Appellate authority on complaints of certificate denial by RC or sanctions imposed by RC on local groups
- h. Appellate authority on complaints of traders/ retailers/ consumers on the quality/ organic integrity of PGS products of particular group and action taken by RC or inaction of RC.
- i. Collaborate PGS Secretariat in collection of PGS certified samples for residue analysis.
- f. Can NOT pick and choose individual farmers to certify, only approve/ confirms the collective decision of the Local Group as a whole and organic integrity of the system adopted by the local group.
- g. Activate and/ or issue certification UID number to each approved Local Group (received from the instant UID Pool maintained on PGS Website).
- h. Print and distribute annual Organic Certificates for individual farmer.
- i. Participate in sampling of Local Group farm appraisals
- j. Provide Local Groups with guidelines for "Non-compliance Sanctions".
- k. Participate in online system to provide Summary Worksheet information to interested parties and helps to connect interested parties with the Local Groups for access to individual farmer's Organic Guarantee
- l. To ensure complete transparency of certification process.
- m. To facilitate Mutual Recognition and Support for the various groups (and individual farmers) on a national level by allowing Regional Councils to audit the Organic Guarantee of certified farms in other Regional Councils.
- n. To quickly build trust and credibility in the system as a whole ensure access to members of the public and media.

4. Regional Councils :

- a. Training and support to existing and new local groups in procedures and paper work necessary for each farmer's organic guarantee.
- b. Translate and print PGS paper work in local language
- c. Register local groups and issue user ID and password for data uploading on PGS-India website.
- d. Facilitate local groups in data uploading on PGS website, if local group do not have access to computer and internet.
- e. Confirms that Local Group Summary Worksheet listing all the farms that are to be Certified Organic is complete and was conscientiously maintained by the group

5. Local Groups

- a. Organize farmers in the group and each member individually sign PGS organic pledge and group agreement.
- b. Provide copies of PGS standards, operational manual and appraisal forms to all the members in local language. If farmers are illiterate then they need to be explained details and standards orally and through pictorial representations.
- c. Prepare necessary field documents with individual farm history.

- d. Elect Group leader and core team of peer reviewers (minimum 3 in 5 member group). There is no upper limit. It will be an optimal situation if all members of the group can participate in peer reviews, as this contributes to capacity building and information exchange between farmers, and reduces conflicts of interests.
- e. Participate in the activities of any other registered PGS group to understand the functioning of the PGS Group. Implement standard requirements on the farms of all the group members and obtain endorsement from the other registered group. This endorsement is needed only once at the time of registration.
- f. Register the group on PGS website (facility available on-line) and obtain registration approval from the nearest Regional Council.
- g. In case no PGS registered group is there in the vicinity then State Agencies (State Agriculture Department District Officer) may be requested to verify the requirement and submit necessary verification report to RC. Else request RC to do verification and grant registration approval. RCOFs can also be requested for verification and endorsements of Local Groups for their recognition by Regional Council.
- h. Obtain User ID and password from RC for time to time data up loading.
- i. Organize time to time meetings and maintain attendance register. Participation of members in these meetings is a mandatory activity and is an indication of dedication of the member to the cause of group's guarantee scheme. There should be at least 6 times a year, compulsory meetings or more frequently as specified by the Regional council and at key times of the year depending on the season, the crops, etc.
- j. Every member need to attend at least 50% of the meetings in a year and sign in attendance register.
- k. Advise each other and share information to improve the capacity of the group as a whole.
- l. Organize regular training courses by inviting practicing organic farmers from other groups, RC members or experts of other State Govt and Non-Govt agencies.
- m. Chalk out peer appraisal strategy and ensure timely appraisal of each farm at least twice a year. Peer reviewers will ensure to complete Peer review appraisal form, sign and submit to the group leader. Each farm is to be appraised by at least a three member team. Inclusion of consumer's representative increases the credibility and trust.
- n. Inspection of peer reviewer's farms by another peer reviewer group. To increase credibility and trust the group may have any number of peer reviewers.
- o. At appropriate time the group decides which farmers are to be certified. Separate out farmers which are yet to comply with the certification requirements. List out defaulters and impose sanctions.
- p. Organize final decision meeting explain the reviewer's results to all the members. Collectively declare the group as conforming to PGS standards (in case of small groups, up to 10 members). If the group is large then elect a sub-group or certification committee, comprising of 5 or more members, which may review the results and decide upon the certification. Approval of majority group members is required only in the cases of negative decision (denial of certification or decertification). Full member body can also serve as an appeal body against the decision of certification committee.
- q. At appropriate time prepare summary sheet with list of farmers declared certified with details of crops and expected quantity of produce.

- r. Submit summary sheet to the RC with all other documents as required by RC. In case if data has already been up loaded by the Group on-line, then provide only the signed hard copy of the summary sheet.
 - s. On getting the approval from RC on-line the certificates can be printed directly from the website and distributed to the individual farmers.
- b. Group registers on the website on-line directly or off-line through Regional Council
 - c. Recognition as PGS group is granted by RC on verification of data.
 - d. Training and knowledge on PGS operational systems is a prerequisite for recognition of the group
 - e. Capacity building of group members by peers in the group
 - f. Up-loading of data and completion of peer appraisal forms from time to time
 - g. Regular meetings and peer inspections on each other
 - h. At the end of season, collectively decide on status of farmers
 - i. Upload information on website in standard formats and/ or provide to Regional Council in hard copies
 - j. Regional Council in the meantime undertake surveillance on functioning of Local Group
 - k. On receipt of end of season Local Group summary sheet, RC verifies the completeness of data, cross verify the information from its own surveillance report and assess the authenticity of the decision conveyed by the LG.
 - l. On being satisfied RC approves the decision of the group. If RC is not satisfied, it can either return the decision with remarks for consideration of group and for revision of the decision. On receipt of revised decision RC may approve or not approve the decision.
 - m. While making decision RC cannot pick and choose on individual farmers, but can approve or not approve the entire decision of the LG.
 - n. RC grants certification with authorization to use logo with PGS number and farmer sub code
 - o. Depending upon the choice of the group certificate can be issued either to the group or to the individual farmers.
 - p. Consumer can access details about farmer group with PGS number

6. Farmer/ Farm Family

- a. Develop an understanding of organic standards and participatory guarantee system. This can be done by obtaining the copy of PGS standards and understanding it through reading, participation in PGS group meetings and discussion with existing farmers.
- b. Make sure that farm practices are compliant to the standards and PGS norms
- c. Fill farm history sheet, registration form and make a pledge that they understand organic system of cultivation and commit to adhere to the organic standards
- d. Participate in appraisals/ inspections of other farms in the local group
- e. Participate in key field day trainings
- f. Participate in local group meetings and advise neighbors, share information and improve the capacity of the group as a whole
- g. Allow consumers/ buyers visits to the farms

7. Certification process in brief

- a. 10 to 50 Farmers belonging to one village or two-three close by villages make a group, collectively pledge for organic, complete application and farmer history sheets, obtain verification endorsement and apply to RC for registration

- q. NCOF and ZCs undertake regular surveillance, collect samples being sold or produced under PGS and get them analyzed for residue.
 - r. Samples analyzed for residue in authorized testing laboratories
 - s. Residue analysis results hosted on website in public domain
 - t. Results are also linked to concerned group, providing additional trust
 - u. Defaulter group's ID gets automatically blocked and shifted to suspended groups
 - v. NAC/NCOF does not take any action. Regional councils need to act and initiate action against defaulter groups and suggest remedial measures
 - w. Re-entry of suspended groups is possible only after verification by NCOF, ZC or RCs.
- Empowers farmers with increased capacity building
 - Bring consumers to the farm without the need of middleman
 - Unlike grower group certification system, PGS offer every farmer with individual certification and each farmer is free to market its own produce independent of group.
 - PGS-India program ensures dual certification and logos. PGS-Green certification for in-conversion farmers and PGS-Organic for organic farmers.
 - Consumers and buyers are often involved in production and verification process
 - Random residue testing at regular intervals ensures the integrity and increases the trust.

Advantages of PGS India over third party certification : Important benefits of this system over third party certification are as follows :-

- Being farmer operated, it gives sense of ownership and belongingness to each and every member.
 - Being non-hierarchical, provides equal opportunities to all the members
 - The procedures are simple, documents are basic and use the local language understandable to farmers
 - All the members are local and known to each other. Being themselves practicing organic farmers have high degree of understanding on day-to-day knowledge or acquaintance of the farm.
 - Peer appraisers are among the group and live in the same village, therefore have better access to surveillance
 - Peer appraisal instead of third party inspections reduce cost
 - Mutual recognition and support between Regional PGS groups ensures better networking for processing and marketing
- PGS certification is only for farmers or communities that can organize and perform as a group within the village or in close – by villages with continuous territory and is applicable on, on- farm activities comprising of crop production, processing and livestock rearing (including bee keeping) and off – farm processing by PGS farmers of their direct product
 - Individual farmers or group of farmers having less than 5 members are not covered under PGS. They either have to opt for third party certifications or join the existing PGS local group.
 - PGS is applicable only on crop production, animal husbandry and on farm processing activities; storage ,transport and value addition away from the group by individual and companies are not covered under PGS .Off farm inputs need to be approved by the each group for their members use on case to case basis.
 - PGS ensures traceability only upto farm gate. Once the product leaves farm gate there is no control of PGS on its integrity. Therefore PGS is ideal for local direct

sales and direct trade between producers and consumers. Local groups and buyers in consultation with RC can devise some mechanism with full traceability records to allow use of PGS logo on products packed by traders/retailers.

