References

- ABARE. 2010. Australian Bureau of Agricultural and Resource Economics. Commodity statistics accessed from ABARE Web site (available at http://www.abare.gov.au/publications_html/data/data/data.html).
- ACI. 2006. Agrifood Consulting. Poultry Sector Rehabilitation Project Phase I. The Impact of Avian Influenza on Poultry Sector Restructuring and its Socio-economic Effects. Prepared for FAO by Agrifood Consulting International April 2006. Rome, FAO.
- **Agarwal, B.** 1992a. The Gender and Environment Debate: Lessons from India. *Feminist Studies* 18(1):119-158.
- Agarwal, B. 1992b. Gender Relations and Food Security. In Unequal Burden: Economic Crises, Persistent Poverty, and Women's Roles L. Beneria & S. Feldman, eds., Oxford, Westview Press.
- Ahmed, A.U., Hill, R.V., Smith, L.C., Wiesmann, D.M. & Frankenberger, T. 2007. The world's most deprived: characteristics and causes of extreme poverty and hunger, 2020 Vision for Food, Agriculture and the Environment Discussion Paper No 43, International Food Policy Research Institute (IF-PRI), Washington DC.
- Ahuja, V., Gustafson, D., Otte, J. & Pica-Ciamarra, U. 2009. Supporting Livestock Sector Development for Poverty Reduction. PPLPI Research Report. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Ahuja, V., Dhawan, M., Punjabi, M. & Maarse, L. 2008. Poultry based livelihoods of the rural poor: case of Kuroiler in West Bengal. Study Report. Doc 012. New Delhi, South Asia Pro-Poor Livestock Policy Programme, FAO and NDDB.
- Aklilu, Y. & Catley, A. 2009. Livestock Exports from the Horn of Africa: An Analysis of Benefits by Pastoralist Wealth Group and Policy Implications. Report commissioned by the Food and Agriculture Organization (FAO) under the Livestock Policy Initiative of the Intergovernmental Authority on Development (IGAD).

- Alderman, H. & Behrman, J.R. 2003. Estimated Economic Benefits of Reducing LBW in Low-Income Countries, University of Pennsylvania: Philadelphia, PA.
- Animal Husbandry Statistics. Ministry of Agriculture, Government of India.
- Argwings-Kodhek, G., M'mboyi, F., Muyanga, M. & Gamba, P. 2005. Consumption patterns of dairy products in Kenya's urban centres. Conference paper. Tegemeo Institute of Agricultural Policy and Development, Egerton University, Nairobi, Kenya. Cited by Kaitibie et al., (2008).
- Arpi, E. 2006. India's Amul Dairy Cooperative. Ashley, S. & Sandford, J. 2008. Livestock Livelihoods and Institutions in the Horn of Africa. IGAD LPI, Working Paper no. 10-08. Rome, FAO.
- Asian Development Bank. 2010. Gender Equality Results: Case Studies: Nepal. Mandaluyong City, Philippines, Asian Development Bank, 2010.
- Associated Press. 2008. Urban areas struggle to get grocers, fresh food (available at http://www.msnbc.msn.com/id/28300393/).
- Bailey, D.V., Barret, C.B., Little, P.D. & Chabari, F. 1999. Livestock Markets and Risk management among East African Pastoralists: a Review and Research Agenda. GL-CRSP Pastoral Risk Management Project (PRMP), Technical Report 03/99.
- Balakrishnan, V. 2002. Developments in the Indian feed and poultry industry and formulation of rations based on local resources in in Protein Sources For The Animal Feed Industry. FAO Expert Consultation and Workshop Bangkok, 29 April 3 May 2002 (available at http://www.fao.org/docrep/007/y5019e/y5019e00.htm#Contents).
- Bamire, A.S. & Amujoyegbe, B.J. 2004. Economics of Poultry Manure Utilization in Land Quality Improvement Among Integrated Poultry-Maize-Farmers in Southwestern Nigeria. *Journal of Sustainable Agriculture*, 1540-7578, 23(3) 2004, 21-37 Nigeria.

- Barrow, E., Davies, J., Berhe, S. Matinu, V., Mohammed, N., Olenasha, W. & Rugadya, M. 2007. Pastoral institutions for managing natural resources and landscapes. IUCN Eastern Africa Office Policy Brief No. 3 (of 5), Nairobi. (available at http://cmsdata.iucn.org/downloads/pastoralist_institutions_for_managing_natural_resources_and_landscapes.pdf).
- BBC. 2009. Brazil eyes Amazon sugar cane ban (available at http://news.bbc.co.uk/2/hi/8262381.stm).
- Beef magazine. August 2008 (available at http://beefmagazine.com/markets/feed/0801-locking-your-corn/).
- Bender, A. 1992. Meat and Meat Products in Human Nutrition in the Developing World. Food and Nutrition paper No. 53. Rome, FAO.
- Bennett, A., Lhoste, F., Crook, J. & Phelan, J. 2006. The future of small scale dairying. In *The Livestock Report 2006* (A. McLeod, ed.). Rome, FAO.
- Bentley, G.R., Aunger, R., Harrigan, A.M., Jenike, M., Bailey, R.C. & Ellison, P.T. 1999. Women's Strategies to Alleviate Nutritional Stress in a Rural African Society. *Social Science and Medicine*, 482:149-162.
- **BFREPA.** 2010. British Free Range Egg Producers Association. *News headline: warning of further feed price increases* (available at http://www.theranger.co.uk/news/Warning-of-further-feed-price-increases_21517.html).
- Birol, E., Roy, D. & Torero, M. 2010. How Safe Is My Food? Assessing the Effect of Information and Credible Certification on Consumer Demand for Food Safety in Developing Countries. IFPRI Discussion Paper 01029, October 2010, Washington D.C.
- Black, K.D. 2001. Environmental Impacts of Aquaculture. Sheffield, Sheffield Academic, 2001.
- Black, P.F, Murray, J.G. & Nunn, M.J. 2008. Managing animal disease risk in Australia: the impact of climate change. *Rev. sci. tech. Off. int. Epiz.*, 2008, 27(2), 563-580

- Blackmore, E. & Keeley, J. 2009. Understanding the social impacts of large-scale animal protein production. Oxfam Novib / IIED preliminary scoping report as input to the Conference on the Social Impacts of the Large-Scale Meat and Dairy Production and Consumption. Oxfam-Novib.
- Blench, R., Chapman, R. & Slaymaker, T. 2003. A Study of the Role of Livestock in Poverty Reduction Strategy Papers (PRSPs). PPLPI Working Paper no. 1. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Blobaum, R. 1980. Biogas production in China. P. 212-216 in Biogas and Alcohol Fuels Production. Proceedings of a Seminar on Biomass Energy for City, Farm, and Industry. Emmaus, PA, The JG Press.
- **Bourdieu, P.** 1977. Outline of a Theory of Practice. Cambridge, Cambridge University Press.
- Brinkley, C. 2010. Feeding Mega-Cities: Periurban Animal Agriculture. Background paper prepared for the FAO Animal Production and Health Division. Unpublished.
- Bumb, B. & Baanante, C. 1996, World Trends in Fertilizer Use and Projections to 2020, 2020 Brief No. 38. International Food Policy Research Institute, Washington, D.C., 1996.
- Byarugaba, D.K., Nakavuma, J.L., Vaarst, M. & Laker, C. 2008. Mastitis occurrence and constraints to mastitis control in smallholder dairy farming systems in Uganda. *Livestock Research for Rural Development*. 20(1) (available at http://www.lrrd.org/lrrd20/1/byar20005.htm).
- Capitalization of Livestock Program Experiences in India (CALPI). Undated. *Milk marketing in India: a review paper on the role and performance of informal sector*. CALPI (available at http://www.intercooperation.org.in/km/pdf/Documentation/Traditional/Informal%20milkmarket%20Desk%20study%20 (Amit).pdf).
- **CARE.** 1998. El Niño in 1997-1998: Impacts and CARE's Response.

