Institution of Agricultural Engineers, Landwards Conference 2012

Weathering the perfect storm. Should there be room in the lifeboat for livestock?

Christopher Wathes, Heather Maggs, Madeleine Campbell and Henry Buller*

Royal Veterinary College and *University of Exeter



Animals in the UK in 2009


Broiler chickens; 840 m


Farmed salmon & trout; ~80 m


Lambs; 16 m from 15 m ewes


Pigs; 9 m from 0.45 m sows


Cattle; 2.6 m from 3.5 m cows



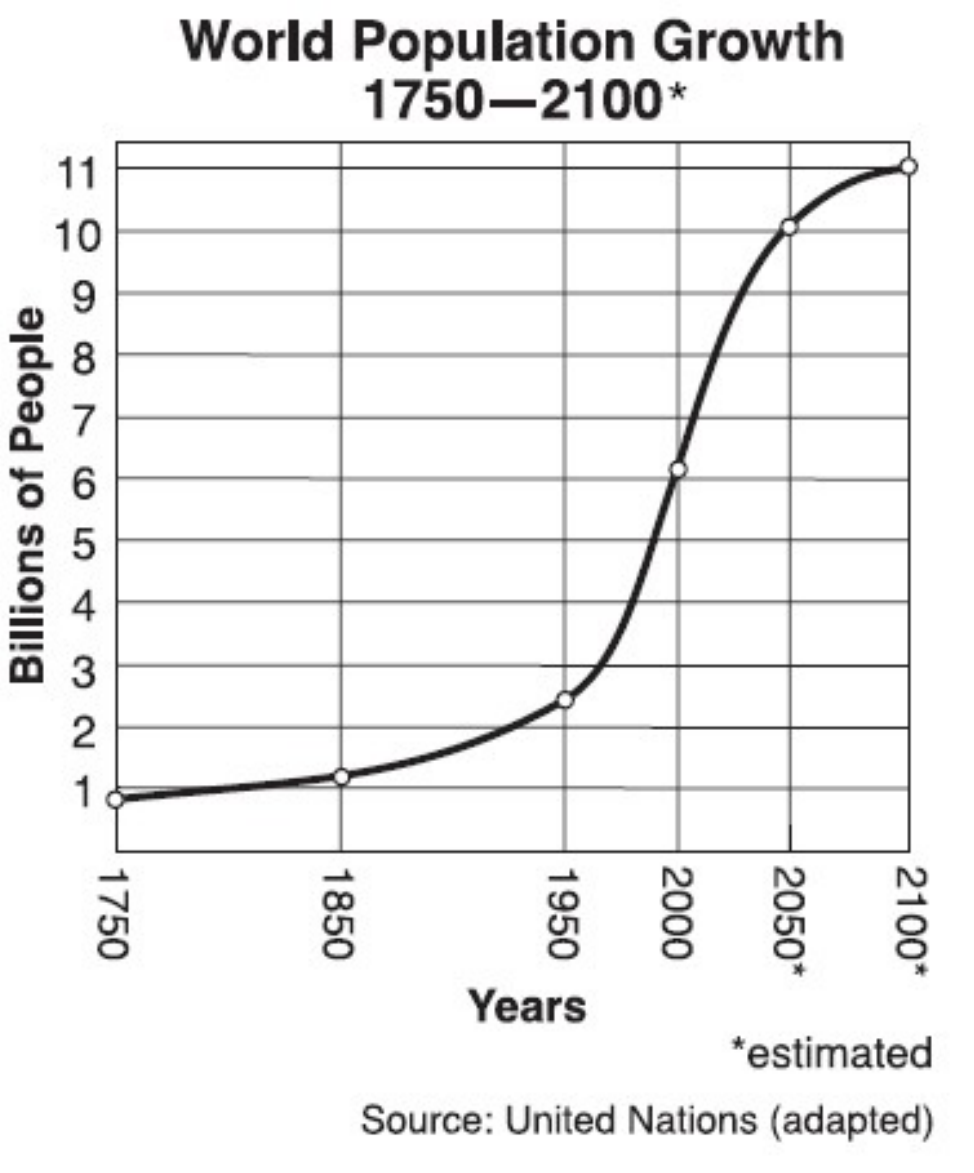