Progress so-far

Since its launch during 2011, the PGS-India program is being operated through six Zonal councils and 20 Regional Councils. All RCs selected in initial phase are well versed with organic certification systems and have also gone under training on implementation procedure organized by the PGS secretariat

and Zonal Councils. Five such capacity building trainings were organized during 2011-2012 through NCOF and four RCOFs.

Efforts have also been made to publicize the program through various means. State Governments are also being roped in to promote the program in their areas.

Details of group registered, total number of farmers brought under the guarantee system, crops being grown by these groups and tentative quantity of various crop produce covered under the programme is given in table below :

STATUS OF PROGRESS REPORT SUBMITTED / TO BE SUBMITTED BY REGIONAL COUNCILS UNDER PGS-INDIA PROGRAMME

Sl. No.	Name of Regional Council	Number of Groups	Number of farmers	Area (ha)	Production 2011-12 (MT)	Main Crops
Andhra Pradesh						
1	Society for Elimination of Rural Poverty HMDA Hermitage Office Complex, 4th Hyderabad Andhra Pradesh 500004	22	243	185.86		Paddy, groundnut, Green gram, vegetables, red gram, blackgram, potato, maize, beans, onion, turmeric, cotton, chilli etc.
Karnataka						
2	Participative Watershed and Rural Development Agency (PRAWARDA) #8-9-270/A-36, Behind Baridshahi Garden, Bidar Karnataka 585401					
3	Shri Saptgiri Rural Development Society No. 932, 1st Block HRBR Layout, Kalyan Bengaluru Karnataka 560043					
4	Belgaum Integrated Rural Development Society (BIRDS) KVKNagnaur Belgaum Karnataka 591319					
5	Association for Promotion of Organic Farming UAS Alumini Building (By the side of Bengaluru Karnataka 24	4	63	124.69	628.3	Sapota, Vegetable, Ragi
6	Social Welfare and Rural Development Society (SWARDS) Raghava Nilaya, GBN Gate Near T.V.V. Tumkur Karnataka	Awaited				
7	Mysore Green Exports Pvt. Ltd. No. 213/Y, 13th Main Road, 3rd Block, Bengaluru Karnataka 560010	12	224	744.7	666.72	Ragi, Groundnut, onion, mango, sapota, paddy
8	Janodaya No. 3, 9th Cross, 5th Main, Jayamahala Bengaluru Karnataka 560046	awaited				
Kerala						
9	Manarcadu Social Service Society Manarcadu P.O. kottayam Kerala 686019	Awaited				
Tamil Nadu						

10	T.V. Srinivasan Centre for Rural Training Bethalapally, Sipcot II Hosur Tamil Nadu 635125	Awaited				
11	Makkal Nala Sangam No.2 Selection Tailors Upstair Back Side, Salem Tamil Nadu 636115	Awaited				
12	Organic Farming Organization Dhanalakshmi Illam, No. 15, thrid Main Vellore Tamil Nadu 632001					
Maharashtra						
13	Neem Foundation Village Gondkhairy, Amravati Road (NH-Nagpur Maharashtra 441501	6	72	182.3	nil	
14	Gramin Krishi Kranti Seva Bhavi Santha Yammewar Complex, Near Market Nanded Maharashtra 431807	Not issues				
15	Centre of Science for Villages Post Box NO. 21, Kumarappapuram, Wardha Maharashtra 442001					
16	Siddhi Vinayak Group, Opp. Govt. Milk Dairy, Amravati					
Madhya Pradesh						
17	Paryavaran Sanrakshan Evam Adivasi Vikas Kendra 413/1, Mittal Apartment, South Civil Lines Jabalpur Madhya Pradesh 482001	2	84	338	65.4	Kodon, Kutki, Ragi,
Rajashtan						
18	Society for Organic Agriculture Movement (SOAM), 26, Gayatri Nagar-B, Maharani Farm, Durgapura, Jaipur-302018 (Raj)					
Uttar Pradesh						
19	Foundation for Agriculture Resources Management and Environmental Remediation (FARMER) SJ-14, Shastri Nagar Ghaziabad Uttar Pradesh 201002					
20	Horticulture Produce Management Institute, 3/15 Mohna Nagar, Industrial Area, Ghaziabad					

India Organic News

Kerala youth set new trend by opting for agro-farm business - Setting a new trend; youngsters across the state are opting for agri-business mostly into banana cultivation, finding it a lucrative option. They are supported by Kerala State Horticulture Mission and Janashree Mission under the Rashtriya Krishi Vighyan Yojana (RKVY). "It's a new trend now that youngsters in the state are increasingly opting for Organic farming and agri-business. As per the opinion of Janashree Mission chief executive officer TO Lucca 60,000 farmers groups in Kerala have opted for organic farming of rice, vegetables including tapioca and cultivation of fruits mostly banana,". Over 60 per cent of the 12,000 farmers under linkage groups of Janashree Mission in the state are youngsters, as against 40 per cent of the 5000 farmers last year, he said. It is planned to link two lakh farmers to the Janashree Mission mostly youngsters with the support of RKVY and KSHM. "More and more youngsters in Kerala are opting for Agri-business mostly Banana cultivation, finding it a highly remunerative. They are either cultivating it on their own land or get land on lease at about Rs 40,000 per acre and opt for banana cultivation. Some have opted for inter-cropping of banana plantation with vegetables such as cucumber and amaranthus, according to Kerala State Horticulture Mission (KSHM) Director Dr. K. Prathapan. Currently over 75,000 hectares is under banana cultivation and its spread across all districts of the state more so in Thiruvananthapuram, Kollam, Thrissur and Palakkad. In Thiruvananthapuram district alone, banana cultivation by youngsters is extensive near Killiyar, Vengannur, Pallichal, Kattakada and Nemom. "It incurs Rs 90 to nurture a banana plant, but the product is highly remunerative. Even if sold at Rs 26 per kg, the farmer can easily make Rs 260 per plant and in one hectare there will be at least 2500 plantations," Prathapan said. Though the current retail price of Nendran banana is about Rs 40 per kg, the price of this banana had peaked to over Rs

50 earlier. Currently, wholesale market price of Nendran banana is Rs 32 per kg while the farmers sell it at Rs 26 per kg to the traders.(Source- Times of India, Thiruvananthapuram May 12, 2013)

Vegetables top the list in the organic food category in India - Data has revealed that vegetables top the category offering organic options in India. As awareness about organic food options grows in urban areas, it was found that vegetables at 68% lead the way with fruits following at 52%. Organic pulses (51%), food grains (50%), milk (45%) and fruit juices (51%) are the most regularly purchased items by Indian consumers, said the Associated Chambers of Commerce and Industry of India (ASSOCHAM) recently. Packaged food, tea and beverages are amongst the other products for which Indians prefer the organic option, adds a survey conducted by ASSOCHAM. Currently, most organic farmers in India are still in the transition phase and hence their costs are still high, according to ASSOCHAM. As these farmers continue with organic farming, the production costs are expected to reduce, making India as one of the most important producers of organic food, said a spokesperson. The average weekly expenditure on organic food is estimated at 50% of the weekly food budget, points out the survey. With all the bad publicity and alarm generated by poor diet, junk food and rising levels of obesity, the boom in the organic sector comes as a relief adds DS Rawat of ASSOCHAM. A majority who participated in the survey said that eating organic food was "healthier". They also said, they would eat more organic food if it was available at more convenient stores and even a bigger majority said if it was less expensive. The Government is also promoting production of organic crops, fruits and vegetables etc. through various schemes like the National Horticulture Mission (NHM), Horticulture Mission for North East and Himalayan States (HMNEH), Rashtriya Krishi Vikas Yojana (RKVY),

National Project on Management of Soil Health and Fertility (NPMSHF), National Project on Organic Farming (NPOF), Network Project on Organic Farming under Indian Council of Agricultural Research (ICAR) and various schemes of Agricultural and Processed Food Products Export Development Authority (APEDA) (Source – Times of India, Mumbai, May 26, 2013)

Consumption of organic food products grows three-fold in metros: Survey

- In high-income-group bracket, nearly 62% of households prefer organic products due to rising awareness due to higher disposable income and easy availability in the markets, according to a survey undertaken by the Associated Chambers of Commerce and Industry of India (ASSOCHAM). There has been a major shift for organic products, especially fruit and vegetables in the metropolitan cities as about 62% of metropolitans buy organic, an increase of 95% in the last 5 years, the survey reveals. The survey on 'Rising demand of organic products in metropolitan cities' was based on 1,500 lead retailers selling non-organic and organic products. 1,000 retailers cited that health and environment grounds are the main reasons for purchasing organic products. The cities that participated in the survey were Delhi-NCR, Mumbai, Cochin, Chennai, Hyderabad, Indore, Patna, Pune, Chandigarh and Dehradun and it was observed that there has been a surprising rise in the demand of organic products in the Indian market. Mumbai led the way with the most consumers for organic products. There were 65% buyers in Mumbai as compared to the second highest at Delhi with 61% and then Bangalore (58%), Ahmedabad (55%), Hyderabad (52%), Chandigarh (51%) and Indore (50%). The majority of the respondents said that, "Parents are more concerned about the health of their children and willing to spend more to ensure they get better and safer food, adding that organic products are 30% to 40% more expensive than usual food." (Source – Times of India, Mumbai May 26, 2013).