- CDC. 2010. Operationalizing "One Health": A Policy Perspective Taking Stock and Shaping an Implementation Roadmap. (available at http://www.cdc.gov/onehealth/meetings.html).
- Chacko, C.T., Gopikrishna, Padmakumar, V., Sheilendra, T. & Ramesh, V. 2010. India: growth, efficiency gains and social concerns. In P. Gerber, H. Mooney, J. Dijkman, S. Tarawali & C. de Haan, eds. Livestock in a changing landscape, Vol. 2: Experiences and regional perspectives. Washington, DC, Island Press.
- Cohen, M.J. & Garrett, J.L. 2010. The food price crisis and urban food (in)security. *Environment and Urbanization* 222: 467-482. DOI: 10.1177/0956247810380375 www.sagepublications.com.
- Committee on World Food Security. 2005. Thirty-first Session, Rome, 23-26 May 2005, Assessment of the World Food Security Situation, CFS: 2005/2.
- Conant, R. 2010. Challenges and opportunities for carbon sequestration in grassland systems. A technical report on grassland management and climate change mitigation. *Integrated Crop Management* Vol. 9–2010. Rome, FAO.
- Conant, R.T. & Paustian, K. 2002. Potential soil carbon sequestration in overgrazed grassland ecosystems. *Global Biogeochemical Cycles* 2002; 1143.
- Costales, A. 2007. Pig Systems, Livelihoods and Poverty: Current Status, Emerging Issues and Ways Forward. PPLPI Research Report. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Costales, A., Gerber, P. & Steinfeld, H. 2006. Underneath the Livestock Revolution. In The Livestock Report 2006 (A. McLeod ed.). Rome, FAO. (available at www.fao.org/docrep/099/a0255e05.htm)
- Costales, A., Otte, J. & Upton, M. 2005. Small-holder Livestock Keepers in the Era of Globalization. PPLPI Research Paper. Rome, Pro-Poor Livestock Policy Initiative, FAO.

- De Weijer, F. undated, probably 2007. Cashmere Value Chain Anlaysis Afghanistan. Report prepared for the USAID Accelerating Sustainable Agriculture Programme.(available at http://www.ahdp.net/reports/Cashmere%20 Value%20Chain%20Analysis.pdf).
- DeBenoist, B., McLean, E., Egli, I. & Cogswell, M. 2008. Worldwide prevalence of anaemia 1993–2005: WHO global database on anaemia (available at http://whqlibdoc.who.int/publications/2008/9789241596657_eng.pdf).
- Debrah, S.K. 1993. Experiences in peri-urban dairy production, marketing and consumption. Cattle Research Network peri-urban dairy production project: pre-survey seminar. Bamako, Mali 27-30. September, 1993. Cited by Cited by Smith, O.B. & Olaloku, E.A. (1998). Peri-Urban Livestock Production Systems. CFP Report 24 (available at http://idrc.ca/fr/ev-2513-201-1-DO_TOPIC.html.).
- Delgado, C., Rosegrant, M., Steinfeld, H., Ehui, S. & Courbois, C. 1999. Livestock to 2020. The next food revolution. Food, Agriculture and the Environment discussion paper No 28, Washington DC, International Food Policy Research Institute, Rome, FAO, and Nairobi, International Livestock Research Institute.
- Delgado, C.L. 2003. Rising Consumption of Meat and Milk in Developing Countries has Created a New Food Revolution. J. Nutr. 133:3907S-3910S, November 2003 (available at http://jn.nutrition.org/cgi/content/full/133/11/3907S; http://www.lrrd.org/lrrd21/9/betr21143.htm).
- Delgado, C.L., Narrod, C.A. & Tiongco, M.M. 2008. Determinants and Implications of the Growing Scale of Livestock Farms in Four Fast-Growing Developing Countries. Research Report 157. International Food Policy Research Institute, FAO, LEAD.

- Deutsch, L., Kalkenmark, M., Gordon, L., Rockstrom, J. & Folke, K. 2010. Water-mediated ecological consequences of intensification and expansion of livestock production. In H. Steinfeld, H. Mooney, F. Schneider & L. Neville, eds. Livestock in a changing land-scape, Vol. 1: Drivers, consequences, and responses. Washington, DC, Island Press.
- Dolberg, F. 2003. A Review of Household Poultry Production as a Tool in Poverty Reduction with a Focus on Bangladesh and India. PPLPI Working Paper no. 6. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Ear, S. 2005. The Political Economy of Pro-Poor Livestock Policy in Cambodia. PPLPI Working Paper no. 26. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Environment Agency, UK. Undated. Turning waste into valuable materials. (available at http://www.environment-agency.gov.uk/aboutus/wfo/epow/126982.aspx).
- EUROPA. Undated. EU legislation on the protection of animals (available at http://ec.europa.eu/food/animal/index_en.htm accessed October 2010.)
- Fafchamps, M., Udry, C., Czukas, K. 1998, Drought and saving in West Africa: are livestock a buffer stock, *Journal of Development Economics*, Vol.55(2) 273–305.
- Fairfield, T. 2004. The Politics of Livestock Sector Policy and the Rural Poor in Bolivia, PPLPI Working Paper no. 15. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Fan, S. & Brzeska, J. 2010. The Role of Emerging Countries in Global Food Security (available at http://www.ifpri.org/sites/default/files/publications/bp015.pdf).
- FAO, UNICEF & UNDP. 2007. FAO/ UNICEF/UNDP Report. Joint Food Security Assessment Mission to Mongolia. Ulaanbaatar, Mongolia. (available at http://www.fao.org/ docrep/010/j9883e/j9883e00.HTM accessed January 2011.)
- **FAO.** 1997. *Street foods*. FAO Food and Nutrition Paper No 63. Rome.

- FAO. 1998. FAO's activities in relation to the 1997/98 El Niño (available at http://www.fao.org/english/newsroom/highlights/1998/elnino-e.htm).
- FAO. 1999. Issues in urban agriculture. January 1999. (available at http://www.fao.org/ag/magazine/9901sp2.htm).
- FAO. 2001. Food for the Cities. Food supply and distribution policies to reduce urban food insecurity A briefing guide for Mayors, City Executives and Urban Planners in Developing Countries and Countries in Transition. Food into Cities Collection, DT/43-00E. Rome.
- FAO. 2003. Understanding the Indigenous Knowledge and Information Systems of Pastoralists in Eritrea. Rome, FAO (available at http://www.fao.org/docrep/006/y4569e/y4569e04.htm).
- FAO. 2004. Incorporating Nutrition Considerations into Development Policies and Programmes. Policy Brief. Rome.
- FAO. 2005. Benefits and Potential Risks of the Lactoperoxidase system of Raw Milk Preservation. Report of an FAO/WHO technical meeting. FAO Headquarters, Rome, Italy, 28 November 2 December, 2005
- FAO. 2006a. Food Security Policy Brief. June (2.) ftp://ftp.fao.org/es/ESA/policybriefs/pb_02. pdf accessed January 2010.
- FAO. 2006b. Impacts of animal disease outbreaks on livestock markets. Introductory Paper on Animal Disease Outbreaks prepared for 21st Session of the Inter-Governmental Group on Meat and Dairy Products. Rome, Italy, 14 November 2006 (available at http://www.fao.org/docs/eims/upload//234375/ah670e00.pdf).
- **FAO.** 2006c. World Agriculture towards 2030/2050. Interim report. Global Perspective Studies Unit. Rome, June.
- FAO. 2006d. State of World Aquaculture. ftp://ftp.fao.org/docrep/fao/009/a0874e/a0874e04.pdf

