CURRICULUM VITAE

Name: Lars Reier Bakken,
Born: 19/2-1952.

Since 1994: Professor at Department of Soil and Water Sciences, AUN.

ACTIVITIES

Evaluation/editorial tasks:

Editorial board member: Microbial Ecology, Soil Biology and Biochemistry, Biology Fertility of Soils

Referee for the journals:: Soil Biology and Biochemistry, Biology and Fertility of Soils, FEMS Microbiology Ecology, J Env Quality, Ambio, Nutrient cycling in Agroecosystems, European Review of agricultural Economics, Journal of Microbilogical Methods. Applied and Environmental Microbiology.

Main opponent ("examinator") for PhD dissertations: total 13 dissertations in Norway, Denmark, Sweden and Scotland.

Teaching at post-graduate level:

Scandinavian summer course in Microbial Ecology, **Physiology and Ecology of fungi.**
Lund Universitet august 1987.
"**Rhizosphere microbiology**", symposium at KVL, Copenhagen, october 1991.
Scandinavian summer course in Microbial Ecology: NorFa Post Graduate course: "**Soil biological activities and methods to follow anthropogenic influence**." 10-16 August 1992,
Soil biological methodology to study C- and N-cycling, Post graduate training course arranged by SLU, Uppsala, Sweden (oct-nov 94).
"**New directions in Microbial Ecology**". PhD course, University of Copenhagen. November 19-20, 1999.
Structure and Function in Soil Microbiology. PhD course, agricultural University of Sweden, Ultuna 4-12 august 2000

PUBLICATIONS since 1997
(Papers in journals and monographs with peer review systems are marked with *****)

* Bleken MA, **Bakken** LR (1997) Nitrogen cost of food production: Norwegian Society. **AMBIO** 26 (3): 134-142.

* Wang J, **Bakken** LR (1997) Competition for Nitrogen During Decomposition of Plant Residues in Soil: Effect of Spatial Placement of N-Rich and N-Poor Plant Residues. **Soil Biol Biochem** 29:153-162

* Wang J, **Bakken** LR (1997) Competition for Nitrogen during Mineralization of Plant Residues in Soil: Microbial Response to N-Depletion in Root Zone. **Soil Biol Biochem** 29:163-170

* Bakken LR (1997) Culturable and unculturable bacteria in soil. In: "**Modern Soil Microbiology**", vanElsas JD, Wellngton EMH, Trevors JT (eds) Marcel Decker. pp 47-61.

* Lindahl V, FrostegÅrd X, **Bakken** LR, BÅÅth E (1997) Phospholipid fatty acid composition of size fractionated indigenous soil bacteria. **Soil Biol Biochem** 29:1565-1569.

* Vatn A, **Bakken LR**, Lundeby H, Romstad E, Rørstad PK, Vold A (1997) Regulating nonpoint-source pollution from agriculture: an integrated modelling analysis. **Eur Rev Agric Economics** 24:207-229.

Bleken MA, **Bakken** LR (1997) The antropogenic nitrogen cycle in Norway. In: Controlling Mineral Emissions in European Agriculture; Economics, Policies and the Environment. Romstad E, Simonsen J, Vatn A (eds). CAB International, Wallingford UK. pp 27-40.

* Jensen S, Prieme A, Bakken LR (1998) Methanol improves methane uptake in starved methanotrophic microorganisms. **Applied and Environmental Microbiology** 64:1143-1146.

* Bakken LR and Bleken (1998) Temporal aspects of N-enrichment and emission of N2O to the atmosphere.

Nutrient Cycling in Agroecosystems. 52:107-121.

* Swensen B and **Bakken** LR (1998) Nitrification potential and urease activity in a mineral subsoil. **Soil Biology and Biochemistry** 30:1333-1341.

* Wang J, **Bakken** LR (1998) Screening of soil bacteria for poly-ß-hydroxybutyric acid production and its role in the survival of starvation. **Microbial Ecology** 35:94-101

Bakken LR, Swensen B (1998): Deicing chemicals as substrates for the microbial communities in soil.Nordic Hydrological Program Report 43 pp 3-14. ISBN 952-11-0348-5, ISSN 0900-0267

Sogn T, Bakken LR (1998): Prediction of mineral N dynamics following additions of organic waste to agricultural soil. Proceedings of NJF seminar 292, November 1998, Finland. DIAS report Plant Production june 1999. pp 65-75. ISSN 0333-1350.

* Klemedtsson L, Jiang QQ, Klemedtsson ÅK Bakken LR (1999) Ammonium oxidizing bacteria in acid forest humus. **Soil Biology and Biochemistry** 31:839-847.

* Swensen B and **Bakken** LR (1999) Release of fossile methane from soil particles, and its implication for estimation of methane oxidation in a mineral subsoil. **Biogeochemistry** 47: 1-14

* Jiang QQ, **Bakken** LR (1999) Comparison of Nitrosospira strains from terrestrial environments. **FEMS Microbiology Ecology 30** (171-186).

* Jiang QQ, **Bakken** LR (1999) Nitrous oxide production and methane oxidation by different ammonium oxidizing bacteria. **Applied and Environmental Microbiology** 65:2679-2648).

* Aakra Å, Utåker JB, Nes IF, Bakken LR (1999) An evaluated improvement of the extinction dilution method for the isolation of ammonia oxidising bacteria. **J Microbiol Methods** 39:23-31.

