

Animal Health Management on Organic Farms

September 2011

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Organic livestock production is a food production system that is governed by EU Legislation with production protocols delivering a high status of animal welfare, care for the environment, restricted use of medicines and the production of a healthy product without residues.

The organic certification system as it is currently implemented under the EU Council Regulations (EC) No 1235/2008, 839/2008 and 834/2007 is based on assuring standards which mainly describe resources, such as stocking densities, provision of quality forage, and restricted use of conventional products. While the organic system is designed to and aspires to guarantee various outcomes such as

- Increased immunity,
- Improved animal welfare,
- Minimisation of residues in milk and meat and
- Reduced damage to flora and fauna

the certification system does not take any legal responsibility over these outcomes. However these outcomes are an integral part of organic farming objectives and a major reason for continued consumer interest in organic products.

The standards for organic livestock production emphasise preventative strategies based on the principles that an animal is allowed to exhibit natural behaviour, is not subject to stress and is fed high quality feed to meet its nutritional requirements so that the animal has optimal natural resistance to combat disease.

The organic standards state that routine use of prophylactic or preventative use of anthelmintics is not permitted, withdrawal periods after administering products are longer and weaning periods are longer.

Disease prevention on organic farms is based on:

- Selection of appropriate breeds and strains of animals
- Use of animal husbandry practises appropriate to the requirements of each species, encouraging strong resistance to disease and the prevention of infections
- Provision of high quality feed together with regular access to grazing areas encourages the natural immunological defence of the animal
- Appropriate stocking densities both during the housed period and at grass reducing stress on animals.

In organic systems, animal health is seen not simply as the absence of disease; it is seen as a positive characteristic which is to be achieved through the application of biological and animal husbandry principles rather than the routine use of conventional veterinary medicines. Where medicines are required, the use of complementary methods both for the prevention and treatment of disease is encouraged.

The development and management of organic livestock production systems requires special care in nurturing positive health and vitality, ensuring the proper control of the disease and the encouragement of positive animal welfare i.e. the satisfaction of the animals needs, including behavioural needs and not merely the avoidance of cruelty.

When a farm undergoes conversion to organic status an Animal Health Plan is required to be drawn up by the veterinary practitioner which specifies the current animal health issues on the farm and how the farmer will tackle these problems into the future while conforming to the requirements of organic certification standards.

Detection of problems needs to be early, and timely veterinary advice is invaluable – when an animal is ill the organic farmer reacts in the same manner as its conventional neighbour and veterinary assistance is required immediately. Failure to treat sick animals may result in the withdrawal of organic status for the entire farm.

In essence the aspirations of organic farmers should be:

1. To have healthy “happy” and productive livestock
2. To develop organic systems which deliver positive health and welfare.
3. To continually improve the health and welfare of livestock.
4. To progressively reduce dependence on medicines

This booklet examines constituents of the Animal Health Plan, Preventative Strategies and Certificate Requirements.

Animal Health Plan

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The development and management of organic livestock systems requires special care in nurturing positive health and vitality, ensuring the proper control of disease and the encouragement of positive animal welfare.

The plan must ensure the development of a pattern of health building and disease control measures appropriate to the particular circumstances of the individual farm and allow for the evolution of a farming system progressively less dependent on allopathic veterinary medicinal products.

The Animal Health Plan ultimately needs to address issues such as:

1. What diseases are currently issues on the farm
2. How can these be controlled or prevented
3. What modifications can be made at farm level to reduce the risk of disease.

The requirements for a health plan includes identification of any persistent health problems, preventive husbandry techniques and all veterinary treatments that are likely to be used on a regular basis. Quarantine measures for all bought-in and sick animals need to be specified as do details of young stock management.

Writing the Health Plan

First find out what you are dealing with. Look through your Animal Remedies Register for the previous years and consult your Vet about locally-occurring diseases and conditions that are likely to affect your livestock.

Faeces testing for your present livestock can help to identify the level and type of internal parasite burden, which you will have to plan to reduce. Once you have the information on what presently does affect and potentially may affect your livestock then you can begin to write the Health Plan. Writing the Health Plan is an ongoing process. Whenever an animal needs treating you must treat it, but do think about what could be done to avoid having to treat again in the future.

