Renger, M., O. Strebel, and W. Giesel. 1974. Evaluation of soil, cultural and hydrological problems by using the climatic water balance and physical soil indices. 1. Need for sprinkler irrigation : Beurteilung bodenkundlicher, kulturtechnischer und hydrologi scher Fragen mit Hilfe von klimatischer Wasserbilanz und bodenphysikalischen Kennwerten. [LA=German] Beregnungsbedurftigkeit. Z-Kulturtech-Flurbereinig 15, no. 3 (May/Jun): 148-160.

Rhoton, F. E., and D. L. Lindbo. 1997. A Soil depth approach to soil quality assessment. *Journal of Soil & Water Conservation* [Ankeny, Iowa: Soil and Water Conservation Society] 52, no. 1 (Jan/Feb): 66-72.

Philosophical viewpoint: depth influences productivity & erodibility of soils, so must assess soil properties based upon ESD (effective soil depth) as an "integrative" factor in S.Q. index development. --(Page 66 quote:) "A soil quality index cannot be based solely on the analysis of a few arbitrarily-chosen soil properties from a single soil type and location, because of inherent and artificial differences among soils." --Lower Mississippi Valley, fragipan soils, eroded sites; 69 randomly-selected points per site were sampled (12 plots, over 3 years); --Tests replicable (p.68). --soybean yields measured. --Soil physical & chemical properties (Table 1, p.68): Bulk density, aggregate stability, mod. of rupture, available water, clay content, extractable Fe, SOM, pH, CEC; grouped by degree of P erodibility. --Correlations with soil depth worked out for A horizons; --Productive-erodibility indices related to ESD were graphed, & compared to 1984-1986 yield data from these plots. --Advocates of the position that a single indicator, such as SOM, is not adequate for soils with limited depth (p.72).

Rienzi, E. A., M. Rorig, S. Navone, A. E. Maggi, and C. P. Movia. 2001. Indicadores de calidad de la tierra en distintas posiciones de la cuenca del rio Santa Maria // Soil quality indicators in landscape position of Santa Maria river basin [Argentina] [LA=Spanish, with English summary] *Revista De La Facultad de Agronomia* [Universidad De Buenos Aires] 21, no. 2: 111-115.

Results of a study on the behaviour of soil (sandy soil) quality indicators (electrical conductivity, sodium adsorption ratio, soil pH and organic carbon content) in the Santa Maria river basin, Catamarca, Argentina, due to changes in the landscape position, land use and measurement depth, are presented. *--CAB Abstracts.*

Rodale Institute. 1991. International Conference on the Assessment and Monitoring of Soil Quality; Proceedings of a conference hosted by the Rodale Institute, July 11-13, 1991, Emmaus, PA. John Haberern, editor. Emmaus, PA: Rodale Press.

"This conference report documents the first steps of a national effort to define and describe methods of enhancing soil quality."

Rodriguez, A., J. L. Mora Hernandez, and C. D. Arbelo Rodriguez. 2002. Variation of soil quality in plant succession of the coastal scrub of Tenerife (Canary Islands, Spain). In: Man and soil at the Third Millennium; Proceedings [of] International Congress of the European Society for Soil Conservation,Volume 2: 1185- . J. L. Rubio, R. P. C. Morgan, S. Asins, and V. Andreu, editors. Logrona , Spain: GEOFORMA Edicions, S.L.

The successional processes of degradation and regeneration of ecosystems are necessarily associated with variations of soil quality. Moreover the reference soils, from the point of view of quality, must be associated with the climax vegetation. A study is presented in this paper of the Relationship between the different plant communities characteristic of the succession in the coastal scrubland of the Canary Islands (Spain) and the quality of the soils (Leptosols, Regosols, Eutric Cambisols, Luvic Calcisols and Petric Calcisols) associated with them, to **attempt to establish a soil quality index that is valid for the ecosystem studied**. To this end, intensive sampling was carried out of both soils and plants in a large arid zone located in southeast Tenerife. Up to 60 properties of the soil and land were analysed. Plant communities were delimited by means of multivariate analysis of classification and ordination. Uni- and multivariate statistical techniques were applied to establish which of the variables studied were relevant in determining the vegetation. The most significant characteristics were those related to the saline-sodic state of the soils and the degree of human intervention in the area. The general characteristics of the soils associated with the different plant communities are presented and the role of each of these communities in the process of plant succession is analysed.

Rogers, T., J. Krebsbach, and Laura L. Jackson . 1994. On-farm measurements of soil quality indices : a class experience. Presentation at: Upper Midwest Organic Farming Conference 1994. From URL: http://www.bio.uni.edu/department/faculty/jackson.html

Romig, D. E., M. J. Garlynd, and R. F. Harris. 1996. Farmer-based assessment of soil quality: a soil health scorecard. In: *Methods for assessing soil quality*; Pp. 39-60. J. W. Doran, and A. J. Jones,editors. Madison, WI : Soil Science Society of America.

> Farmers' knowledge of soil health (in Wisconsin, USA), was analysed through structured interviews. All responses were coded and a database characterizing the main soil health properties was created. The identified properties were used to produce score cards containing the following scale: healthy (optimal function); impaired (abnormal function or structure); unhealthy (function severely restricted, deformity). A numerical scale (0.1; 1.5 and 3-4) grades each indicator with a degree of sensitivity, but this rating is ordinal. A detailed description of the scorecard used as a field tool to assess and monitor soil quality and health is presented. --*CAB Abstracts.*

Rubio, J. L., R. P. C. Morgan, S. Asins, and V. Andreu, editors. 2002. *Man and soil at the Third Millennium*; Proceedings [of the] International Congress of the European Society for Soil Conservation, Valencia, Spain, 28 March-1 April, 2000. Volume 1. Logrona, Spain: GEOFORMA Edicions, S. L. ["This publishing company has stopped its activities."--web note Oct.14, 2003]; 1115 p.

> ***Book of Abstracts* is available [web page] at URL:** http://www.zalf.de/essc/valindex.htm#indexval **; edited by: Rubio, José L.//Asins, S.//Andreu, V.//Paz, J. M. de//Gimeno, E.**
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> This book has 2 volumes which are divided into 10 sections. Section 1 is on soil and society. Soil and water cycle are discussed in Section 2. The inter-linkages between biodiversity, climate change and soil resources are dealt with in Section 3. Section 4 presents the traditional soil water conservation systems. Section 5 is devoted to soil indicators. Soil functions and soil quality are described in Section 6. Section 7 tackles desertification and soil degradation processes. A discussion on soil contamination is presented in Section 8. New technologies and soil assessment are given in Section 9. And Section 19 is on soil conservation.

Rust, R. H., R. S. Adams, and W. P. Martin. 1972. Developing a soil quality index. IN: *Indicators of environmental quality*; Proceedings of a symposium held during the AAAS meeting in Philadelphia, Pennsylvania, December 26-31, 1971; Pp.243-247. William A. Thomas, editor. New York, London: Plenum Press.

General discussion (academic, theoretical review) of the factors possibly necessary to develop a Nitrogen soil quality 'index' in terms of retention in soils amended for cropping; considers the Smith & Wischmeier soil-loss prediction equation as an analogy. Also uses pesticide residues as one example of crop residue estimation as a complex expression of an SQ Index.