

Managing the conversion process successfully

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The increase in numbers of farmers considering organic farming as a viable option will lead to an increase in the number of conversion plans to be prepared in the near future. Good conversion planning can help minimise the risks associated with conversion by identifying potential problems, in particular feed requirements and stocking rates, animal health, soil fertility and nutrient management.

Techniques for conversion planning were developed as student projects in the early eighties and were subsequently adopted by organic farming advisors in the UK (Lampkin, 1992). Conversion plans are now a prerequisite for applying for an organic licence from one of the certification bodies but are also a useful tool for assessing the technical feasibility of the conversion and a roadmap through the difficulties of the conversion process (MacRae *et al*, 1989).

There are three steps in the process of planning an organic conversion:

1. Current Management Practices – identify the resource limitations to be faced during conversion. This would include soil type, farm infrastructure and quotas.
2. Organic vision- what the target is for the farm to be producing when full organic symbol is achieved.
3. Future management practices – this will outline changes that have to be made to comply with organic standards, the plan will need to demonstrate how sufficient forage will be provided, how soil fertility and good animal health and welfare will be maintained.

Provision of sufficient high quality forage

Clover is the key to successful grassland management on organic farms (Barry, 2002). Assuming reasonable soil fertility levels, nitrogen supply to the plant is the key to

sustainable levels of grass growth (Culleton *et al*, 2002). White clover through its ability to fix atmospheric nitrogen, can transfer nitrogen to the plant and thereby encourage grass growth. The quantity of nitrogen supplied can be as much as 150kg N/ha (Humphreys & Lawless, 2007).

Clover content in pastures can be increased by:

- Encouraging the spread of indigenous varieties
- Direct Reseeding
- Undersowing with a cereal crop
- Oversowing into permanent grassland (Culleton *et al*, 1999; Humphreys & Lawless 2007).

Maintenance of High Animal Health and Welfare

The maintenance of a high animal welfare status is enshrined as one of the principles of organic farming and good health is obviously a major element in the overall welfare status of the animal (IFOAM, 1998). Good livestock health is not seen simply as the absence of disease, but a high level of vigour and vitality, thus enhancing the animal's ability to resist infection, parasitic attack, metabolic disorder and recovery from injury (Younie, 2000).

Because the organic system minimises the use of veterinary treatments, a positive approach to livestock husbandry is required (Boehncke, 1997). Every decision that is made regarding grassland management, housing, reproductive patterns have the potential to impact on livestock health. Preventative health strategies include:

- Closed herds
- Breed choice – breeding for disease resistance
- Adequate feed supplies
- Establishment of clean grazing system
- Adequate winter accommodation.

Soil Fertility

Nutrient management is one of the main challenges facing the organic farmer. In the short term, the challenge is to supply sufficient nutrients to the crop at the correct time in its development to achieve economically viable yields. In the longer term, the challenge is to balance inputs and off-takes of nutrients to avoid reduction in soil fertility or environmental pollution (Briggs, 2008).

Nutrient supply to crops depends on the use of legumes to add nitrogen to the system and limited amounts of supplementary nutrients, in acceptable forms. Manures and crop residues must be carefully managed to recycle nutrients around the farm. Crop rotation is the central tool that integrates the maintenance and development of soil fertility with different aspects of crop and livestock production in organic systems. Short term leys help ensure good soil structure and biodiversity in crop systems as well as improving weed control (Watson *et al.*, 2002). As a result of the long term interactions between different components, soil fertility management needs to be a long term integrated approach rather than the short term very targeted solutions common in conventional agriculture.

Organic farming adopts many practices that minimises fertility losses such as:

- Maximising green covers – short term leys, cover crops
- Use of straw based manures or compost applications
- Lower stocking rates.

Manure management within the rotation has been shown to have large effects on both yield and product quality including protein levels in cereals (Stein – Bachinger, 1996; Frederiksson *et al.*, 1997). The quality of nutrients in manures varies with type of animal, feed composition, quality and quantity of bedding material, length of storage and storage conditions (Dewes & Hunsche, 1998; Shepard *et al.*, 1999).

Animal manures are an important means of re-distributing nutrients as it is important to ensure that excessive fertility is not built up in some fields at the expense of others (Berry *et al.*, 2002). Manure use should be planned with regard to both farm system and field nutrient budgets (Briggs, 2008).

While the certification bodies accept conversion plans from both farmers and professional advisors, it is important to research the topic well, a good solid conversion plan will provide a roadmap for the farmer and will help ease the transition from conventional methods of farming.

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