Conditions like mastitis that have multiple causes need to be investigated to help the farmer to identify the main causes on an individual farm. Consult with the vet about how management affects health and how to monitor conditions as well as how to treat clinical cases. The more objective stance of a Vet or advisor can be useful in helping you to plan what is possible immediately and in the long term.

Practical steps to develop a Health Plan

1. Identify the disease organism or health problem;
2. Learn about the organisms life cycle and/or the health problem;
3. Identify the current veterinary or other treatments used;
4. Think about management/husbandry practices that could be used to break the organisms lifecycle or improve the animals health, whilst reducing reliance on veterinary treatments;
5. Identify management/husbandry practices or alternative therapies that could be used to minimise or reduce the problem;
6. Identify in advance the alternative veterinary medicines that can be used should the management practices not be successful;
7. Identify the specified withdrawal periods for the treatments and calculate the longer withdrawal periods required for organic management

The use of Alternative Therapies

Organic management encourages the use of alternative therapies, such as homeopathy, that improve the animals ability to resist disease rather than treating the disease specifically. It's important to remember that there is a danger of misuse of alternative therapies as much as with conventional (allopathic) medicines.



Preventative Strategies

Biosecurity

The organic standards recommend the implementation of a closed herd policy. However, since organic herds are allowed to bring in breeding animals, measures need to be taken to prevent introduction of disease with these animals. These are:

- Buying animals from herds that are accredited free of certain contagious diseases (such as BVD, IBR, Leptospirosis, Johne's disease, BSE) or from farms whose disease status is known.
- Replacement animals should be purchased directly from the farm of origin, and not via cattle markets.
- All purchased animals should be quarantined before inclusion into the herd, in a separate building or paddock. A period of four weeks is adequate for most diseases. Manure from the quarantine site should be composted before spreading to fields and the quarantine paddock should not be used by other animals within a year.
- During the quarantine, milking cows' udders should be checked for signs of mastitis, and other health tests should be carried out according to the vets advice.

Other aspects of herd health security

- Protect feed stores from vermin, wild birds and domestic dogs and cats.
- Purchase feed and bedding from a known source. If bought from another farm, check disease status before purchase.
- Limit visitors' and vehicle access to the cattle areas on the farm.
- Prevent both indirect and direct contact with cattle from other herds – ensure that all fences are stock-proof
- Provide washing facilities and disinfectant footbaths for all visitors onto the farm.

Housing

- Housing conditions for livestock must meet the livestock's biological and ethological needs (e.g. behavioural needs as regards appropriate freedom of movement and comfort).
- Livestock must have easy access to feeding and watering.
- Insulation, heating and ventilation of the building must ensure that air circulation, dust level, temperature, relative air humidity and gas concentration are kept within limits which are not harmful to animals.
- Housing for livestock is not mandatory in areas with appropriate climatic conditions to enable animals to live outdoors, If overwintering the stocking density of livestock must be low enough to prevent poaching of the soil and over grazing of vegetation and must be compliant with the Nitrates Directive

- The stocking densities in buildings should provide for the comfort and wellbeing of the animals, depending on the species, breed and age. It shall also take account of the behavioural needs of the animals which depend in particular on the size of the group and the animals' sex.
- The optimum density will seek to ensure the animals welfare by providing them with sufficient space to stand naturally, lie down easily, turn round, groom themselves, assume all natural postures and make all natural movements such as stretching.
- The minimum surface areas for indoor housing and outdoor exercise areas and other characteristics of housing are detailed in Table 1.

Table 1: Floor Area Requirements for Organic Cattle/Sheep

	Indoors area (net area available to animals)	
	Live weight minimum (kg)	M ² /head
Breeding and fattening bovine	up to 100	1.5
	up to 200	2.5
	up to 350	4.0
	over 350	5 with a minimum of 1 m ² /100 kg
Dairy Cows		6
Bulls for breeding		10
Sheep and goats		1.5 sheep/goat
		0.35 lamb/kid

- Housing, pens, equipment and utensils must be in a condition that is not likely to cause injury to livestock and must be properly cleaned and disinfected to prevent cross-infection and the build up of disease carrying organisms.
- Bulls over one year old shall have access to pasturage or an open air area. Breeding bulls over one year may be housed. If housed, breeding bulls must have access to pasturage or an open-air exercise area of a minimum of 30m². The required open-air area may include open yards or situations where the bull is running with cows (e.g. for breeding purposes) in housing facilities which include at least one open side (this can include housing with an A shaped roof which has an open passage). When housed alone, it is recommended bulls are in sight of other animals. Safety precautions when handling such animals must be observed.

