

Making the Case for Livestock:

NUTRITION



A **balanced, nutritious diet is essential to good global health** and all of the related benefits that this brings. While huge progress has been made in reducing hunger, **two billion people** globally are still not getting all the nutrients they need. Poor diets impair **physical and cognitive development**, preventing people, communities and countries from reaching their full potential.

Ensuring **access to animal-source foods (ASFs)** is a powerful way to ensure the world's poorest can improve their diet, either through the animals they raise or the income they receive from them.

MICRONUTRIENTS

- **Eggs and milk are nature's first foods, designed to sustain and support early childhood with essential vitamins and minerals. A child who drinks milk daily can grow up to 3% more in a month.**



References:

- Ianotti, L. and Lesorogol, C. 2014. Animal Milk Sustains Micronutrient Nutrition and Child Anthropometry Among Pastoralists in Samburu, Kenya. *American Journal of Physical Anthropology* 155(1): 66-76. <https://doi.org/10.1002/ajpa.22547>
- Mosites E. et al. 2017. Child height gain is associated with consumption of animal-source foods in livestock-owning households in Western Kenya. *Public Health Nutrition* 20(2): 336-345. <https://doi.org/10.1017/S136898001600210X>
- Neumann, C.G., Murphy, S.P., Gewa, C., Grillenberger, M. and Bwibo, N.O. 2007. Meat supplementation improves growth, cognitive, and behavioral outcomes in Kenyan children. *Journal of Nutrition* 137(4):1119-23. <http://dx.doi.org/10.1017/S0007114512003121>

CONVENIENT, PROTEIN RICH AND ENERGY DENSE

- **Animal-source foods are energy-dense, they provide readily absorbed and used proteins and they are especially important for vulnerable groups like children and sick people and in areas where other nutritious foods are not available. Small quantities provide large benefits.**

References:

- Allen L. 2013. Comparing the value of protein sources for maternal and child nutrition. *Food and Nutrition Bulletin* 34(2):263-6. <https://doi.org/10.1177/156482651303400223>
- Bruyn, J. de, Ferguson, E., Allman-Farinelli, M., Darnton-Hill, I., Maulaga, W. et al. 2016. Food composition tables in resource-poor settings:

exploring current limitations and opportunities, with a focus on animal-source foods in sub-Saharan Africa. *British Journal of Nutrition* 116(10):1709–1719. <https://doi.org/10.1017/S0007114516003706>

- FAO. 2013. Milk and dairy products in human nutrition. Rome: FAO. <http://www.fao.org/docrep/018/i3396e/i3396e.pdf>
- Garnett, T., Scarborough, P. and Finch, J. 2016. Focus: the difficult livestock issue. IN: FCRN. Foodsource. Oxford: Food Climate Research Network. <https://www.foodsource.org.uk/chapters/8-focus-difficult-livestock-issue>
- Grace, D., Dominguez-Salas, P., Alonso, S., Lannerstad, M., Muunda, E., Ngwili, N., Omar, A., Khan, M. and Othob E. 2018. The influence of livestock-derived foods on nutrition during the first 1,000 days of life. ILRI Research Report 44. Nairobi: ILRI. <http://hdl.handle.net/10568/92907>
- Gupta S. 2016. Brain food: Clever eating. *Nature* 531: S12-S13. <https://doi.org/10.1038/531S12a>
- Iannotti, L., Lutter, C., Bunn, D. and Stewart, C. 2014. Eggs: the uncracked potential for improving maternal and young child nutrition among the world's poor. *Nutrition Reviews* 72(6):355–68. <https://doi.org/10.1111/nure.12107>
- Mottet, A., Haan, C. de., Falcucci, A., Tempio, G., Opio, C. and Gerber, P. 2017. Livestock: On our plates or eating at our table? A new analysis of the feed/food debate. *Global Food Security* 14: 1-8. <http://dx.doi.org/10.1016/j.gfs.2017.01.001>
- Randolph, T.F., Schelling, E., Grace, D., Nicholson, C.F., Leroy, J.L. et al. 2007. Invited review: Role of livestock in human nutrition and health for poverty reduction in developing countries. *Journal of Animal Science* 85(11): 2788–2800. <http://dx.doi.org/10.2527/jas.2007-0467>

DIVERSE DIETS ARE HEALTHY DIETS

- **People eating diverse diets, including iron-rich meat, are less prone to anaemia and other nutrient deficiencies. Eating foods from animal sources reduces the risk of malnutrition associated with monotonous diets.**



References:

