



# EGU

## Media Tips

24 April 2005

EGU General Assembly 2005

**What:** *Natural and anthropogenic changes of soil properties*

**Where:** *Tuesday, 26/4, 08:30 – 12:00 – Lecture Room 22*

**Who:** *Marcello Pagliai\* (convenor)*

Soil structure is a dynamic property and it is subjected to genesis and degradation processes.

The main factors affecting the degradation of soil structure are long-term intensive cultivation, erosion, compaction, the formation of surface crusts and the formation of a compacted layer along the soil profile (e.g. ploughpan). Organic matter plays a key role in the formation and stabilization of soil structure. Optimum structure is what enables the soil to have the widest range of possible uses, i.e. when the soil's "functionality" is at its maximum. Intensive agriculture and activities such as mining may lead to severe soil structure degradation. Up to now, these physical factors have not been adequately taken into consideration.

Session SSS9 discusses various of these aspects. Knowledge of the processes involved forms the basis for recommendations to policy makers of sustainable soil management systems able to maintain and improve the soil structure quality and to prevent soil degradation.

Some interesting papers:

[EGU05-A-00980](#); Peng, X.; Horn, R. Influence of soil structure on the shrinkage behavior and consequences for modeling approaches.

[EGU05-A-08301](#); Rogasik, H.; Onasch, I.; Brunotte, J.; Koch, H.-J.; Tomanova, O. X-ray CT analyses of soil structure changes induced by agricultural machinery or different tillage practices.

[EGU05-A-09538](#); Hallett, PD; Zhang, B. Quantifying root exudate impacts on soil structure genesis using fracture mechanics.

[EGU05-A-01938](#); Pellegrini, S.; Vignozzi, N.; Pagliai, M.; Calzolari, M.C.; Ungaro, F.; Torri, D.; Salvador, P. Effect of Different Organic Amendments on Topsoil Structural Properties.

[EGU05-A-00127](#); Gaęe, O. P.; Czyż, E. A.; Dexter, A. R. Soil physical quality as affected by management practices.

**SESSION: SSS9: Quantification of soil structure and soil porosity changes caused by natural and anthropogenic affects:** Tuesday, 26/4, 08:30 – 12:00 – Lecture Room 22.

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