

6.3 Animal Health and Breeding

6.3.1 What Keeps Animals Healthy

Factors influencing animal health

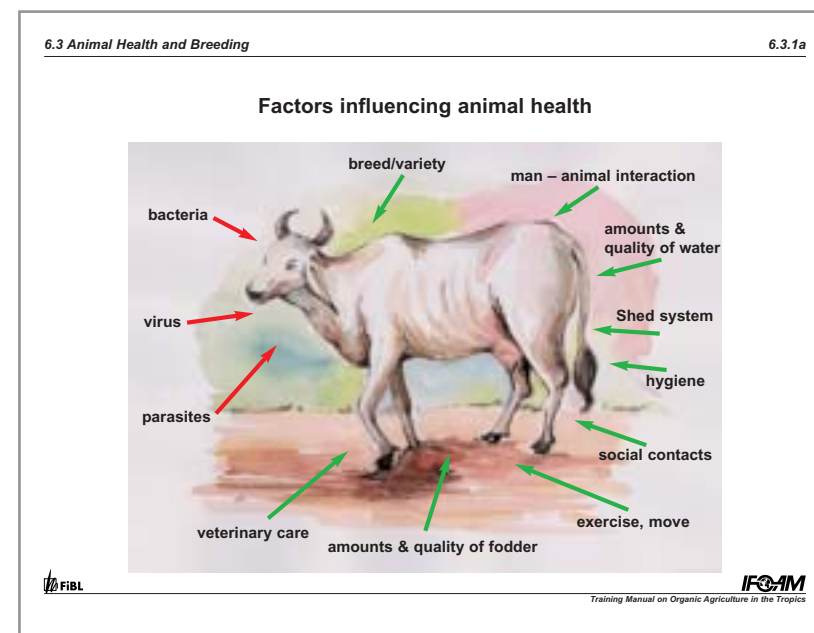
Disease causing germs and parasites are present almost everywhere. Like humans, animals have an immune system which is usually able to cope with these germs. And as with humans, the efficiency of the immune system will be disturbed if animals are not properly fed, can not practise their natural behaviour, or are under social stress.

Health is a balance between disease pressure (the presence of germs and parasites) and the resistance (immune system and self healing forces) of the animal. The farmer can influence both sides of this balance: reduce the quantity of germs by maintaining good hygiene, and strengthen the animal's ability to cope with germs.

Organic animal husbandry puts its focus on improving the living conditions of animals and on strengthening their immune systems. Of course: if an animal gets sick it must be treated. But the farmer should also think about why the immune system of the animal was not able to fight the disease or the parasite attack. And the farmer should think of ways to improve the animals living conditions and hygiene in order to strengthen it.

How to influence animal health?

Draw a farm animal which is common in the region on the board. Ask the participants which factors influence the health of the animal and its ability to cope with diseases? Note down the suggestions around the animal, distinguishing supportive and negative factors.



Transparency 6.3.1a: Bacteria, viruses and parasites attacking the farm animal which fights back with its immune system. The farmer can influence both sides of this balance.

Prevention before curing

Similar as in crop health, organic animal husbandry puts the main emphasis on preventive measures in order to keep animals healthy, rather than on curative methods. This starts from keeping robust breeds rather than high performing but very susceptible ones. Next, the conditions in which the animals are kept should be optimal ones: sufficient space, light and air, dry and clean bedding, frequent exercise (e.g. grazing) and proper hygiene etc. The quality and quantity of fodder is of crucial importance for the health of the animal. Instead of feeding commercial concentrates which make animals grow faster and produce more, a natural diet appropriate to the requirements of the animal should be achieved.

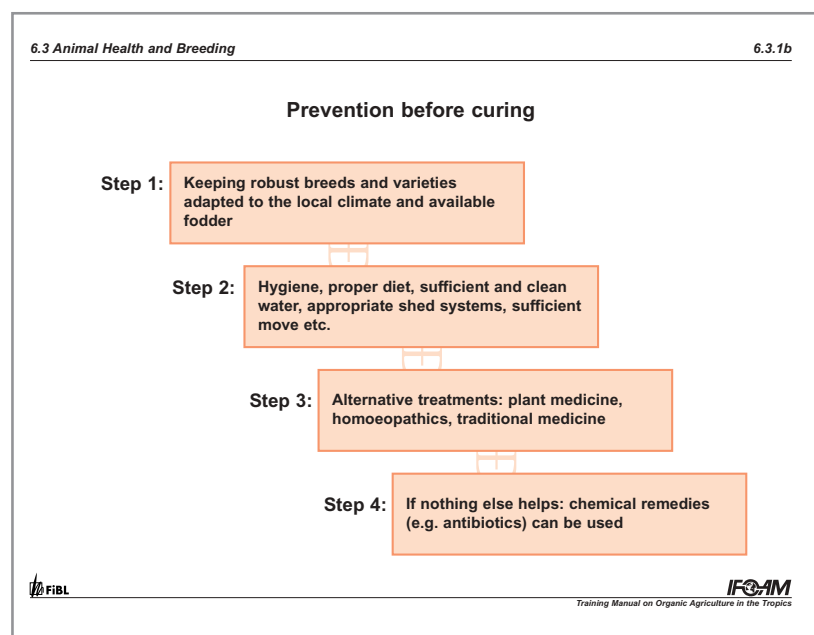
Where all these preventive measures are taken, animals will rarely fall sick. Veterinary treatment thus should play only a secondary role in organic farming. If treatment is necessary, alternative medicine based on herbal and traditional remedies should be used. Only if these treatments fail or are not sufficient, synthetic medicines (e.g. antibiotics) may be used.