- FAO. 2007. Food Outlook Global Market Analysis Poultry Meat (available at http://www.thepoultrysite.com/articles/918/foodoutlook-global-market-analysis-poultrymeat.
- FAO. 2008a State of Food Insecurity in the World 2008: High food prices and food security threats and opportunities. FAO, Rome ftp://ftp.fao.org/docrep/fao/011/i0291e/i0291e00.pdf.
- FAO. 2008b. Climate change, water and food security. Technical background document from the expert consultation held on 26 to 28 February 2008. Rome, FAO (available at http://www.fao.org/nr/water/docs/HLC08-FAOWater-E.pdf).
- FAO. 2008c *The State of World Fisheries and Aquaculture 2008*. FAO Fisheries and Aquaculture Department, Rome, 2009 ftp://ftp.fao.org/docrep/fao/011/i0250e/i0250e01.pdf
- FAO. 2009a. State of Food Insecurity in the World 2009. FAO, Rome.
- **FAO.** 2009b. *Livestock in the balance.* State of Food and Agriculture 2009. FAO Rome.
- FAO. 2009c. Mapping traditional poultry hatcheries in Egypt. Prepared by M. Ali Abd-Elhakim, Olaf Thieme, Karin Schwabenbauer and Zahra S. Ahmed. AHBL Promoting strategies for prevention and control of HPAI. Rome.
- FAO. 2010a. State of Food Insecurity in the World 2010: Addressing food insecurity in protracted crises, FAO Rome (available at http://www.fao.org/docrep/013/i1683e/i1683e.pdf).
- FAO. 2010b. The State of World Fisheries and Aquaculture. Rome, FAO. 2010.
- **FAO.** Undated. *Edible forest insects.* (available at http://www.fao.org/forestry/65422/en/).
- FAO/OIE/WHO/UNSIC/UNICEF/World Bank. 2008. Contributing to One World, One Health: A Strategic Framework for Reducing Risks of Infectious Diseases at the Animal–Human–Ecosystems Interface. 14 October 2008 Consultation Document. ftp://ftp.fao.org/docrep/fao/011/aj137e/aj137e00.pdf

- FARM-Africa. 2007. Working Paper No 9. The Goat Model: A proven approach to reducing poverty among smallholder farmers in Africa by developing profitable goat enterprises and sustainable support services. London: FARM Africa. (available at http://www.farmafrica.org.uk/resources/WP9%20The%20 Goat%20Model.pdf)
- **Fiala, N.** 2008. Meeting the demand: an estimation of potential future greenhouse gas emissions from meat production. Ecological Economics 2008; 67: 412-419.
- Foeken, D. & Mwangi, A.M. Undated. *Increasing Food Security Through Urban Farming In Nairobi* (available at http://www.ruaf.org/sites/default/files/Nairobi.PDF).
- Foeken, D. 2006. Legislation, policies and the practice of urban farming in Nakuru, Kenya. Contradictions abound. RUAF. (available at http://www.ruaf.org/sites/default/files/uam16_article8.pdf).
- **Gan, L. & Juan Yu.** 2008. Bioenergy transition in rural China: Policy options and co-benefits. *Energy Policy* 36, p. 531-540.
- Garcia, O., Hemme, T. & Khan, A.R. 2004a. A Review of Milk Production in Bangladesh with Particular Emphasis on Small-Scale Producers. PPLPI Working Paper no.7. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Garcia, O., Hemme, T. & Mahmood, K. 2003. A Review of Milk Production in Pakistan with Particular Emphasis on Small-Scale Producers. PPLPI Working Paper no. 3. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Garcia, O., Hemme, T. & Saha, A. 2004b. The Economies of Milk Production in Orissa, India, with Particular Emphasis on Small-Scale Producers. PPLPI Working Paper no.16. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Garcia, O., Hemme, T., Huong Tra, H. & Tat Nho, L. 2006. The Economics of Milk Production in Hanoi, Vietnam, with Particular Emphasis on Small-scale Producers. PPLPI Working Paper no. 33. Rome, Pro-Poor Livestock Policy Initiative, FAO.

- Geerlings, E., Albrechtsen, L. & Rushton J. 2007. Highly pathogenic avian influenza: A rapid assessment of the socio-economic impact on vulnerable households in Egypt. Report based on FAO and WFP livelihoods impact study of HPAI and its control in the Egyptian governorates of Assiut, Fayoum, Minya and Sohag, in partnership with UNDP's sister organisations BEST and Catholic Relief Services and in collaboration with the Egyptian Demographers Association. Rome, FAO.
- Gerber, P., Chilonda, P., Franceshini, G., & Menzi, H. 2005. Geographical determinants and environmental implications of livestock production intensification in Asia. *Bioresource Technology* 96(13), 263-276.
- Girardet, H. 1999. Urban farming and sustainable cities. Paper presented at International Workshop on the Policy Agenda, Havana, Cuba, 11–15 October 1999.
- Gittelsohn, J., Thapa, M. & Landman, L.T. 1997. Cultural Factors, Caloric Intake and Micronutrient Sufficiency in Rural Nepali Households Social Science & Medicine, 44 (11): 1739-1749.
- Gning, M. 2005. Navigating the Livestock Sector: The Political Economy of Livestock Policy in Burkina Faso: PPLPI Working Paper no. 28. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Griffin, M. 2004. Issues in the development of school milk. Paper presented at School Milk Workshop, FAO Intergovernmental Group on Meat and Dairy Products. Winnipeg, Canada, 17-19 June 2004. (available at http://www.fao.org/es/esc/common/ecg/169/en/School_Milk_FAO_background.pdf).
- Guo, X., Mroz, T.A., Popkin, B.M., & Zhai, F. Structural Change in the Impact of Income on Food Consumption in China, 1989-93. Working Paper 99-02, Department of Economics University of North Carolina, Chapel Hill. (available at http://www.unc.edu/depts/econ/papers/99-02.pdf).

- Gura, S. 2008. Industrial livestock production and its impact on smallholders in developing countries. Consultancy Report to the League for Pastrolaist Peoples and Endonegnous Livestock Development. April 2008. Cited by Blackmore and Keeley 2009.
- Gurung, K., Man Tulachan, P. & Gauchan, D. 2005. Gender and Social Dynamics in Livestock Management: A Case Study from Three Ecological Zones in Nepal. (available at http://www.research4development.info/PDF/Outputs/Livestock/ZC0286-Case-Study-Nepal. pdf).
- Halderman, M. 2005. The Political Economy of Pro-Poor Livestock Policy-making in Ethiopia. PPLPI Working Paper no. 19. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Hancock, J. 2006. Exploring Impacts of Avian Influenza on Food Security. Internal working paper prepared for the FAO ECTAD socioeconomic working group, November 2006. FAO, Rome.
- Harding, J. 2010. What we are about to receive. Jeremy Harding (available at http://www.lrb.co.uk/v32/n09/jeremy-harding/what-were-about-to-receive/print)
- Harvey, J. 2010. Plenty of guilt and a very heavy footprint. *In Business and Food Sustainability*. Financial Times Special Report (available at http://media.ft.com/cms/62017148-0b29-11df-9109-00144feabdc0.pdf).
- Heimlich, R.E. & Bernard, C. 1993. Agricultural adaptation to urbanization: Farm types in the United States Metropolitan Area. USDA, Economic Research Service.
- Heimlich, R.E. 1988. Metropolitan Growth and High-Value Crop Production. In Vegetables and Specialties Situation and Outlook Report, 17-26. TVS-244. U.S. Dept. of Agriculture, Economic Research Service. Washington.
- Heimlich, R.E. & Brooks, D.H. 1989.Metropolitan Growth and Agriculture: Fanning in the City's Shadow. *AER-619*. U.S. Dept. of Agriculture, Economic Research Service. Washington, DC.

