

# 5th World Congress on Conservation Agriculture INCORPORATING 3rd Farming Systems Design Conference

Brisbane Convention & Exhibition Centre • Brisbane Australia • 26–29 September 2011

*resilient food systems for a changing world* • [www.wcca2011.org](http://www.wcca2011.org)

## Invitation

Australia, host for the 5th World Congress on Conservation Agriculture (WCCA5) and 3rd Farming Systems Design Conference (FSD3), will welcome scientists and practitioners to Brisbane to discuss current and future developments of sustainable agriculture in September 2011.

The co-location of WCCA5 and FSD3 provides a great opportunity to explore the application of conservation agriculture practices and principles in a systems context. The common objective is the design of more productive, economic, and sustainable farming systems to meet the challenges of expanding population, global change, and environmental degradation.

Conference program options and tours will cater for different interest groups, and take advantage of Brisbane's proximity to intensive, extensive and sub-tropical farming, as well as to world leading research groups and facilities.

We look forward to meeting you in Australia!



**John Harvey**  
Managing Director,  
Grains Research and  
Development Corporation



**Nick Austin**  
CEO, Australian  
Centre for  
International  
Agricultural  
Research

## FOUNDATION SPONSORS



## Themes

### **Theme 1: More efficient management practices for Conservation Agriculture to improve livelihoods / profitability / food security and to reduce environmental footprint**

- 1.1 Striking the balance between efficiency and trade-offs in input use (carbon, nutrients, water, pesticides, labour, energy, green house gas emissions)
- 1.2 More integrated solutions for crop, residue and weed management, including permanent raised beds, controlled traffic and site-specific management
- 1.3 Cost-effective and fit-for-purpose implements and machinery (small-holder implements, raised bed machinery, heavy residue seeders)
- 1.4 Reducing off-site impacts (soil ecology, runoff, erosion, groundwater pollution, GHG emissions)

### **Theme 2: Designing productive farming systems that integrate solutions and balance trade-offs**

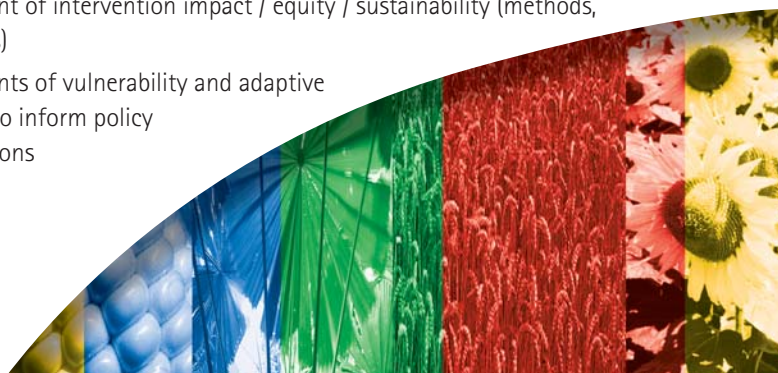
- 2.1 High value and lower input farming systems
- 2.2 Designing more robust and resilient farming systems in face of change (climate, markets, technologies, and policies).
- 2.3 More integrative and interdisciplinary approaches to support complex farming systems (multi-objective, new crops and genetics, multi-cropping, agroforestry)
- 2.4 Maximising environmental services and biodiversity outcomes

### **Theme 3: Achieving impact through more effective consultation, participation and knowledge sharing**

- 3.1 Industry-farmer-science-policymaker consultative platforms and the role of systems tools
- 3.2 Adoption and innovation / learning systems (extension, farmer's experimentation)
- 3.3 Landcare and participatory natural resource management
- 3.4 Global institutions and platforms (conventions, UN, CGIAR)

### **Theme 4: Informing policy development and supporting market effectiveness**

- 4.1 Carbon and water markets (C sequestration, water saving technologies, institutional arrangements)
- 4.2 Policies and regulation (subsidy regimes, national/local and cross-sectoral harmonisation)
- 4.3 Assessment of intervention impact / equity / sustainability (methods, indicators)
- 4.4 Assessments of vulnerability and adaptive capacity to inform policy interventions



## Paper Submission

Condensed paper submissions are invited for the 5th World Congress on Conservation Agriculture (WCCA5) incorporating 3rd Farming System Design Conference (FSD3).

Early paper submission will allow early notification of acceptance, which will be important for overseas delegates needing time to arrange Visas, travel and financial assistance.

The 3-page condensed paper format will provide delegates with a concise record of all papers. It is important that authors follow the Congress paper submission format, which can be downloaded from the Congress website: [www.wcca2011.org/condensed.htm](http://www.wcca2011.org/condensed.htm)

**Super early bird** registration closes on **31st December 2010**. **Early bird** registration closes on **31st March 2011**

**Final date** for paper submission is **15th May 2011** but earlier submission is advisable for authors particularly seeking oral presentations, or requesting financial assistance.

All inquiries regarding condensed papers for WCCA5 & FSD3 2011 should be emailed to: [infowcca5@icmaust.com.au](mailto:infowcca5@icmaust.com.au).

