

## **Curriculum Vitae: Lars Olav Eik**

### **1. Current Positions**

Professor, Small Ruminant Nutrition & Production Systems / Tropical Animal Husbandry, Department of International Environment and Development Studies, Noragric (80% position) and Department for Animal and Aquacultural Sciences, IHA (20% position), University of Life Sciences (NMBU). Coordinator, Norwegian side for the EPINAV-CCIAM Programmes, Tanzania.

### **2. Personal details**

Name: Eik, Lars Olav, Date of Birth: March 27<sup>th</sup> 1955

### **3. Educational Background:** PhD in Animal Science, NMBU, 1991, professor NMBU, 2011

### **4. Supervisor for NMBU-registered PhD-students:**

Berhane, G., Mekelle University, Ethiopia: 2001-2005; Tesfay, Y., Mekelle University, Ethiopia: 2004-2008; Nurfeta, A., Hawassa University, Ethiopia: 2004-2008; Mushi, D. Sokoine University of Agriculture, Tanzania: 2006-2009; Woldemariam, A.A., Hawassa University, Ethiopia: 2006-2011; Safari, J., Sokoine University of Agriculture, Tanzania: 2007-2012; Chigwa, F.C., Bunda University of Malawi, Malawi: 2007-2012, Gebremikael, M.B., Mekelle University, Ethiopia: 2009-2014; Selemay, I., Sokoine University of Agriculture, Tanzania: 2009-2014; Etana D., Hawassa University, Ethiopia: 2005-2009; Lind, V., Bioforsk-Tjøtta: 2004-2009; Mwaseba, D., NIMRI-Tanzania: 2009-; Zabron Cuthibert Nziku, TALIRI-Tanzania: 2011-.

### **5. Out-reach activities:**

1983-: Introducing Norwegian Dairy Goats in Tanzania and Malawi emphasizing improved feeding, use of milk in human nutrition and market outlets for meat (including local goats and sheep) and milk products.

1995-: Using goats for rangeland management in Norway with emphasize on open landscape and maintenance of flower-meadows.

1995-2005: Work on improving the annual distribution of goat's milk in Norway, introducing the "Snøfrisk-Cheese" (TINE-Brand).

1994 – 2010. Work on introducing cashmere goats in Norway and marketing of products.

2002 -2010: Marketing small ruminant's meat to the Muslim community in Norway (Nortura Niche Markets, Alfathi Brand).

2002- 2010: Improving quality of lamb's meat in Norway, introducing the concept of "mountain flavor" on meat and "slow-food" (Nortura Niche Markets).

2009-2015: Coordinator, Norwegian side, for the institutional collaboration programme between Sokoine University of Agriculture (SUA), Tanzania and NMBU: "Enhancing Pro-poor Innovations in Natural Resources and Agricultural Value-chains (EPINAV)".

2009-2015: Coordinator, Norwegian side, for the institutional collaboration programme between Sokoine University of Agriculture (SUA), Ardhi University, University of Dar es Salaam (UDSM), Tanzania Meteorological Agency, NMBU: Climate Change Impact, Adaptation and Mitigation in Tanzania (CCIAM): "Reduced Emissions from Deforestations and Forest Degradation (REDD)" initiative.

2010-2015: Coordinator, Norwegian side, for the project: "Integrated Small Ruminant Production Systems for Improved Livelihood and reduced Emission of Greenhouse gasses (GHG)" in collaboration with SUA-Tanzania and funded by Norwegian FK (Peace Corps).

2011-2014: Coordinator, Norwegian side, for the project: “Measuring ecosystem services of mountain agriculture through landscape and biodiversity indicators”. EU-funded project through «People Marie Curie Actions, Intra-European Fellowships (IEF).

2013-: Advisor, Norwegian side, for the project: Collaboration on value-adding activities for small-scale farmers with emphasis on dairy goats and undergraduate student-training programme in Zanzibar –Tanzania and Norway in collaboration with *Kizimbani Agricultural Training Institute (KATI) – Zanzibar, Sogn Jord- og Hagebruksskule (SJH) – Aurland* and funded by Norwegian FK (Peace Corps).

#### **6. Teaching experience, on-going courses at NMBU:**

HFX 250: Kjøttproduksjon på storfe og sau (Meat-production on cattle and small-ruminants). Main responsible for the small ruminant section of the course.

HFX 207: Animal husbandry and aquaculture in the tropics and sub-tropics, introductory course. Course responsible.

HFX212: Introductory Field Course in Tanzania: Integrated farming systems and value-chains for smallholder farmers in Tanzania. Course responsible.

#### **7. Peer-reviewed articles, 2010-2015 and some selected earlier publications:**

Eik, L.O. 1991. Effects of feeding intensity during dry period on performance of dairy goats. *Small Rumin. Res.* (6): 223-232.