- Hell, K., Fandohan, P., Ranajit Bandyopadhyay, Kiewnick, S., Sikora, R. & Cotty, P.J. 2008. Pre- and post-harvest management of aflatoxin in maize: an African perspective. In L.J. Leslie, R. Bandyopadhyay, A. & Visconti, eds. Mycotoxins: detection methods, management, public health and agricultural trade. pp. 219-229. UK, CABI.
- Henderson B., Gerber P. & Opio C. (in press) Livestock and climate change, challenges and options. Paper submitted to......
- Hillbruner, C. & Murphy, M. 2008. Food Security And Livelihoods In The Small Urban Centers Of Mongolia. Findings from the Aimag Center Food Security Assessment. Final Report. Mongolia: Mercy Corps.
- Hinrichs, J. 2006. Economic aspects of restructuring the poultry sector in Viet Nam. In: Poultry Sector Restructuring in Vietnam Evaluation Mission. A study conducted by the Food and Agriculture Organization of the United Nations for the World Bank. July 2006.
- Hoffmann, I. & Mohammed, I. 2004. The role of nomadic camels for manuring farmer's fields in the Sokoto close settled zone, northwest Nigeria. *Nomadic peoples* 8(1).
- Hofmann, N. 2006. A geographical profile of livestock manure production in Canada, 2006. Environment Accounts and Statistics Division, Statistics Canada. (available at http://www.statcan.gc.ca/pub/16-002-x/2008004/article/10751-eng.htm).
- Honhold, N. 1995. Livestock Population and Productivity and the Human Population of Mongolia, 1930 to 1994 (Ulaanbaatar: European Union (Project ALA/MNG/9209), Ministry of Food and Agriculture).
- **Honhold, N.** 2010. Mongolia: the limits of the last place on earth. Draft paper provided by the author to FAO as a reference for this publication, October 2010.

- Hooper, R., Calvert, J., Thompson, R.L., Deetlefs, M.E. & Burney, P. 2008. Urban/rural differences in diet and atopy in South Africa. *Allergy 2008*: 63: 425–431 (available at http://onlinelibrary.wiley.com/doi/10.1111/j.1398-9995.2008.01627.x/pdf).
- Hubbell, H.V. 1925. Land Subdivision Restrictions. *Landscape Architecture*. Vol 16. Oct. pp. 53-4.
- Ibrahim, M., Porro, R. & Mauricio, R.M. 2010. Brazil and Costa Rica: deforestation and livestock expansion in the Brazilian legal Amazon and Costa Rica: Drivers, environmental degradation and policies for sustainable land management *In P. Gerber, H. Mooney, J. Dijkman, S. Tarawali & C. de Haan, eds. Livestock in a changing landscape, Vol. 2: Experiences and regional perspectives.* Washington, DC, Island Press.
- ICASEPS. 2008. Indonesian Center for Agrosocioeconomic and Policy Studies. Livelihood and gender impact of rapid changes to bio-security policy in the Jakarta area and lessons learned for future approaches in urban areas. Rome, ICASEPS in collaboration with Food and Agriculture Organization.
- IFAD. Undated. International Fund for Agricultural Development. China biogas project turns waste into energy. Web site (available at http://operations.ifad.org/web/guest/country/voice/tags/china/biogas
- Ifft, J., Otte, J., Roland-Holst, D. & Zilberman, D. 2009. Poultry Certification for Pro-Poor HPAI Risk Reduction. Mekong Team Working Paper No. 6, HPAI Pro Poor Risk Reduction Project January 2009.
- Ifft, J., Roland-Holst, D. & Zilberman, D. 2007. Impact of Quality Characteristics on Demand for Chicken in Viet Nam. PPLPI Research Report 07-14. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- **IFPRI. 2004.** Research and Outreach: Food Systems Governance. Washington DC: IFPRI.

- Imai, K. 2003. Is Livestock Important for Risk Behaviour and Activity Choice of Rural Households? Evidence from Kenya. *Journal* of African Economies, 12(2): 271-295.
- **IMF.** Undated. International Monetary Fund. Primary Commodity Prices, monthly data (available at http://www.imf.org/external/np/res/commod/index.asp).
- Jabbar, M., Pratt, N. & Staal, S.J. 2008. Dairy Development for the Resource Poor (Part 1,2,3), PPLPI Working Paper no. 44. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Jackson, C. & Palmer-Jones, R. 1999. Rethinking Gendered Poverty and Work. Development and Change, 30 (3): 557-584.
- Jackson, H.L. & Mtengeti, E.J. 2005. Assessment of animal manure production, management and utilization in Southern Highlands of Tanzania. *Livestock Research for Rural Development*. 17(10) (available at http://www.lrrd.org/lrrd17/10/jack17110.htm).
- **Jianming, C.** 2003. Periurban Agriculture Development in China. Urban Agriculture. 9: 40-42.
- Jones, N. 2010. A Taste of Things to Come. Nature 468, 752-753 2010 (available at http://www.nature.com/news/2010/101207/full/468752a.html).
- Junfeng, L. 2007. REEEP: Activities that Support AD Project Development Worldwide. Paper presented at the Methane to Markets Partnership Expo, Beijing, 30 October 1 November. (available at http://www.methanetomarkets.org/expo/docs/postexpo/ag_junfeng.pdf).
- Kaiser, A. Undated. Biogas from Energy Crop and organic waste in Europe in Germany. Powerpoint presentation (available at http://www.business-meets-research.lu/fileadmin/user_upload/downloads/BMR_IBBK_A. KAISER.pdf).

- Kaitibie, S., Omore, A., Rich, K., Salasya, B., Hooton, N., Mwero, D. & Kristjanson, P. 2008. Influence pathways and economic impacts of policy change in the Kenyan dairy sector. ILRI Research Report 15. Nairobi, International Livestock Research Institute (ILRI).
- Kamuanga, M.J.B., Somda, J., Sanon, Y. & Kagoné, H. 2008. Livestock and regional market in the Sahel and West Africa Potentials and challenges. Paris: SWAC-OECD/ECOWAS 2008.
- Kangmin, L. & Ho, M-W. 2006. *Biogas China*. Institute of Science in Society Report.(available at http://www.i-sis.org.uk/BiogasChina.php).
- Kaplan, J.D., Johanssen, R.C. & Peters, M. 2004. The manure hits the land: economic and environmental implications when land application of nutrients is constrained. *Amer. J. Ag. Econ.* 86(3) (August 2004) 688-800
- Kawashima, T. 2002. The use of food waste as a protein source for animal feed current status and technological development in Japan. *In Protein Sources for the Animal Feed Industry.* FAO Expert Consultation and Workshop Bangkok, 29 April 3 May 2002 (available at http://www.fao.org/docrep/007/y5019e/y5019e00.htm#Contents).
- Kazianga, H. & Udry, C. 2006. Consumption smoothing? Livestock, insurance and drought in rural Burkina Faso. *Journal of Development Economics* 79 413–446.
- Kazybayeva, S., Otte, J. & Roland-Holst, D. 2006. Livestock Production and Household Income Patterns in Rural Senegal, PPLPI Research Report. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Ke, B. & Han, Y. 2007. Poultry sector in China: structural changes during the past decade and future trends. In *Poultry for the 21st Century.* Avian influenza and beyond. Bangkok, November 2007. Rome, FAO.

