WORLD ASSOCIATION OF SOIL AND WATER CONSERVATION

HOT NEWS

Issue 05, 2015

WASWAC HOT NEWS No. 05, May, 2015

Contents

Cover photo: plant measure to control soil erosion, dongchuan, Yunnan Province, China. Photographer is Du Pengfei.

Editors: Ms. Mao Juan, Contributors include Prof. Li Rui, Dr Amir Kassam, Panos Panagos, and Dr. Du Pengfei.

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(Where the Secretariat of WASWAC is located)

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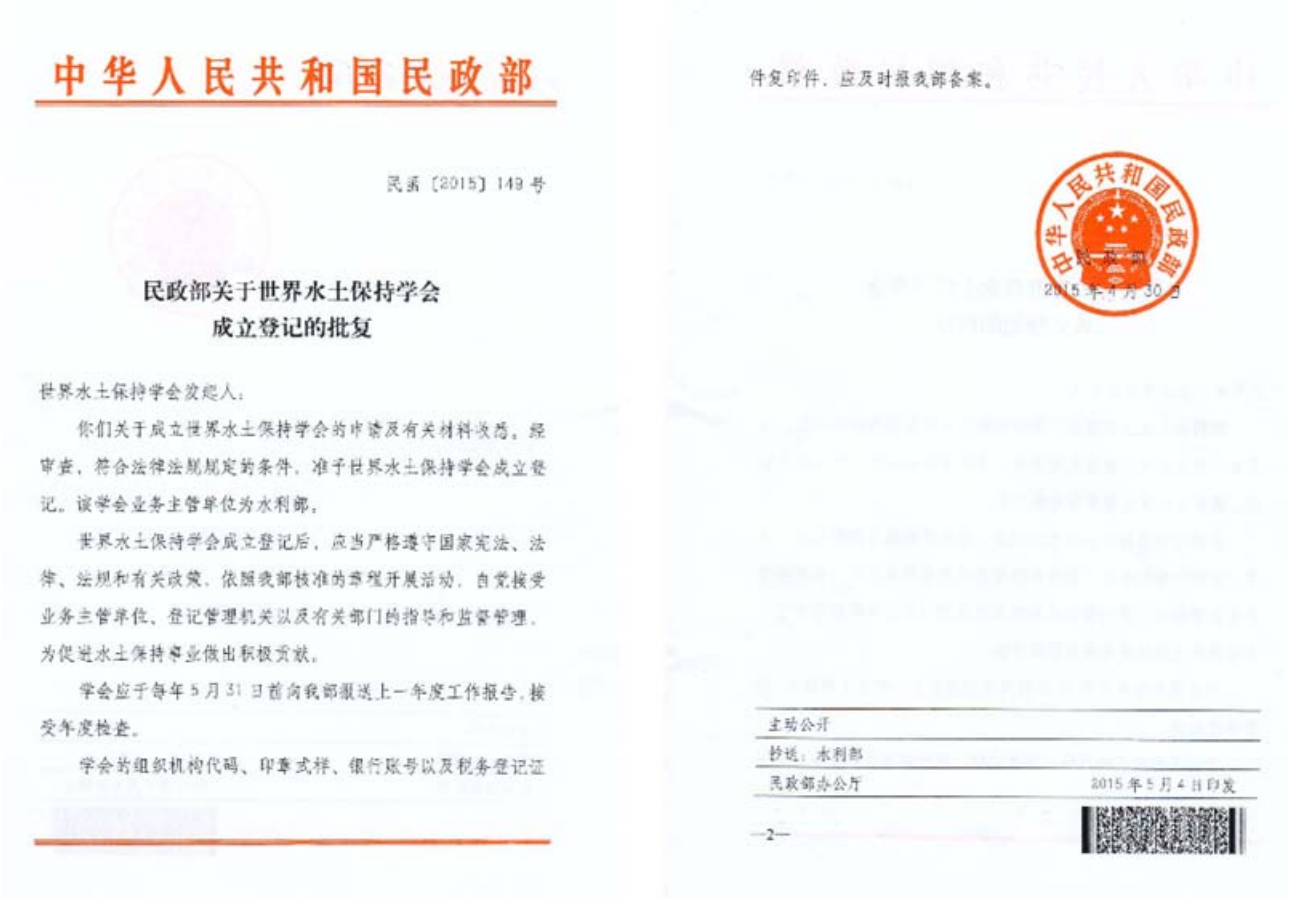
WASWAC Registration in China was Authorized

Great News!

