



European Fertilizer Manufacturers Association

The European Fertilizer Manufacturers' Position on Organic Farming

It is clear from natural ecosystems that a sustainable balance can exist in soil/plant systems without external inputs. Challenges arise when plant materials are to be harvested and, at least in part, exported from the system –as in organic farming. There are limited opportunities to maintain soil fertility and to replace the plant (and animal) nutrients so exported from organic farms. Approved nutrient sources include organic-based fertilizers and animal feeds imported into the system, which add nutrients to manures.

Quite apart from the fact that the demand for 'organic' food is unlikely ever to be more than a niche market, the production of such food on any more than a very modest scale is not possible. The reasons are that the extra land required (because of reduced productivity per hectare) is not available or is in valued wild ecosystems, and that sufficient approved nutrient sources do not exist to maintain the soil phosphate and potash status. Even the natural fixation of atmospheric nitrogen, for example by growing leguminous plants, could supply at most little more than half the annual world population's need for protein.

Truly sustainable and economic food production and the protection and maintenance of existing natural habitats require the input of mineral fertilizers. These are principally nitrogen (from the atmosphere and mainly for the production of protein by plants), phosphate (mostly produced by the processing - recycling - of phosphate rock, the fossilized remains of long-dead sea creatures) and potash (simply extracted from the crystal deposits from ancient seas).

It is often presumed that organic farming is the most 'environmentally friendly' farming system, but in fact on anything but a very local scale it cannot be judged sustainable because regional and national demand for food involves more nutrients than are available to organic farming.

Fertilizer inputs are essential for the production of the food the world requires. The best farming systems marry the available organic nutrient sources with the necessary balancing fertilizer inputs to ensure sufficiently productive agriculture with minimal environmental impact. This dynamic approach, known as Integrated Farm Management (IFM), provides the basis for sustainability in both the environmental and agriculturally economic aspects of farming, and can provide sufficient food for today's world population and for the projected increase.

A number of the issues surrounding agriculture and food production are listed overleaf, and EFMA has identified some of the relative impacts of Integrated Farming and of organic farming. It is clear that organic farming cannot claim the 'moral high ground' in this context and that an Integrated Farming approach can provide the necessary safeguards to the environment at the same time that it produces an adequate supply of high quality food. EFMA finds it difficult to understand the justification for specific additional EU funding for organic farming when it is in truth simply a niche market-driven system.

Public, Political Issue	Clear advantages of Integrated Farming (use of organic and mineral fertilizers)	Clear advantages of Organic Farming (use of organic and a restricted number of mineral fertilizers)	Balance of benefits from Integrated Farming and Organic Farming
Food Supply	Only two thirds of the area is needed to feed the same number of people. Increased food diversity		
Food Safety	No health issues have been reported relating to food grown with inorganic fertilizers	Perceptions that it is safe supports a specific market	Both systems are required to guard against the use of inputs that raise heavy metal levels in soil
Food Quality			No evidence that food quality is favoured by either system
Energy Efficiency	Producing wheat with mineral fertilizers provides six times the energy needed to produce, transport and spread mineral nitrogen fertilizer Integrated Farming is an energy-positive cycle		
Biodiversity	Greater biodiversity over total land surface as more land is left to wildlife habitat	Greater biodiversity tends to occur within the organic crop	
Soil Quality	Sustains soil nutrient levels for all nutrients and organic matter	Sustains soil organic matter	Soil structure maintained or improved using both approaches
Water Quality	More accurate nutrient management is achieved by applying new tools and technologies		Nitrogen and phosphorus transport from soil to water are equivalent and totally dependent on the Nutrient Management Planning and the vagaries in the weather
Air Quality	The higher yields achieved with fertilization capture five times the amount of greenhouse gas carbon dioxide emitted when producing, transporting and applying fertilizers		

References and further reading:

Farming for the Future (EFMA, 2003)
Delivering Quality to your Food (EFMA, 2004)
www.efma.org

Shades of Green. A Review of UK Farming systems (Royal Agricultural Society of England, 2000)

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