## Workshop Proposals

Workshop proposals are invited to promote debate on important issues of CA and FSD. Details on the website: [www.wcca2011.org/Workshop.htm](http://www.wcca2011.org/Workshop.htm)

## Mid-Congress Field Day

This will be held at University of Queensland Gatton campus on 28 September, featuring demonstrations of high and intermediate-technology conservation agriculture equipment and techniques. It will be combined with CA and FSD workshops, and conclude with the Congress dinner.

## Venue

The Brisbane Convention & Exhibition Centre is a world-class purpose-built venue renowned for its operational and service excellence. The Centre is located

in a unique urban cultural and entertainment precinct in the heart of Brisbane known as South Bank.

South Bank is a unique riverside cultural and entertainment precinct in the heart of the city of Brisbane. Set in lush subtropical riverfront parkland, it is a dynamic urban lifestyle and retail precinct that showcases

Queensland's art and culture and hosts one of the world's most important collections of indigenous art. Located on a one kilometre stretch of the Brisbane River, South Bank is home to the only sand and swimming beach in the heart of an Australian city. You'll be surprised at the diversity of attractions, with rainforest walks, more than 30 restaurants, cafes and bars, stylish shops, symphony orchestras, state opera companies, performing arts theatres and art culture including Australia's newest and largest Gallery of Modern Art.

Brisbane is an alive and bustling city of 1.6million people that features all the requisite offerings of the nation's fastest growing capital -world-class facilities and ever-expanding infrastructure, and unparalleled support services, shopping and entertainment. Brisbane also combines traditional Australian informality and friendliness with a multicultural atmosphere. Restaurants offering menus from many different parts of the world can be found within 10 minutes walk of the Congress venue.

The WCCA5 venue of choice is a central city location, convenient for visitors with easy and direct access to an efficient citywide transport network of buses, trains, taxis and the river's high-speed regular catamaran service. The city to airport Air Train is also very convenient and operates from the South Brisbane train station, adjacent to the Brisbane Convention & Exhibition Centre.



## Registration

### Key dates for registration

Close of Super Early Bird Registration	31 December 2010
Close of Early Bird Registrations	31 March 2011
Close of Standard Registrations	30 August 2011

### Registration fees (AU\$) (cost includes field day and dinner)

Delegates	OECD	Non-OECD
Super Early-Bird	700	550
Early Bird	850	650
Standard	1050	750
Day registrations	400	400

### Full time students

Super Early-Bird	450	400
Early Bird	450	400
Standard	750	600

## Contact Us

All enquiries including registration, accommodation, sponsorship and exhibition should be directed through the Congress secretariat.

WCCA5 & FSD3 2011 Congress Secretariat  
PO Box 3599  
South Brisbane QLD 4101  
AUSTRALIA

Phone: +61 7 3255 1002

Fax: +61 7 3255 1004

Email: [infowcca5@icmaust.com.au](mailto:infowcca5@icmaust.com.au)

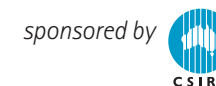


# Program Sunday 25th September 2011

4.00pm Plaza Terrace Foyer  
**Registration Opens**

6.30pm - Plaza Terrace Room  
8.30 pm **Welcome Reception**

Welcome – Dr Nick Austin, CEO, Australian Centre for International Agricultural Research.



# Program Day 1: Monday 26th September 2011

8.30am Plaza Terrace Room  
**Welcome to Country** Songwoman Maroochy

**Official Opening:** Her Excellency Ms Penelope Wensley, Governor of Queensland and Congress Patron

Welcome on behalf of the Australian Government, The Hon Dr Mike Kelly AM, MP Parliamentary Secretary for Agriculture, Fisheries and Forestry  
MC Keith Perrett, Chairman, Grains Research and Development Corporation

9.15am **Congress Keynote Speaker**  
**Dr Pedro Arreas, President, EMBRAPA** - Agricultural Research Corporation of Brazil

10.00am - **Morning Tea**  
10.30am

10.30am **Plaza Terrace Room**  
**Keynote Speaker – Theme 1**  
**Dr John Kirkegaard, CSIRO**  
Sense and Nonsense in Conservation Agriculture – Pragmatic Applications in the Right Context

11.00am - **Concurrent Paper Sessions**  
12.30pm

	Plaza Terrace Room	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5
	1.1 Efficiencies and Trade-Offs in CA <b>Chair Rolf Derpsch</b>	1.4 & 1.5 Reducing Off-Site Impacts with CA <b>Chair Pedro Machado</b>	4.1 Carbon and Water Markets <b>Chair Emilio Gonzales</b>	3.1 Participatory Platforms for R,D&E <b>Chair Brian Sims</b>	2.2 Adapting to climate variability and change <b>Chair Elizabeth Clarke</b>	2.2 More Robust and Resilient Farming Systems Design <b>Chair David Parsons</b>
11.00am – 11.20am	The synergy of raised beds, controlled traffic, minimum tillage and stubble retention deliver higher water use efficiency in SW Vic, Australia <b>Renick Peries</b>	Short-term effect of no-tillage on profitability, soil fertility and microbiota: a case study in a tropical ecosystem (altitude plains, Lao PDR) <b>Pascal Lienhard</b>	Soil Organic Carbon accumulation in conservation agriculture: A review of evidence <b>Sandra Corsi</b>	Impact and adoption of conservation agriculture in Africa: a multi-scale and multi-stakeholder analysis <b>Marc Corbeels</b>	Adapting agriculture to climate change: the need for a systems perspective <b>Lauren Rickards</b>	Opportunities and challenges for the adoption of CA in maize production areas of Laos <b>Guillaume Lestrelin</b>