Three day fruit Festival at Bhubaneswar, Odisha - Fruit lovers in the capital city Bhubaneswar of Odisha have a reason to rejoice. The state Government organized a three-day fruit exhibition at the Adivasi ground from May 19 to 21, 2013 where different varieties of fruits were on display. The fruit Festival was inaugurated by the Hon'ble Chief Minister of Odisha, Shri Navin Pattnaik. The Horticulture Department, expected more than 3,500 participants from 30 districts of Odisha. About 25 experts from related fields were also invited to evaluate and judge the best fruit, sources said. Last year, the fruit exhibition saw 2,800 participants and about 23 varieties of fruits were on display. "Fruit growers across the state have been informed through the Deputy Directors of Horticulture to take part in the exhibition. Given the fruit growing trend in the state, mainly mangoes, litchis, jack fruits and coconut some local and exotic varieties become a hit at the exhibition," said Assistant Horticulture Officer Susanta Das. 72 varieties of mangoes, six kinds of litchi, six coconut types and two forms of jack fruits were on display. Besides fresh fruits 400 participants also put up large varieties of jam, jelly, squash and pickles. Most interesting event of the festival was two days interactive workshop on Organic farming, which was attended by more than 260 participants said Mr Das. The fruit exhibition was organized to boost fruit growing in the state, said Horticulture Director Shri Sanjeev Chaddha. "In order to create interest among visitors, the Department also organized fruit-eating competition. Children below 14 years took part in it," said Chaddha. A drawing competition was also organized during the exhibition, he added. (Source- Times of India, Bhubaneswar May 16, 2013).

Organic farming to usher evergreen revolution in country'- MS Swaminathan

- Emphasizing the need to educate farmers for making right use of fertilizers, noted agriculture scientist M S Swaminathan said the wave of organic farming will usher in the "Evergreen Revolution" in country. Speaking at Khalsa College Amritsar (KCA), he said environment issues confronting agriculture were serious but adopting the organic and

controlled-fertilisers-use would end the woes. He said focus cannot be merely on agriculture growth but "we must ensure economic well-being of farmers too". Former head of National Commission of Farmers and Indian Council of Agriculture Research (ICAR), Swaminathan also appealed to the youth to adopt agriculture as a vocation. "The country needs young farmers, men and women both. They are more ready to adopt new technology and modern methods of farming," he said. Asked about Punjab's declining agriculture growth, Swaminathan said the production is up in Punjab but other issues need attention. "There are environmental and marketing issues confronting Punjab's agriculture today. There are issues of farmers' debts and need for diversification and crop rotation," he said, adding that more and more farmers must adopt organic farming and the government must help the farming community to get rid of the challenges of marketing. He, however, said Punjab had been and would always be the leader in grain production and the hard working farmers from here will continue feeding the country. Punjab Farmers Commission Head G S Kalkat cited cultural and behavioral patterns confronting farmers. He said farmers taking loans to dig tube wells and buying machinery that may not pay adequate dividends have added to the problems of indebtedness. Kalkat said the focus had always been on Agriculture but the time has come when emphasis should be given on economic prosperity of farmers as well. Khalsa College Governing Council (KGC) honorary Secretary Rajinder Mohan Singh Chhina appreciated the contributions of Swaminathan to the Green Revolution. He said Punjab was witnessing the 50th anniversary of 'wheat revolution' in 1963, which led to the Green Revolution. It is time to re-think the widespread use of chemicals in farming, which has badly affected land and water resources of the state, he added. (Source- Times of India, Chandigarh, April 04, 2013).

Bio-compost plants in Kerala schools soon - With the twin objective of treating waste at the source of origin and to inculcate the message of organic farming, the

government has decided to set up bio-compost plants in all schools in Kerala from the next academic year, Agriculture Minister K. P. Mohanan has said. The project would treat waste and use it as organic manure and to generate biogas, he said after inaugurating a NABARD funded social infrastructure projects for the endosulfan hit-panchayats in the district at Bovikkanam near here. It has been decided to commence Rs. 22 crore projects by involving young students as they could prove to be the messengers of values, Mr. Mohanan said adding that the manure developed through the project could be used for developing vegetable gardens in respective schools. The initiatives to turn Kasargod into a complete organic-farming district would begin from next month. As part of implementing the recommendations of the report by the commission headed by former State Chief Secretary P. Prabhakaran, a Cabinet team headed by Chief Minister Oommen Chandy would meet Prime Minister Manmohan Singh on April 23 to mop up Central funds for the projects, he said (Source- The Hindu, Kasargod, April 6, 2013).

Organic revolution catching on in Chennai - An organic food revolution is slowly catching on in Chennai as more and more people turn to agricultural products grown without the use of pesticides or chemical fertilizers. Although organic food shows a low penetration of 17 per cent among households in India, experts believe that in Chennai awareness about it is slowly growing and outlets in pockets like Adyar, Besant Nagar, T Nagar and Anna Nagar now stock organic food. Arun, owner of Vidai organic store in the city, feels that currently the awareness is limited to the elite and upper middle class and will percolate to the masses only if organic food products become cheap and affordable. Arun is planning to cash in on the organic revolution sweeping across the city by opening an organic food hotel on East Coast Road and Old Mahabalipuram Road. "IT professionals are now more health conscious, and with diabetes and stress at a high level in the city, an organic food hotel would be a big

hit,” he says. “There is a marked preference in many shops and malls for organic millet with the spurt in diabetes. The State government is launching a major initiative in tribal areas to increase millet production by involving womenfolk under the Puthu Vazhvu project,” said Sultan Ahmed Ismail, noted ecologist and director of Ecoscience Research Foundation. A study claims that the market for organic food is still nascent in India with very few active brands and a low penetration even among urban consumers. The estimated market size of organic fruit and dairy products at present is \$80 million and \$20 million respectively. The study predicts this will grow at 13-14 per cent and 10-11 per cent respectively over the next five to six years. “The main reason for the low demand for organic food in the city is that people find it too expensive. The main issue is that we are dependent on the western market for import of organic food. These industries use a lot of technology to process organic food items,” Sultan says. “The cost of organic food is high because it is produced in isolated areas and there is the cost of transporting the food to the market. Organic food is a way of life. It is food on the table and people should not see it as belonging to the elite class,” he says. The nutrient content is higher in organic vegetables. But how does one know, food is organic? “Organic food items undergo a certification. Certification by a global expert costs Rs. 3 lakh. But there is more reasonable certification. One is the Participatory Guarantee System (PGS). There is a need to accept the guarantee system as it is done by the farmer himself,” Sultan said. Sivaraman, an activist with Poovulagin Nanbargal, a 25-year old environmental movement, says that the organic market is slowly picking up in the city. Although there have been some ups and downs like non-availability of de-husked millet, many supermarket stores now stock organic food and there is growing consumer awareness about these products. (Source- By C Shivakumar ENS – CHENNAI 03rd June 2013).