Under Chinese government fully support, the registration of WASWAC in China has been authorized. According to the file released by the Ministry of Civil Affairs of China, WASWAC was permitted to start the formal registration procedures to transact the organization registration code certificate, official seal, tax registration certificate, permit for opening bank account, etc. We will try our best to finish the necessary procedures as soon as we can.



中华人民共和国民政部

民函〔2015〕149号

民政部关于世界水土保持学会成立登记的批复

世界水土保持学会发起人：

你们关于成立世界水土保持学会的申请及有关材料收悉。经审查，符合法律法规规定的条件，准于世界水土保持学会成立登记。该学会业务主管单位为水利部。

世界水土保持学会成立登记后，应当严格遵守国家宪法、法律、法规和有关政策，依照我部核准的章程开展活动，自觉接受业务主管单位、登记管理机关以及有关部门的指导和监督管理，为促进水土保持事业做出积极贡献。

学会应于每年5月31日前向我部报送上一年度工作报告，接受年度检查。

学会的组织机构代码、印章式样、银行账号以及税务登记证

件复印件，应及时报我部备案。

2015年4月30日

主动公开

抄送：水利部

民政部办公厅 2015年5月4日印发

—2—

Appreciation also extends to our all councilors and members, thanks for your continuous support to WASWAC. We believe that a better and brighter future is awaiting us in the near future!

ISCO 18 was held successfully

ISCO 18 was held successfully in El paso, Texas, USA during May 31 to June 4, 2015. The topic of this conference is “Achieving sustainability through conservation in a changing world”.

About 100 participants attended this conference with 65 submitted papers. Researchers gave excellent presentations on following aspects: (1)conservation agriculture, (2)impacts of soil erosion and conservation on soil health and organic carbon sequestration, (3)soil conservation for mitigation and adaptation to changing climate: sustainable solutions, (4)basic soil erosion: processes, mechanisms and modeling, (5)soil degradation: salinization, sodification and desertification, (6) soil conservation in non-agricultural settings, and (7)sustainable intensification of food production.

This conference was sponsored by United States Department of Agriculture, Soil and Water Conservation Society, European Society for Soil Conservation, International Union of Soil Sciences, International Soil Tillage Research Organization, International Society for Aeolian Research, American Water Resources Association, American Society of Agricultural and Biological Engineers, Union Geofisica Mexicana, Red de Desastres Hidrometeorologicos y Climaticos and World Association of Soil and Water Conservation.

LAST REMINDER

Only several authors who have submitted abstracts and applied for the Outstanding Youth Paper Award have not submitted full papers. This is the last reminder, please submit your full paper to us as soon as possible, the deadline will be July 15, 2015. Any submission later than this date will not be acceptable.

Any further inquiries please feel free to contact:

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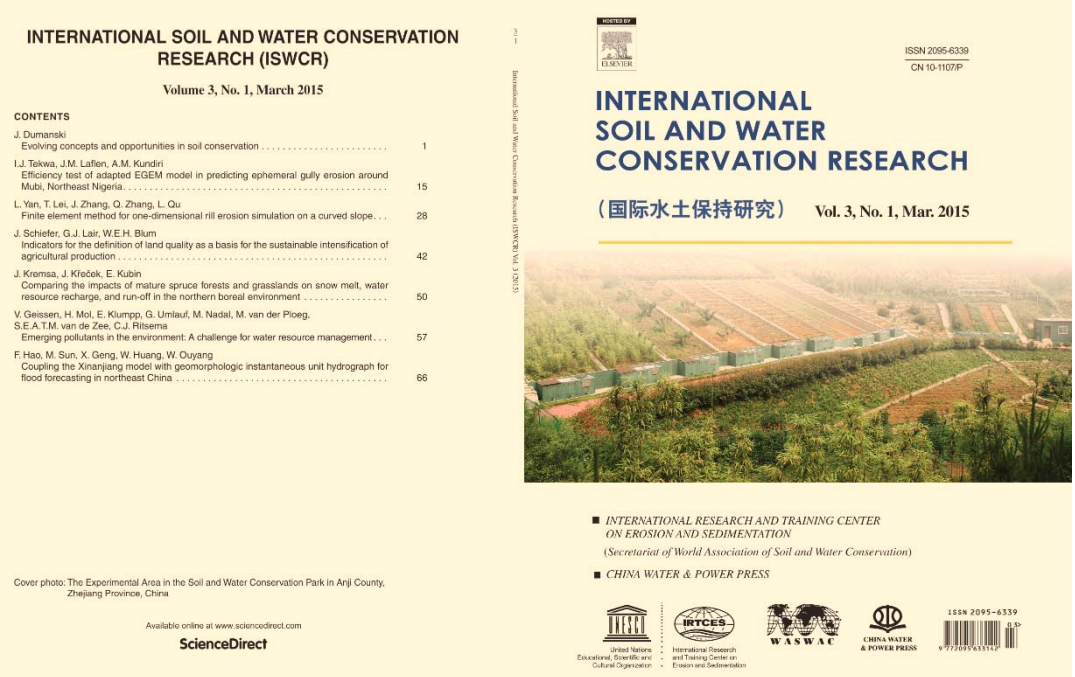
Ms. Wang, Yue +86-791-88179397 15870607879

