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Module-7

Animal Husbandry

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Integrating animals into a farm help creating a closed or semi-closed system where energy and nutrients are recycled. Animals can convert non-edible biomass (e.g. grass, straw, kitchen waste) into food, while increasing soil fertility with their manure.

Many farm animals have a multi-functional role, for example
→ Produce dung which is of great importance for soil fertility.
→ Yield products such as milk or eggs for sale or own consumption continuously.
→ Recycle by-products such as straw or kitchen waste.
→ Serve as draught animals for tillage or transport.
→ Produce meat, hides, feathers, horns etc.
→ Serve as an investment or a bank.
→ Help in pest control (e.g. dugs) and weed management (e.g. grazing on barren fields).
→ Have cultural or religious significance (prestige, ceremonies etc.).
→ Produce young stock for breeding or sale

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A. Making a Decision on Animal Husbandry

- Is my farm suitable?

Do I have sufficient space for shedding and grazing, sufficient fodder or by-products to feed, sufficient know-how on keeping, feeding, and treating the specific kind of animals?

- Will the animals benefit my farm?

Can I use the dung in a suitable way? Will I get products for my own consumption or sales? Will the animals somehow affect my crops?

- Can I get the necessary inputs?

Is sufficient labour available within or outside my farm? Is enough fodder and water of good quality available throughout the year? Will remedies and veterinary support be available, if needed? Can I get suitable breeds of animals?

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- Will I find a market for the product?

Does anyone want to buy my milk, eggs, meat etc.? Is the price worth the effort? Am I able to compete with other farmers?

- What do animals need?

Fodder in adequate quality and quantity; for non-ruminants: diversity in fodder is usually required.

→ Sufficient access to clean drinking water.

→ Clean sheds of sufficient size and with adequate light and fresh air.

→ Sufficient freedom to move around and perform their natural behaviour. Healthy conditions and veterinary follow-up, when needed.

→ Sufficient contact with other animals, but no stress due to overcrowding.

→ For herd animals: an appropriate age and sex distribution within the herd.

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How many animals to keep?

Availability of fodder on the farm, especially in periods of scarcity (e.g. dry season).

→ Carrying capacity of pastures.

→ Size of existing or planned sheds.

→ Maximum amount of manure the fields can bear.

→ Availability of labour for looking after the animals.

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Animal Housing

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B. Animal Housing

The type of shed should be specific to the type of animals to be sheltered.

- Planning Sheds

They should be constructed in a way ensuring:

→ Sufficient space to lie down, stand up, move and express natural behaviour (e.g. licking, scratching etc.).

→ Sufficient light (as a rule, one should be able to read a newspaper in the shed).

→ Protection from sunlight, rain, and extreme temperatures.

→ Sufficient aeration, but no draught.

→ Appropriate beddings (see section below).

→ Elements to exercise natural behaviour (e.g. for poultry: perching rails, sand baths and secluded laying nests).

→ Sheltered pits or heaps to collect and store manure

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- Beddings

Beddings are materials used in sheds for keeping the floor soft, dry, and clean, which is important for animal health. They absorb the excrements of the animals and need to be re-placed from time to time. Beddings can be of straw, leaves, twigs, husks or other locally available material. . They can be replaced daily or kept for several months while adding fresh material on top.

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Animal Feeding

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C. Animal Feeding

- Food Requirement of Animals
- Grazing versus Shed Feeding
- Integrating Fodder Cultivation in the Farm

Grass or leguminous cover crops in tree plantations

→ Hedges of suitable shrubs

→ Shade or support trees

→ Grass on bunds against soil erosion

→ Grass fallows or green manures in the crop rotation

→ Crops with by-products such as paddy straw or pea leaves.

- Management Pastures

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D. Animal Health

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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.

- Prevention before Curing.
- 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.

- 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.

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E. Breeding Goals

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- 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.
- In addition, for organic farmers the main animal product (e.g. milk) is not the only reason to keep animals.
- Breeding activities therefore should try to optimise the overall performance of the animal, taking into consideration the different goals of an organic farmer

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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.

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.