Millet production to increase in Tamil Nadu - The State government is planning a

number of initiatives, including roping in women in tribal areas, to increase the production of millet in Tamil Nadu. Sources told City Express that millet was produced in nearly 18 districts of the State, but now only a handful of them produce the crop. In 1980, millet was cultivated on 35,00,000 acres of rain-fed areas, mostly by tribal communities. In 2010, the area of cultivation was around 15,00,000 acres. It is believed that many tribal areas have switched over to rice. Organic millet is rich in iron. The rate of anaemia is high among young girls in the State and millet could be an alternative to the iron folic tablets. The nutritive value of millet is believed to be higher than that of rice and wheat, and the State Rural Department has launched a Puthu Vazhvu project to train womenfolk to cook millet-based dishes and to conserve millet. Sultan Ahmed Ismail, ecologist and Director of Ecoscience Research Foundation, says that organic millet is the best crop to tackle climate change as well as the problem of anemia in young girls. It was after the Bengal famine that the excessive use of chemical fertilizers began, says Sultan. Chemicals, some detrimental to health, were used to give colour to the food. Sultan says that the consumption of chemically-treated food resulted in hyperactivity among children. Sivaraman, an activist with Poovulagin Nanbargal, says the consumption of organic millet is slowly picking up. It could be consumed by all if the government supported its procurement as it does for cereals. He said the cost of producing organic millet is lower than that producing it by conventional procedures. The State government is planning to make millet available in the public distribution system, sources say. Sivaraman said organic millet has a huge market due to its therapeutic nature. It helps in the control of diabetes, cholesterol and non-communicable diseases. (Source- Indian Express, June 3, 2013)

Impact of vermicompost and nitrogen phosphorus-potassium application on biomass partitioning, nutrient uptake and productivity of arecanut - A long-term field experiment (1998 to 2010) investigated

the effects of vermicompost (VC) and chemical fertilizers (CF) application alone or in combination on biomass partitioning, nutrient uptake and productivity of arecanut. Trunk biomass (kg palm^{-1}) was significantly higher with integrated treatments (40.8–43.0) than control (23.9). Biomass partitioning to kernel varied between 4.6% in control to 7.7% in CF 100 and 200% nitrogen (N) - phosphorus (P) - potassium (K). The leaf P and K content varied significantly among treatments. The N immobilized in trunk (g palm^{-1}) was significantly higher in integrated treatments (119-127) than in control (93). Phosphorus and K uptake by trunk followed same trend. The leaf K uptake and total K removed were found significant. The nutrition treatments registered significantly higher kernel yield (2508–3176 kg ha^{-1}) than control (1721 kg ha^{-1}). The increased yield of arecanut from chemical fertilizers (73–85%) was more pronounced when compared to VC (48–59%) and integrated treatments (46–63%) over control. (Source- [Sujatha et al 2013](#), Journal of Plant Nutrition, Volume 36, (6), , Published online: 08 Apr 2013)

Evaluation of integrated nutrient management on *boro* rice in alluvial soil and its impacts upon growth, yield attributes, yield and soil nutrient status - A field trial was conducted during 2009 to 2011 to study the effect of inorganic fertilizer, vermicompost, phosphate solubilizing bacteria (PSB) and *Azotobacter* on the yield of *boro* rice (winter rice) and its impacts on soil nutrient status and grain uptake. The highest yield attributes were recorded with full recommended dose of inorganic fertilizer along with vermicompost at 2.5 t ha^{-1} , PSB and *Azotobacter*, which was at par with 75% of inorganic fertilizer along with vermicompost at 2.5 t ha^{-1} and PSB and *Azotobacter*. Application of PSB and *Azotobacter* significantly increased available phosphorus and nitrogen in soil. Uptake of micronutrients in grain was in the order of $\text{Fe} > \text{Mn} > \text{Zn} > \text{Cu}$. Micronutrient status in soil was also significantly influenced by the different doses of inorganic, organic and biofertilizers (Source- [Garai et al](#), Archives of Agronomy

and Soil Science Published online: 04 Feb 2013).

From Punjab to Bangalore, he pedals for a green cause - Cycling 2,800 km all the way from Punjab to Bangalore, all for reducing greenhouse gas emissions. As an air-conditioner mechanic back in Ludhiana, [Sanjay Verma](#) knew very well how much the environment was being polluted. The 27-year-old, along with a group of friends, launched, 'Satya Malhotra', a local NGO in Ludhiana. They promote organic farming, plantation and cycling to help reduce greenhouse gas emissions, he said after a 21-day cycling expedition which reached Bangalore on May 5. Sanjay started his solo journey from Ludhiana on April 14, to convey the 'go green' message. He travelled 2,800 km spanning Punjab, Haryana, New Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Maharashtra, Andhra Pradesh, and finally reached Karnataka on May 5. It took Sanjay 21 days to cover the distance. On the way he held a rally in Ambala, spreading messages like "Save water, save life" and "Clean Ambala, green Ambala". The rally drew over 150 like-minded people who gathered to support the cause. "Although I faced obstacles like extreme weather conditions, my journey was great. I learned survival techniques and met a lot of people on the way, those who shared my concern about degradation of the environment," Sanjay said. Once back home, Sanjay hopes to start a cycling club to spread awareness and garner the support of youth. (Source - Times of India, Bangalore, May 27, 2013)

A Review of Organic Farming for Sustainable Agriculture in Northern India - In the post independence period, the most important challenge in India has been to produce enough food for the growing population. Hence, high-yielding varieties are being used with infusion of irrigation water, fertilizers, or pesticides. This combination of high-yielding production technology has helped the country develop a food surplus as well as contributing to concerns of soil health, environmental pollution, pesticide toxicity, and sustainability

of agricultural production. Scientists and policy planners are, therefore, reassessing agricultural practices which relied more on biological inputs rather than heavy usage of chemical fertilizers and pesticides. Organic farming can provide quality food without adversely affecting the soil's health and the environment; however, a concern is whether large-scale organic farming will produce enough food for India's large population. Certified organic products including all varieties of food products including basmati rice, pulses, honey, tea, spices, coffee, oilseeds, fruits, cereals, herbal medicines, and their value-added products are produced in India. Non edible organic products include cotton, garments, cosmetics, functional food products, body care products, and similar products. The production of these organic crops and products is reviewed with regard to sustainable agriculture in northern India. (Source- Yadav et al, International Journal of Agronomy, 16 May 2013).

India: Franciscan Sisters takes up organic farming - The Franciscan community of FSMA Sisters has been serving the people in the desert state of Rajasthan for more than three decades. They run a hospital and a school, and recently have embarked on a new agricultural project - running an organic farm on their two acre plot. The Principal was inspired after a visit to the Tarumitra Bio-reserve in Patna, where she saw students in Bihar led by Ms Margaret Molomoo making

great success in organic farming on their farm. The Superior of the small FSMA community, Sr Isabel, said she felt organic farming was more appropriate for Franciscans. Srs Celine and Pauline, two veterans in the community and the young Junior Sr Gincy all jumped at the chance to work on the project. With some help from students the community planted a local variety of wheat. They watched their crop turn green and tall and, unlike the neighbouring farms, did not use any chemical fertilizers or pesticide sprays. Their first crop was mature and ripe by the end of March. When the harvesting and threshing was complete the Sisters weighed up the wheat: a full 27 quintals! Over 10,000 Rupees worth of hay was an extra bonus. One of the seasoned farmers of the area, Usha Bai complimented the Sisters by stating that theirs was one of the best harvests she has ever seen in the whole of her life! "The best part of the whole story has been that all of us got involved with the land!" said Sr Ishpriya. "The traditional respect people had towards the earth is fast disappearing" she said. Sr Ishpriya said she want her children to grow up in their reverence for the land that supported them with food, water and life rejuvenating breath. "If this life-giving Earth is not sacred, then what is sacred?" she asked teachers and students in the school assembly (Source- Times of India, May 9, 2013.

Global Organic News

Organic Food is \$63 Billion strong Global Industry - 2011 is the most recent year for statistics on the growth of organic industry worldwide, but here's an update. Organic food is a \$63 billion industry globally, according to the International Federation of Organic Agriculture Movements (IFOAM). From 2002- 2011, the industry grew 170%, or about 19% a year. Interestingly, the US is the largest single market for organic food (and beverages), but developing countries are the biggest producers of the food we eat. In the US, the organic industry reached \$31.5 billion in sales, rising 9.5% from the previous year. Approximately a third of the world's agricultural land and more than 80% of the producers are in developing countries and emerging markets. Germany and France are the other dominant markets for organic food and Switzerland, Denmark and Luxemburg consume the most organic food per capita. Organic agriculture still makes up less than 1% of the world's farming acreage (0.9%) with 37.2 million hectares planted worldwide across 162 countries. One might be surprised to learn that Australia leads the world in organic acreage with 12 million hectares, followed by Argentina with 3.8 million hectares. The US comes in third with 1.9 million hectares. Organic's share of total agricultural land is highest in the Falkland Islands (35.9%), Liechtenstein (27.3%) and Austria (19.7%). Although the Oceania region has a third of the world's organic acreage - 12.2 million hectares - it accounts for just 2.9% of farmland there. Europe, with 10.6 million hectares, has 29% of the world's acreage, taking up 5.4 percent of the land. Latin America has 6.9 million hectares (18.4%), North America has 2.8 million hectares (7.5%), and Africa has 1.1 million hectares (3%). (Source-Sustainable Business.com News 05/16/2013).