- Ke, B. 2010. China: The East West Dichotomy. In P. Gerber, H. Mooney, J. Dijkman, S. Tarawali & C. de Haan, eds. Livestock in a changing landscape, Vol. 2: Experiences and regional perspectives. Washington, DC, Island Press.
- Kenya Ministry of Agriculture. 2008. Agriculture, Livestock, Fisheries and Rural Development Sector Medium-Term Plan 2008-2012. Republic of Kenya.
- Kharel, P. Undated. National alliance against hunger in Nepal. (available at http://www.iaahp.net/fileadmin/templates/iaah/pdf/NAAH_Nepal_EN.pdf).
- Knips, V. 2005. Developing Countries and the Global Dairy Sector: Part 1: Global Overview: PPLPI Working Paper no. 30. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Knips, V. 2006 Developing Countries and the Global Dairy Sector: Part II: Country Case Studies: PPLPI Working Paper no. 31. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Krishna, A., Kristjanson, P., Nindo, W. & Radeny, M. 2004. Pathways out of Poverty in Western Kenya and the Role of Livestock. PPLPI Working Paper no. 14. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- **LEAD.** Undated. Livestock Production Systems Classification: Mixed systems (available at http://www.fao.org/ag/againfo/programmes/en/lead/toolbox/Refer/ProSystR. htm#Mixed).
- Lee-Smith, D. & Memon P.A. 1994. Urban agriculture in Kenya. In A.G.Egziabher et al., eds. Cities feeding people: an examination of urban agriculture in East Africa. Ottawa: International Development Research Centre.
- Lee-Smith, D. 2010. Cities feeding people: an update on urban agriculture in equatorial Africa. *Environment & Urbanization*. 22(2): 483–499.
- LEGS. 2009. Livestock Emergency Guidelines and Standards. UK, Practical Action Publishing. (available at http://www.livestock-emergency.net/userfiles/file/legs.pdf).

- **Leonard, W.R.** 1991. Household-level Strategies for Protecting Children from Seasonal Food Scarcity. *Social Sci Med.* 33(10): 1127-1133.
- Leyland, T. & Akabwai, D.M.O. Undated.

 Delivery of Private Veterinarian Supervised

 Community-Based Animal Health Services

 To Pastoralist Areas Of The Greater Horn Of

 Africa. UK: Vetwork.
- Lipton, M. & Longhurst, R. 1989. New Seeds and Poor People. London, Routledge.
- Lopez, R.A., Adelaja, A.O. & Andrews, M.S. 1988. The Effects of Suburbanization on Agriculture. *American Journal of Agricultural Economics*. 70 (2), 346-358.
- LPP, LIFE Network, IUCN-WISP and FAO. 2010. Adding value to livestock diversity Marketing to promote local breeds and improve livelihoods. FAO Animal Production and Health Paper. No. 168. Rome.
- Ly, C., Fall, A. & Okike, I. 2010. West Africa: the livestock sector in need of regional strategies. In P. Gerber, H. Mooney, J. Dijkman, S. Tarawali & C. de Haan, eds. Livestock in a changing landscape, Vol. 2: Experiences and regional perspectives. Washington, DC, Island Press.
- Makkar, H. FAO Animal Production and Health Division, personal communication.
- Maltsoglou, I. & Rapsomanikis, G. 2005. Contribution of Livestock to Household Income: A Household Typology Based Analysis, Vietnam. PPLPI Working Paper no. 21. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Maltsoglou, I. & Taniguchi, K. 2004. Poverty, Livestock and Household Typologies in Nepal. PPLPI Working Paper no. 13. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Maltsoglou, I. 2007. Household Expenditure on Food of Animal Origin: A Comparison of Uganda, Vietnam and Peru. PPLPI Working Paper no. 43. Rome, Pro-Poor Livestock Policy Initiative, FAO.

- Maltsoglou, I. & Taniguchi, K. 2004, Poverty, Livestock and Household Typologies in Nepal, PPLPI Working Paper No.13 (available at http://www.fao.org/ag/againfo/programmes/ en/pplpi/docarc/wp13.pdf)
- Mamo, G. 2007. Community? Forest Management in Borana. In A. Ridgewell, G. Mamo and F. Flintan, eds. Gender & Pastoralism Vol. 1: Rangeland & Resource Management in Ethiopia. Addis Abbaba: SOS Sahel Ethiopia.
- Martínez, J., Jaro, P.J., Aduriz, G., Gómez, E.A., Peris, B. & Corpa, J.M. 2007. Carcass condemnation causes of growth retarded pigs at slaughter. *The Veterinary Journal* 174(1), July pp 160-164.
- Maxwell, D.G. 1994. The household logic of urban farming in Kampala. In Cities Feeding People; an examination of urban agriculture in East Africa. International Development Research Centre. Ottawa, Canada. p. 146. Cited by Smith, O.B. and Olaloku, E.A. 1998. Peri-Urban Livestock Production Systems. CFP Report 24. (available at http://idrc.ca/fr/ev-2513-201-1-DO_TOPIC.html.)
- Maykuth, A. 1988. Pigging Out. *In Philadel-phia Inquirer, September 20, 1988.* (available at http://www.maykuth.com/Archives/pigs88.htm)
- Mcleod, A. & de Haan, N. 2009. Mission report to the Avian Influenza Team in Viet Nam. FAO internal document.
- **McLeod, A.** 2009. The Economics of Avian Influenza. *In* D. E. Swayne, ed, *Avian Influenza*. Blackwell Publishing Ltd., Oxford.
- McLeod, A., Honhold, N. & Steinfeld, H. 2010. Responses on emerging livestock diseases In H. Steinfeld, H. Mooney, F. Schneider & L. Neville, eds. Livestock in a changing landscape, Vol. 1: Drivers, consequences, and responses. Washington, DC, Island Press.

- McLeod, A., Taylor, N., Lan, L.T.K., Thuy, N.T., Dung, D.H. & Minh, P.Q. 2002. Control of classical swine fever in the Red River Delta of Vietnam: A stakeholder analysis and assessment of potential benefits, costs and risks of alternative proposals. Report on Phase 1 of the study. Hanoi: EUSVSV Project.
- McMichael, A.J., Powles, J.D., Butler, C.D. & Uauy, R. 2007. Food, livestock production, energy, climate change and health. Energy and Health 5. In *The Lancet* Published Online. September 13, 2007DOI:10.1016/S0140-6736(07)61256-2.
- Meat and Livestock Australia. 2001. Web site accessed Jan 2011 (available at http://www.mla.com.au/Prices-and-markets/Trends-and-analysis/Sheep-and-goats/Domestic-consumption).
- Meat Trade News Daily. 2009. Brazil Carrefour and Wal-Mart ban Amazon related beef. 16 June 2009 (available at http://www.meattradenewsdaily.co.uk/news/160609/brazil___carrefour_and_wal_mart_ban_amazon_related_beef.aspx).
- Mehta, R., Nambiar, R.G., Delgado, C.L. & Subramanyam, S. 2003. Policy, Technical, and Environmental Determinants and Implications of the Scaling-Up of Broiler and Egg Production in India. Final Report of IFPRIFAO Livestock Industrialization Project: Phase II. Washington D.C., IFPRI and Rome, FAO.
- Mhlanga, F.N., Khombe, C.T. & Maukza, S.M. 1999. Indigenous livestock types of Zimbabwe. Department Of Animal Science University Of Zimbabwe (available at http://www.ilri.org/InfoServ/Webpub/fulldocs/AnGen-ResCD/docs/IndiLiveGenoZimbabwe/TableofContents.htm#TopOfPage).
- Micronutrient Initiative. 2009. Investing in the future: a united call to action on vitamin and mineral deficiencies. (available at http://www.unitedcalltoaction.org/documents/Investing_in_the_future.pdf).

