Australian Soil Carbon Accreditation Scheme (ASCAS)

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Introduction Australia has the highest per capita rate of greenhouse gas emissions in the world. Appropriately managed farmlands could effectively retrieve, store and utilise most of the excess carbon being emitted to the atmosphere, converting a potential hazard into an extremely productive opportunity. Humified organic carbon has many benefits in soils.

The Australian Soil Carbon Accreditation Scheme (ASCAS) rewards landholders for adopting innovative techniques designed to sequester soil carbon. The ASCAS project is a first in the Southern Hemisphere, making Australia a world leader in the recognition of soils as a verifiable carbon sink. Effective carbon management is a key factor for productive farms, revitalised catchments and a greener planet.
The ASCAS project will provide proof of concept that:

i) innovative management practices exist for increasing the level of carbon in agricultural soils
ii) improvements in soil carbon and soil health can be measured
iii) landholders can be financially rewarded for building soil carbon

Materials and methods baseline soil carbon levels in the 0-110cm profile were determined between August and October 2007 within Defined Sequestration Areas (DSAs) located on regeneratively managed broadacre cropping and grazing lands across Australia. In 2008 and 2009 the first Soil Restoration Incentive Payments (SCIPs) will be paid retrospectively for measured, validated soil carbon increases above these baseline levels.

Receipt of Soil Carbon Incentive Payments will be similar to being paid "on delivery" for livestock or grain, with the bonus being that sequestered carbon remains in soil, conferring multiple landscape health and productivity advantages.

Results and discussion Initial results indicate that soil carbon can build rapidly when farm operations enhance-rather than detract from-the four-step soil-building process of photosynthesis, resynthesis, root exudation and humification (Jones, 2007). The humification step is generally absent from conventional chemically-based (including Zero Till) cropping programs-hence it is difficult for soil carbon to accumulate using "standard practice" in the Australian environment.

Conclusion The Australian Soil Carbon Accreditation Scheme (ASCAS) will convincingly demonstrate that levels of stable soil carbon in agricultural soils CAN be increased, CAN be measured and CAN be financially rewarded.

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Reference

Jones, C. E. 2007. Building soil carbon with Yearlong Green Farming (YGF). *Evergreen Farming*, Sept. 2007, p. 4-5.