

Federation of Animal Science Societies (FASS) Policy Statement Co-Promotion of Environmental Stewardship *and* Production Efficiency

Background

Preservation of the ability of future generations to meet their needs while adequately serving the present population (sustainability) requires control of greenhouse gas (GHG) production and avoiding damage to air, water and soil. Simultaneously, growing populations and rising purchasing power in developing countries will strain the earth's finite capacity to produce enough high-quality protein and nutritionally rich foods, demanding efficient production of food. Fortunately, a growing body of evidence related to production of foods of animal origin suggests that production efficiency leads to environmental stewardship.

The current situation is:

- The United Nations (UN) estimates the current world population to be about 6.9 billion and projects it to rise to more than 9 billion in 2050. (1)
- Population growth rates in developing countries remain nearly twice those of developed countries. These rapidly increasing populations are accompanied by increased income and increased demand for meat and other animal products (50% increase by 2020). (2)
- Food security is and will continue to be a major challenge, (3, 4) A recent report by the UN's Food and Agriculture Organization (FAO) estimates that global food production must increase 70% by 2050. (5) Even within the US, USDA estimated that in 2008 14.6% of households were food insecure during at least some portion of the year. (6)
- Properly managed modern animal production systems and technologies have clear environmental advantages over older, less efficient production models. To produce the same amount of milk, modern dairy production practices require 79% fewer animals, 77% less feed, 65% less water, and 90% less land than systems used in 1944. Modern dairy systems produce 76% less manure and 63% less carbon than those of the 1940s. (3)
- Contrary to some previous reports, a recent study found that the contribution of direct livestock emissions (from enteric fermentation and manure) amounts to less than 3% of total GHG emissions caused by man. (7)
- The FAO concluded that intensification of livestock production offers significant opportunities to mitigate climate change, largely by increasing efficiency of feed use and thereby reducing the need to expand feed production onto environmentally critical land. (8)

Policy

FASS supports minimization of greenhouse gas production and proper management of manure nutrients to avoid environmental damage from the necessary production of food of animal origin.

Specific Policy Objectives

- FASS opposes restriction on animal production technology when these restrictions may reduce efficiency and therefore increase environmental degradation.
- FASS supports increased funding for research, extension and education directed to improving environmental quality by increasing the efficiency of feed use by animals.

References

- (1) World Population Prospects: The 2008 Revision Population Database. United Nations Population Division. <http://esa.un.org/unpp/>
- (2) USDA Agricultural Projections to 2017. February 2008. USDA Economic Research Service.
- (3) Capper et al. The environmental impact of dairy production: 1944 compared with 2007. *Journal of Animal Science* 2009. 87:2160-2167.
- (4) <http://www.beeftechnologies.com/environImpact/impact-resources-land.html>
- (5) How to feed the world in 2050. A report from the World Summit on Food Security held in Rome, November 16-18, 2009
- (6) Household Food Security in the United States, 2008. November 2008. USDA Economic Research Service.

- (7) Pitesky et al Clearing the Air: Livestock's Contribution to Climate Change. In: Advances in Agronomy, Vol. 103.
- (8) Livestock's Long Shadow – Environmental Issues and Options. Food and Agriculture Organization of the United Nations. Rome, 2006.

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