River Court, Mill Lane, Godalming, Surrey, GU7 1EZ
T: +44 (0)1483 521 950 Email: peter.stevenson@ciwf.org

A Sustainable Food Policy for Europe

Towards a sustainable, nourishing and humane food policy for Europe and globally

Executive Summary

Food policy has to fulfil a range of objectives. It must provide food of good nutritional quality and promote diets that support good health. It has to achieve food security, ensuring that all people have access to sufficient food. It must be environmentally sustainable as our ability to feed the growing world population is dependent on the continuing availability of healthy and plentiful soils, land, water and biodiversity. Finally, it should ensure that animals are farmed to high welfare standards. Food policy needs to take an integrated approach, ensuring that one objective is not achieved at the expense of another.

Food waste: 60% of EU cereals are fed to farm animals. Feeding cereals to animals is inefficient. For every 100 calories that we feed to animals in the form of human-edible crops, we receive on average just 17-30 calories in the form of meat and milk.

In the EU we annually waste 180 kg of food per person at the retail/distribution and consumer levels. However, we waste more – at least 234 kg per person per year - by using human edible cereals as animal feed. This figure does not refer to the total cereals fed to animals; it is what is *wasted* due to the low efficiency with which animals convert cereals to meat. 167 million metric tonnes of cereals are used annually in the EU as animal feed but 117 million metric tonnes of these are wasted; they produce no food for humans.

25% of global calories are lost or wasted post-harvest or at the retail or consumer level. A further 25-30% of global calories are wasted by being used as animal feed.

How much additional food is needed to feed the growing world population? We are often told that to feed the anticipated world population in 2050 of 9.6 billion, food production must increase by around 70% and accordingly that further intensification of agriculture is essential. However, if food waste - including the feeding of human-edible cereals to animals - were just halved, an extra 2.75 billion people could be fed i.e. more than the expected increase in world population. Increased production is needed, particularly in the developing world, but the required increase is very much lower than 70%.

Adverse environmental impact of industrial livestock production: Using cereals as animal feed is a wasteful use not just of these crops but of the land, water and energy used to grow them. Much more arable land, water and energy are generally needed to produce a unit of nutrition from industrially produced meat than from meat derived from animals that are fed little or no human-edible crops.

Water: The UN states that “Intensive livestock production is probably the largest sector-specific source of water pollution”. Animal products from industrial systems generally consume and pollute more ground- and surface-water resources than animal products from

grazing or mixed systems. Diets with a high proportion of meat have larger water footprints than diets that contain less meat. It is more water-efficient to obtain calories and protein through crop products than animal products.

Land and soils: Halving the consumption of animal products in the EU would result in 23% per capita less use of cropland for food production. Clear benefits would arise if a proportion of the arable land used to grow feed crops for livestock were instead used to grow crops for direct human consumption. Firstly, a greater number of people could be fed from the same area of land. Secondly, arable land could be farmed less intensively with reduced use of monocultures, chemical fertilisers and pesticides. This would enable the EU to gradually rebuild the quality of its agricultural soils. This is a pressing challenge as 45% of European soils face quality problems.

Nitrogen pollution: Nitrogen is one of the major environmental challenges of the twenty-first century. Excess reactive nitrogen (N_r) in the environment results in damage to water quality, air quality (and hence human health), soil quality, the greenhouse balance and ecosystems and biodiversity. Agricultural emissions of nitrogen dwarf those from traffic and industry. Most production of N_r in Europe is used for fertiliser to grow feed crops for animals.

Animal farming is inherently less efficient in its use of N_r than crop production. Livestock production involves a double burden of nitrogen losses. Firstly when fertilisers are applied to feed crops as much of the nitrogen in the fertiliser is not taken up by the crops and secondly when these crops are fed to animals as much of the nitrogen in the crops is not assimilated by the animals, being instead excreted into their manure. A 50% reduction in livestock product consumption and production would reduce European agricultural N_r emissions by around 40%. The global nitrogen cycle is also dominated by humanity's use of N_r to raise livestock.

Climate change: A high meat diet (>100g/day) is responsible for much higher greenhouse gas (GHG) emissions than a low meat diet (<50g/day). Meat and dairy products are generally responsible for a higher level of GHG emissions than non-animal foods.

Biodiversity loss: Biodiversity is under considerable pressure as a result of intensified farming as can be seen in Europe's plummeting number of pollinators and farmland birds.

Impact of EU farming and food consumption on third countries: The EU's import of beef and soy as feed for EU livestock leads to deforestation in South America. This results in biodiversity loss and GHG emissions ensuing from the clearing of forests. EU soy imports could be reduced by a move away from pig and poultry meat towards beef as pig and poultry diets contain higher proportions of soy than cattle diets. A 50% reduction in EU livestock production would reduce the requirement for imported soy for animal feed by 75%.

Adverse public health implications of industrial livestock production: The high levels of meat consumption that have been made possible by industrial farming are having a detrimental impact on human health. Overconsumption of animal protein can lead to obesity, diabetes, heart diseases and certain cancers.