Russia seeks to supply EU with organic foods - Russia shows immense potential for

exporting organic foods, but the market needs a regulatory framework in order to progress. Russian producers of organic foods have founded the Union of Organic Farming to lobby their interests. It is mostly foreign companies and farmers that are interested in promoting the \$148 million market, in hopes of launching exports of organic foods to the EU. The founders of the union are Russia's largest privately-owned farms. The union will have 20 members to start with and is expected to number 50 by the end of the year. The Executive Director of the union, Yakov Lyubovedsky, told Kommersant that the organization's main objective was to lobby for organic farms within the government and promote their sales. The top-priority mission for the union is to create a regulatory framework for the market. "The bio, eco and organic tags are added to packaging just for marketing purposes," Lyubovedsky says. Euromonitor International estimated the value of the Russian market for organic foods at \$148 million in 2012, an increase of 7.8 percent over 2011. Experts project the Russian market for green foods to expand by 30 percent by 2015. The Union of Organic Farming believes the market volume to be underestimated, because Euromonitor only takes into account sales by certified producers. "The thing is that small holdings produce 1.85 trillion rubles' [\$57.97 billion] worth of food, whereas the Agriculture Ministry estimates the entire agricultural sector at 3.37 trillion rubles [\$105.61 billion]," says Yakov Lyubovedsky. The largest organic farms produce up to 10,000 tons of food annually and their sales proceeds are estimated at \$1-3 million. "Organic farming is a global trend; people are engaged in organic food production in 160 countries, and in 84 of them, they have laws to regulate the market. Yet there is no such regulatory framework in Russia so far," says Ivan Starikov, Chairman of the Public Council at the Union of Organic Farming. Andrei Lysenkov with Abcert (a provider of European certification services) says that it

is mostly foreign businesses that are interested in organic farming in Russia, for they hope to start supplying green foods to the EU. Stefan Duerr, owner of Econiva (one of Russia's largest privately-owned farms), insists that the lack of regulations on the Russian market for eco products is an obstacle to supplying his produce to the EU. "We invite certification companies from the EU, but they are too expensive and our supplies prove unprofitable. If Russia develops a regulatory framework, both domestic sales and exports will become more attractive to farmers in Russia, with its vast lands and immense potential for growing food without GMO, fertilizers or other things used in intensive agriculture," he says. "The demand for organic foods is out of proportion to the supply both in Russia and abroad. The domestic market consumes everything we produce; there is nothing to export, although we have orders coming in from Germany and Sweden, where the demand for regular foods dropped during the crisis, while the demand for organic ones showed a 3 percent increase," says Chistaya Eda, Sales Director at Borio Almo Walter. (Source- June 3, 2013 [Svetlana Mentjukova](#), Kommersant)

The Russians Prove Small Scale Organic Farming CAN Feed the World - If you've already been through an economic collapse, you might know a thing or two about how to feed your family with little money. More importantly, you might know how to do it without pesticides, herbicides, fungicides, and GMO seed. On a total of about 20 million acres managed by over 35 million Russian families, Russians are carrying on an old-world technique, they are growing their own organic crops – and it's working. According to some statistics, they grow 92% of the entire countries' potatoes, 77% of its vegetables, 87% of its fruit, and feed 71% of the entire population from privately owned, organic farms or house gardens all across the country. These aren't huge Agro-farms run by pharmaceutical companies; these are small family farms and less-than-an-acre gardens. A recent report from Agro-ecology and the Right to Food says that organic and sustainable small-scale farming could

double food production in the parts of the world where hunger is the biggest issue. Within five to 10 years could see a big jump in crop cultivation. It could also take the teeth out of GMO business in the US. According to World Watch, also fish can be farm responsibly and feed the planet. Sustainable fish farms along with organic gardening are becoming the new agrobusiness. "Farmed seafood has certain advantages over wild fish in meeting modern demand. For a global marketplace that demands increasingly predictable products—uniform-sized fillets available year-round, free of the vagaries of weather or open-ocean fishing—fish farming delivers this predictability. Farms are also becoming more productive, raising fish at a lower cost and expanding the potential market." As long as this is done in sustainable ways without GMO salmon, really can feed over 7 billion people. Unfortunately, not all of us want to utilize organic farming. Purchasing 500,000 shares of Monsanto stock in 2012, Bill Gates is just one key figure who argues that GMOs are an absolute necessity in order to fight global starvation. Of course along with 'saving the world from starvation', GMO crops also bring along a large number of unwanted health and environmental effects. This isn't even considering the fact that long term; we truly don't know what kind of impact this will have on the earth on a major scale. Though we do know once everything is GMO, it will be virtually impossible to go back to a natural world. (Source Sarich Christina Infowars.com May 30, 2013).

Clean – Disinfect – Sanitize - The Rodale Institute CDS is a revolutionary, Non-Toxic/Green system that cleans (C), disinfects (D) and sanitizes (S) making this the most environmentally responsible, safest and most efficient cleaning/sanitizing system. The system utilizes only salt, water and a small charge of electricity to transform the ions in water into two safe solutions. Within the unit, chloride ions are converted into Hypochlorous Acid (HOCl), a sanitizer with a kill time of just seconds, while sodium ions are transformed into Sodium Hydroxide (NaOH), an alkaline solution used as a

grease cutter and cleaner. Both are completely safe for animals, humans and the environment (Source- Posted on Tuesday, May 21st, 2013 at 2:16 pm)

Recipe for great growth - When it comes to growing food, it takes a village. But not the kind of village you might think. While inviting friends and neighbors over to help plant in the spring, harvest in the summer and fall, or weed anytime during the growing season does make our tasks easier, it's the micro-villagers that gardeners, farmers, and landscape professionals should be focused on luring onto, and into, our land. Communities of bacteria, fungi, nematodes, and other microorganisms are the villagers that truly affect how our plants grow, in what I like to call a "cake and cookies" process. The formal term is nutrient cycling, but can more easily relate to how plants and microorganisms feed each other by looking at the process from our own kitchens. Plants release mostly simple sugars, but also carbohydrates and proteins, into the soil around their roots. Sugar, carbohydrates, and protein sound a lot like the ingredients for cake and cookies: sugar, flour, and eggs. Every plant gives off a mix of these ingredients, meaning a different kind of cake or cookie is going out into the soil around the root. As a plant releases these ingredients, bacteria and fungi in the soil start to party on these yummy cakes and cookies. But the only thing the bacteria and fungi are getting from the plant is the energy part of their diet—just cake and cookies, none of the minerals that they need for a healthy body (just as humans do). So they take the minerals they need from the sand grains, silt particles, clays, and organic matter that the soil is made of—minerals, plants also need but can't use as is from the soil. Now the bacteria and fungi have the nutrients the plant needs, but the plant can't get those directly from them. Instead, the bacteria and fungi hand off excess nutrients that they've collected to another set of guests at the root zone party: Organisms like protozoa, nematodes, microarthropods, and earthworms (a general group called predators) take those excess mineral nutrients from the bacteria and fungi and

make yet another set of cakes and cookies, mineral-based cakes and cookies that provide exactly what the plant needs right there in the root zone. Just like a block party where all the neighbors get together and bring what they are good at making, the soil-plant community members all feed and nurture each other. To summarize: The plant makes different combinations of "sugar, flour, and eggs" depending on what nutrients it's going to need today. Those "cakes and cookies" attract exactly the right set of bacteria and fungi guests to the party. The predators then use the nutrients the bacteria and fungi have collected to make the "cakes and cookies" that the plant needs. The plant feeds the microbiology, the microbiology feeds the predators, and the predators feed the plant. What an ideal system! So why do we struggle with growing more food faster? And why do some plants fail? Farmers feed the plant rather than feed the villagers. By providing fast and easy food using synthetic fertilizers, they bypass plants' production of their cakes and cookies. No invite from the big boss means no party. On top of which, the synthetic fertilizers kill the bacteria and fungi, so even if the plant does put out the cakes and cookies, there's no one left to partake of the goodies. By tilling and turning the soil incessantly for a weed-free zone, we break up not only the houses where microorganisms live and grow, but also the microorganisms themselves. We constantly disrupt the system of communication and interconnectedness between plants and their microbiological soil communities. So what's the answer? Rebuild our soil communities. Make compost and compost teas and extracts that include the right ingredients and the right recipes for the right microorganisms that will, in turn, provide the right cakes or the right cookies for our plants. It might seem like we know everything there is to know about compost. But when you dig a little deeper, it's clear we are leagues away from truly understanding how to rebuild the natural system we have interrupted and continue to disrupt, because not all compost is created equal. Sometimes, in our effort to improve the system, we do more damage than good. We all need to become good hosts in our own

right when it comes to properly nurturing our gardens, farms, and landscapes. We need to let soil life and compost life party on their own terms. (Source-Coach Mark Smallwood, Dig Deeper Rodale Institute Posted on Monday, May 20th, 2013 at 10:57 am. Originally appeared at www.mariasfarmcountrykitchen.com)

