

**Alert No. 19 (18 January 2012)**

1. **5<sup>th</sup> World Congress of Conservation Agriculture incorporating 3<sup>rd</sup> Farming Systems Design Conference, 26-29<sup>th</sup> September 2011 Brisbane Australia.**

The 5<sup>th</sup> WCCA website has been updated adding some so far missing papers: papers, workshop reports and PowerPoint presentations are available online at: [aci-ar.gov.au/WCCApapers](http://aci-ar.gov.au/WCCApapers) The 5<sup>th</sup> WCCA website is online at: <http://www.wcca2011.org/>

2. **Microbial interactions in the mycorrhizosphere and their significance for sustainable agriculture** by Jonas F. Johansson, Leslie R. Paul, Roger D. Finlay. FEMS Microbiology Ecology 48 (2004) 1–13. ([full paper](#))
3. **No-tillage improvement of soil physical quality in calcareous, degradation-prone, semiarid soils** by O. Fernández-Ugalde, I. Virto, P. Bescansa, M.J. Imaz, A. Enrique, D.L. Karlen. Soil & Tillage Research 106 (2009) 29–35. ([full paper](#))
4. **Tillage and crop rotation effects on barley yield and soil nutrients on a Calcicortidic Haploxeralf** by I. Martin-Rueda, L.M. Muñoz-Guerra, F. Yunta, E. Esteban, J.L. Tenorio, J.J. Lucena. Soil & Tillage Research 92 (2007) 1–9. ([full paper](#))
5. **Agronomic and economic evaluation of permanent raised beds, no tillage and straw mulching for irrigated maize-wheat system in northwest India** by Hari Ram, Yadvinder-Singh, K. S. Saini, D. S. Kler, J. Timsina and E. J. Humphreys. *Expl Agric.* (2012), volume 48 (1), pp. 21–38. ([full paper](#))
6. **Greenhouse Gas Emissions from U.S. Agriculture and Forestry: A Review of Emission Sources, Controlling Factors, and Mitigation Potential** by Deneff, K., S. Archibeque, and K. Paustian, 2011. Interim report to USDA under Contract #GS23F8182H. [http://www.usda.gov/oce/climate\\_change/techguide/Deneff\\_et\\_al\\_2011\\_Review\\_of\\_reviews\\_v1.0.pdf](http://www.usda.gov/oce/climate_change/techguide/Deneff_et_al_2011_Review_of_reviews_v1.0.pdf)
7. **Zero-Till Farming Systems: Investigation of Zero-Till Farming Systems (ZT) in high rainfall cropping zones (HRZ), and its impact on soil biology and nutrient cycling.** by Stephen Ball, A report for Nuffield Australia Farming Scholars, March 2011. Nuffield Australia Project No 1006, Sponsored by Grains Research & Development Corporation. ([full document](#))
8. **Beyond the Beginning: The Zero Till Evolution 3<sup>rd</sup> in a series.** Manitoba - North Dakota Zero Tillage Farmers Association 2011. ([full document](#))
9. **CA2AFRICA: NEWSLETTER N°2 November 11.** Conservation Agriculture in Africa: Analysing and Foreseeing its Impact – Comprehending its Adoption. ([newsletter](#))

**10. ACT-UPDATE NEWSLETTER VOLUME 2.** Conservation Agriculture for Food Security. ([newsletter](#))

**11. Advance Course in Conservation Agriculture: Laying the groundwork for sustainable and productive cropping systems.** May 21 to June 22, 2012, CIMMYT, Mexico. ([announcement](#))

**12. A cartoon book on Conservation Agriculture from China.** The [Conservation Tillage Research Centre of the Ministry of Agriculture](#) in China has published a cartoon book on CA for farmers and extension staff. The book is available as flash in [Chinese](#) on the CTRC website and as [English version](#) on the FAO website.

**13. Soil Nitrous Oxide Emissions in Corn following Three Decades of Tillage and Rotation Treatments** by Rex A. Omonode, Doug R. Smith, Anita Gál and Tony J. Vyn, (2011). Soil Sci. Soc. Am. J. 75:152–163 ([full paper](#))

#### **14. Up-dated CA Data Base in AquaStat, FAO.**

The CA land area data base has now been updated based on the feedback received from our regular sources of information and has been posted in AquaStat. The latest figures can be seen at the FAO CA-Website at (<http://www.fao.org/ag/ca/6c.html>).

However, updating of the data base is an ongoing process, and anyone who would like to provide information on the land area under CA systems at the national level is most welcome to do anytime. Ideally, we would appreciate receiving the CA area information at the sub-national level, together with any relevant historical information on adoption, cropping pattern, farm size, agro-ecology, constraints, etc.

For the recording of area under CA, please adhere to the quantification of the CA definition on the FAO-CA website: <http://www.fao.org/ag/ca/6c.html>

**1. Minimum Soil Disturbance:** Minimum soil disturbance refers to low disturbance no-tillage and direct seeding. The disturbed area must be less than 15 cm wide or less than 25% of the cropped area (whichever is lower). There should be no periodic tillage that disturbs a greater area than the aforementioned limits. Strip tillage is allowed if the disturbed area is less than the set limits.

**2. Organic soil cover:** Three categories are distinguished: 30-60%, >60-90% and >90% ground cover, measured immediately after the direct seeding operation. Area with less than 30% cover is not considered as CA.

**3. Crop rotation/association:** Rotations/associations should involve at least 3 different crops. However, repetitive wheat or maize cropping is not an exclusion factor for the purpose of this data collection, but rotation/association is recorded where practiced.

**We would further like** to stress that the database counts actual land area under annual crops with CA (permanent no-till). Area under perennial crops will be recorded separately. No-till area by crop will not be recorded to avoid double recording of the same land area.

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