A 50% reduction in EU meat and dairy consumption would:

- bring consumption of saturated fats below the recommended maximum intake proposed for Europe by the World Health Organisation (WHO)
- bring consumption of red meat into line with maximum intake levels advised by the World Cancer Research Fund
- still leave EU citizens consuming 50% more protein than is required under WHO recommendations.

The FAO points out that the modern western diet lacks nutrient quality. Free-range animals, who consume fresh forage and have higher activity levels, often provide meat of higher

nutritional quality - with lower levels of fat and higher proportions of the beneficial omega-3 fatty acids - than animals that are reared industrially.

Many of the world's poor would benefit from increased meat consumption. However, the developing world should aim for a balanced intake of animal-source foods and should not adopt western diets as these have an adverse impact on health.

Animal welfare: Most EU pigs, poultry and rabbits and many dairy cows are farmed industrially. They are kept indoors throughout their lives, crammed into overcrowded, often barren, sheds or confined in cages or crates. Animals' health is often seriously impaired by genetic selection for fast growth or high yields. The European Food Safety Authority has concluded that genetic selection for high milk yield is the major factor causing poor welfare and health in dairy cows. Today's chickens are bred to grow so quickly that many suffer from painful leg disorders.

Major improvements in animal welfare are needed. In particular:

- Cages and crates should be phased out as they thwart many of animals' basic instincts: to roam, to forage, to explore;
- Animals should be kept in outdoor systems or, if they are housed, they should be kept in large barns with ample space, plenty of straw, natural light and effective ventilation;
- Husbandry systems must enable animals to express their natural behaviours;
- Genetic selection for fast growth or high yields should be avoided where this results in compromised welfare;

The EU wastes 90 million tonnes of food a year; this includes the meat equivalent of almost two billion animals. This is morally repugnant as most of these animals will have been put through the suffering of factory farming only for their meat to be thrown away.

What should future EU food and farming policy look like? The EU needs to develop a new model of food and farming. One that uses resources more efficiently and that rather than damaging the environment, enhances soil quality, makes judicious use of arable land, uses water sparingly without polluting it and restores biodiversity and ecosystems. EU food policy should encourage the adoption of balanced diets with a lower proportion of meat. This would deliver health benefits by reducing the incidence of heart disease, obesity and certain cancers.

The use of human-edible crops as animal feed is wasteful. Olivier De Schutter, who until recently was UN Special Rapporteur on the right to food, highlights the importance of "reallocating cereals used in animal feed to human consumption". He adds that "continuing to feed cereals to growing numbers of livestock will aggravate poverty and environmental degradation". The EU should avoid the excessive use of human-edible crops in animal feed and instead put more emphasis on:

- Raising animals on species-rich extensive pastures: The strength of extensively reared cattle and sheep is that they convert material that is inedible for humans into food that we can eat and are able to use land that is generally not suitable for other forms of food production;
- Integrated crop/livestock systems where animals are fed on crop residues in mixed rotational systems and their manure, rather than being a pollutant, fertilises the land;
- Pigs and poultry are nature's great foragers and recyclers. Most EU pigs and poultry are factory farmed. They should instead be kept outdoors where some of their diet can come from foraging, pasture, cull vegetables from local farms and unavoidable food waste. This could replace part of the cereal- and soy-based feed currently used.

A move away from grain-based animal production coupled with a reduction in meat consumption would produce environmental benefits. It would allow land to be farmed less intensively with less use of artificial fertilisers, reduced degradation of water, soil and air and

lower use of water, land and energy. It would also result in biodiversity gains and enable animals to be kept to higher welfare standards.

The CAP should be radically reformed; its core role should be to help the EU introduce the new approach to food and farming outlined above. CAP monies should be used to fund the provision of public goods that are not readily supported in the market place

The developing world: Increasing food production will not of itself be sufficient to combat hunger. It must be combined with improved livelihoods for the poorest, particularly small-scale farmers. Smallholder farmers must be helped to increase their productivity in ways which are appropriate for their circumstances. This should not entail the introduction of industrial livestock systems as these exclude participation of the poorest farmers. They are out-competed by industrial production which provides little employment.

A constructive approach would be to help small-scale farmers provide improved healthcare and nutrition for their animals by better disease management, the expansion of veterinary services and the cultivation of fodder crops such as legumes. Better animal health and nutrition result in increased productivity and longevity. This will improve smallholders' purchasing power, making them better able to buy the food that they do not produce themselves and to have money available for other essentials such as education and medicine.

Increased production is indeed needed in the world's poorest regions but this must be achieved in a genuinely sustainable manner. A study in resource-conserving agriculture shows that industrialisation is not needed in order to increase productivity. It examined the impact of 286 projects in 57 poor countries. The projects included integrated pest and nutrient management, conservation tillage, agro-forestry and water harvesting. These projects increased productivity on 12.6 million farms. The average crop yield increase was 79%. All crops showed water use efficiency gains. Of projects with pesticide data, 77% resulted in a decline in pesticide use by 71% while yields grew by 42%.

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