«Moonde» – a preventive ritual from the Sahel

Moonde is a ritual where animals are made to take protective plant decoctions mixed with salt as a prevention against diseases. Certain local plants are collected and dried. At night, the women grind and mix them with salt inside the patriarch's home who is the master of the ceremony. Until late in the night, they sing songs in which they praise their animals and ask them to give abundant milk and beautiful calves.

In the morning, sixteen basins are dug into the soil and are coated with a gluey substance so that they can hold water mixed with the herbal preparation. A little further away, there is a seventeenth basin which will receive, along with the herbal preparation, other elements with supposed mystical powers for the protection of the animals. The patriarch stands near the basin, holding a bowl filled with butter in his right hand, symbolising prosperity. Then, the animals drink from the basins, while the community members say prayers for a smooth and prosperous year with many calves and lots of milk.

The ritual shows how much animal health is connected with human wealth in traditional pastoral societies. It also shows the respect the herders have towards their cattle and how much they care for their well being.



Transparency 6.3.1b: Only when all preventive measures fail animals should be treated, preferably with alternative remedies.

Experience sharing: Preventive measures

Which preventive measures do participants know? Which are the experiences of farmers in the region? Some topics can be: fodder, keeping, breeds, hygiene, pasture management.

Experience sharing: Rituals in animal husbandry

Which traditions of preventive treatment of farm animals do the participants know? Which rituals are practised in the area related to animal health and prosperity? What is the deeper significance of these ceremonies?

6.3.2 Veterinary Treatment

The main principal for veterinary treatment in organic animal husbandry is: get to know the causes of (or factors that favour) diseases in order to enhance the natural defence mechanisms of the animal (and to prevent its manifestations in the future, see above)

What the IFOAM Basic Standards say on veterinary medicine

Unlike in crop production, synthetic means are allowed to cure sick animals if alternative treatment is not sufficient. Here, reducing the suffering of the animal is given priority over the renunciation of chemicals. However, the standards clearly demand that priority is given to management practices which encourage the resistance of the animals thus preventing the outbreak of a disease.

Therefore, an outbreak of a disease shall be considered as an indicator that the conditions under which the animal is kept are not ideal. The farmer should try to identify the cause (or causes) of the disease and prevent future outbreaks by changing management practises.

If conventional veterinary medication is applied, withholding periods must be adhered to before the animal products can be sold as "organic". This shall ensure that organic animal products are free from residues of antibiotics etc. Synthetic growth promoters are not allowed in any case.

Controlling parasites with herbal remedies

Herbal medicines are widely used in many countries. Some traditional farming communities have a vast knowledge of local plants and their healing properties. Plants can definitely support the healing process, even if they do not eliminate the germ of the disease directly. Still, farmers should not forget to identify the cause of the disease and also to re-think their management practises. For parasite problems, changing the living conditions or the management of pastures will be more effective in the long run than any treatment.

What the IFOAM Basic Standards say on veterinary medicine

General Principles

- Management practices should be directed to the well being of animals, achieving maximum resistance against disease and preventing infections.
- Sick and injured animals must be given prompt and adequate treatment.

Recommendations

- Natural medicines and methods, including homeopathy, ayurvedic medicine and acupuncture, should be emphasised.
- When illness does occur the aim should be to find the cause and prevent future outbreaks by changing management practices.
- Where appropriate the certification bodies should set conditions based on the farm's veterinary records to minimise the use of medicines.
- The certification body/ standardising organisation should make a list of medicines and withholding periods.