Milk; 13 m l from 1.9 m dairy cows


Eggs; 9 b from 30 m hens


Laboratory procedures; 3.5 m


Cats and dogs; ~20 m

Feeding the world: Beddington's Perfect Storm

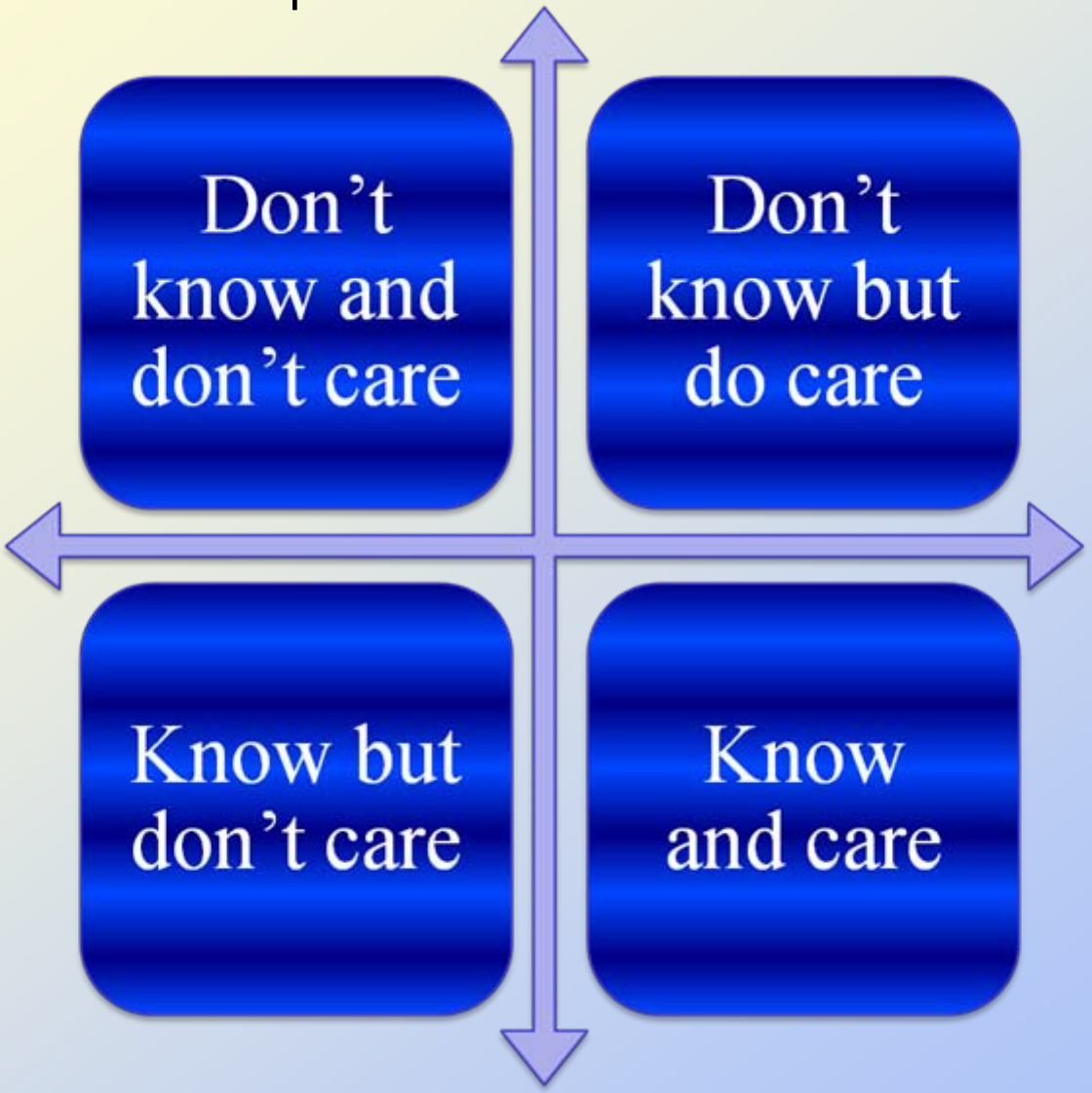




"By 2020, if not earlier, in China and India a middle class of about 700 to 750 million people with a buying power comparable to that in Europe today, will have completely changed the market situation for food in East and South Central Asia".