- **Mission East.** 2010. Project report to FAO on results of a cost-sharing campaign for brucellosis control in Tajikistan. Unpublished.
- Morgan, N. & Tallard, G. Undated. Cattle And Beef International Commodity Profile. Background paper for the Competitive Commercial Agriculture in Sub–Saharan Africa (CCAA) Study (available at http://siteresources.worldbank.org/INTAFRICA/Resources/257994-1215457178567/Cattle_and_beef_profile.pdf).
- Morgan, N. Undated. Repercussions of BSE on International Meat Trade: Global Market Analysis (available at http://www.fao.org/ag/aGa/agap/FRG/Feedsafety/pub/morgan%20 bse.doc).
- Mukhebi, A.W. 1996. Assessing economic impact of tick-borne diseases and their control: the case of theileriosis immunisation. In A.D. Irvin, J.J. McDermott & B.D. Perry, eds *Epidemiology of ticks and tick-borne diseases in Eastern, Central and Southern Africa.* Proc. Workshop, 12-13 March, Harare. Nairobi, International Livestock Research Institute (ILRI).
- Nakiganda, A., Mcleod, A., Bua, A., Phipps, R., Upton, M. & Taylor, N. 2006. Farmers' constraints, objectives and achievements in smallholder dairy systems in Uganda. *Livestock Research for Rural Development*. 18(69) (available at http://www.lrrd.org/lrrd18/5/naki18069.htm).
- NaRanong, V. 2007. Structural Changes in Thailand's Poultry Sector and its Social Implications. A publication commissioned by the FAO-AGAL, pp.37. In *Poultry In The 21st Century: Avian Influenza And Beyond.* International Poultry Conference. Bangkok, November 2007. ISBN 978-92-5-106063-6 Rome, FAO.
- National Research Council. 2009. Emerging technologies to benefit farmers in sub-Saharan Africa and South Asia. Washington DC. National Academies Press.
- National Statistical Office of Mongolia. 1980 to 2009. Annual yearbooks.

- National Statistical Office of Mongolia. 2007. Statistical Yearbook.
- NDDB. 2010. National dairy statistics presented on the Department of Animal Husbandry, Dairying & Fisheries Web site, update May 2010 (available at http://dahd.nic.in/).
- Neuman, C.G. & Harris, D.M. 1999. Contribution of animal source foods in improving diet quality for children in the developing world. Washington DC: Prepared for World Bank.
- Neumann, C., Demment, M.W., Maretzki, A., Drorbaugh, N. & Galvin, K. 2010. Chapter 12. The Livestock Revolution and Animal Source Food Consumption. *In* Steinfeld H., Mooney H., Schneider F., & Neville L., eds. *Livestock in a changing landscape, Vol. 1: Drivers, consequences, and responses.* Washington, DC, Island Press.
- Ngutu, M.N., Lelo, F.K., Kosgey, I. & Kauffmann, B. Undated. Collective community management of livestock drug trade in a pastoralist setting: a case study of Ramati and Maslis groups of the greater Marsabit district. Report to the Kenya Agricultrual Resarch Intitute.
- Nyungu, P. & Sithole, L. 1999. Analysis of Dynamic Gender Relations around Goat Acquisition, Ownership and Disposal in Chizumba Communal Area, Mwenezi District, Zimbabwe. Makoholi Experiment Station, Masvingo, Zimbabwe. Ministry of Agriculture.
- OECD-FAO. 2010. Agricultural Outlook 2010-2019 (available at http://www.agri-outlook.org/document/10/0,3746, en_36774715_36775671_42852746_1_1_1_1,00.html).
- OIE. Undated. The OIE's objectives and achievements in animal welfare (available at http://www.oie.int/animal-welfare/keythemes/ accessed February 2011.)
- Okali, C. 2009. Making women partners in the livestock revolution. Unpublished background paper for FAO's State of Food and Agriculture 2010, in press.

- Okike, I., Spycher, B., Williams, T.O. & Baltenweck, I. 2004. Lowering cross-border livestock transportation and handling costs in West Africa. ILRI/CFC/FAO/CILSS—West Africa Livestock Marketing: Brief 3. Nairobi (Kenya): ILRI.
- Omore, A., Muriuki, H.G.M., Kenyanjui, M., Owango, M. & Staal, S. 2004. *The Kenyan dairy subsector: a rapid appraisal.* SDP research and development report. SDP (Smallholder Dairy Project), Nairobi, Kenya (available at http://www.smallholderdairy.org).
- Oonincx, D.G.A.B., van Itterbeeck, J., Heetkamp, M.J.W., van den Brand, H. & van Loon, J.J.A. 2010. An Exploration on Greenhouse Gas and Ammonia Production by Insect Species Suitable for Animal or Human Consumption. *PLoS ONE 5(12): e14445*. doi:10.1371/journal.pone.0014445.
- Opio, C. 2007. Background paper for H. Steinfeld, H. Mooney, F. Schneider & L. Neville, eds. *Livestock in a changing landscape, Vol. 1: Drivers, consequences, and responses.* Washington, DC, Island Press.
- Otte, J. 2006. The Hen Which Lays Golden Eggs: Why backyard poultry are so popular. PPLPI Features. July 2006. Rome, Pro-Poor Livestock Policy Initiative, FAO. (available at http://www.fao.org/ag/againfo/programmes/en/pplpi/docarc/feature01_backyardpoultry.pdf).
- Otte, J., Pica-Ciamarra, U. & Roland-Holst, D. 2008. Food Markets and Poverty Alleviation, PPLPI Research Report. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Over, H.J., Jansen, J. & van Olm, P.W. 1992. Distribution and impact of helminth diseases of livestock in developing countries. FAO Animal Production and Health Paper No. 96. FAO, Rome.
- Owens, G.M. 2007. Analyzing impacts of bioenergy expansion in China using strategic environmental assessment. *Management of Environmental Quality* 18(4), p. 398-407.

- PAHO (Pan American Health Organization). 2006. Assessing the economic impact of obesity and associated chronic diseases: Latin America and the Caribbean. Fact Sheet, April 2006. Washington, DC.
- Parthasarathy, P.R. and Birthal, P.S. 2008. Typology of Mixed Crop-Livestock Systems in Nepal. In *Livestock in mixed farming systems in South Asia*. New Dehli, National Centre for Agricultural Economics and Policy Research, and India, International Crops Research Institute for the Semi-Arid Tropics.
- Pavanello, S. 2010. Livestock marketing in Kenya-Ethiopia border areas: A baseline study. HPG Working Paper. July 2010.
- Perry, B. & Sones K. 2008. Global livestock disease dynamics over the last quarter century: drivers, impacts and implications. Background paper prepared for the FAO (2009b).
- Petrie, O.J. 1995 "End Uses of Wool" in *Harvesting Of Textile Animal Fibres*. FAO Agricultural Services Bulletin No. 122. Rome, FAO (available at http://www.fao.org/docrep/v9384e/v9384e04.htm).
- Pica-Ciamarra, U. & Otte, J. 2009. Poultry, Food Security and Poverty in India: looking beyond the farm gate. PPLPI Research Report. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Pica-Ciamarra, U., Tasciotti, L., Otte, J. & Zezza, A. (in preparation) Livestock and Livelihoods in Developing Countries: Evidence from Household Surveys. Draft paper.
- Pingali, P., Alinovi, L. & Sutton, J. 2005. Food security in complex emergencies: enhancing food system resilience *In Disasters*, 29(s1) UK & USA, Blackwell Publishing.
- Pinstrup-Andersen, P. 2009. Food security: definition and measurement. *In Food Sec* (2009) 1:5-7.
- Pinstrup-Andersen, P., Burger, S., Habicht, J.P. & Peterson, K. 1993. Protein-Energy Malnutrition. In Disease Control Priorities