	Plaza Terrace Room	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5
11.20am – 11.35am	Direct seeded rice and zero tillage wheat: an approach of resource conservation in rice-wheat system of Indo Gangetic plains (IGP) of India <b>Virendra Pratap Singh</b>	Conservation agriculture potential effects on Soil Erosion for rainfed crops in the Lake Alaotra region in Madagascar <b>Eric Scopel</b>	Harnessing Ecosystem Services with Conservation Agriculture <b>Amir Kassam</b>	Global Overview of the Spread of Conservation Agriculture <b>Theodor Friedrich</b>	Adapting to change: more realistic quantification of impacts and better informed adaptation alternatives <b>Daniel Rodriguez</b>	Striga asiatica : a driving-force for dissemination of CA systems based on Stylosanthes guianensis in Madagascar <b>Olivier Husson</b>
11.35am – 11.50am	Energy scenario and water productivity of maize based cropping system under conservation agriculture practices in South Asia <b>CM Parihar</b>	Conservation agriculture, aggregate stability and the organic carbon distribution in soil aggregates <b>Mariela Fuentes</b>	A comparison of the greenhouse gas emissions from dryland and irrigated grain farming systems in Australia <b>Tek Maraseni</b>	The conservation agriculture Network for SE Asia -CANSEA, an initiative to develop & disseminate CA in SE Asia <b>Jean-Claude Legoupil</b>	Assessing the adaptation of arable farmers to climate change using DEA and bio-economic modelling <b>Argyris Kanellopoulos</b>	Acehnese farmers trial conservation farming techniques <b>Gavin Tinning</b>
11.50am – 12.05pm	Irrigation performance and seasonal changes under permanent raised beds on vetrisols in Qld, Australia <b>Ghani Akbar</b>	The effects of soil conservation practices implemented in basal plateau scarp -southern Brazil <b>Gustavo Merten</b>	An index to rate the quality of no-till systems: a conceptual framework <b>Glaucio Roloff</b>	Development and promotion of zero tillage in Iraq and Syria <b>Colin Piggin</b>	Capacity of broadacre farmers to adapt to climate change in Queensland <b>Kerry Bridle</b>	Assessment of tradeoffs for biomass uses between livestock and soil cover at farm level <b>Krishna Naudin</b>
12.05pm – 12.20pm	Evaluation of mulch for irrigated zero till wheat in north-west India <b>Balwinder Singh</b>	Carbon sustainability and productivity of maize based cropping system under CA practices in Indo-Gangetic plains <b>Shankar Jat</b>	An index to rate the quality of no-till systems: validation <b>Glaucio Roloff</b>	CA coordination in Zimbabwe, through the Zimbabwe CA <b>Michael Jenrich</b>	Performance of an efficient dairy farm system using combined environmental impact mitigation strategies in a variable climate <b>Vicki Burggraaf</b>	Short term intensive rotational grazing in native pasture: Effects on soil nitrate and extractable P <b>Gholamreza Sanjari</b>
12.20pm – 12.30pm	<b>Discussion</b>					
12.30pm – 1.30pm	<b>Lunch &amp; Exhibition</b>					



