



# KASSA

Knowledge Assessment and Sharing on Sustainable Agriculture

## The challenge of sustainability

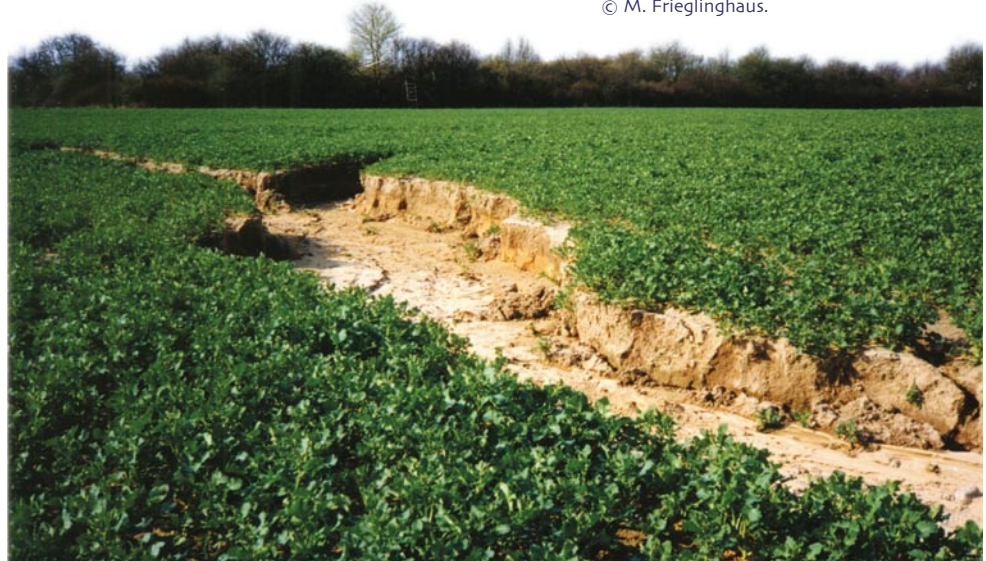
The sustainability of agriculture is one of the most relevant and global issues along with the environmental and socio-economic concerns. Agriculture should guarantee not only economic and social viability but also food security and safety while conserving and even improving local and global basic resources and the environment. This is going to be one of the major post Green Revolution challenges world-wide while many parts of the world are experiencing water and soil degradation or even scarcity...



# Conventional Agriculture in Question

The impact of the conventional agricultural practices on farm productivity and sustainability, as well as on the basic natural resources and the environmental processes, is increasingly documented and recognized as negative in many situations in both, developed and developing countries. In the same way, awareness of the need to change these practices is growing all over the world.

Soil erosion, Germany  
© M. Friedlinghaus.





# Proposed Alternatives to Conventional Agriculture

During the second half of the 20th century, much research as well as on farm tests and extension operations were conducted to develop alternative agricultural practices, technologies and approaches in order to sustain agriculture and the environment; substantial terminology has been used to refer to these alternatives.

Up to date data confirm the dominance and the trends to the growth of major alternatives: Conservation Agriculture (zero or reduced tillage and cover crops) and Organic Farming.

Available results confirm the positive on-farm and off-farm socio-economic and environmental impacts of Conservation Agriculture and Organic Farming. Significant research and experiences are currently in progress throughout the world in order to improve knowledge basis on these systems.

**Learning from these results and experiences and sharing knowledge may help ensure shifting agriculture towards more sustainability all over the world.**



Conservation  
Agriculture,  
France.  
© R. Lahmar.



Conventional tillage, Spain. © A. Sombbrero.



Reduced tillage, Spain. © A. Sombbrero.



No tillage, Spain. © A. Sombbrero.

Agroecological experiments  
on typical chernozem, Ukraine.  
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# What is KASSA?

Knowledge Assessment and Sharing on Sustainable Agriculture – KASSA is a Specific Support Action, funded by the European Commission 6<sup>th</sup> R&D framework Programme-FP6 within the priority *Global Change and Ecosystems*.



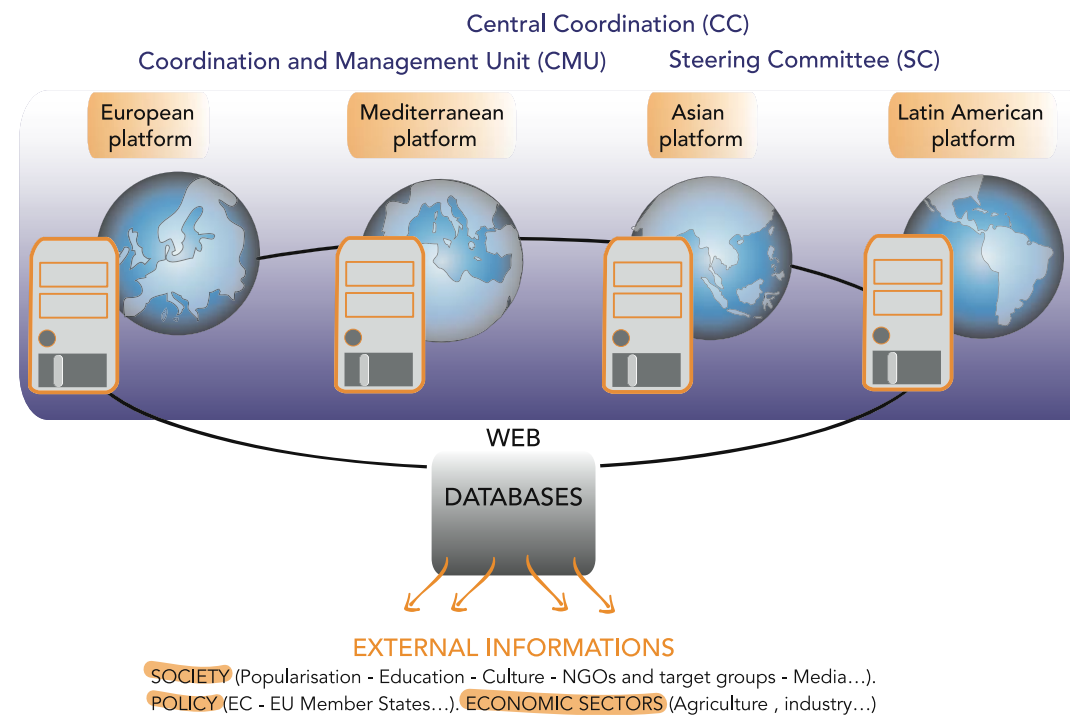
Furrow Irrigated Raised Bed System, RWC-IGP, India.  
© R. Gupta.