Nematode indicators as integrative measures of soil condition in organic cropping systems

- Even though indicators based on nematode community composition are among the best developed metrics of soil health, little research has been done to support their application to management. This work tested the hypothesis that organic farming systems could enhance nematode community structure where soil resource condition had been enhanced by reducing disturbance and using organic fertility inputs. Authors tested this hypothesis by exploring the relationship between soil biology and the condition of the soil resource in an organic trial using the Nematode Maturity (MI), Plant Parasitic (PPI), Enrichment (EI), Channel (CI), and Structure (SI) indices. Shifts in nematode indices occurring during the growing season were compared with measures of labile soil organic matter and N availability [particulate organic matter-C and -N (POM-C, POM-N), particulate organic matter C:N ratio (POM C:N), potentially mineralizable N (PMN), hydrolysable N estimated with the Illinois-N test (IL-N), and heterotrophic activity estimated with fluorescein diacetate hydrolysis (FDA)]. Soil samples were collected four times during a single growing season from plots that had been transitioned from conventional to organic management under Ley-, Row Crop- and Vegetable-based regimes. Each of the three transition scenarios included three subplots that were either supplied with organic matter from raw and composted dairy manure or cover crop residues. High EI and low CI values revealed a greater dominance of the bacterial decomposition pathway in soils transitioned under the Ley system and values were positively associated with measures of microbial activity and available N. Increases in the PPI values were stimulated where nutrient

availability (and likely crop root growth) were enhanced. The SI was positively associated with the POM fraction and declined after primary tillage. This signalled a shift in the community towards an early stage of succession and demonstrates the detrimental effects of tillage on soil food web complexity. Recommendations for soil stewardship that are guided by nematode food web indices would encourage practices that enhance soil organic matter, reduce the frequency of cultivation, and conserve structure. (Source-et al, Soil Biology and Biochemistry, Volume 64, 2013, Pages 103–113)

Extractability and bioavailability of Pb and As in historically contaminated orchard soil: Effects of compost amendments

- The availability of Pb and As in an historically contaminated orchard soil, after amendment with compost and aging in the field, was determined by single-step chemical extraction with 1.0 M ammonium acetate at pH 4.8, sequential extraction using the modified BCR test, and a redworm bioassay in the laboratory. The efficiency of soil Pb extraction by ammonium acetate was greater at higher total soil Pb but was reduced by compost amendment. Conversely, the extraction efficiency of total soil As increased with compost amendment, but was not sensitive to total soil As. The redworm bioassay indicated Pb (but not As) bioavailability to be reduced by soil amendment with compost, a result consistent with the ammonium acetate extraction test but not reflected in modified BCR test. Electron microprobe studies of the orchard soil revealed Pb and As to be spatially associated in discrete particles along with phosphorus and iron. (Source-Fleming et al, Environmental Pollution, Volume 177, June 2013, Pages 90–97)

Durum wheat varieties in N-deficient environments and organic farming: a comparison of yield, quality and stability performances

- Stability and reliability of yield and quality for 15 durum wheat genotypes (old and modern) were evaluated in a 5-year experiment (southern Italy) in organic farming. Genotypes were

grown at two N levels (0 and 80 kg/ha), with the aim of evaluating 'genotype × environment' (GE) interactions and their role on genotype selection in N-limited environments. Several approaches to stability were used, within the frame of mixed models and additive main effects and multiplicative interaction analysis, and their validity in stressful conditions and organic farming was discussed. Especially for protein and gluten content, results indicate high environmental variability and the presence of crossover 'N × environment' interactions, which supports the need for specific breeding programmes in N-deficient environments. The average response was strongly affected by N availability (on average, yield was 2.95 and 3.42 t/ha, protein content was 11.6% and 12.85%, gluten content was 8.55% and 9.92%, respectively, at 0 and 80 kg N/ha), and few genotypes gave high yield and quality at both fertilization levels. Only 'Gargano' and 'Fortore' showed a good inter-year stability at both N levels. The old cultivars gave minimal responsiveness to increased N input, but gave good results in limiting conditions, indicating that they may play a role in organic farming. (Source – Stagnari et al, 2013 Plant cell and developmental biology, Plant Breeding, June 2013)

Evaluating the sustainability of four organic vegetables production systems_-

A field study evaluating the sustainability of four organic vegetable production systems was conducted in Lexington, Kentucky in 2006 and 2007. The four systems included no-till, raised beds covered with biodegradable black mulch, bare ground with shallow cultivation, and bare ground with shallow cultivation and wood chip mulch. The two-year study compared yield, weed control, labor, and costs associated with each system, as well as physical, chemical, and microbiological soil characteristics. In 2006, tomatoes (*Lycopersicon esculentum* Mill.) were grown in the four systems, with no significant difference in yield. Summer squash (*Cucurbita pepo* L.) was grown in the four systems in 2007. The no-till system had significantly lower yields than other systems.

The bare ground with cultivation and mulch system had the best weed control in both years. (Source- Scott, Delia W., University of Kentucky "evaluating the sustainability of four organic vegetable production systems" (2013). Theses and Dissertations--Plant and Soil Sciences. Paper 23. http://uknowledge.uky.edu/pss_etds/2)

Effects of Soil Depth and Season Variation on Community Structure of Arbuscular Mycorrhizal Fungi in Greenhouse Soils Planted with Watermelon -

The characteristics of arbuscular mycorrhizal fungal (AMF) community structure in various soil depths and growing seasons of watermelon (*Citrullus vulgaris*) grown in commercial greenhouses in Daxing of Beijing and Weifang and Laiyang of Shandong, China were investigated using both morphological identification and denaturing gradient gel electrophoresis. The sampled soils had been used for continuous greenhouse production of watermelon for 0, 5, 10, 15, or 20 years. *Glomus claroideum* was the dominant species in the greenhouse soils planted for 5, 10, and 15 years in Laiyang, while *Glomus mosseae* and *Glomus etunicatum* were dominant in the nearby open farmland soil. Sorenson's similarity index of AMF community composition ranged from 0.67 to 0.84 in the soils planted for 5 years, and from 0.29 to 0.33 for 20 years among the three locations. Spore abundance, species richness, and the Shannon index were highest near the soil surface (0–10 cm) and decreased with soil depth, and higher in June and October than in August and December. Canonical correspondence analysis showed that available P and the number of years that soil had been used for greenhouse production were the main factors contributing to the variance of AMF community composition. It was concluded that the community structure of AMF was mainly influenced by soil available P and planting time of watermelon as well as by soil depth and seasonal variation in the commercial greenhouse. (Source - Run-Jin and Yan Li, 2013, Pedosphere, Volume 23, Issue 3 : 350–358).

Impact on food productivity by fossil fuel independence—A case study of a Swedish small-scale integrated organic farm - The

large-scale industrial agriculture that provides the majority of food at present is dependent upon fossil fuels in the form of tractor fuel, mineral fertilizers, pesticides, and irrigation. Yet, the age of cheap and abundant fossil fuels will likely come to an end within the coming decades. In this case study, the productivity of a small-scale farm (8 ha arable land, 5.5 ha meadow, 3.5 ha pasture and 18 ha forest) independent on fossil fuels by using organic methods and draught horse power was investigated. The aim was to quantify its productivity when the animal composition and possible alternatives to tractive power were varied. After an analysis of possible solutions, three scenarios for tractive power were selected: draught horse power, diesel tractor, and combination of draught horse power and rapeseed oil fueled tractor. A model that calculates the amount of food available at the farm in terms of meat, milk egg, and crops, converts it into energy units and calculates how many people can be supplied from the farm was developed. The most reasonable of the scenarios studied was when draught horse power was combined with tractor (and combine harvester) driven on locally produced rapeseed oil. Then the farm will have access to all advantages with the tractor and harvester, e.g., timeliness in harvest and lifting heavy loads, and the renewability and efficiency of draught horse power on smaller fields, and lighter operations. This system was able to support between 66 and 82 persons depending on crop yields, milk yields, meat production, fuel demand for the tractor, and availability of forest grazing. Most likely the production capacity lands on ability to support approximately 68–70 persons, and the farm may require fossil fuels to support more than 80 persons. If all farmland globally was to be operated with the same productivity, this would be enough for supplying the global population with food at present. (Source - [Johansson et al, 2013](#), Acta Agriculturae Scandinavica, Section B -

Soil & Plant Science, Volume 63, (2), : 123-135)

The impact of land management and abandonment on soil enzymatic activity, glomalin content and aggregate stability -

