

## Editorial

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Livestock production has rapidly responded to the growing demand for milk and meat, particularly in developing countries. Over the last 20 years, this has been largely achieved through increased livestock numbers rather than enhanced output per animal (yield). However, major advances in productivity have occurred in some pig, poultry and dairy cattle systems, but more rarely in beef and sheep systems. This global trend obscures major advances in productivity in some countries. Future trends show an increased demand for meat, mainly in transition and developing countries associated with improved affluence. Production is expected to double to 470 million tonnes by 2050, mainly from pigs and poultry primarily centred in these countries.

Livestock production typically represents a significant proportion (~40% of income or gross domestic product) earned by agriculture, and employs approximately 1.3 billion people directly and indirectly. In less-developed countries, livestock are considered as a multifunctional asset that is central to the livelihoods and well-being of some of the poorest societies on earth.

Traditionally, agriculture and hence livestock systems have been able to ignore some of the external consequences of production. However, the positive benefits to the environment have also been ignored. This is changing, and many governments are now also linking sustainability concepts to national and global food security objectives. In addition, in many countries, consumer awareness is now becoming the principal driver of decision-making among powerful retailers.

Livestock agriculture is the world's largest user of land resources, and engages very closely with landscape management, biodiversity, soil conservation and the holistic functioning

of agri-ecosystems. Within these, the major environmental impacts are on land degradation, water depletion and pollution and biodiversity. These impacts are, however, dependent on the system of production and its intensity. Extensive systems can make positive contributions to landscape and biodiversity, and efficient manure management can improve nutrient supply to soils from pig systems. Conversely, when mismanaged or through pressure on land, livestock can have marked adverse environmental impacts.

The increasing global demand for animal products presents opportunities, but also several challenges for the industry (Gerber *et al.*, 2010; Gill *et al.*, 2010; Soussana *et al.*, 2010). Addressing these challenges will help the industry continue to play an important role in global agriculture. In this, the policy community has difficult decisions to make in balancing, for example, the potential negative contribution of livestock to climate change against the positive benefit in terms of food security and rural livelihoods.

It is against this background that European Federation of Animal Science (EAAP) organised the plenary session of its annual meeting in Crete to concentrate on these challenges and in particular the interactions between the livestock industry and climate change.

### References

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