- Faeces, urine and uneaten or spilt food must be removed as often as necessary to minimise smell and to avoid attracting insects or rodents.
- Livestock housing must have a smooth but not slippery floor and must be provided with a comfortable, clean and dry lying/resting area. At least 50% (one third in the case of poultry housing) of the total floor areas must be solid, that is, not of slatted or grid construction.
- Ample dry bedding strewn with litter material must be provided in the lying/resting area. The litter must comprise of straw or other suitable natural material.



Breeding

The choice of breed and breeding policies in organic dairy or beef herds should preferably be based on local breeds and/or breeds that are well suited for the production system chosen.

Whilst most beef and dairy breeds are suitable for organic production, in beef production the use of traditional, early maturing breeds will probably better suit an organic, forage-based system as they finish earlier on lower levels of concentrates.

The requirement to maintain a closed herd encourages selection on the basis of farm needs, and the development of greater resistance to the spectrum of disease present. Specific aspects of breed and breeding in organic cattle production relevant to health and welfare:

- Where relevant information is available, resistance to disease should be taken into consideration over productivity when breeding decisions are made.
- Mismatching of bull and dam, resulting in calving difficulties, should be avoided.
- Whilst animals suffering from disease or injury should be culled in good time, longevity should be encouraged in dairy and suckler cows.
- The opportunity to select bulls with low SCC levels in daughters should be utilised.
- Use breeds of sheep which are less susceptible to worms e.g. Texel.

Feeding

Feeding is intended to produce quality rather than maximum production. The organic standards state:

- Livestock must be fed organically produced feed that is preferably home-grown, up to 30% of the total diet can come from in-conversion sources, this increases to 100% if the in-conversion feedstuffs come from a unit of the holding itself. Also up to 20% of the total amount of feedstuffs may originate from the grazing or harvesting of permanent pastures in the first year of conversion.
- Calves must be fed on organic whole milk up to three months of age;
- The cattle feeding system must be based on maximum use of pasture and cattle must have access to pasture whenever possible (buffer grazing is acceptable but must not constitute the bulk of forage feeding: At least 60% of daily rations must consist of roughage, fresh or dried fodder or silage;
- Cattle feed must not contain genetically modified organisms, antibiotics, medicinal substances, growth promoters or any other substances intended to stimulate growth or production.

The inclusion of forage legumes in the diet of cattle improves the nutritive value of the diet and improves individual performance. Animals which are fed a high quality forage are less likely to succumb to disease pressures.

Features such as more sympathetic management of the soil, better biological activity, more balanced crop rotations, less production pressure on livestock enterprises, more diverse swards and a prohibition of artificial fertilisers are expected to reduce problems of micro-nutrient deficiency relative to conventional systems.

There is a need to be aware of nutritional deficiencies when solely home-grown feed is used, particularly in areas where inherent soil deficiencies are known to be prevalent. The need for supplementation is based on a veterinary recommendation following interpretation of a blood or herbage sample. Treatment may be in the form of mineral lick, bolus or injection.

Clean Grazing Policy

A clean grazing policy is necessary to minimise the risk of internal parasite infestations as routine dosing with anthelmintics is prohibited.

A clean grazing policy ultimately provides a system where clean or lightly infected pastures are available for ewes and lambs or young calves during the first part of the grazing season and provide the opportunity for a change to cleaner pasture either before susceptible stock acquire to high a level of infection or by weaning time. The risk from internal parasites can be greatly reduced if a series of two to four moves to clean grazing during the grazing season is implemented. Table 2 is an example of a clean grazing plan.