- in Developing Countries, eds. Jamison D.T., Mosley W.H., Measham A.R., and Bobadilla J.L., pp. 391–420. New York, Oxford University Press for the World Bank.
- Popkin, B.M., Horton, S. & Kim S. 2001. The nutritional transition and diet-related chronic diseases in Asia: Implications for prevention.
 FCND Discussion Paper No. 105. Food Consumption and Nutrition Division, International Food Policy Research Institute, 2033 K Street, N.W., Washington, D.C. 20006.
- Povcal. (available at http://iresearch.world-bank.org/PovcalNet/povDuplic.html. (using poverty line of 1.25\$ per day in PPP or 38 \$ per month).
- Pozzi, F. & Robinson, T. 2007. Poverty and Welfare Measures in the Horn of Africa: IGAD LPI, Working Paper no. 08-08. Rome, FAO.
- Public Health of Canada. 2009. One World One Health: from ideas to action. Report of the expert consultation. March 16-19, Winnipeg, Manitoba.
- Quisumbing, A.R., Meinzen-Dick, R.S. & Smith, L.C. 2004. Increasing the effective participation of women in food and nutrition security in Africa. Africa Conference Brief 4. International Food Policy Research Institute. Washington.
- Quisumbing, A.R., Brown, L.R., Feldstein, H.S., Haddad, L. & Pena, C. 1995. Women: The Key to Food Security. Food Policy Statement No. 21. Washington, DC, IFPRI.
- Raas, N. 2006. Policies and Strategies to Address the Vulnerability of Pastoralists in Sub-Saharan Africa. PPLPI Working Paper No. 37. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- Rae, A. & Nayga, R. 2010. Chapter 2 Trends in consumption, production and trade in livestock and livestock products. In H. Steinfeld, H. Mooney, F. Schneider & L. Neville, eds. Livestock in a changing landscape, Vol. 1: Drivers, consequences, and responses. Washington, DC, Island Press.
- Reardon, T., Timmer, C.P. & Minten, B. 2010. Supermarket revolution in Asia and

- emerging development strategies to include small farmers. PNAS Early edition (available at http://www.pnas.org/content/early/2010/12/01/1003160108.full.pdf).
- Reardon, T., Timmer, C.P., Barrett, C.B. & Berdegue, J.A. 2003. The rise of supermarkets in Africa, Asia, and Latin America. Am J Agric Econ 85:1140-1146.
- Regmi, A. & Dyck, J. Undated. Effects of Urbanization on Global Food Demand in Changing Structure of Global Food Consumption and Trade/WRS-01-1 USA: Economic Research Service/USDA.
- Rosegrant, M.W., Cai, X. & Cline, S.A 2002. Global water outlook to 2025, averting an impending crisis. A 2020 vision for food, agriculture, and the environment initiative. Washington, DC: IFPRI and IWMI.
- Rosenzweig, M.R. & Wolpin, K.I. 1993. Credit market constraints, consumption smoothing, and the accumulation of durable production assets in low-income countries: investments in bullocks in India. *Journal of Political Economy 101* (2), 223–244.
- Ross, J. & Horton, S. 1998. Economic consequences of iron deficiency. Ottawa: The Micronutrient Initiative.
- Ru-Chen, C. 1981. The Development of Biogas Utilization in China. *Natural Resources Forum* 5(3), p. 277-282.
- Rymer, C. 2006. Increasing the contribution that goats make to the livelihoods of resource-poor livestock keepers in the Himalayan Forest Region. Final Technical Report to Natural Resources International Ltd, UK. Retrieved January 2011. (available at http://www.dfid.gov.uk/r4d/PDF/outputs/R7632d.pdf).
- Salasya, B., Rich, K., Baltenweck, I., Kaitibie, S., Omore, A., Murithi, F., Freeman, A. & Staal, S. 2006. Quantifying the economic impacts of a policy shift towards legalizing informal milk trade in Kenya. ILRI (International Livestock Research Institute) Discussion Paper 1. ILRI, Nairobi, Kenya.
- Schlebecker, T. 1967. A History of American Dairying. Chicago: Rand McNally. 1967.

- Schneider Group. Undated. Market indicators for cashmere from 1998 to 2012 (available at http://www.gschneider.com/index.php?page=marketindicators)
- Sere, C. & Steinfeld, S. 1996. World Livestock Production Systems: Current status, issues and trends (available at http://www. fao.org/ag/againfo/programmes/en/lead/ toolbox/Paper127/cover1.htm).
- Sharma, V.P. 2010. Animal traction in South Asia. Background paper prepared for FAO's Regional Office for Asia and the Pacific, unpublished.
- Smith, O.B. & Olaloku, E.A. 1998. Peri-Urban Livestock Production Systems. CFP Report 24 (available at http://idrc.ca/fr/ev-2513-201-1-DO_TOPIC.html).
- Sponberg, K. 1999. Weathering a storm of global statistics. *Nature*, 400, p. 13. cited by UNEP/NCAR/UNU/WMO/ISDR. 2000. Lessons Learned from the 1997–98 El Niño: Once Burned, Twice Shy? (available at http://www.ccb.ucar.edu/un/enFinal.pdf).
- Stage, J., Stage, J. & McGranahan, G. 2010. Is urbanization contributing to higher food prices? *Environment & Urbanization* Vol 22(1): 199–215. DOI: 10.1177/0956247809359644.
- **Starkey, P.** 2010. Livestock for traction: world trends, key issues and policy implications. AGA working paper series. Rome, FAO.
- Steinfeld, H., Gerber, P., Wassenaar, T., Castel, V., Rosales, M., De Haan, C. 2006 Livestock's Long Shadow: Environmental Issues and Options. Rome, FAO.
- Steinfeld, H., Gerber, P. & Opio, C. 2010. Responses on environmental issues. *In* H. Steinfeld, H. Mooney, F. Schneider & L. Neville, eds. *Livestock in a changing landscape*, *Vol. 1: Drivers, consequences, and responses*. Washington, DC, Island Press.
- **Stokstad, E.** 2004. Salmon survey stokes debate about farmed fish. *Science* 2004; 303(5655): 154–5.
- **Stuart, T.** 2009. Waste: Uncovering the global food scandal. London, Penguin Books.

- Swiss Re. 1999. El Niño 1997/98: On the phenomenon's trail. Zurich, Switzerland: Swiss Reinsurance, 8 pp. (available at http://www.swissre.com/).
- **TECA.** Undated. *Mastitis control in smallholder dairy cows.* (available at ://www.fao.org/teca/node/4656).
- The Economist. 2009. Egypt's pigs: What a Waste. May 7, 2009. (available at http://www.economist.com/node/13611723?story_id=13611723).
- The Economist. 2010. Slaughterhouse Rules. Jun 24th 2010. (available at http://www.economist.com/node/16436481).
- The *In Vitro* Meat Consortium. 2008. Preliminary Economics Study. Project 29071 V5 March 2008. (available at http://invitromeat.org/images/Papers/invitro%20meat%20economics%20study%20v5%20%20march%20 08.pdf)
- Thompson, E., Harper, A.M. & Kraus, S. 2008. Think Globally, Eat Locally. San Fransisco Foodshed Assessment. American Farmland Trust.
- **Thornton, P.** 2010. Livestock production: recent trends, future prospects. *Phil. Trans. R. Soc. B* 2010 365, 2853-2867.
- Thornton, P.K. & Herrero, M. 2010. Potential for reduced methane and carbon dioxide emissions from livestock and pasture management in the tropics. *Proceedings of the National Academy of Sciences* USA, 107: 19627-19632
- Thornton, P.K. & Gerber, P. 2010. Climate change and the growth of the livestock sector in developing countries *Mitigation and Adaptation Strategies for Global Change* (in press).
- Thornton, P.K., Kruska, R.L., Henninger, N., Kristjanson, P.M., Reid, R.S., Atieno, F., Odero, A.N. & Ndegwa, T. 2002. Mapping poverty and livestock in the developing world. ILRI (International Livestock Research Institute), Nairobi, Kenya (available at http://www.ilri.org/InfoServ/Webpub/fulldocs/mappingPLDW/index.htm).
- Thøy, K., Wenzel, H., Jensen, A.P. & Nielsen, P.