Standards

- § 5.7.1. The well-being of the animals is the primary consideration in the choice of illness treatment. The use of conventional veterinary medicines is allowed when no other justifiable alternative is available.
- § 5.7.2. Where conventional veterinary medicines are used, the with-holding period shall be at least double the legal period.
- § 5.7.3. Use of the following substances is forbidden:
- a. Synthetic growth promoters,
 - b. Substances of synthetic origin for production stimulation or suppression of natural growth,
 - c. Hormones for heat induction and heat synchronisation unless used for an individual animal against reproductive disorders, justified by veterinary indications.
- § 5.7.4. Vaccinations shall be used only when diseases are known or expected to be a problem in the region of the farm and where these diseases cannot be controlled by other management techniques. The certification body/ standardising organisation shall define conditions for such cases.
- a. Legally required vaccinations are allowed.
 - b. Genetically engineered vaccines are prohibited.

Transparency 6.3.2a: Statements of the IFOAM Basic Standards on Animal Health (Edition 2000). Sections of specific relevance in this context are underlined.

Discussion: Relevance of the standards related to animal health
What is the relevance of the organic standards concerning veterinary treatment in the concerned region? Discuss with the participants.

Example: Using Sweet flag against parasites

One example to use a herbal remedy against parasites is sweet flag (*Acorus calamus*). This plant grows both in tropical as well as subtropical regions and is found on the banks of rivers and lakes and in swampy ditches or marshes. The powdered dried rhizomes (thick root parts) act as an effective insecticide against fowl lice, fleas and house flies.

Treating fowls infested by lice: Use around 15g of powdered rhizome for an adult bird. For dusting the bird with the powder, hold it by its feet upside down so that the feathers open and the dust will work its way to the skin. The treatment is reported as being safe to the birds.

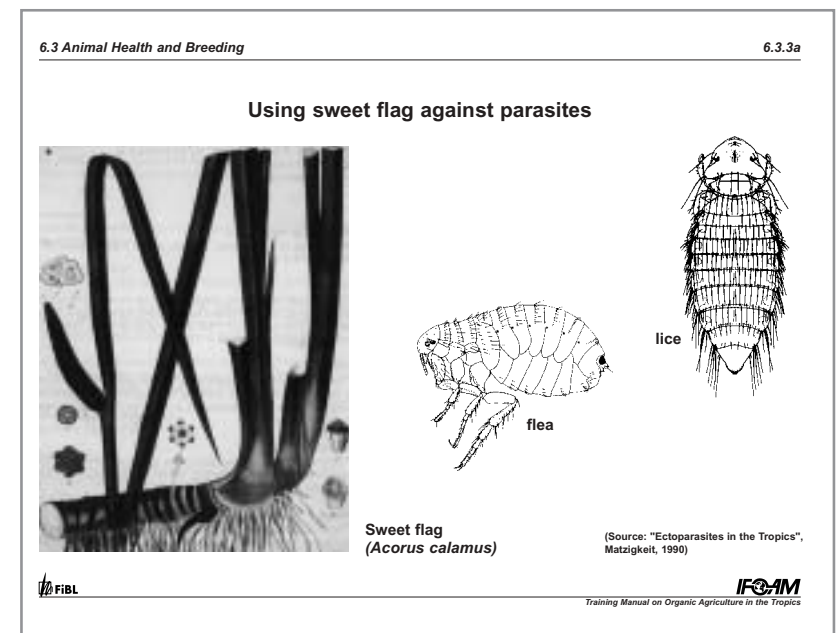
The sweet flag powder is also reported to be effective against house flies when dusted on fresh cowdung infested by fly maggots. It further shall protect new-born calves of vermin infection if washed with a water infusion.

Attention! Herbal remedies against parasites can also have a toxic effect on the farm animals! Therefore it is important to know the appropriate dose and application method!

Homeopathic Treatment

The concept of homeopathy was developed in the 18th century for treatment of humans. In recent times, some veterinary doctors use this alternative medicine for treating sick animals. Homeopathy is based on highly diluted substances which would cause similar symptoms as the disease if given in high concentrations. Homeopathic treatment aims at stimulating the self healing forces and the immune system of an organism. A specific dilution process transfers the "information" of the substance to the next dilution level. Usually, the remedies itself do not contain detectable amounts of the original material anymore.

As with treating humans, a large amount of experience is crucial for properly using homeopathy for veterinary treatment.



Transparency 6.3.2b: Sweet flag (*Acorus calamus*) can be used to treat fowls against lice, but also to reduce house fly populations. (Source: "Ectoparasites in the Tropics", Matzigkeit, 1990)

Experience sharing: Herbal veterinary medicines

Find out in groups: Which local plants are used for treating farm animals? Each group shall note on a paper chart a list of plants and for which diseases or injuries they are used. Share the results with the other groups and present conclusions.