Concurrent Paper Sessions						
	Plaza Terrace	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5
1.30pm – 3.00pm	1.1 Efficiencies and Trade-Offs in CA <b>Chair Mahesh Gathala</b>	1.3 Effective CA Equipment <b>Chair John Blackwell</b>	1.6 Adaptation of CA across environments <b>Chair Saidi Mkomwa</b>	3.1 Participatory Platforms for R,D&E <b>Chair Emilio Gonzalez-Sanchez</b>	2.2 Opportunities and Trade-offs in farming systems design <b>Chair Valentin Picasso</b>	2.2 More integrative analyses in farming systems design <b>Chair Howard Cox</b>
1.30pm – 1.50pm	CA in cereal systems of South Asia: Effect on crop productivity & carbon based sustainability index <b>ML Jat</b>	Disc seeders in conservation agriculture: An Australian survey <b>Jack Desboilles</b>	Genetic control of wheat adaptation to conservation agriculture <b>Richard Trethowan</b>	Decision support systems, risk assessment and priority setting – some experiences and opinions <b>David Freebairn</b>	Robustness of livestock farmers to climate variability: a case study in Uruguay <b>Valentin Picasso</b>	A decision support tool for optimizing integration of specialty crop enterprises in grain production systems <b>Lori Hoagland</b>
1.50pm – 2.05pm	Short term agronomic gains from conservation agriculture in NW China <b>Allen McHugh</b>	Improved no-till seeding performance in Northern China using powered-chain residue manager <b>Li Hui</b>	Cereal system characterization and potential of conservation agriculture in South Asia <b>Vijesh Krishna</b>	Inclusive research for agricultural development: farmers' participation and innovation <b>Ajai Kumar</b>	Western Australian farm businesses build resilience <b>David Maxwell Gray</b>	Modelling sowing time response of canola in the northern wheatbelt of Western Australia <b>Bob French</b>
2.05pm – 2.20pm	Enhancing nitrogen use efficiency in wheat sown into rice residue and effect of straw management on soil health in rice-wheat system in North West India <b>Yadvinder Singh</b>	Machinery Development for crop residue management under direct drilling <b>Harminder Singh</b>	Upland rice under zero tillage in Brazil: Performance of Embrapa cultivars, cover crops, soil mineral nitrogen, furrow compaction and termite control <b>Pedro Machado</b>	Assessing production risks in agricultural systems – a modelling study with APSIM-maize in New Zealand <b>Edmar Teixeira</b>	Can corporate farms provide new pathways to improve the profitability and productivity of family farms? <b>Brendan Lynch</b>	Modelling options for a Western Queensland mixed grain and graze farm evaluating enterprise options under climate change <b>Howard Cox</b>
2.20pm – 2.35pm	InfoRCT: productivity, income and environment simulation tool for CA based rice-wheat rotation <b>Yashpal Saharawat</b>	Advanced Design of Permanent Raised Bed Machinery in Pakistan <b>Muhammad Irfan</b>	Conservation tillage improves soil properties and crops yields in North China <b>He Jin</b>	An integrated systems thinking deliberative process to explore approaches for dealing with the impacts of land use on water quality <b>Liz Wedderburn</b>	Using value chain systems modelling to develop more sustainable cool temperate vegetable marketing systems in a transitional economy: a case study in PNG <b>Laurie Bonney</b>	Mixed crop-livestock businesses reduce price and climate-induced variability in farm returns: a model-derived case study <b>Lindsay Bell</b>
2.35pm – 2.50pm	Sustainable agriculture in the Aral Sea Basin: Introducing Legumes in Crop Rotations <b>Maryse Bourgault</b>	Economics of alternatives of owning the Happy Seeder for managing stubble and direct drilling wheat in Rice-Wheat System <b>Rajinder Singh</b>	Conservation agriculture in Haryana, India: Past Experiences & Future Plans <b>Ashok K Yadav</b>	Combining different modelling approaches for a participative assessment of alternative agricultural systems at different scales <b>Sylvestre Delmotte</b>	Cultivation of African Walnut <i>Tetracarpidium conophorum</i> Mull. (Arg) on Agricultural Plantation: An approach to CA in Nigeria <b>Folaranmi Babalola</b>	Feed gaps and the effect of cereal grazing in a dryland farming system of the South Australian Mallee – a crop-livestock model application <b>Katrien Descheemaeker</b>

2.50pm – Discussion  
3.00pm

3.00pm – Afternoon Tea  
3.30pm

3.30pm – Concurrent Workshop Sessions  
5.00pm

**Plaza Terrace**

Maize Legume Intensification  
in Eastern Southern Africa  
(SIMLESA I)  
Mulugetta Mekuria  
(CIMMYT)

**Plaza 1**

Sustainable Farm Practices  
& Policies  
Ian Thompson (DAFF)

**Plaza 2**

Adaptive Systems for a  
Changing World  
Drew Lyon (U. of  
Nebraska)

**Plaza 3**

Reduced Labour for Lower  
Mekong Farming  
Pheng Sengxua (NAFRI) &  
Len Wade (CSU)

**Plaza 4**

Farming Systems to  
Minimise GHG Emissions  
Peter Thorburn, (CSIRO)

**Plaza 5**

No-till, the need for an  
agreed definition  
Pat Wall, (CIMMYT)

5.00pm – Plaza Terrace Room  
6.00pm **Reflections: International Panel**

6.30 pm – Congress rooms will be available for special interest group meetings  
9.00 pm

6.00pm International Farmers Event hosted by CAAANZ (Conservation Agriculture Alliance of Australia and New Zealand) - Jean-Francois Rochecouste Plaza Room 5

7.30pm WCCA 5 International Steering Committee Meeting 1st meeting - By Invitation Only Boardroom 2 (Mezzanine Level)

## Program Day 2: Tuesday 27th September 2011

8.30am – Plaza Terrace Room  
9.00am **Keynote Speaker – Theme 2**  
Dr Mario Herrero ILRI  
Production systems for the future: balancing trade-offs between food production, efficiency, livelihoods and the environment

