Global CA-CoP CONSERVATION AGRICULTURE COMMUNITY OF PRACTICE
for sustainable agriculture and land management

Alert No. 64 (19 November 2020)

1. **Phosphorus speciation by P-XANES in an Oxisol under long-term no-till cultivation. By João A. Antonangelo et al. Geoderma 377 (2020).**

2. **Transforming Agriculture in Southern Africa: Constraints, Technologies, Policies and Processes. By Richard Sikora et al. Earthscan (2020).**

3. **Productivity or stability? Exploring maize-legume intercropping strategies for smallholder Conservation Agriculture farmers in Zimbabwe. By Connie Madembo et al. Agricultural Systems 185 (2020).**

4. **Local adaptation strategies to increase or maintain soil organic carbon content under arable farming in Europe: Inspirational ideas for setting operational groups within the European innovation partnership. By E.A.C. Costantini et al. Journal of Rural Studies 79 (2020).**

5. **The Effect of Conservation Agriculture and Environmental Factors on CO2 Emissions in a Rainfed Crop Rotation. By Rosa Carbonell-Bojollo et al. Sustainability 11 (2019).**

6. **Implications of Adoption of Zero Tillage (ZT) on Productive Efficiency and Production Risk of Wheat Production. By Tamer El-Shater et al. Sustainability 12 (2020).**

7. **The Ability of Conservation Agriculture to Conserve Soil Organic Carbon and the Subsequent Impact on Soil Physical, Chemical, and Biological Properties and Yield. Front. Sustain. Food Syst. 4:31 (2020).**

8. A review of conservation agriculture research in South Africa. By Corrie M Swanepoel et al. South African Journal of Plant and Soil (2017).
9. Farmers' risk-based decision making under pervasive uncertainty: Cognitive thresholds and hazy hedging. By Kieran M Findlater et al. Risk Analysis, 39(8) (2019).

10. Enhancing NDCS for food systems recommendations for decision-makers. By Ingrid Shulte et al. WWF, Germany, Berlin.

11. Putting Carbon back where it belongs - the potential of carbon sequestration in the soil. By Stefan Schwarzer, UN Environment / GRID-Geneva and University of Geneva (2019).

12. Conservation Agriculture – A way to improve soil health. By Gayatri Sahu et al. Journal of Experimental Biology and Agricultural Sciences 8(4) (2020).

13. The sustainable development index: Measuring the ecological efficiency of human development in the Anthropocene. Jason Hickel. Ecological Economics 167 (2020).

14. Application of Conservation Agriculture Principles for the Management of Field Crops Pests Morris Fanadzo et al. Sustainable Agriculture Reviews 28, Ecology for Agriculture 28 (2018).

15. Comparison on Farmers' Profile, Knowledge and Problems Association of Straw Management in Punjab and West Bengal. By Pinaki Roy and Manmeet Kaur. Indian Journal of Extension Education Vol. 55 (2019).

16. Hire Services as a business enterprise: A training manual for small-scale mechanization service providers. By Brian Sims et al. Food and Agriculture Organization of the United Nations and International Maize and Wheat Improvement Center Rome (2018).

17. Microbial diversity drives carbon use efficiency in a model soil Luiz A. Domeignoz-Horta et al. NATURE COMMUNICATIONS 11:3684 (2020).

18. Soil Protein as a Rapid Soil Health Indicator of Potentially Available Organic Nitrogen. By Tunsisa T. Hurisso et al. Agric. Environ. Lett. 3:180006 (2018).

19. The concept and future prospects of soil health. By Johannes Lehmann et al. PERSPECTIVES Nature Reviews, Earth & Environment (2020).

20. Conservation Agriculture Increases Profits in an Andean Region of South America. By J. A. Delgado et al. Agrosyst. Geosci. Environ. 2:180050 (2019).

21. Conservation Agriculture Increases Yields and Economic Returns of Potato, Forage, and Grain Systems of the Andes. By V.H. Barrera Mosquera et al. Agron. J. 111:2747–2753 (2019).

22. Sustainable Soil Management for Food Security in South Asia. By Ahmad Nawaz et al. Journal of Soil Science and Plant Nutrition (2020).

23. Carbon Dioxide Fluxes and Carbon Stocks under Conservation Agricultural Practices in South Africa Patrick Nyambo et al. Agriculture 10, 374 (2020).

24. Rubber-leguminous shrub systems stimulate soil N2O but reduce CO2 and CH4 emissions. By Xin Rao et al. Forest Ecology and Management (2021).

25. Short-term impacts of different tillage practices and plant residue retention on soil physical properties and greenhouse gas emissions. By K. Alskaf et al. Soil & Tillage Research (2021).

26. Ecosystem service mapping in soybean agroecosystems. By Saeid Moushan et al. Ecological Indicators 121 (2021).

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Conservation Agriculture is an ecosystem approach to regenerative sustainable agriculture and land management based on the practical application of context-specific and locally adapted three interlinked principles of: (i) Continuous no or minimum mechanical soil disturbance (no-till seeding/planting and weeding, and minimum soil disturbance with all other farm operations including harvesting); (ii) permanent maintenance of soil much cover (crop biomass, stubble and cover crops); and (iii) diversification of cropping system (economically, environmentally and socially adapted rotations and/or sequences and/or associations involving annuals and perennials, including legumes and cover crops), along with other complementary good agricultural production and land management practices. Conservation Agriculture systems are present in all continents, involving rainfed and irrigated systems including annual cropland systems, perennial systems, orchards and plantation systems, agroforestry systems, crop-livestock systems, pasture and rangeland systems, organic production systems and rice-based systems. Conservation Tillage and Minimum Tillage are not Conservation Agriculture, and nor is No-Till on its own (more at: **http://www.fao.org/conservation-agriculture**).

Latest (2015/16) CA area information available from: **Global spread of Conservation Agriculture. By A. Kassam et al. International Journal of Environmental Studies. Published Online (2018).**

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