* Vatn A, **Bakken LR**, Botterweg P, Romstad E (1999) ECECMOD: an interdisciplinary modelling system for analyzing nutrient and soil losses from agriculture. **Ecological Economics** 30: 189-205.

* Vold A, **Bakken** LR, Uhlen G, Vatn A (1999) Use of data from long-term fertilizer experiments to model plant nitrogen uptake. Nutrient Cycling in Agroecosystems 55:197-206.

Klemedtsson L, Weslien P,Klemedtsson ÅK, Silvola J, Maijanen M, Martikainen P, Doersch P, Dasselaar Av, Corre W, Oenema O, Holtan-Hartwig L, Bakken LR, Cristensen S, Prieme A, Jensen NO, Klein-Gunnewick HJT, Leffelar P (1999). Greenhouse gas emissions from farmed organic soils. In Valentini R and Brüning C (eds): "Greenhouse gases and their role in climate change: the status of research in europe." Proceedings from an International Workshop held in Orvieto, Italy, 10-13 November 1997. EU Dirctorate General Research EUR 19085 EN. Pp 57-65.

* Sitaula BK, Hanssen S, Situla JIB, Bakken LR (2000) Methane oxidation potentials and fluxes in agricultural soil: effects of fertilization and soil compaction. **Biogeochemistry** 48:323-339

* Holtan-Hartwig L, Dörsch P, **Bakken** LR (2000) Comparison of denitrifying communities in organic soils: kinetics of NO_3^- and N_2O reduction. **Soil Biology and Biochemistry** 32: 833-843.

* Aakra Å, Hesselsøe M, **Bakken** LR (2000) Surface attachment of ammonia oxidizing bacteria in soil. **Microbial Ecology** 39:222-235.

* Smith K, Dobbie KE, Ball BC, **Bakken** LR, Sitaula B, Hansen S, Brumme R, Borken W, Christensen S, Prieme A, Fowler D, MacDonald JA, Skiba U, Klemedtsson L, Kasimir-Klemedtsson A, Degorska A, Orlanski P (2000) Oxidation of atmospheric methane in northern European soils, comparison with other ecosystems, and uncertainties in the global terrestrial sink. **Global Change Biology** 6:791-803

* Sitaula BK, Hansen S, Sitaula JIB, **Bakken** LR (2000) Effects of soil compaction on N2O emission in agricultural soil. Chemosphere – Global Change 2:367-371.

* Korsaeth A, Molstad L, **Bakken** LR (2001) Modelling the competition for nitrogen between plants and microflora as a function of soil heterogeneity. **Soil Biology and Biochemistry** 33:215-226.

French HK, **Bakken LR**, van der Zee SEATM (2001) Natural attenuation of airport pollutants in the unsaturated zone. Nato Advanced Workshop; Current problems of hydrogeology in urban areas, urban agglomerates and industrial centres. May 29th-June 1st 2001. Abstract

* Mulder J, De Wit HA, Boonen HWJ, **Bakken LR** (2001) Increased levels of aluminium in forest soils: Effects on the stores of soil organic carbon. Water Air and Soil Pollution130: 989-994

* Sitaula, B., Sitaula, J.I.B., Aakra, Å., **Bakken, L.R.** (2001). Nitrification and Methane Oxidation in forest soil: Acid deposition, nitrogen input and plant effects *Water, Air and Soil Pollution.* 130, 1061-1066.

French HK, **Bakken LR**, van der Zee SEATM (2001) Natural attenuation of airport pollutants in the unsaturated zone. In: Howard KWF, Israfilov RG (eds): Current problems of hydrogeology in urban areas, urban agglomerates and industrial centres. Kluwer Acad. Publ. Pp437-456.

* Korsaeth A, Henriksen TM, **Bakken** LR (2002) Temporal changes in microbial mineralization and immobilization of N during degradation of plant material: implications for the plant N supply and nitrogen losses. **Soil Biology and Biochemistry** 34:789-799.

* Holtan-Hartwig L, Dörsch P, Bakken LR (2002) Low temperature control of soil denitrifying communities. **Soil Biology and Biochemistry** 34:1797-1806.

* Holtan-Hartwig L, Bechman M, Høyås TR, Linjordet R, Bakken LR (2002) Heavy metal tolerance of soil denitrifying communities, N_2O dynamics. Soil Biology and Biochemistry 34:1181-1190.

* Holtan-Hartwig L, Bechmann M, Hoyas TR, Linjordet R, **Bakken LR** (2002) Heavy metals tolerance of soil denitrifying communities: N2O dynamics Soil Biology and Biochemistry 34: 1181-1190

* Korsaeth A, **Bakken LR**, Riley H (2003) Nitrogen dynamics of grass as affected by N input regimes, soil texture and climate: lysimeter measurements and simulations Nutrient Cycling in Agroecosystems 66: 181-199.

* Almås ÅR, Bakken LR, Mulder J (2004) Changes in tolerance of soil microbial communities in Zn and Cd contaminated soils. Soil Biology and Biochemistry 36: 805-813.

Vatn A., L. Bakken, M.A. Bleken, O.H. Baadshaug, H. Fykse, L. E. Haugen, H. Lundekvam, J. Morken, E. Romstad, P.K. Rørstad, A.O. Skjelvåg, T. Sogn, N. Vagstad and E. Ystad 2003. ECECMOD(2.0): An Interdisciplinary Research Tool for Analysing Policies to Reduce Emissions from Agriculture. Agricultural University of Norway, Report no: 3/2002. http://www.nlh.no/forskning/mildri/publikasjoner/ececmod_doc.pdf