9.00am – **Poster Presentations** – Plaza Terrace Foyer  
10.00am

10.00am – Morning Tea  
10.30am

10.30am – Concurrent Paper Sessions  
12.00pm

**Plaza Terrace**

1.2 More integrative CA  
systems Solutions  
Chair Li Hongwen

**Plaza 1**

1.4 & 1.5 Reducing Off and  
On-Site Impacts  
Chair Eric Scopel

**Plaza 2**

4.2 Policies and Regulation  
Chair Glaucio Roloff

**Plaza 3**

3.2 Adoption and  
Innovation platforms  
Chair Jay Cummins

**Plaza 4**

2.3 More integrative analyses  
in farming systems design  
Chair Colin Birch

**Plaza 5**

2.3 New systems analysis tools  
in farming systems design  
Chair Holger Meinke

10.30am – 10.50am	Soil and yield improvements from Controlled Traffic Farming CTF on a Red Chromosol were similar to CTF on a swelling Black Vertosol <b>Tim Ellis</b>	Crop roots and crop residues management: impacts on soil structure under zero tillage <b>Mariela Fuentes</b>	Mainstreaming CA: Challenges to Adoption, Institutions and Policy <b>Amir Kassam</b>	Initiating Sustainable Agricultural Systems through Conservation Agriculture in Mozambique: Preliminary experiences from SIMLESA <b>Isiah Nyagumbo</b>	Farm typologies and resilience: The diversity of livelihood strategies seen as alternative system states <b>Pablo Tittonell</b>	Reducing the cost of complexity for greater farming systems change <b>Rick Llewellyn</b>
10.50am – 11.05am	Comparison of different soil tillage systems, under several crop rotations in wheat production at Central Anatolian Plateau, Turkey <b>Ýrfan Gültekin</b>	Conservation agriculture in southern Africa: Longer term trends in soil quality and crop productivity <b>Christian Thierfelder</b>	Ecological responses to public policy scenarios in farmlands: a bio-economic modelling approach <b>Lauriane Mouysset</b>	Adaptation of Conservation Agriculture by smallholder farmers in Malawi: drivers, intensity, benefits and problems for up scaling <b>Amos Robert Ngwira</b>	Building social resilience through understanding capacities of smallholder farming in Papua New Guinea <b>Colin Birch</b>	ADOPT: a tool for evaluating adoptability of agricultural innovations <b>Geoff Kuehne</b>
11.05am – 11.20am	The effects of minimum and conventional tillage systems on maize grain yield and soil fertility in western Ethiopia <b>Tolessa Debele Dilalessa</b>	No-tillage effects on soil carbon storage and carbon dioxide emissions in northern China <b>En Ke Liu</b>	Opportunities for Conservation Agriculture in the European Union' schemes 2020 <b>Gottlieb Basch</b>	The Role of Social Capital in the Adoption of Conservation Agriculture: The Case of likoti in Lesotho. <b>Amir Kassam</b>	A framework for exploring rural futures through collective learning <b>M Wedderburn</b>	Exploring hotspots in the carbon footprint and energy use profiles of tomatoes grown for the Sydney market <b>Girija Page</b>
11.20am – 11.35am	Controlled Traffic/ Permanent Bed Farming Reduces GHG Emissions <b>Jeff Tullberg</b>	Happy seeder technology: a solution for residue management for the sustainability of the rice-wheat system of the Indo-Gangetic Plains <b>Mahesh Gathala</b>	Regional Conservation Agriculture project proposal in degraded annual cropping systems areas in South East Asia <b>Panyasiri Khamkéo</b>	Extension and determinants for adoption of direct seeding mulch-based systems in smallholder agriculture, LAO PDR <b>Frédéric Jullien</b>	The sustainable intensification of maize-legume farming systems in eastern and southern Africa (SIMLESA) program <b>Mekuria Mulugetta</b>	The expected value of seasonal stream-flow forecasts to a grain-cotton irrigator in the Condamine-Balonne catchment. <b>Brendan Power</b>
11.35am – 11.50am	Controlled Traffic Farming – more productivity, sustainability and resilience <b>Don Yule</b>	The Contribution of Rainfall Erosivity, Soil Cover and Organic Carbon to Soil loss and Run-off under Conservation Agriculture on a Fersiallitic Red clay soil in Zimbabwe <b>Isaiah Nyagumbo</b>	Brazilian Public Policy to Mitigate and Adapt for Climate Change and Develop a Low-Carbon Agriculture Plan <b>Luiz Cordeiro</b>	Predisposition for Conservation Agriculture in North West Ghana <b>Keith Moore</b>	Improving cattle profitability in mixed crop-livestock systems in south central coastal Vietnam using an integrated modelling approach <b>David Parsons</b>	To mix or not to mix : evidences for the unexpected high productivity of new complex agrivoltaic and agroforestry systems. <b>Christian Dupraz</b>
11.50am – 12.00pm	Discussion					
12.00pm – 12.30pm	Plaza Terrace Room <b>Keynote Speaker – Theme 3</b> Dr Dennis Garrity, ICRAF Making Conservation Agriculture Ever Green					

12.30pm – 1.30pm  
Lunch, Exhibition and Poster Presentations

1.30pm-3.00pm  
Concurrent Workshop Sessions

Plaza Terrace Room	Plaza 1	Plaza 2	Plaza 3	Plaza 4
Maize Legume Intensification in Eastern Southern Africa <b>(SIMLESA II)</b> Mulugetta Mekuria (CIMMYT)	Modelling Mixed Crop-Livestock Systems <b>Andrew Moore (CSIRO)</b>	Landcare – a model for promoting sustainable agriculture around the world <b>Rob Youl (Australian Landcare International)</b>	Controlled Traffic and Permanent Beds Sustainable for CA <b>Don Yule (CTF Solutions)</b>	Integrated Assessment of Farming Systems: Categorising Diversity, Simulating Trade-offs (Typologies I) <b>Walter Rossing (WUR)</b>