## Goals

KASSA intends to build up a comprehensive knowledge base through assembling international experience on sustainable agriculture and emphasising pathways, conditions and challenges to be considered by the stakeholders in order to improve agricultural sustainability.

KASSA will make it possible to learn from past and ongoing research activities and technology implementation to identify gaps, scope for the collaboration of potential stakeholders and the major social, cultural, technical and economic issues. This will lead to bringing to the fore the major research questions to be addressed, and the practical learning and capacity building conditions to support agricultural sustainability strengthening in Europe and southern countries.

## An adapted management



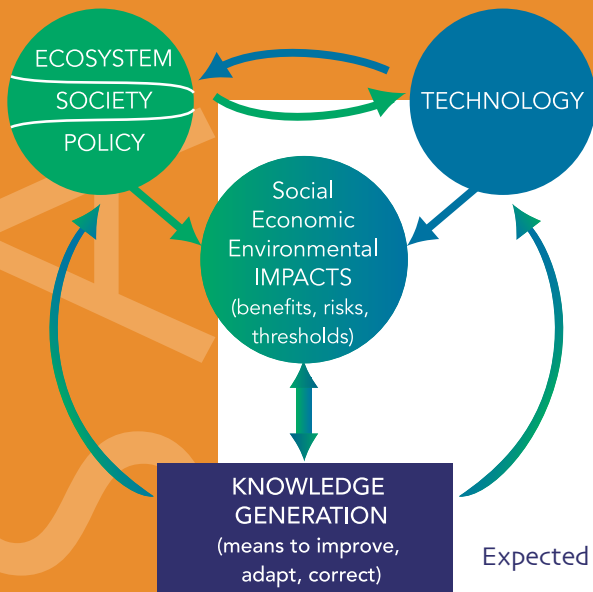
## Work Organisation and plan

KASSA will achieve its goals through an inventory and a critical analysis of experiences and results on sustainable agriculture. KASSA is built on three successive major tasks, each followed by a validation process:

- comprehensive inventory and assessment of existing knowledge on sustainable agriculture;
- learning from local/regional past and ongoing research through a shared critical comparative analysis of the results of the first task;
- refining and validating findings and their release.

The work is performed and co-ordinated simultaneously in *Europe, the Mediterranean, Asia and Latin America*.

The project leader is assisted by a Co-ordination and Management Unit (CMU) and a Steering Committee (SC).



## Key Outputs

KASSA will provide an updated, state-of-the-art view of sustainable agriculture. This will provide a reliable basis for the development of new concepts and site-specific technological strategies for sustainable management of the natural resources. The information assembled will constitute a reference database of great interest for land-use modelling and the major future research actions purposes.

Expected contribution of the results of KASSA.

## Who Benefits?

A better understanding of alternative agricultural systems, practices and approaches and their economic, social and environmental impacts will:

- ▶ allow to enhance the knowledge and initiative capacity of farmers, practitioners and extensionists through providing reliable practical information that might help to match new profitable economic strategies and the adoption of new technologies for sustaining agricultural activity and protecting the environment and the basic natural resources;
- ▶ allow reinforcing the capacity of the scientific research community through highlighting major new relevant and on-site based research items and approaches contributing to sustainability of agriculture, the environment and the basic natural resources;
- ▶ enable policymakers to design, adapt and implement new agricultural and environmental policies matching the requirements of sustainable development;
- ▶ contribute to increase awareness, stimulate and promote the commitment of other society actors such as NGOs, farmer organisations and private companies, through effective information dissemination.

KASSA results will strengthen the European Research Area - ERA capacity to play an effective role as interface between societal needs and policy requirements.



# Impacts

In the context of globalisation, undoubtedly European countries have responsibility to contribute to the development of global/local solutions aiming at agricultural and environmental sustainability, food security and safety, poverty alleviation and economic and social viability. Developing interconnected initiatives as KASSA will help in mobilising European and Southern research capacity as well as international programmes to face these challenges.

This should lead to identify fundamental processes, factors, interactions and resulting impacts that will collectively benefit agriculture in Europe and in southern countries. It will also enable the progress in knowledge, the strengthening of technological innovation and expertise capacity to support agricultural viability as well as Europe-South solidarity.

Seeding in crop residue without plowing and soil biodiversity, France.

© R. Lahmar.



Plowed field after rain, France.

© R. Lahmar.





# Who is participating in KASSA?



The KASSA consortium totalizes 31 teams, belonging to 28 institutions from 18 countries including:

- ▶ Governmental, public organisations acting in the fields of higher education, research and development at local, regional and international levels;
- ▶ A European multidisciplinary SME network;
- ▶ A non-profit international autonomous agency;
- ▶ Several non-profit agricultural organisations.

All participating institutions are skilled and recognised in their respective field of activity. Their complementarity and the critical mass they form vouches for the reliability and the impact of the findings of KASSA.

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