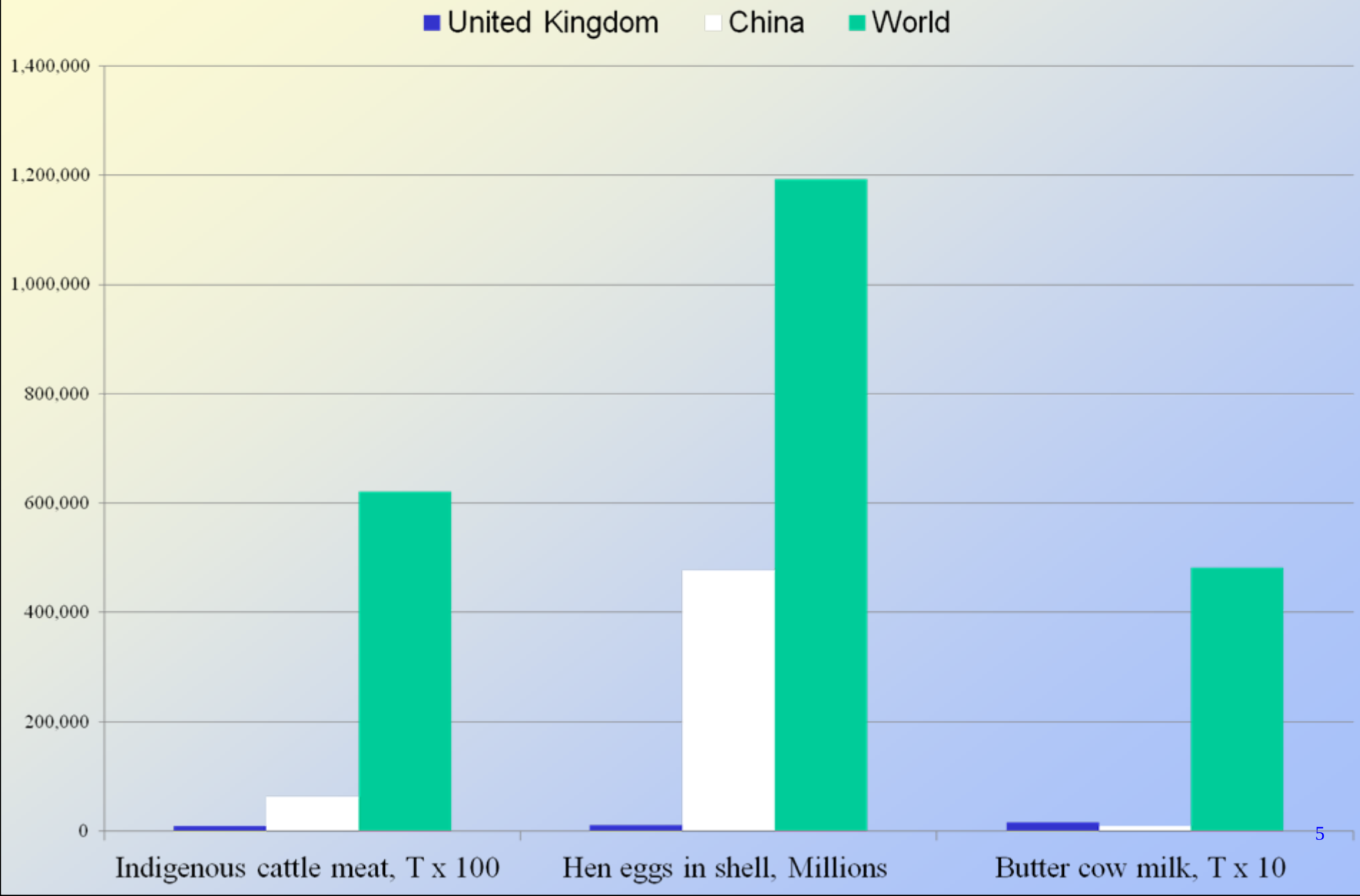
Professor Hans-Wilhelm Windhorst; International Egg Commission

The perfect storm – sceptic or believer?



After Donald Rumsfeld, 2002

Global production of cattle meat, eggs and milk (FAO, 2012)



Animal Ethics: Critical reflection on the humane treatment of animals

The question is not, Can they reason? nor, Can they talk? but, Can they suffer?