3.00pm – 3.30pm  
Afternoon Tea

3.30pm – 5.00pm  
Concurrent Paper Sessions

Plaza Terrace Room	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5
1. 2 More integrative CA systems Solutions <b>Chair Liz Humphreys</b>	1.3 Effective CA Equipment <b>Chair Harminder Sidhu</b>	4.3 & 4.4 Policy Impacts on Equity, Sustainability, Vulnerability and Adaptive Capacity <b>Chair Amir Kassam</b>	3.2 Adoption and Innovation platforms <b>Chair Mary Johnson</b>	2.3 The role of systems analysis in co-learning <b>Chair Walter Rossing</b>	2.3 Opportunities and trade-offs in farming systems design <b>Chair Drew Lyon</b>
The Effect of Tillage Practice and Residue Management on Wheat Yield and Yield Stability in Two Agro-ecological Environments in Mexico <b>Bram Govaerts</b>	Development of the conservation agriculture equipment industry in sub-Saharan Africa <b>Brian Sims</b>	Conservation agriculture: Perspectives from Salamieh District, Syria <b>Shinan Kassam</b>	Integrating Conservation Agriculture into Formal Education Systems <b>Tonie Putter</b>	The role of systems analysis in co-learning <b>Walter Rossing</b>	Nitrogen is essential to capture the benefit of summer rainfall for wheat in Mediterranean environments of South Australia <b>Victor Sadras</b>
Rice straw mulching and nitrogen management to improve productivity of no-till wheat following rice in Bangladesh <b>Ataur Rahman</b>	Versatile Multi-crop Planter for Two-wheel Tractors: An Innovative Option for Smallholders <b>Md. Enamul Haque</b>	Policy impacts on land-use and agricultural practices in North-West India <b>Nick Milham</b>	Conservation Agriculture in Tanzania: The Case of Mwangaza B CA Farmer Field School (FFS), Rhotia Village, Karatu District, Arusha Tanzania <b>Wifred Mariki</b>	Co-innovation of family farm systems in Uruguay: the role of farm modeling <b>Santiago Dogliotti Moro</b>	Stubble retention in cropping in South-East Australia: benefits and challenges <b>Len Wade</b>



4.05pm – 4.20pm	The impact of trash management and tillage on soybean productivity in sugar-based farming systems <b>Neil Halpin</b>	Improving furrow backfill in rotary strip-tillage systems <b>Md. Abdul Matin</b>	Scope of sustainability - Do castor beans and the biodiesel industry offer family farmers a sustainable development opportunity in Brazil? <b>Madeleine Florin</b>	Training Programme to Overcome Barriers and to Intensify the Adoption of Conservation Agriculture in the Eastern Cape Province, South Africa <b>Dirk Lange</b>	Assessing rural resources and rural livelihood development strategies combining socioeconomic and spatial methodologies <b>Krishna Bahadur</b>	Biomass shifts and suppresses weed populations under conservation agriculture <b>Michael Mulvaney</b>
4.20pm – 4.35pm	Crop residues, an effective tool for improving wheat growth and suppression of some associated weeds <b>Mahmoud Hozayn</b>	Innovations for relay planting of wheat in cotton: a breakthrough for enhancing productivity and profitability in cotton-wheat systems of South Asia <b>Gurmeet Buttar</b>	Conservation Agriculture and Rainfall variability in Zambia: Is CA a promising option for responding to droughts and floods? <b>Bridget Umar</b>	Factors Affecting Adoption of Conservation Agriculture in Malawi (A Case Study of Salima District) <b>James L Mlamba</b>	A Spatial Analysis: Creating similarity domains for targeted research sites in Zimbabwe <b>Andries Potgieter</b>	Sustainable intensification of maize-bean production among smallholder farmers in western Kenya <b>John Achieng</b>
4.35pm – 4.50pm	Carbon Footprint of Crop Production due to shift from Conventional to Conservation Agriculture <b>Ranjan Laik</b>	Effect of narrow opener geometry on lateral surface soil movement and implications for no-till seeding <b>Aliakbar Solhjoui</b>	From local Min-Till experience to a strategy for CA development in EU <b>Gerard Rass</b>	Barriers and emerging success factors towards effective ca adoption in the Uluguru Mountains, Tanzania. <b>Monica Coll Besa</b>	Identifying the fit for perennial forage options in a crop-livestock system: use of a whole-farm optimization model <b>Marta Monjardino</b>	Agroforestry Adaptation and Mitigation Options for Smallholder Farmers Vulnerable to Climate Change <b>Brenda Lin</b>
4.50pm – 5.00pm	<b>Discussion</b>					
5.00pm – 6.00pm	<b>Concurrent "So What?" Sessions</b> What's the practical significance of what we've seen and heard so far?					
	Plaza Terrace Room <b>Theme 1</b>	Plaza 1 <b>Theme 2</b>		Plaza 2 <b>Theme 3</b>	Plaza 3 <b>Theme 4</b>	
6.30 pm – 9.00 pm	Congress rooms will be available for special interest group meetings					
6.00pm	<b>CANSEA Reception – Jean-Claude Legoupil</b> (Conservation Agriculture Network for South East Asia)			Plaza Room 5		
7.30pm	<b>WCCA 5 International Steering Committee Meeting 2nd meeting</b> By Invitation Only			Boardroom 2 (Mezzanine Level)		

# Program Day 3: Wednesday 28th September 2011

## Mid-Congress Field Day at University of Queensland's Gatton Campus

7.45am	Meet at main entrance of Brisbane Convention & Exhibition Centre
8.00am	Buses depart to University of Queensland, Gatton
9.30am	Arrival at University of Queensland, Gatton

The field day event will be held at University of Queensland Gatton Campus, about 80 km west of Brisbane. This will be a full day program with demonstrations in the field, combined with workshops, discussions and software demonstrations in campus buildings, concluding with the Congress dinner. A detailed program and map will be handed out at the Congress, and lunch provided for Congress participants.