The first issue of ISWCR in 2015

The first issue of ISWCR in 2015 was released in the end of March and was printed in the beginning of the second season. This is the first issue after cooperating with Elsevier. Since this issue, all papers are available on line real-time.

The first issue includes 7 papers, Prof. J. Dumanski contributed achievement with title of "Evolving concepts and opportunities in soil consevation", Dr I.J.Tekwa et al. made an efficiency test of adapted EGEM modes in predicting ephemeral gully erosion in Nigeria, Dr L. Yan et al. introduced a finite element method for one-dimensional rill erosion simulation on a curved slope, J.Schiefer et al. studied indicators for the definition of land quality as a basis for the sustainable intensification of agricultural production, J. Kermsa et al. compared the impacts of mature spruce forests and grasslands on snow melt, water resource recharge, and run-off in the northern boreal environment, V.Gissen et al. analyzed challenges for water resource management emerged pollutants in the environment, F. Hao et al. coupling a model for flood forecasting in northeast China. All readers can download the papers published in our journal on Elsevier website through

http://www.journals.elsevier.com/international-soil-and-water-conservation-research/recent-articles/



INTERNATIONAL SOIL AND WATER CONSERVATION RESEARCH (ISWCR)

Volume 3, No. 1, March 2015

CONTENTS

Cover photo: The Experimental Area in the Soil and Water Conservation Park in Anji County, Zhejiang Province, China

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INTERNATIONAL SOIL AND WATER CONSERVATION RESEARCH

(国际水土保持研究) Vol. 3, No. 1, Mar. 2015

■ INTERNATIONAL RESEARCH AND TRAINING CENTER ON EROSION AND SEDIMENTATION
(Secretariat of World Association of Soil and Water Conservation)
■ CHINA WATER & POWER PRESS

MEETINGS

International Conference on

"Modern technologies, strategies and tools for sustainable irrigation management and governance in Mediterranean agriculture"

IRRIMED 2015

European Territorial Cooperation Programmes (ETCP) GREECE-ITALY 2007-2013

Efficient Irrigation Management Tools for Agricultural Cultivations and Urban Landscapes

Place and Time: Valenzano (Bari, Italy), 23-25 September 2015

Conference themes:

- Soil–plant - atmosphere continuum
- Innovative tools for irrigation management at farm and district level
- Use of unconventional water resources in agriculture
- Modern strategies for water management under protected environment
- Modern strategies for water management for open field crops
- Water governance
- Environmental, social and economic aspects of water management

Important dates:

Deadlines:

Abstract submission by July 15st 2015 (ABSTRACT Submission Format at

http://irrimed2015.iamb.it/important-dates)

Information about the acceptance of abstract by July 31th 2015

Full paper submission by September 10th 2015

Registration by September 10th 2015

Contacts:

To get in touch with us:

angelo.parente@ispa.cnr.it

infoirrimed2015@iamb.it

Send your abstract to:

abstractirrimed2015@iamb.it not later than May 31st 2015

Send your full paper to:

fullpaperirrimed2015@iamb.it not later than September 10th 2015

Details at: http://irrimed2015.iamb.it/

International Universitary Meeting of Soil Sciences

Background:

Soil Sciences deal with soil functions in nature, and their conservation in the ecosystem. Progress

during the last 50 years of teaching and researching at UNAM will be presented at the meeting; further topics will include research diversification in soil sciences, achievements regarding food security, procurement of raw materials, understanding of fluxes in soil, atmosphere and hydrosphere, also their impact on landscape and biodiversity. Current challenges in the field of soil sciences, trans and interdisciplinary approaches to ensure continuity of the ecological functions of soils will also be addressed

Important dates:

August 15th. Deadline for abstract submission.

August 25th. Deadline for submission of letters of acceptance.

August 25th. Deadline for registration with reduced fee payment.

Registration

Registration fee includes access to the meeting, coffee-breaks, daily lunch, a participant's package, welcoming party and the closing dinner. Registration fee for companions will include the welcoming party, closing dinner, and a special program for companions.