- Allen, L.H. Current Information Gaps in Micronutrient Research, Programs and Policy: How Can We Fill Them? 2016. *World Rev Nutr Diet*. 115: 109-17. <http://dx.doi.org/10.1159/000442077>
- FAO. 2010. Guidelines for measuring household and individual dietary diversity. Rome: FAO. <http://www.fao.org/docrep/014/i1983e/i1983e00.pdf>
- Garnett, T., Scarborough, P. and Finch, J. 2016. What is a healthy sustainable eating pattern? IN: FCRN. Foodsource. Oxford: Food Climate Research Network. <https://foodsource.org.uk/chapters/9-what-healthy-sustainable-eating-pattern>

FIRST 1,000 DAYS

- **Animal-source foods are critically important for women, infants and children.**
- **Pregnant and lactating women, and babies in their first 1,000 days of life, have particularly high protein and nutritional requirements.**
- **Eggs, meat and dairy products are three of the seven food groups deemed by the World Health Organization to be essential to assessing the dietary diversity of infants and young children.**



Because animal-source foods are essential to children and pregnant and breast-feeding women, targeted subsidized programs should make these foods available to these groups. Social behavioural change programs are also needed to increase awareness of the nutritive value of animal-source foods, as well as to counter taboos among some communities that discourage consumption of certain animal-source foods by women and children.

References:

- Clemens, R.A., Hernell, O. and Michaelsen, K.F. 2011. Milk and milk products in human nutrition. Basel, Switzerland: S. Karger AG; Vevey, Switzerland, Nestlé Nutrition Institute. <https://www.nestlenutrition-institute.org/docs/default-source/global-document-library/publications/secured/a01bda0eba159a4f93ecfce6f4db90fb.pdf>
- Grace, D., Dominguez-Salas, P., Alonso, S., Lannerstad, M., Muunda, E., Ngwili, N., Omar, A., Khan, M. and Othob E. 2018. The influence of livestock-derived foods on nutrition during the first 1,000 days of life. ILRI Research Report 44. Nairobi: ILRI. <http://hdl.handle.net/10568/92907>
- Iannotti, L., Barron, M. and Roy, D. 2008. Animal Source Foods and Nutrition of Young Children: An ex ante analysis of impact of HPAI on nutrition in Indonesia. HPAI Research Brief 2. Washington DC: IFPRI. <http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/124997>
- Iannotti, L. and Lesorogol, C. 2014. Animal Milk Sustains Micronutrient Nutrition and Child Anthropometry Among Pastoralists in Samburu, Kenya. *American Journal of Physical Anthropology* 155(1): 66-76. <https://doi.org/10.1002/ajpa.22547>
- Mosites E. et al. 2017. Child height gain is associated with consumption of animal-source foods in livestock-owning households in Western Kenya. *Public Health Nutrition* 20(2): 336-345. <https://doi.org/10.1017/S136898001600210X>
- Neumann, C.G., Murphy, S.P., Gewa, C., Grillenberger, M. and Bwibo, N.O. 2007. Meat supplementation improves growth, cognitive, and behavioral outcomes in Kenyan children. *Journal of Nutrition* 137(4):1119–23. <http://dx.doi.org/10.1017/S0007114512003121>
- WHO. 2008. Indicators assessing infant and young child feeding practices. Part I. Definitions. Geneva: WHO. http://whqlibdoc.who.int/publications/2008/9789241596664_eng.pdf

FOOD AND NUTRITION SECURITY GOALS

- **Livestock are critical to meet sustainable development goal 2 on ending hunger, achieving food security and improved nutrition and promoting sustainable agriculture.**

Country-level strategies must integrate the multiple roles livestock play in achieving food and nutritional security in low-income countries. The focus has to include meeting 'nutrition goals', which animal-source foods in particular contribute to, rather than merely meeting people's calorie requirements. Because animal-source foods are relatively expensive compared to other foods, policies should help make livestock products more affordable for the poorest in society. These policies should include reducing production costs, facilitating trade and providing targeted price support for the poorest and vulnerable groups.

While there is a consensus that over-consumption of animal-based products can cause health problems, this is generally not the case in most developing countries, where under-consumption of animal-source foods is more typical. Policies in poor countries should facilitate access to animal-source foods by those groups and communities that remain under-nourished.

References:

- FAO.2018. Shaping the future of livestock: Sustainably, responsibly, efficiently. Rome: FAO.
<http://www.fao.org/3/i8384en/i8384EN.pdf>
- Garnett, T., Scarborough, P. and Finch, J. 2016. Focus: the difficult livestock issue. IN: FCRN. Foodsource. Oxford: Food Climate Research Network. <https://www.foodsource.org.uk/chapters/8->