Selected environments ranging from cultivated soils under vines and olive groves to sequential abandonment with forest, meadow and scrub cover were investigated for their impact on relevant physical and chemical properties in the shallow soils of the Cap de Creus Peninsula (NE Spain). Both insufficient agricultural practices and periodical wildfire occurrence in abandoned areas were focused as components triggering degradation processes. Despite that, less fire affected soils under *Erica* scrubs or meadows were found to be more active in carbon preservation potential. Soil properties like moisture, bulk density, water holding capacity, pH, organic carbon (SOC), carbon dioxide emission (CO₂) and total nitrogen (TN) showed significant seasonal patterns within and between the investigated soil environments, but total phosphorus (TP) did not show a clear trending. Carbon loss (C–CO₂) was extremely variable along the seasons in soil under vines, ranging from 3% to 10% of SOC stocks on annual basis. Assessment of C–CO₂ losses allowed establishing soils and associated management or stage of abandonment more susceptible to organic compound depletion. Glomalin and organic carbon were found to be significantly more active in favoring structural stability in the 2.00–5.60 mm aggregate class with respect to the 0.25–2.00 mm aggregate class, indicating that stable organic compounds may enhance the formation of larger aggregates and a better organized soil crumb. Seasonally, β-glucosidase, protease and phosphatase activities were much lower in soils under vines in agreement with the lowest organic carbon content. Enzyme activity increased from soils under vines to soil under pasture and showed significant patterns within soil environments and between seasons. A three component factor structure showed component 1 to be positively and significantly related with variables favoring better soil conditions

except the ratio C-CO₂/SOC and the bulk density. Soils under pasture and *Erica* scrub were scored as being more relevant to the first component-variable association especially in winter, spring and autumn, as opposed to the soils under vines (V) at each season. In the summer season the structural stability of 0.25–2.00 mm aggregate class of all the soil environments but vines was loaded in the component 2 and resulted in

opposition to CO₂ emission and soil moisture only at soils under pasture and *Cistus* scrub, suggesting that CO₂ emission increases at higher moisture content and both may cause disruption of smaller aggregates. Total phosphorus dynamics was found to depend by pH variation. (Source- Maria et al, Volumes 202–203, July 2013, Pages 51–61).

NATIONAL CENTRE OF ORGANIC FARMING
KAMLA NEHRU NAGAR, GHAZIABAD

Proforma of application for Subscription of Newsletter/ Change in Mailing Address

To,

The Director,
National Centre of Organic Farming,
Hapur Road, Near CBI Academy,
Kamla Nehru Nagar,
Ghaziabad-201 002.

Subject : Request for Subscription of Newsletter/ Change in mailing address – regarding.
Subs. No. : _____ (if request is for change in mailing address).

Sir,

I wish to subscribed Biofertiliser Newsletter (BFNL – Half Yearly)/ Organic Farming Newsletter (OFNL – Quarterly) being published by your organization. Kindly include the following address in your mailing list for the subscription of aforesaid newsletter(s).

Name : _____

Designation : _____

Office/Residence address : _____

District : _____ Pincode _____

State : _____

Telephone Nos. _____ Fax No.: _____

E-mail : _____

Field of Interest/work : _____

Yours faithfully,

Date : _____

Place : _____

Signature _____

Name _____

National and International Events

18TH ORGANIC WORLD CONGRESS-2014

ISTANBUL - The 18th edition of the IFOAM Organic World Congress (OWC) is taking place from 13 -15 October 2014 in Istanbul, Turkey. Approximately 2,000 people from all continents are expected there to debate issues, inspire each other, learn together and make strategic decisions. The Organic World Congress and the IFOAM General Assembly are the gatherings of the global Organic Movement every three years. This congress is structured in 3 conference tracks: Main Track, Scientific Track, and Practitioners' Track. In addition, a series of workshops i.e. full sessions organized by interested parties, are highlighting the contributions made by various initiatives from around the organic world. The Main Track made up of two parallel sessions titled Organic Vision Building and Growing the Organic World, sees panelists discuss the future direction of the global organic world. The Scientific Track is designed for researchers to present their latest findings on systems, plant production, animal husbandry, socio-economics, processing, trade, and human nutrition research. The Practitioners Track provides a forum for the exchange of hands-on knowledge and experiences in the practical and strategic as well as socio-cultural aspects of organic food and agriculture. The series of workshops is open to institutes and initiatives interested in sharing their expertise with congress attendees. Now is the time to secure active participation in the OWC 2014. Apply as a panelist, scientific speaker, practitioner or host a workshop. Submission deadline is 30 September, 2013. Instruction on how to submit a paper in Organic eprints for the 18th IFOAM Organic World Congress Main Track, Practitioners' Track, Workshops and Scientific Track are available at: <http://www.orgprints.org/>.

BIOFACH NORTH AMERICA 2013 -

BioFach America 2013 is scheduled for 26-28 September 2013 at Baltimore, USA. BioFach America - All Things Organic offers

manufacturers and traders the opportunity to get to know the North American organic market better. Besides inspiring meetings at the trade show, Baltimore is the ideal place for planning trade connections and making contact. Located at Natural Products Expo East, BioFach America - All Things Organic delivers the largest organic buying audience in the United States. With a qualified audience of more than 20,000 industry members, your organic products will be seen, tasted, and tried by this huge audience of potential customers. BioFach America - All Things Organic delivers cutting edge organics finished products, raw materials, market intelligence and education that tradeshow and conference attendees won't find anywhere else in North America. IFOAM (International Federation of Organic Agriculture Movements) is proud to be the Patron of BioFach, who applies strict admission criteria to guarantee the constantly high quality of the products on display. For further details log on to: events@ifoam.org.

EAST AFRICA CONFERENCE-

The proponents of the IFOAM OSEA II Project in partnership with the Tanzania Organic Agriculture Movement (TOAM) is organizing in Dar es Salaam the third East African Organic Conference under the theme "*Sharing achievements made and lessons learned*" from July 2 to 4 2013. The conference will bring together organic stakeholders to share experiences learned since the launch of the East African Organic Products Standards six years ago. In particular, the conference will - report on the implementation of the East Africa Organic Products Standard and the East African Organic Mark and the growth of organic market; - present organic agriculture related project and case studies; - report on progress made in mainstreaming organic agriculture into relevant national and regional policies; - introduce new aspects of organic production such as aquaculture and Participatory Guarantee Systems; - share

successful research initiatives and sector development experiences. Besides the main conference event, the OSEA Project and key partners will organize a number of separate workshops and meetings. At the East African organic exhibition, producers will show the public what organic agriculture has to offer consumers. More information about the conference is available at <http://www.ifoam.org/en/events/east> Africa conference.

MIDDLE EAST NATURAL & ORGANIC PRODUCTS EXPO 2013 - The Middle East Natural & Organic Product Expo 2013 is going to happen during Dec 3-5, 2013 at Dubai World Trade Centre, Dubai, United Arab Emirates, is a "never to be missed" expo in the region as it attracts high quality trade buyers from all over the world especially from GCC, Middle East and African countries. The overwhelming response from the trade community in the region is a clear example that there is a high demand for organic products in the Middle East market. Significantly, the show is held in Dubai, the cosmopolitan city-state of the UAE. Dubai offers a vantage point to companies for regional penetration with the city being the trading and export hub for the whole of Middle East and Africa. For details log on to - www.naturalproductme.com Tel:

+ 971 4 3322283, 3327274, Fax: + 971 4 3322253 Mob: + 971 50 4544693.

7th EUROPEAN ORGANIC CONGRESS - 7th European organic congress is going to happen during 2-4 July 2013 in Vilnius, Lithuania. The IFOAM EU Group is the European working level within the International Federation of Organic Agriculture Movements. It brings together more than 300 organisations, associations and enterprises from all EU-27, EFTA and candidate countries. IFOAM's goal is the worldwide adoption of ecologically, socially and economically sound systems that are based on the principles of Organic Agriculture. It is to announce that the 7th European Organic Congress is now listed officially a Lithuanian EU Council Presidency event. With 250 participants expected, including high-level speakers from the European Commission, the European Parliament and the European organic sector, the 7th European Organic Congress will take place at a crucial point in time for the review of the European Organic Regulation and for the debate on the future Common Agricultural Policy (CAP). Please save the new dates (2-4 July 2013) in your calendar. Registration with an early bird fee and the congress website has opened on 4 March 2013. For detail information interested can contact: www.ifoam-eu.org

"CERTIFICATE COURSE ON ORGANIC FARMING"

To create first generation organic agriculture extension workers and field worker, to develop rural trainers on organic management practices with special focus on cropping system management, nutrient management and plant protection etc., National Centre of Organic Farming, Ghaziabad has started 3 residential **Certificate Course on Organic Farming** courses each of 30 days duration at its campus Ghaziabad from the year 2013-2014. The courses are normally organized during July, September and December.

Eligibility of Participation: The course will be open for rural youth having Degree/Diploma in Agriculture. SAUs/Educational Institutes can also sponsor their undergraduate students for such course.