Courses:

Two courses will be held at the meeting (Spanish spoken):

- IX Seminario - Taller Internacional de Clasificación de Suelos
- II Curso - Seminario Internacional de Indicadores de Calidad del Suelo

Cost: $ 250 USD each one.

Details at: http://soil15.geociencias.unam.mx/

7th International Conference of the Africa Soil Science Society

START *Enhancing scientific capacity to inspire informed action on global environmental change*

The African Soil Science Society (ASSS) and the Soil Science Society of Burkina Faso (3SBF) invite participants to the 7th International Conference of the Africa Soil Science Society that will be held from 25 October to 1st November 2015 in Ouagadougou (Burkina Faso).

This 7th International Conference will gather soil scientists, land planners and users as well as all related specialists to deliberate on the contribution of soil science for a sustainable development in Africa, with special attention on issues such as food insecurity, climate change, land degradation, land and water knowledge management and renewable energies.

During a four-day period (26-29 October) of scientific exchanges and debates focusing on a thorough analysis of issues related to sustainable development and land management in Africa, participants will be able to deliberate on (i) socio-economic sustainability of tropical agro-systems, (ii) land pressure and the increasing number of small scale farmers, (iii) community land ownership and agribusiness, (iv) emerging constraints or opportunities in land management such as carbon sequestration, climate change and the buffering role of soil, and the strategy for improving education and capacity building in soil science in Africa. Three other days (30 October to 1st November) will be used for a transnational field trip between Burkina Faso and Ghana.

Contributions will include oral communications (keynote speeches, scientific papers) and poster presentations. Proposed contributions must be relevant to one of the following sub- themes:

- Soil productivity in tropical agro-systems,
- Land ownership and sustainable land management,
- Soil, climate and climate change,
- Africa Soil Landscapes and Soil genesis,
- Knowledge, education and capacity building in soil science in Africa.

Abstracts and full papers should be submitted by respective deadlines. All papers should be typed and double spaced and should include:

1. Title and name(s), institutional affiliation(s) and complete mailing address (es) including e-mail of the author(s) with an indication of which author is responsible for correspondence.

2. Abstract, Introduction, Materials and Methods, Results, Discussion, Conclusion, eventual acknowledgements, list of References.

Two high-quality books of abstracts and proceedings will be published in volumes tentatively titled “Abstracts and Proceedings of the 7th ASSS”. Abstracts for oral or poster presentations will be accepted for presentation only after the revised version submitted on time.

Some important dates:

- 30 September 2015: Deadline for Full paper submission – 2 October 2015: Final programme
- 25 Oct-1st Nov 2015: Conference and field tour
- April 2016: Publication of the Proceedings

For more information: Visit ASSS Website: www.asssland.org or www.asssonline.org

The Africa Soil Science Society is a non-profit organization founded in 1986, with the aim of promoting and fostering soil science in all its facets and facilitating the collaboration and cooperation amongst the Regional and National Societies of Soil Science in Africa.

1. Post-doctotal position at the University of Lorraine GeoRessources laboratory

Title : Geochemistry and mineralogy of scandium in laterites

Context: Laterites developed on ultrabasic rocks in New Caledonia contain exploitable concentration of Ni, as well as Co depending of the ore processing. Laterites may also contain scandium at low concentrations, but significantly enriched in comparison with the source rocks (protoliths), at a concentration which could be of interest for a future exploitation.

Objectives and work summary: The objective of this post-doctoral position thesis will be to develop a comprehensive description of the scandium distribution from protoliths (ultrabasic series) to laterites both at the scale of rocks and minerals.

The scandium is a metal ubiquitously distributed in the earth crust but is rarely concentrated and generally does not almost posses mineralogical expression, and thus specific deposit. Supergene concentrations correspond to residual accumulation during intense leaching of protoliths. They are known in the lateritic profiles affecting ultrabasic rocks, or in the bauxites. In ultrabasic context, the primary carriers are Mg(Fe) silicates and laterites, by residual enrichment are considered as a promising resource for the scandium exploitation, in particular by hydrometallurgy. If the preliminary studies realized in New Caledonia suggest a preferential accumulation of the scandium within laterites, its geochemical behaviour during the supergene alteration as well as the mineral speciation both in the protolith as in the laterites remains little known. The objective is thus to study the distribution of scandium and other associated metals in lateritic profiles, and to analyse in situ scandium in particular through the development of quantitative analysis by LA-ICP-MS. Works will be carried in collaboration with M. Ulrich (Strasbourg University), M. Munoz (Synchrotron facilities, Grenoble University), BRGM (Orléans, and New Caledonia) and CEREGE (Aix-Marseille).