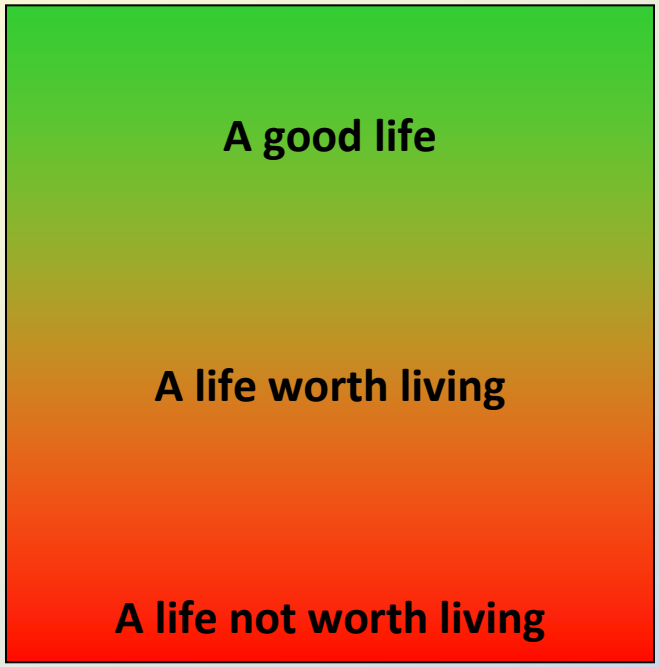
Jeremy Bentham, English Philosopher, 1748-1832



Sustainable intensification

with compassion

Quality of a Life



'The question is not just, "Do they suffer?" nor, "Are their needs met?" but rather, "Do they have a life worth living?"'
Farm Animal Welfare Council, 2010.

Balancing interests

Consumers expect food that is:
plentiful,
safe,
of known provenance
and cheap



Precautionary principle
Give the animal the benefit of the scientific and moral doubt



Marketing meat, eggs and milk

The concerned consumer must be informed.

- a retrospective analysis of marketing campaigns is needed

Should there be any room in the lifeboat for livestock?

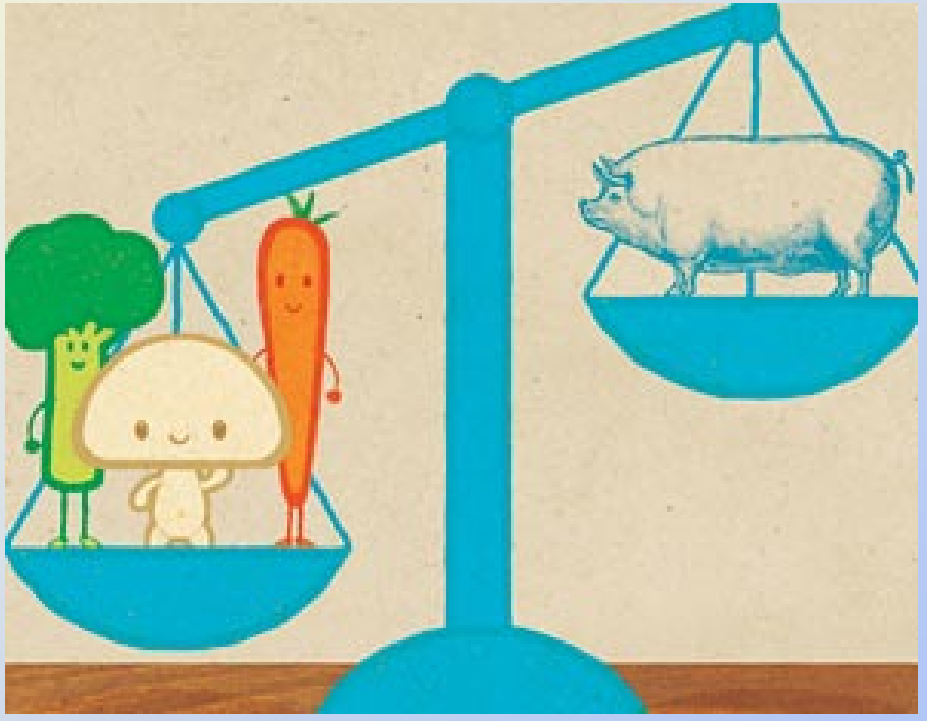
Alternative solutions

Population control

Eat no meat

Eat less meat

Eat different types of meat



The Agricultural Engineer's Role

- What should be the potential contribution of the agricultural engineer to livestock farming in the future?
- Should he side unequivocally with either the critics or the supporters of livestock farming?
- How can he help livestock farmers to thrive in an uncertain market?
- What changes, if necessary, are needed in his education and training if he is to play a part?

The agricultural engineer is versatile and skilled

- Pigs and Poultry
- Precision Livestock Production
- Ruminants