Eik, L.O., 1991. Effects of feeding intensity on performance of dairy goats in early lactation. *Small Rumin. Res.* (6): 233-244.

Eik, L.O.; T. Garmo & J.J. Nedkvitne, 1991. A low cost feeding strategy for Norwegian dairy goats and comparison of performance between first-fresheners and multiparous does. *Small Rumin. Res.* (6): 257-265.

Eik, L.O.; J.J. Nedkvitne & A.M. Robstad, 1991. Long-term effects of feeding intensity and supplementation on the utilization of unimproved pastures by dairy goats. *Small Rumin. Res.* (6): 245-255.

Eik, L.O., M. Eknæs, Ø. Havrevoll, T. Garmo, J. Raats & T. Ådnøy, 1998. Partial suckling during the grazing period as a management tool for improving the annual patterns of goat milk in Norway. *6<sup>th</sup> International symposium on the milking of small ruminants, Athens, Greece, September 26<sup>th</sup>- October 1<sup>st</sup>*: 217-222.

Asheim, L. J., L. O. Eik, and I. Myrsetrud, 2004. Linear Programming Analysis of Sheep and Cashmere Goat Production Systems. Evolutions of sheep and goat production systems: Future of Extensive Systems and Changes in Society. *OPTIONS méditerranéennes. SERIE A: Séminaires Méditerranéens Numero A-61*: 49-55.

Ådnøy T., A. Haug O. Sørheim, M. S. Thomassen, Z. Varszeg and L. O. Eik, 2005. Grazing on mountain pastures - does it affect meat quality in lambs? *Livestock Production Sciences, vol. 94, Issues 1-2*: 25-31.

Eik, L.O., G.C. Kifaro, S.M. Kiango, Ø. M. Nordhagen, J. Safari and L.A. Mtenga, 2008. Productivity of goats and their contribution to household food security in high potential areas of East Africa: A case of Mgeta, Tanzania. *African Journal of Food Agriculture and Development (AJFAND), vol.8 (3)*: 278-290.

Mushi, D.E., M.S. Thomassen and G.C. Kifaro and L.O. Eik, 2010. Fatty acids composition of minced meat, longissimus muscle and omental fat from Small East African goats finished on different levels of concentrate supplementation. *Meat Science, 86*:337-342.

- Haug, A., Christophersen, O.A., Kinabo, J., Kaunda, W. and L.O. Eik, 2010. Use of dried Kapenta (*Limnothrissa miodon* and *Stolothrissa tanganyicae*) and other products based on whole fish for complementing maize-based diets. *African Journal of food agriculture, nutrition and development*, vol. 10, no5, May 2010, ISSN 16845374, online-23pp.
- Safari, J., Mushi, D.E., Mtenga, L.A., Kifaro, G.C., Eik, L.O. (2011). Growth, carcass and meat quality parameters of Red Maasai sheep fed wheat straw- based diets. *Tropical Animal Production and Health*, 43 (1): 87-89.
- Safari, J., Mushi, D.E., Mtenga, L.A., Kifaro, G.C., Eik, L.O. (2011). Growth, carcass and meat quality parameters of Small East African goats fed wheat straw- based diets. *Livestock Science*, 135 (2): 168 - 176.
- Safari, J., Mushi, D.E., Kifaro, G.C., Mtenga, L.A., Eik, L.O., 2011. Seasonal variation in chemical composition of native forages, grazing behaviour and some blood metabolites of Small East African goats in a semi-arid area of Tanzania. *Animal Feed Science and Technology*, 164 (1-2), p. 62
- Lind, B., J. Berg, Eilertsen, S.V., Hersleth and L.O. Eik, 2011. Effect of gender on meat quality in lamb from extensive and intensive grazing systems when slaughtered at the end of growing season. *Meat Science* (2), p. 305.
- Debela, E., A. Tolera, L.O. Eik and R. Salte, 2011. Nutritive value of morphological fractions of *Sesbania sesban* and *Desmodium intortum*. *Tropical and Subtropical Agroecosystems*, 14:793-805
- Debela, E., A. Tolera, L.O. Eik and R. Salte, 2012. Condensed tannins from *Sesbania sesban* and *Desmodium intortum* as means of *Haemochus contortus* control in goats. *Tropical Animal Health and Production*, vol. 41, no. 3.
- Safari, J., Mushi, D.E., Kifaro, G.C., Mtenga, L.A., T. Ådnøy and Eik, L.O., 2012. Influence of flushing and season of kidding on reproductive characteristics of Small East African goats (does) and growth performance of their kids in a semi-arid area of Tanzania. *African journal of Agricultural Research* Vol. 7(35): 4948-4955.
- Abebe A., Tolera, A., Holand Ø., Ådnøy, T. and Eik, L.O., 2012. Seasonal variations in nutritive value of some browse and grass species in Borana rangeland, southern Ethiopia. *Tropical and Subtropical Agroecosystems* (15): 261-271.
- Abebe A., Eik L.O, Holand Ø., Ådnøy T. and Tolera, A. 2012. Pastoralists' perceptions of feed scarcity and livestock poisoning in southern rangelands, Ethiopia. *Tropical Animal Health and Production*, vol. 44 (1): 149-157.
- Selemani I.S, Eik L.O., Holand Ø., Ådnøy T., Mtengeti E. and Mushi D., 2013. Variation in quantity and quality of native forages and grazing behavior of cattle and goats in Tanzania. *Livestock Science*, vol. 157(1): 173-183.
- Selemani I.S, Eik L.O., Holand Ø., Ådnøy T., Mtengeti E. and Mushi D., 2013. The effects of a deferred grazing system on rangeland vegetation in a northwestern, semiarid region of Tanzania. *African Journal Range and Forage Science*, vol. 30 (3): 141-148.
- Asheim L.J., Eik L.O. and Dellal I., 2014. Production Systems for the Muslim Goat's Meat Market. *Tanzanian Journal of Agricultural Sciences*, vol. 12. (2): 26-34.
- Balehegn M., Eik, L.O. and Tesfay, Y., 2014. Replacing commercial concentrate by *Ficus thonningii* improved productivity of goats in Ethiopia. *Tropical Animal Health and Production*, Volume 46. (5) p. 889-894
- Balehegn, M., Eik, L.O., 2014. Tesfay, Y., 2014. Silvopastoral system based on *Ficus thonningii*: an adaptation to climate change in northern Ethiopia. *African Journal of Range and Forage Science*: 1-9.