Student profile: The candidate must be a highly-motivated and self-directed person with a recent university master degree (or equivalent) in geosciences. A solid background in mineralogy petrology and/ or geochemistry and a strong interest for in situ analytical techniques are required. He or she may demonstrate fundamental knowledge in mineralogy and / or quantitative analytical techniques of minerals. The candidate will need to be fluency in English and in French (or willingness to learn French).

Funding: This post-doc position will be funded by the LabEx RESSOURCES21 which was selected by the French Ministry of Research and Education in the framework of the "Laboratoires d'Excellence" initiative. RESSOURCES21 proposes an integrated scientific and educational approach to the understanding, exploitation and environmental management of strategic metal resources for the 21th century. This post-doctoral fellowship is funded for one year but extension can be examined at the end of the stay.

Salary: €48 k annual gross salary

Applicants should send via email a Curriculum Vitae and the names and email addresses of two references to:

Dr Michel Cathelineau (DR CNRS, michel.cathelineau@univ-lorraine.fr)

Ass. Pr. Marc Ulrich (MCF, Strasbourg University, mulrich@unistra.fr)

RESSOURCES21 (contact, ressources21-contact@univ-lorraine.fr)

2. PhD Student in experimental and tracer hydrology (M/F)

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY

LIST

As a key player in research and innovation in Luxembourg, the Luxembourg Institute of Science and Technology (LIST) covers with its 630 employees the domains of materials, environment and IT. As an RTO (Research and Technology Organisation) and with its interdisciplinary impact-driven approach, LIST contributes to the development of Luxembourg's economy and society.

Context of intervention

The successful candidate will join the "Environmental Research and Innovation" (ERIN) department. With a team of more than 170 scientists and engineers from life science, environmental science, and IT

science, the department has the necessary interdisciplinary knowledge and skills to tackle major environmental challenges our society is facing today: climate change mitigation, ecosystem resilience, sustainable energy systems, efficient use of renewable resources, environmental pollution prevention and control.

PhD project subject

The offered PhD position is part of the project `Exploring catchment functions of storage, mixing and release across space and time' (STORE-AGE - FNR CORE 2014), funded by the Luxembourg National Research Fund.

The objective of the STORE-AGE is to explore the links between catchment storage dynamics and time-variant catchment transit times to better understand how catchments store, mix, and release water. The project combines hydrometric approaches with stable isotopes methods (2H, 18O), and the use of tritium as a natural tracer. The study will be carried out in the nested Attert River basin (0.46 km2-250 km2) in Luxembourg. The responsibilities of the PhD candidate are to better understand time-variant catchment transit times and to improve methods to assess them in the Attert research basin in Luxembourg using stable isotopes and potentially tritium as tracer. The work involves field work, lab work and data analysis/modelling.

The PhD candidate will have to attend conferences, summer schools and special courses in experimental hydrology in order to acquire the latest technologies in environmental tracing. She/he is expected to publish at least 3 peer-reviewed papers from her/his PhD research.

We offer:

The opportunity to work in an international team working in the fields of hydrological processes, tracer hydrology, eco-hydrology, soil hydrology, and hydrological modeling.

International network and support for summer schools, conferences, and travel.

State-of-the art lab facilities.

Profile

Education: Have a Master degree (or equivalent) in hydrology, water resources engineering, environmental engineering, physics, or a related discipline.

Competencies: Good background in data analysis and hydrological processes. Knowledge of a command programming language (Matlab, R) or willingness to acquire this knowledge. Enthusiastic, dedicated

and excited to work in a team of process hydrologists. Creative and team player. Willingness to work in the field, the laboratory, and in data analysis.

Language: Fluent in English (good writing skills required). German and French are an asset.

Other: Driving licence class B

Contact

Candidates interested in the above position can apply online on our website: www.list.lu

The application file should include:

a CV, a motivation letter; any other document you may think useful to be considered in your application file

For any questions regarding the scientific background of the project, feel free to contact Dr. Julian Klaus by email: julian.klaus@list.lu

The Magoye CF Planter - 'Mechanizing smallholder conservation farming'

Performance and Spacing

The planter performance in terms of uniformity of in-row plant spacing and emergence is comparable to that of the imported planters. When used properly with the correct seed grade, performance can even be better.

The planter can plant 1hectare in 4hours depending on various factors. One farmer planted about 30ha in two weeks with just two pairs of oxen. The row spacing is 75 or 90cm depending on the yoke used. The in-row plant spacing is changed by changing seed plate.