At lunchtime, there will be a brief address by Dr Tom Lumpkin, Director of CIMMYT, and Bill Crabtree, No-Till Consultant.

Prof Neal Menzies, Head, School of Agriculture and Food, University of Queensland, will welcome delegates pre-dinner.

Farmers will be invited to participate in the field day, and we expect valuable and informative interactions at demonstrations and discussions.

### Field events:

Commercial No-till Seeders  
 Experimental No-till Seeders  
 Commercial spray technology

Precision Agriculture, Satellite & UAV Images  
 Proximal Monitoring, Precision Guidance  
 Soil Condition Assessment, Rainfall Simulator  
 Soil Health, Structure and Root Architecture  
 Power Penetrometer, Soil Pit

### Campus events:

#### Workshops:

Empowering smallholders for CA.  
 CTF reduced till for intensive vegetables.  
 Integrated assessment of farming systems.  
 Rice residue management.

#### Demonstrations

Farming Systems Design  
 APSIM demonstrations.  
 Spray nozzle performance

#### Discussion events.

Forum: Mining and Agriculture

#### 4th Farming Systems Design Conference Planning Meeting

**Q&A: Farmers, Manufacturer, Scientist**

### 3.3 Adoption and Innovation

Chair: Mary Johnson

11.00am – 11.20am	<b>Wolfgang G. Sturny</b> From plow to no-till: the Bernese farmer to farmer's incentive soil support program
11.20am – 11.35am	<b>Rob Youl</b> Landcare – adaptable program for rural community development
11.35am – 11.50am	<b>Jeremy Bourgoin</b> Engaging local communities in negotiating their own pathway towards conservation practices
11.50am – 12.05pm	<b>Sanjay Arora</b> Natural Resource Conservation through Watershed approach vis-à-vis economic sustainability in foothills of Northwest Himalayas, India
12.05pm – 12.20pm	<b>Hendrik Smith</b> Promotion of CA in South Africa: evolution and impact

6.15pm	<b>Congress Dinner</b>
8.30pm	Depart University of Queensland, Gatton by bus and return to Brisbane

# Program Day 4: Thursday 29th September 2011

8.30am – Plaza Terrace Room  
 9.00am **Keynote Speaker – Theme 4**  
 Dr Kamel Shideed, ICARDA  
 Informing Water Policy Development for Sustainable and Productive Food Production Systems in Dry Areas.

## 9.00am – Concurrent Paper Sessions

10.30am	Plaza Terrace	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5	M2
	1.2 More integrative CA systems Solutions <b>Chair Rick Peries</b>	1.4 & 1.5 Reducing Off- and On-Site Impacts <b>Chair Gustavo Merten</b>	1.6 Adaptation of CA to across environments <b>Chair Bram Govaerts</b>	3.2 Adoption and Innovation platforms <b>Chair Rick Llewellyn</b>	2.2 New systems analysis tools in farming systems design <b>Chair Daniel Rodriguez</b>	2.2 New farming systems designs in dryland agriculture <b>Chair John Dimes</b>	2.1+2.4 Farming Systems Design: Biodiversity and soil health <b>Chair Richard Doyle</b>
9.00am – 9.20am	Trade-offs of crop residue use in smallholder mixed farming systems in Sub-Saharan Africa and South Asia <b>Diego Valbuena</b>	Spatial variation of soil constraints and its implications for site-specific soil and nutrient management in conservation agriculture <b>Yash Dang</b>	The adoption of conservation agriculture in the Lake Aleotra area after 10 years <b>Eric Penot</b>	Farmer innovation: seeder fabrication and uptake of zero tillage in Iraq <b>Sinan Jalili</b>	Whole-farm models: a review of recent approaches <b>Mike Robertson</b>	Is there an ideal farming system to maximize stored soil water in the Eastern Australian, Vertosol dominated, semi arid sub tropics? <b>Jeremy Whish</b>	Does landscape heterogeneity modulate the trade-off between production and biodiversity <b>Muriel Tichit</b>
9.20am – 9.35am	Maize Yield Increases and Stabilization under CA in Semi-arid Districts of Tanzania <b>Saidi Mkomwa</b>	Termite Prevalence and Crop Lodging under Conservation Agriculture in Semi-arid Zimbabwe <b>Eleanor Mutsamba</b>	Experience in low cost CA farming systems with small scale farmers of north eastern Tanzania <b>Joseph Mwalley</b>	Conservation Agriculture Adoption Challenges in Zimbabwe <b>Kizito Mazvimavi</b>	Designing modular frameworks for crop modelling: implementation and guidelines for use <b>Myriam Adam</b>	Irrigated lucerne and dryland sorghum are effective crop options for reducing deep drainage in the farming systems of the Lockyer Valley, Australia <b>Brett Robinson</b>	Agroecology-based aggradation-conservation agriculture (ABACO): targeting resource-limited and degraded environments of semi-arid Africa <b>Pablo Tittone</b>
9.35am – 9.50am	Conservation tillage systems for peanut cultivars in rotation with sugarcane and pastures in Brazil: effects on yield pod and root growth <b>Denizart Bolonhezi</b>	Using Conservation Agriculture to improve water use efficiency in wheat crops on the Branson farm in South Australia. <b>Mark Branson</b>	Does Conservation Agriculture Pay? Experiences from Zimbabwe <b>Killain Mutiro</b>	Up-scaling of Conservation Agriculture in Zambia: Some key practical barriers in practice of minimum tillage among smallholder farmers <b>Progress Nyanga</b>	A Modelling Approach to Explore the Impact of Root Distribution and Citrate Release on Phosphorus Use Efficiency of Crops <b>Enil Wang</b>	Long-term evaluation of dryland cropping systems intensification for sustainable production in the semi-arid tropics of India <b>V Nageswara Rao</b>	A more predictable approach to sequestration of organic carbon in soil <b>Peter McGee</b>