Table 2: Clean Grazing Plan


Plot No	Year 1 Feb - end June	Year 1 July - Nov	Year 2 Feb - end June	Year 2 July - Nov
1	Sheep	Cattle	Silage	Sheep
2	Cattle	Silage	Sheep	Cattle
3	Silage	Sheep	Cattle	Sheep

The cleanest grazing should be prioritised for the most susceptible animals. Ewes sucking twins should be given priority over singles. Preference for the cleanest pastures should be given to young dairy bred cattle, grazing ahead of animals in their second season.



Table 3 outlines susceptibility of animals to parasites.

Table 3: Susceptibility of Animals to Parasites

Sheep		Cattle
Growing twin lambs	Most Susceptible 	Young weaned cattle in first season at grass
Growing single lambs		Suckler Calves
Hoggets		Cattle in their second grazing season
Underfleshed adult ewes		Adult Cattle
Adult Ewes		
	Least Susceptible	

On cattle only farms a leader follower system minimises risk of parasite infestation by grazing younger more susceptible stock ahead of older stock. This has the added benefit of providing the highest quality forage to the fastest growing animals.

Pastures on the farm can be classified according to risk. Table 4 illustrates risk levels of various pastures.

Table 4: Risk Levels of Various Pastures

Risk	Grazing Season Part1 Before end June	Grazing Season Part 2 July onwards
Low	Newly reseeded ground. Grazed only by cattle or silage during the previous grazing season.	Grazed only by cattle for the first part of the grazing season. Silage only in first part of year. Arable stubble, forage or catch crops.
Medium	Grazed only by dry ewes the previous year. In the case of Nematodirus fields grazed by young calves the previous spring.	Mixed grazing with cattle and sheep during Spring.
High	Grazed by ewes and lambs the previous spring. Grazed by weaned lambs the previous autumn.	Grazed by pregnant or lactating ewes during the first part of the grazing season.

Complying with Organic Certification Requirements

Detection of problems needs to be early, and timely veterinary advice is invaluable – when an animal is ill the organic farmer reacts in the same manner as their conventional neighbour and veterinary assistance is required immediately. Failure to treat sick animals may result in the withdrawal of organic status for the entire farm. (i.e. treatment must be administered even if the result would mean an animal losing its organic status).

Veterinary medicinal products or antibiotics may be used under the responsibility of a vet provided that their therapeutic effect is effective for the species of animal and the condition for which the treatment is intended. The use of chemically synthesised allopathic veterinary medicinal products or antibiotics for **preventive treatments** is prohibited.

Withdrawal Periods

The withdrawal period between the last administration of an allopathic veterinary medicinal product to an animal under normal conditions of use, and the production of organically certified products from such animals is to be:

1. Where a zero withdrawal period is specified on the product, no withdrawal period should be required.
2. Where no withdrawal period is specified on the product, the withdrawal period should be 48 hours
3. For mastitis treatments, the withdrawal period should be three times the legal withdrawal period.

Number of Treatments Permitted

The organic standards sets out the number of veterinary treatments permitted per animal

1. Animals for meat consumption: One course of treatment of veterinary medicinal products or antibiotics is allowed within a twelve month period.
2. Animals for breeding: Two courses of treatment within a twelve month period.
3. For Dairy Mastitis Control: Two courses of treatment for dairy mastitis control are allowed within a twelve month period.

A course of treatment means all necessary measures taken to restore the animal to health following a particular disease episode.

If the number of treatments permitted are exceeded, the animal should then be sold conventionally or undergo a further fifteen month conversion period. Excluded from this are vaccines, internal and external parasite treatments and compulsory eradication orders.

Use of Antibiotics

The use of antibiotics in clinical cases only is a restricted practise where no other remedy would be effective or after major trauma as a result of surgery or accident

Use of Vaccines

Vaccination is permitted only in cases where there is a known disease risk (confirmed in writing by the veterinary surgeon) on a farm or neighbouring land which cannot be controlled by any other means.

The simplest vaccine should be used for the disease to be treated where required, more complex vaccines may be used. Single, two in one or four in one vaccines are preferred to more complex vaccines unless such cover is specifically required. Vaccine choice and use should be agreed with the nominated veterinary surgeon to ensure adequate disease protection during the conversion phase with, where possible, progressive reductions in use as the organic unit becomes established.