A satisfied customer

The Magoye CF Planter

This planter was developed to address the unavailability of affordable locally produced conservation farming (CF) planters. It is a versatile tool that can also be used as a conservation tillage implement for ripping and strip tillage.

The different options give the farmers flexibility and enables them to combine tillage, planting and fertilizer application in one operation saving labour and time. The planter was designed to be simple and to use locally available material so that it is affordable and cheap to maintain.

A 1 4ha field planted with the Magoye CF planter

Benefits

- Better yields due to timely planting, correct plant populations and better fertilizer placement.
- Enables the expansion of land under cropping.
- Labour saving
- Affordable
- Reliable
- User friendly and cheap to maintain
- Promotes local industry creating employment and saving foreign currency

AGMECH MECHANIZATION SERVICES

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Kafue.

Phone: +260-968-260 442, +260-974-302032
E-mail: arthurchomba@yahoo.co.uk

Uses

Ripping

The implement features a ripper tine for breaking compacted soil or just loosening the soil. The new ripper is narrower than that of other animal drawn rippers like the Magoye Ripper which makes it have deeper soil penetration without disturbing the soil too much in line with CA requirements. It does not use bolts and nuts making it cost a fraction of the Magoye ripper tines which are very expensive.

The Ripper Tine

Strip tillage

Sub-surface wings can be added to the tine to increase the width of soil loosening when the soil is moist. Most of the farmers used the Magoye Ripper in moist soil in which it is ineffective.

The Strip Tillage Tool

Strip tillage is designed for moist soil making it a lighter operation than ripping, achieves deeper soil loosening and there is less wear of tines.

The Magoye CF Planter

Planting

The planter can be used for zero-tillage planting where the tine opens a shallow planting furrow or can be used for planting combined with deep strip tillage.

It uses vertically rotating seed plates which enables a simple design that is easy to manufacture in local workshops, is reliable and relatively cheaper.

The seed plate

An test plot with well spaced plants

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What is Conservation Agriculture?

Conservation Agriculture (CA) is an approach to managing agro-ecosystems for improved and sustained productivity, increased profits and food security while preserving and enhancing the resource base and the environment. CA is characterized by three linked principles, namely:

1. Continuous minimum mechanical soil disturbance.

2. Permanent organic soil cover.

3. Diversification of crop species grown in sequences and/or associations.

CA principles are universally applicable to all agricultural landscapes and land uses with locally adapted practices. CA enhances biodiversity and natural biological processes above and below the ground surface. Soil interventions such as mechanical soil disturbance are reduced to an absolute minimum or avoided, and external inputs such as agrochemicals and plant nutrients of mineral or organic origin are applied optimally and in ways and quantities that do not interfere with, or disrupt, the biological processes.

CA facilitates good agronomy, such as timely operations, and improves overall land husbandry for rainfed and irrigated production. Complemented by other known good practices, including the use of quality seeds, and integrated pest, nutrient, weed and water management, etc., CA is a base for sustainable agricultural production intensification. It opens increased options for integration of production sectors, such as crop-livestock integration and the integration of trees and pastures into agricultural landscapes.

Conventional "arable" agriculture is normally based on soil tillage as the main operation. The most widely known tool for this operation is the plough, which has become a symbol of agriculture. Soil tillage has in the past been associated with increased fertility, which originated from the mineralization of soil nutrients as a consequence of soil tillage. This process leads in the long term to a reduction of soil organic matter. Soil organic matter not only provides nutrients for the crop, but it is also, above all else, a crucial element for the stabilization of soil structure. Therefore, most soils degrade under prolonged intensive arable agriculture. This structural degradation of the soils results in the formation of crusts and compaction and leads in the end to soil erosion. The process is dramatic under tropical climatic situations but can be noticed all over the world. Mechanization of soil tillage, allowing higher working depths and speeds and the use of certain implements like ploughs, disk harrows and rotary cultivators

have particularly detrimental effects on soil structure.

Excessive tillage of agricultural soils may result in short term increases in fertility, but will degrade soils in the medium term. Structural degradation, loss of organic matter, erosion and falling biodiversity are all to be expected. (T Friedrich).

Soil erosion resulting from soil tillage has forced us to look for alternatives and to reverse the process of soil degradation. The logical approach to this has been to reduce tillage. This led finally to movements promoting conservation tillage, and especially zero-tillage, particularly in southern Brazil, North America, New Zealand and Australia. Over the last two decades the technologies have been improved and adapted for nearly all farm sizes; soils; crop types; and climatic zones. Experience is still being gained with this new approach to agriculture and FAO has supported the process for many years.