Group work: Organic disease management

What are the most common animal health problems in the region? What are the symptoms? Select a disease which the participants are most familiar with and discuss in groups how an organic disease management plan could be developed. Distinguish between preventive and curative measures.

6.3.3 Breeding in Organic Animal Husbandry

Principles and methods

As preventive measures for maintaining good animal health are of high relevance in organic farming, the selection of breeds suitable to local conditions and to organic feeding is of crucial importance. This requires that suitable breeds are available. Traditional breeds of farm animals may be a good starting point for organic animal breeding. Animals can be improved by selection of individuals especially suitable for organic conditions. They can be crossbred with suitable new breeds, thus achieving an animal with the positive aspects of traditional breeds and the satisfying production of the new breeds.

For breeding, organic farming uses natural reproduction techniques. While artificial insemination is allowed, embryo transfer, genetic manipulation, and hormonal synchronisation are not permitted according to IFOAM standards.

Breeding Goals

Over the last decades, traditional breeds have been replaced by high performing ones in many regions. Similar to high yielding plant varieties, these new breeds usually depend on a rich diet (concentrates) and optimal living conditions. As high performing breeds in general are more susceptible to diseases than traditional varieties, they need frequent veterinary interventions. Thus, these new breeds might not be the right choice for small farmers, as the costs of food concentrates and veterinary treatment are too high compared with what can be earned by selling the products.

In addition, for organic farmers the main animal product (e.g. milk) is not the only reason to keep animals (see chapter 6.3.1). Breeding activities therefore should try to optimise the overall performance of the animal, taking into consideration the different goals of an organic farmer. For example a poultry breed suitable for organic smallholder farms might not be the one with the highest egg production, but one in which meat production is good, and kitchen wastes and whatever is found on the farm yard can be used as feed. Suitable cattle breeds would produce sufficient milk and meat while feeding mainly on roughage and farm by-products (e.g. straw), be of high fertility and good resistance against diseases, if required, they can also be used for draught and transport.

Breeding Goals

The «ideal» organic poultry breed

- Feeding on kitchen wastes and farm by-products
- Satisfying egg production
- Useful as meat
- Good health, good resistance against diseases



The «ideal» organic cattle breed

- Utilising roughage and farm by-products
- Satisfying milk production
- High fertility
- Good resistance against diseases
- Long life with continuous production

Transparency 6.3.3a: Organic animal breeding should optimise the overall use of farm animals, with consideration given to the local conditions and available fodder: breeding goals for poultry and cattle breeding.

Discussion: Traditional varieties and cross-breeds

Select the farm animal which is most relevant for organic farmers in the region. Collect on the board the locally available breeds which the participants can name. Which are their properties concerning food requirements, production level, susceptibility to diseases etc. Which of them would be suitable for organic farming, which wouldn't? Discuss and make conclusions.

Maximum performance or life production?

When comparing the production of different breeds of cows, usually, only the production per day or year is taken into consideration. However, high performing breeds usually have a shorter life span than traditional ones with lower production. The life milk production of a cow giving, for example, 8 litres per day, but over 10 years, therefore would be greater than the one of a high-breed cow yielding 16 litres per day, but dies after 4 years. As the investments to get a milk producing cow are quite high, i.e. the rearing and feeding of a calf or the purchase of an adult cow, continuous production over a long life span should be of high interest to the farmer. This should be reflected in the breeding goals, which so far mainly focus on the maximum short term production.

Discussion: Economic considerations

Select together with the participants a high performing "modern" breed of a cow and one traditional or cross-breed type. Make realistic estimates (or get the data in advance) for the investments, maintenance costs, and milk production. Also name other uses of the breeds. Discuss the overall economic costs versus overall benefits and make conclusions. You can draw the table below on a board or use the template given in Annex 8.1.

Template: Comparing the economic performance of two cattle breeds		
Item	Breed A	Breed B
Investments: <ul style="list-style-type: none">costs of a calfcosts of a cow		
Maintenance: <ul style="list-style-type: none">fodder purchases per yearveterinary costs per year		
Milk production: <ul style="list-style-type: none">litres per daylitres per yearproductive years in lifelitres per life		
Other uses: <ul style="list-style-type: none">meatdraughtdung		

8. Annex IFOAM Training Manual on Organic Agriculture in the Tropics 9

Illustration: Table for comparing the economic performance of two different breeds.

Recommended Readings

- «Dairy Cattle Husbandry», Agromisa Agrodok-series No.14.
- «Natural Veterinary Medicine. Ectoparasites in the Tropics», Agrecol.

Useful web-sites

- *Vétérinaires sans frontières* <http://www.vsf-france.org>