A veterinary surgeon should be consulted on appropriate vaccinations. The vaccinations used and the reasons for their usage must be recorded in the Health Plan.



Mineral Supplementation

On well established organic farms, sound agricultural practices should render mineral supplementation unnecessary. Restricted supplements may be used following approval from the certification body where there is evidence of a suspected dietary deficiency in home grown feeds as a result of soil deficiencies or there is veterinary evidence for a deficiency within the livestock (e.g. blood analysis). The use of Calcium and Magnesium supplements is permitted

Record Keeping

Whenever veterinary medicinal products are to be used, the type of product must be recorded clearly (including an indication of the active pharmacological substances involved), together with details of the diagnosis, the dosage, the method of administration, the duration of the treatment and the legal **organic** withdrawal period.

This information must be recorded in the Record Book, declared to the certification body at the annual inspection and before the livestock or livestock products are marketed as organically produced. The animals treated must be clearly identified, individually in the case of large animals individually or by batch, in the case of poultry and small animals. The Record Book must be able to verify that withdrawal periods and maximum number of treatments have been adhered to.



Veterinary Conditions and Recommendations

Condition	Recommendation
Stomach Worms	<p>Clean Grazing or Leader Follower System.</p> <p>Lower stocking rates.</p> <p>Do not run young calves with older calves.</p> <p>Avoid lush wet pastures or paddocks with swampy areas if possible.</p> <p>Use rotational grazing if possible, moving at weekly intervals, followed by adult immune cattle.</p> <p>Faecal Sample if problem perceived and receive advice from vet.</p>
Liver Fluke	<p>Fence off wet areas.</p> <p>If necessary, work out a strategic worming regime against liver fluke with vet.</p> <p>The period of greatest risk is in the autumn and early winter.</p> <p>In beef cattle, the first treatment should be given at housing or, if the cattle are not housed, during late autumn and early winter.</p> <p>A product killing immature fluke is advisable.</p>
Lice	<p>Low density in housing.</p> <p>Keep animals clean.</p> <p>If necessary use an approved insecticide such as deltamethrin before housing.</p> <p>If the agent chosen is only effective against adult stages of the lice infecting the animals, the treatment might have to be repeated again during the housing period.</p>

Condition	Recommendation
Mastitis	<p>Mastitis is a multifactorial disease, closely related to the production system and environment in which the cows are kept. Control of mastitis in an organic dairy herd must take an holistic approach which encompasses mastitis detection and treatment, milking practices, the cows' environment (both housed and at grass), feeding practices, accurate record keeping and importantly regular review of milk recording results.</p> <p>Good husbandry, breeding of resistant animals and optimisation of production levels are seen as the cornerstones of mastitis prevention. Cull high cell count animals.</p> <p>If treatment necessary use antibiotic.</p>
Scour	<p>Feed sufficient colostrum in first 24 hours of calves life.</p> <p>Group calves according to age and do not mix groups.</p> <p>Good ventilation and bedding.</p> <p>In a case of outbreak in a herd, it is important to attempt to diagnose the infective cause of the disease in order to target further control measures appropriately.</p> <p>Isolation of affected calves, effective treatment with rehydration solutions and provision of dry and warm conditions are vital in the treatment of calf scours.</p>
Respiratory Diseases	<p>Good ventilation, appropriate stocking densities and minimising stress particularly at weaning and castration.</p> <p>In a case of outbreak in a herd, it is important to attempt to diagnose the infective cause of the disease in order to target further control measures appropriately.</p> <p>The need for antibiotic cover for in-contact animals can, however, be minimised if an isolation facility exists and the affected animals are immediately removed from rest of the herd.</p> <p>Requires veterinary intervention.</p>
Sheep Scab	<p>Closed Flock where possible – source stock from scab free flocks.</p> <p>Moxidectin and Doramectin, both injectable macrocyclic lactone (ML) products, are the only two treatment options available to organic producers.</p>
Fly strike	<p>Shearing before the onset of the fly season will minimise the risk of fly strike.</p> <p>Spraying with cyromazine during high risk periods the best method of control, as a single application protects the animal for up to 10 weeks.</p>