Experience has shown that these techniques, summarized as conservation agriculture (CA) methods, are much more than just reducing the mechanical tillage. In a soil that is not tilled for many years, the crop residues remain on the soil surface and produce a layer of mulch. This layer protects the soil from the physical impact of rain and wind but it also stabilizes the soil moisture and temperature in the surface layers. Thus this zone becomes a habitat for a number of organisms, from larger insects down to soil borne fungi and bacteria. These organisms macerate the mulch, incorporate and mix it with the soil and decompose it so that it becomes humus and contributes to the physical stabilization of the soil structure. At the same time this soil organic matter provides a buffer function for water and nutrients. Larger components of the soil fauna, such as earthworms, provide a soil structuring effect producing very stable soil aggregates as well as uninterrupted macropores leading from the soil surface straight to the subsoil and allowing fast water infiltration in case of heavy rainfall events.

This process carried out by the edaphon, the living component of a soil, can be called "biological tillage". However, biological tillage is not compatible with mechanical tillage and with increased mechanical tillage the biological soil structuring processes will disappear. Certain operations such as mouldboard or

disc ploughing have a stronger impact on soil life than others as for example chisel ploughs. Most tillage operations are, however, targeted at loosening the soil which inevitably increases its oxygen content leading in turn to the mineralization of the soil organic matter. This inevitably leads to a reduction of soil organic matter which is the substrate for soil life.

Keeping the soil covered and planting through the mulch will protect the soil and improve the growing environment for the crop. This picture shows soya planted into wheat straw (a good rotation; by direct planter (minimal soil disturbance), without removing the previous crop residue (permanent soil cover). Good CA. (J.Benites).

Thus agriculture with reduced, or zero, mechanical tillage is only possible when soil organisms are taking over the task of tilling the soil. This, however, leads to other implications regarding the use of chemical farm inputs. Synthetic pesticides and mineral fertilizer have to be used in a way that does not harm soil life.

As the main objective of agriculture is the production of crops, changes in the pest and weed management become necessary with CA. Burning plant residues and ploughing the soil is mainly considered necessary for phytosanitary reasons: to control pests, diseases and weeds. In a system with reduced mechanical tillage based on mulch cover and biological tillage, alternatives have to be developed to control pests and weeds. Integrated Pest Management becomes mandatory. One important element to achieve this is crop rotation, interrupting the infection chain between subsequent crops and making full use of the physical and chemical interactions between different plant species. Synthetic chemical pesticides, particularly herbicides are, in the first years, inevitable but have to be used with great care to reduce the negative impacts on soil life. To the extent that a new balance between the organisms of the farm-ecosystem, pests and beneficial organisms, crops and weeds, becomes established and the farmer learns to manage the cropping system, the use of synthetic pesticides and mineral fertilizer tends to decline to a level below that of the original "conventional" farming system.

Burning crop and weed residues destroys an important source of plant nutrients and soil improvement potential. The phytosanitary motives for burning and ploughing can better be achieved by integrated pest management practices and crop rotations. (FAO).

Conservation Agriculture, understood in this way, provides a number of advantages on global, regional, local and farm level:

- It provides a truly sustainable production system, not only conserving but also enhancing the natural resources and increasing the variety of soil biota, fauna and flora (including wild life) in agricultural production systems without sacrificing yields on high production levels. As CA depends on biological processes to work, it enhances the biodiversity in an agricultural production system on a micro- as well as macro level.
- No till fields act as a sink for CO2 and conservation farming applied on a global scale could provide a major contribution to control air pollution in general and global warming in particular. Farmers applying this practice could eventually be rewarded with carbon credits.
- Soil tillage is among all farming operations the single most energy consuming and thus, in mechanized agriculture, air-polluting, operation. By not tilling the soil, farmers can save between 30 and 40% of time, labour and, in mechanized agriculture, fossil fuels as compared to conventional cropping.
- Soils under CA have very high water infiltration capacities reducing surface runoff and thus soil erosion significantly. This improves the quality of surface water reducing pollution from soil erosion, and enhances groundwater resources. In many areas it has been observed after some years of conservation farming that natural springs that had dried up many years ago, started to flow again. The potential effect of a massive adoption of conservation farming on global water balances is not yet fully recognized.
- Conservation agriculture is by no means a low output agriculture and allows yields comparable

with modern intensive agriculture but in a sustainable way. Yields tend to increase over the years with yield variations decreasing.