	Plaza Terrace	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5	M2
9.50am – 10.05am	No-till dryland sugarbeet production in the semi-arid US High Plains <b>Drew Lyon</b>	White grubs, Scarabaeidae larvae (Insecta, Coleoptera) control by plants in CA: effects on macrofauna diversity <b>Bodovololona Rabary</b>	Conservation agriculture in dryland agro-ecosystems of Ethiopia <b>Tewodros Mesfin</b>	A Qualitative expert Assessment Tool (QAToCA) for assessing the adoption of Conservation Agriculture in Africa: selected application in Kenya and Tanzania <b>Hycenth Tim Ndah</b>	Modernizing traditional agriculture – Optimization of maize-vegetable intercropping systems <b>Sebastian Munz</b>	Economics of growing mungbean after rice in the rainfed lowlands of Cambodia <b>Sareth Chea</b>	Opportunity to increase phosphorus efficiency through co-application of organic amendments with mono-ammonium phosphate (MAP) <b>David Gale</b>
10.05am – 10.20am	Soil organic carbon and nitrogen sequestration by long-term of CA in Mollisol in Mexico <b>Joel Perez Nieto</b>	Simulating maize (Zea Mays L.) responses to fertilizer under CA practices in two distinct pedo-climatic zones of Zimbabwe <b>Frederico Pancaro</b>	Conservation Agriculture for Smallholders in Africa: Lessons, Challenges and the Vision <b>Saidi Mkomwa</b>	Developing and adapting mechanized conservation agriculture machinery for smallholder systems of southern Africa <b>Lewis T Mataba</b>	Towards an efficient and useful crop disease model <b>Roger Lawes</b>	Intercropping maize and mungbean to intensify summer cropping systems in Queensland, Australia <b>Joseph Eyre</b>	Effects of conservation agriculture and manure application on maize grain yield and soil organic carbon: a comparative analysis <b>Leonard Rusinamhodzi</b>
10.20am – 10.30am	Discussion						
10.30am – 11.00am	<b>Morning Tea</b>						
11.00am – 12.30pm	<b>Concurrent Workshop Sessions</b>						
	Plaza Terrace	Plaza 1	Plaza 2	Plaza 3	Plaza 4	Plaza 5	M2
	Herbicide Resistance and Pesticide Issues in CA <b>Jacques Wery (INRA-France)</b>	Payment for Environmental Services: Policy, Indicators and Certification <b>Ricardo Ralisch (U. De Londrinás)</b>	Climate Change Mitigation and Adaption PIARN <b>Richard Eckard, University of Melbourne</b>	ACT 2 Empowering Smallholders for CA Adoption <b>Saidi Mkomwa</b>	Landcare and Community Engagement <b>Rob Youl</b>		
11.00am	<b>Paper Session – Plaza 5</b> <b>4.3 Interventions and Impacts</b> Chair Jean-Francois Rochecouste						
11.00am – 11.15am	<b>Bio-economic optimisation of land use to manage natural resources</b> Ian Hume						
11.15am – 11.30am	<b>A framework for international standard for CA: stewardship for sustainable production</b> Shan-Jung Lin						
11.30am – 11.45am	<b>The spatial agglomeration of low-impact farming intensity: implications for biodiversity conservation</b> Felix Teillard						
11.45am – 12.00pm	<b>Sustainable agriculture in Carbon arithmetics LIFE+ Agricarbon</b> Emilio González-Sánchez						

12.00pm – Discussion  
12.30pm

12.30pm – Lunch, Exhibition and Poster Presentations  
1.30pm

1.30 pm **Plenary Address – Plaza Terrace Room**  
2.00pm **Address by the Foreign Affairs Minister of Australia, Mr Kevin Rudd**  
Chair: Dr Nick Austin, CEO, Australian Centre for International Agricultural Research.

2.00pm – **Keynote Speaker – Theme 1**  
2.30pm **Mr Richard Heath** – Conservation Agriculture: have the good years become the bad years?

2.30pm– **Plenary Session**  
3.30pm Workshop Reports

3.30pm - Plenary "So What": International Panel Session  
4.30pm

4.30pm – **Afternoon Tea**  
5.00pm

5.00pm End of Congress