How to Apply: Duly typed application can be submitted on A-4 size paper **clearly indicating choice of duration of course** to the Director, National Centre of Organic Farming, Sector 19, Hapur Road, Ghaziabad-201002 (UP) along with detailed Bio-Data and a passport size photograph (duly attested by gazetted officer) pasted on the Bio-Data, supported by attested photocopies of Educational Qualifications (Degree / Diploma in Agriculture) **10 clear days before the commencement of the course**. The applications can either be submitted directly or through the institutions where the applicant is presently pursuing his studies. **However, a signed, scanned copy of the application must be sent to email id nbdc@nic.in with subject line "Application for Certificate Course"**. During the stay of participant at NCOF, Ghaziabad, lodging and boarding charges shall be borne by this centre, however, NO TA/DA shall be paid for attending this course. Selection of participant will be on first come first serve basis and it will be the sole discretion of Director, NCOF to change / postpone or cancel any of the course, circumstances, if so warrants.

The date of commencement of each course will be advertised in the national newspapers and also in the website of this office at <http://ncof.dacnet.nic.in>.

Book Reviews

"Organic Agriculture : African Experiences in Resilience and Sustainability", 2013. Edited by, Raymond Auerbach, Gunnar Rundgren and Nadia Scialabba, New FAO publication May 2013 -.This new FAO publication demonstrates that organic management can benefit people, the economy and ecosystems and that this can be achieved in Africa, where hunger and degradation stubbornly persist, despite decades of development efforts. The work presented in this volume stems from the conference on Mainstreaming Organic Agriculture in the African Development Agenda, held in Lusaka, Zambia, from 2 to 4 May 2012. Participants of this Conference shared research results confirming that organic agricultural practices "increase yields, improve livelihoods and food security, conserve indigenous knowledge, plant varieties and animal breeds, as well as sociocultural development, and provide much greater resilience in times of climate extremes, such as drought and heavy rains."This publication expands on selected research presented during the Lusaka Conference. The different chapters document sustainability experiences, including: mainstreaming organic agriculture into African development approaches; community-based livestock systems combining holistic range management; indigenous ethno-veterinary practices and new understanding of customary systems of resource management; ecofunctional intensification through management of legumes, systems of rice intensification and integrated farming and smallholders' knowledge harnessed through family farmers learning groups and customized information and communication technologies. The studies from different Sub-Saharan countries demonstrate that successful organic farming is about whole farm management, where feeding the soil feeds the plant, where optimal nutrient cycling is achieved through plant and

animals management in time (i.e. rotations) and space (i.e. associations) and where quality production goes hand-in-hand with market linkages. Sound agronomy is a recipe that needs to be owned by farmers who have specific cultures and by pastoralists who have specific environments: traditional knowledge and flexible management strategies are therefore key for successful outcomes.

The World of Organic Agriculture-Statistics and Emerging Trends 2013. by Willer, Helga, Julia Lernoud and Lukas Kilcher (Eds.) FiBL, IFOAM, 2013, First edition, 344 pages, ISBN 978-3-03736-233-4 - The 14th edition of The World of Organic Agriculture documents recent developments in global organic agriculture. It includes contributions from representatives of the organic sector from throughout the world and provides comprehensive organic farming statistics that cover surface area under organic management, specific information about land use in organic systems, numbers of farms and other operator types as well as selected market data. The book also contains information on the global market for organic food, the latest developments in organic certification, information on standards and regulations as well as insights into current and emerging trends for organic agriculture in Africa, Asia, Europe, Latin America, North America and Oceania. In addition, the volume contains a number of country reports: Albania, Australia, Canada, Hungary, Kosovo, Montenegro, Serbia, Pacific Islands, and the United States.

Principles of Sustainable Soil Management in Agroecosystems 2013. Edited by Rattan Lal, B.A. Stewart., Series -Advances in Soil Science, to be published 24th June 2013 by CRC Press, 568 pages Hardback: £89.00 978-1-46-651346-4 - With the use of high-level soil management technology, Africa could feed several billion

people, yet food production has generally stagnated since the 1960s. No matter how powerful the seed technology, the seedling emerging from it can flourish only in a healthy soil. Accordingly, crop yields in Africa, South Asia, and the Caribbean could be doubled or tripled through adoption of technologies based on laws of sustainable soil management. Principles of Sustainable Soil Management in Agroecosystems describes the application of these laws to enhance ecosystem services while restoring degraded soils and promoting sustainable use. With chapters contributed by world-class soil scientists, ecologists, and social scientists, this book outlines critical changes in management of agricultural soils necessary to achieve food security and meet the food demands of the present and projected future population. These changes include conversion to no-till and conservation agriculture; adoption of strategies of integrated nutrient management, water harvesting, and use of drip sub-irrigation; complex cropping/farming systems such as cover cropping and agroforestry; and use of nano-enhanced fertilizers. The book is based on the premise that it is not possible to extract more from a soil than what is put into it without degrading its quality. The strategy is to replace what is removed, respond wisely to what is changed, and be pro-active to what may happen because of natural and anthropogenic perturbations. The chapters, which exemplify these ideas, cover a range of topics including organic farming, soil fertility, crop-symbiotic soil microbiota, human-driven soil degradation, soil degradation and restoration, carbon sink capacity of soils, soil renewal and sustainability, and the marginality principle.

The Road back to Nature - Japanese book on farming in Tamil 2013. By N Vinoth Kumar | ENS – CHENNAI - The theme of this year's World Environment Day set by the UN Environment Programme (UNEP) is Think. Eat. Save. According to the UNEP website, global food production occupies 25 per cent of all habitable land and is responsible for 70 per cent of fresh

water consumption, 80 per cent of deforestation, and 30 per cent of greenhouse gas emissions. It is the largest single driver of biodiversity loss and land-use change. Many environmentalists are of the opinion that this is the result of a mechanised way of farming. Toeing that line of thinking and advocating an organic way of life, is organic farming expert Masanobu Fukuoka's book The Road back to Nature. The Japanese book's Tamil translation, Iyarkaikku Thirumbum Paathai, was recently released by Iyalvaagai Pathippagam. The Tamil translation was done by noted health activist Dr V Jeevanandam. Fukuoka, who himself was an agricultural scientist, had doubts on modern methods of agriculture. This made him engage in organic farming on his own land. This book narrates his experiences on his own farm and comprises lectures he had given all over the world. "Agriculture is the roof of one's culture. If agriculture turns out to be poisonous, then it would have effect on culture as well. When Japan's traditional farming blends with culture, we will be able to lead a happy life. This is my dream," writes Fukuoka in his book. In one place, Fukuoka says, "It is shocking to hear that India does not practice Gandhian way of farming". The author considers organic farming or natural way of farming as a part of the Gandhian way of farming. Fukuoka also makes criticisms on the activities of the US in the field of agriculture and in agricultural universities. "One cannot separate nature into trees, stem, leaves, roots and so on. Nature comprises everything" he says. Speaking to City Express, Dr V Jeevanandam, the translator said, "Many think that agriculture is bringing about a change in nature. It's not. We should do farming by joining hands with nature. Fukuoka says that we can do farming even without ploughing. He says we should develop the nutrients of soil or land. But in reality, we try only to maintain the existing nutrients. Through natural farming, we can develop the land's nutrients." On the WED theme, he said, "If we follow the suggestions of Fukuoka we will be able to bring down greenhouse gas emissions".

"Growing your own food isn't just a hobby; it is part of a healthy lifestyle. Children learn where food comes from. They can appreciate nature and the effect that we can have on our environmental horizon. Simple tasks, such as raking leaves, pulling weeds, growing seedlings or peeling a carrot they grew themselves, put them in touch with the world outside the plastic packet in the fridge. ... So grow your own food: It is trendy, politically correct, wholesome, good for the environment, good for our tight budgets and for our burgeoning waistlines. And it isn't hard. ... Get your hands dirty and enjoy the soil and the sunshine. Pick and plunder from outside your own windows. Enjoy the process from garden to table and all that is in between." – Sally Cameron, Author, 'Grow It Cook It.'

"Be thinking gardeners, not mindless consumers ... If you really want to be a good gardener, you need to understand what is going on in your soil. Once you are aware of and appreciate the beautiful synergisms between soil organisms, you will not only become a better gardener but a better steward of the earth." – Jeff Lowenfels & Wayne Lewis, Authors 'Teaming with Microbes.'

"Permaculture is the conscious design and maintenance of agriculturally productive systems which have the diversity, stability, and resilience of natural ecosystems. It is the harmonious integration of the landscape with people providing their food, energy, shelter and other material and non-material needs in a sustainable way." - Graham Bell, 'The Permaculture Way'

"Permaculture is a way of life which shows us how to make the most of our resources by minimizing waste and maximizing potential. Living ecologically doesn't mean giving everything up, but relearning the value of nature & understanding new ways of being wealthy...Conscious design of a lifestyle which is highly productive and does not cause environmental damage.....Meeting our basic needs & still leaving the earth richer than we found it." - Graham Bell, 'The Permaculture Way'