- For the farmer, conservation farming is mostly attractive because it allows a reduction of the production costs, reduction of time and labour, particularly at times of peak demand such as land preparation and planting and in mechanized systems it reduces the costs of investment and maintenance of machinery in the long term.

Disadvantages in the short term might be the high initial costs of specialized planting equipment and the completely new dynamics of a conservation farming system, requiring high management skills and a learning process by the farmer. Long term experience with conservation farming all over the world has shown that conservation farming does not present more or less but different problems to a farmer, all of them capable of being resolved. Particularly in Brazil the area under conservation farming is now growing exponentially having already reached the 10 million hectare mark. Also in North America the concept is widely adopted.

Copy from: http://www.fao.org/ag/ca/1a.html

Training Course on Soil/Water Conservation and Dryland Farming for Developing Countries

was held on 10-30 of June 2015 in Yangling, China

The Training Course on Soil/Water Conservation and Drland Farming for Developing Countries was hold on 10-30 of June 2015 in Yangling, China. There are 32 trainees from 13 developing countries. During 3 weeks training they have lectures and field trip on soil/water conservation and dryland farming. WASWAC President Li Rui gave a lecture of Overview of Soil/Water Conservation and Dryland Farming in the World. All of the trainees expressed their strong interest with WASWAC. This training course is supported by Chinese government. Every year there is at least one course in English and French respectively. The more new information about the training course can be got through the China's Embassy in foreign countries.

A group photo of trainees with Professor Li Rui, the president of World Association of Soil and Water Conservation (WASWAC)

Visiting in the experiment laboratory

WASWAC MEMBERSHIP APPLICATION/RENEWAL FORM (Issued 120501)

(For applicants from all countries)

Name: (Ms./Mrs./Mr./Prof./Dr.)_____ Gender: □F □M

Institution:_____

Postal address:_____

State/Province:_____Zip/Postal code:_____Country:_____

Phone:_____Fax:_____

Emails (Please give at least 2 addresses to ensure uninterrupted contact): (1)_____

(2)_____(3)_____

My specialized field(s):_____

Please sign me up for the WASWAC membership in category*: □1(IM)□2(LM)□3(OM)□4(SM&GM)

Membership for the year(s)_____@US$_____= US$ _____

Donation for developing country membership, etc. US$ _____

Donation to the Moldenhauer Fund US$ _____

Total US$ _____

***Membership categories & rates** from July 18, 2005, amended March 3, 2007 and March 4, 2010.

1. IM (Individual membership): US$20 for 5 years for developing countries (In China, members pay 130 yuan RMB); US$40 for 5 years for developed countries and persons working in international organizations worldwide.

2. LM (Life membership): US$80 for developing countries (In China, members pay 520 yuan RMB); US$160 for developed countries and persons working in international organizations worldwide. Persons who have passed their 60th birthday pay only half of these LM rates.

3. OM (Organization membership): For universities, research and implemental institutions, government agencies, NGOs, societies, associations and international organizations, etc. Persons belonging to an Organization member will receive the same online products and services as the other two above categories: $100/year for an organization with up to 150 persons; $150/year for an organization with up to 300 persons: $200/year for an organization with up to 500 persons; and $10/year for an additional 100 persons or part thereof.

4. SM&GM (Student membership & Gift membership): US$5/year worldwide, to be purchased to give to colleagues, friends, students, etc.

▲ **How and where to submit this form and the money**: You may send this form by e-mail (preferred), fax or post – and membership due – to:

Dr. Xiaoying Liu. WASWAC Treasurer, c/o IRTCES. No. 20 Chegongzhuang Road West, Beijing 100048, China. Tel: +86 10 68786413; Fax: +86 10 68411174; Email: waswac@foxmail.com; waswac@163.com . Membership fee can be sent through **Check, Bank Draft, Bank Transfer** and **WESTERN UNION**.

For sending money by foreign wires through a bank, please give the following information to your bank:

Name of Receiver (A/C Holder's Name): Liu Xiaoying

Bank Name and Address: Bank of China Beijing Branch, No. 2 Chao Yang Men Nei Da Jie, Dongcheng District, Beijing, 100010, P R China

A/C NO.: 3467 5879 1740; **Swift code:** BKCH CN BJ 110

Message to write on the Bank Sheet: WASWAC Membership due for Ms./Mrs./Mr./Prof./Dr. ....., Country .....

NOTE: 1. Do not deduct the bank fee from the amount of money to send. **2.** For sending money by wire/bank transfer or check please add US$7 per transaction to compensate for the charge at the receiving bank in Beijing. This additional charge does not apply for **WESTERN UNION** or any payment of US$50 or more.