- Kidane A.S., Sørheim K. Eik, L.O. and Steinshamn H., 2014. Growth and chemical composition of chicory and performance of lambs grazing chicory relative to grass-clover mixtures. *Acta agriculturae Scandinavica. Section A, Animal science*, Vol. 64. (4): 233-242.
- Balehegn M., Eik L.O. and Tesfay Y., 2015. There is more in fodder trees than their nutritional values: local valuation of indigenous fodder trees and shrubs by pastoral and agrarian communities in northern Ethiopia. *Forests, Trees and Livelihoods*, Vol. 24. (2): 112-127.
- Bernues A., Rodríguez-Ortega T., Alfnes F., Clemetsen M., Eik L.O., 2015. Quantifying the multifunctionality of fjord and mountain agriculture by means of sociocultural and economic valuation of ecosystem services. *Land Use Policy*, Vol. 48: 170-178.
- Chigwa F., Eik L.O., Kifaro G.C., Muhikambe V.R.M., Mushi D. E., 2015. Alternative Goat Kid-Rearing Systems for Improved Performance and Milk Sharing Between Humans and Offspring in Climate Change Mitigation. I: *Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa*. Springer Publishing Company 2015 ISBN 978-3-319-09359-8: 331-341.
- Lal R., Singh B.R., Mwaseba D.L., Kraybill D., Hansen D.O., Eik L.O., 2015. Forgotten Facts: Research and Development Priorities. I: *Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa*. Springer Publishing Company 2015 ISBN 978-3-319-09359-8: 603-616.
- Lal R., Singh B.R., Mwaseba D.L., Kraybill D., Hansen D.O., Eik L.O., 2015. Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa. *Springer Publishing Company 2015 (ISBN 978-3-319-09359-8): 665 pp.*
- Mushi D.E., Eik L.O., Bernues, A., Ripoll-Bosch R., Sundstøl F., Mo M., 2015. Reducing GHG Emissions from Traditional Livestock Systems to Mitigate Changing Climate and Biodiversity. I: *Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa*. Springer Publishing Company 2015 ISBN 978-3-319-09359-8: 343-366.
- Mwaseba D.L., Kaarhus R., Johnsen F.H., Mattee A.Z., Mvena Z.S.K., Eik L.O., 2015. Empowering farmers? Collaborative research at Sokoine University of Agriculture, Tanzania. *Development in Practice*, Vol. 25(5): 347-359.
- Selemani I.S., Eik L.O., Holand Ø., Ådnøy T., Mtengeti E., Mushi D.E., Sørheim, O., 2015. Feeding Strategies for Improved Beef Productivity and Reduced GHG Emission in Tanzania: Effect of Type of Finish-Feeding on Carcass Yield and Meat Quality of Zebu Steers. I: *Sustainable Intensification to Advance Food Security and Enhance Climate Resilience in Africa*. Springer Publishing Company 2015 ISBN 978-3-319-09359-8:367-382.
- Selemani I.S., L.O. Eik, 2015. The effects of concentrate supplementation on growth performance and behavioral activities of cattle grazed on natural pasture. *Trop Anim Health Prod* DOI 10.1007/s11250-015-0935-z