- 2009. Biogas from manure represents a huge potential for reduction in global greenhouse gas emissions. 2009 IOP Conf. Ser.: Earth Environ. Sci. 6 242020.
- Tiong, C.K. & Bing, C.S. 1989. Abattoir condemnation of pigs and its economic implications in Singapore British Veterinary Journal Volume 145(1), January-February, pp.77-84.
- Tisdell, C.A., Harrison, S.R. & Ramsay, G.C. 1999. The economic impacts of endemic diseases and disease control programmes *Rev. sci. tech. Off. int. Epiz.*, 1999, 18(2), 380-398.
- **Tung, D.X.** 2005. Smallholder Poultry Production in Vietnam. Marketing Characteristics and Strategies. *In: NSPD 2005* (available at http://www.poultry.kvl.dk/upload/poultry/workshops/w25/papers/tung.pdf).
- Umar, A. & Baulch, B. 2007. Risk Taking for a Living Trade and Marketing in the Somali Region of Ethiopia, UN OCHA-PCI, April 2007.
- UN HABITAT. 2010. Urban Indigenous Peoples and Migration: A Review of Policies, Programmes and Practices. United Nations Housing Rights Programme Report No. 8. Nairobi.
- UN Standing Committee on Nutrition. 2005. Overweight and Obesity: A New Nutrition Emergency? SCN News No. 29.
- UN Standing Committee on Nutrition 2010. 6th Report on the World Nutrition Situation (available at http://www.unscn.org/files/Publications/RWNS6/report/SCN_report.pdf).
- **UNDP**. 2009 *Human Development Report* 2009. New York.
- **UNFPA.** 2007. State of the World Population 2007. New York.
- **UNFPA.** 2009. State of the World Population 2009. New York.
- **UNFPA.** 2010. *State of World Population 2010.* New York.
- UNICEF. 2007. The State of the World's Children 2007. New York.
- UNICEF. Undated. Vitamin and Mineral De-

- ficiency, A Global Progress Report (available at http://www.micronutrient.org/CMFiles/PubLib/VMd-GPR-English1K-WW-3242008-4681.pdf).
- United Nations Population Division, 2009. World Population Prospects: The 2008 Revision. (available at http://esa.un.org/unpp).
- Upton, M. 2004. The Role of Livestock in Economic Development and Poverty Reduction. PPLPI Working Paper no. 10. Rome, Pro-Poor Livestock Policy Initiative, FAO.
- USAID. 2007. USAID Supports Marketing of Traditionally-raised Poultry to Fight Bird Flu. USAID Viet Nam press release Thursday, March 05, 2009.
- USAID. 2009. USAID Executive Brief: El Niño and Food Security in Southern Africa October 2009. The Famine Early Warning Systems Network. (available at http://www.fews.net/docs/Publications/El_Nino_brief_South_Oct_2009_final.pdf).
- Von Braun, J. & Torero, M. 2009. Implementing Physical and Virtual Food Reserves to Protect the Poor and Prevent Market Failure. IFPRI Policy Brief 10, February 2009. (available at http://www.ifpri.org/sites/default/files/publications/bp010.pdf).
- Von Braun, J. 2008. Rising Food Prices: What Should be Done? IFPRI Policy Brief. Washington: International Food Policy Research Institute. (available at http://www.ifpri.org/publication/rising-food-prices).
- Walker, A. 2010. UN calls meeting on food price concerns. BBC World Service. (available at http://www.bbc.co.uk/news/business-11177346).
- Walker, J. 2006. Utilizing an Untapped Resource; Manure Use in The Bolivian Altiplano as a Means to Increase Overall Production. SANREM CRSP (available at http://pdf.usaid.gov/pdf_docs/PNADL268.pdf).
- Walker, P., Rhubart-Berg, P., McKenzie, S., Kelling, K. & Lawrence, R.S. 2005. Public health implications of meat production and consumption. *Public Health Nutrition*: 8(4), 348–356.
- Walmart. 2010. Walmart's Integrated Organic

- Diversion Program 2010. *Solid Waste and Recycling Programs*. (available at http://www.epa.gov/epawaste/rcc/resources/meetings/rcc-2010/fanning.pdf).
- WHO. 2000. Manual on the Management of Nutrition in Major Emergencies. IFRC/UN-HCR/WFP/WHO. Geneva: WHO.
- WHO. 2001. Water, Sanitation and Health: Water Related Diseases (available at http://www.who.int/water_sanitation_health/diseases/malnutrition/en.) Accessed January 2010.
- WHO. 2003. Diet, nutrition and the prevention of chronic diseases: report of a joint WHO/FAO expert consultation, Geneva, 28 January 1 February 2002
- WHO. 2007. The challenge of obesity in the WHO European region and the strategies for response. F. Branca, H. Nikogosian and T. Lobstein eds. Geneva: WHO.
- WHO. 2011. Obesity and overweight. Fact sheet N°311. Updated March 2011. Geneva.
- WHO, FAO, UNU. 2007. Protein and amino acid requirements in human nutrition (PDF). WHO Press (available at http://whqlibdoc.who.int/trs/WHO_TRS_935_eng.pdf. Retrieved 2008-07-08).
- World Bank, FAO, IFPRI, OIE. 2006. Enhancing Control of Highly Pathogenic Avian Influenza in Developing Countries through Compensation: Issues and Good Practice. Washington: World Bank (available at http://www.fao.org/docs/eims/upload//217132/gui_hpai_compensation.pdf).
- World Bank, Latin America & the Caribbean. Undated. What are the facts about rising food prices and their effect on the region? (available at http://go.worldbank.org/CJYWKZPMX)
- World Bank. 2003. From Goats to Coats: Institutional Reform in Mongolia's Cashmere Sector. Report No. 26240-MOG. Poverty Reduction and Economic Management Unit East Asia and Pacific Region
- World Bank. 2009. Mongolia Livestock Sector Study Volume I – Synthesis Report. Sustainable Development Department East Asia and Pacific Region. World Bank: Washington DC.

- World Population Prospects. 2002 revision. (available at http://www.un.org/esa/population/publications/wpp2002/WPP2002_VOL_3.pdf).
- Yach, D., Stuckler, D. & Brownell, D. 2006. Epidemiologic and economic consequences of the global epidemics of obesity and diabetes *Nature Medicine* - 12, 62 - 66 (2006)
- Yi-Zhong, C. & Zhong, Z. Undated. Shanghai: trends towards specialised and Capital-intensive urban agriculture. RUAF city case study Shanghai (available at http://www.ruaf.org/sites/default/files/Shanghai.PDF).
- Yi-Zhong, C. & Zhangen Z. 2000. Shanghai: Trends towards specialised and capital-intense urban agriculture. In Growing Cities, Growing Food: Urban Agriculture on the Policy Agenda. N. Bakker, M. Dubbeling, S. Gündel, U. Sabel-Koschella & H. de Zeeuw, (eds) A Reader on Urban Agriculture, German Foundation for International Development (DSE), Feldafing, Germany. 467-75.
- Yu, S.M., Zhu, L.F., Ouyang, Y.N., Xu, D.H. & Jin, Q.Y. 2008. Effects of rice-duck farming system on biotic populations in paddy field. (article in Chinese) Ying Yong Sheng Tai Xue Bao 2008. Apr;19(4):807-12.

Although much has been said about livestock's role in achieving food security, in reality, the subject has been only partially addressed and no current document fully covers the topic. Recognizing that food security is central to international development – and to the mandate of FAO - this report tells the story of livestock and food security from three perspectives.

It begins by presenting a global overview, examining the role that livestock play in human nutrition, the world food supply and access to food particularly for poor families. Next it moves from the global level to a human perspective, examining the way in which livestock contributes to the food security of three different human populations –livestock-dependent societies, small-scale mixed farmers and urban dwellers.

The final part of the report looks to the future. It discusses the expected demand for livestock source food and the way that increased demand can be met with ever more limited resources. It reviews the drivers that led to the livestock revolution, how these have changed and what the implications will be for livestock contributing to resilient food systems of the future.

ISBN 978-92-5-107013-0

8 9 2 5 1 0 7 0 1 3 0 I2373E/1/09.11