

# ORGANIC LIVESTOCK POULTRY AND PRODUCTS

### 1. Scope

Livestock standards prescribed under these rules refer to any domestic and domesticated animal including bovine (including buffalo, Mithun and Yak), ovine, porcine, caprine, rabbits, poultry, insects and bees and/ or any other animal notified by the FSSAI from time to time, raised for food/fibre or in the production of food and fibre, their derivatives and by-products. The products of hunting or fishing or wild animals shall not be considered part of livestock standards.

### 2. General principles

Organic livestock production in general is a land based activity and shall be an integral part of organic farm unit and management of livestock shall be in consistent with the principles of organic farming and shall base on:

- a. Natural breeding;
- b. Protection of animal health and welfare;
- c. Fed with organic feed and fodder;
- d. Access to grazing in organic fields;
- e. Freedom to express natural behaviour;
- f. Reduction of stress and
- g. Prohibition of use of chemically synthesized allopathic veterinary drugs, antibiotics, hormones, growth boosters, feed additives etc

Landless livestock production where the operator does not have organically managed land and/ or has not established a written cooperation agreement with another certified organic operator in compliance of the rules specified in Appendix 1 of these rules is prohibited.

In cases where traditional rearing system of the farm and/ or adverse climatic conditions does not allow easy access to pastures, livestock may be produced through providing organic feed certified under these rules, provided the indoor and outdoor space requirements, specified under these rules are fully met (Clause 6).

### **3. Organic Management Plan**

During the registration of the farm by the accredited Certification Body, the producer has to present an organic management plan which requires to be verified during the inspection. This plan shall be updated annually.

### **4. Choice of Breeds, Source and Origin**

#### **4.1 Choice of Breeds**

The choice of livestock and poultry, breeds, strains and breeding methods shall be consistent with the principles of organic farming, taking into account, in particular, the following:

- i. their adaptation to the local climatic conditions and
- ii. their vitality and resistance to diseases

#### **4.2 Sources/ Origin**

- i. Animals must have been born or hatched from production units complying with these guidelines, or must be the offspring of parents raised under the conditions set down in these guidelines;
- ii. Transfer of livestock and poultry between organic and non-organic units shall not be permitted. The accredited Certification Body shall ensure that brought in livestock and poultry from other units comply with these Guidelines;
- iii. Livestock and poultry raised on non-organic production units shall be converted to organic as per these Guidelines;
- iv. When a producer demonstrates to the satisfaction of the accredited Certification Body that the organic source livestock are not available, the accredited Certification Body may allow such livestock and poultry under the following circumstances:
  - a. When the producer is establishing an organic livestock and poultry operation for the first time;

- b. When the producer wants to change the livestock and poultry breed/ strain or when new livestock and poultry specialization is developed;
- c. For the renewal of a herd, e.g., due to high mortality of animals caused by catastrophic circumstances and
- d. When the producer wishes to introduce breeding males into the farm. In all such cases product of such animals shall qualify for organic only after completion of conversion period specified under clause 7 of these standards.

## **5. Livestock Identification and Animal Record Keeping**

### **5.1 Livestock identification**

- i. Each animal/ herd/ batch shall bear unique identification number. Large animals including bovine, ovine, caprine, porcine etc shall bear individual number in the form of tag, while poultry birds and small mammals shall be identified with herd/ flock/ batch;
- ii. Identification devices on the animals can be printed ear tags, RFID tags, Barcodes or any other suitable tag which is clearly visible.

### **5.2 Record keeping**

Following data for each animal/ herd or batch shall be maintained and made available to the accredited certification body for verification during inspection:

- i. Parent details;
- ii. Source and purchase details;
- iii. Animal details;
- iv. Breeding details;
- v. Feeding details;
- vi. Health care details including details of vaccination, medication, veterinarian prescription and withdrawal period etc;
- vii. Production details;
- viii. Sale details and
- ix. Any other relevant details

## **6. Housing and Management**

- i. The housing and day-to-day management of the animal, maintenance of sanitation, hygiene, bio-security and environment shall be planned to suit the specific behavioural needs of the livestock and poultry and shall provide for sufficient space to ensure free movement and opportunity to express normal patterns of behaviour;
- ii. The animals should not be tied, however animals can be confined for specific reasons, such as, milking, for some medical procedures, controlled grazing, during night time and for health and safety of animal;
- iii. Where the livestock and poultry's normal behaviour demands group living, animals shall not be kept in isolation, but shall have company of like kind;
- iv. As far as possible two different kinds of animals shall not be kept together, unless for specific purposes, such as, free range poultry birds in cow/buffalo shed for scavenging on ticks and other insects
- v. The housing system shall ensure prevention of abnormal behaviour, injury and disease;
- vi. Appropriate facilities to cover emergencies such as the fire, the breakdown of essential mechanical services and the disruption of supplies, shall be available;
- vii. Housing for Livestock and Poultry shall not be mandatory in areas where appropriate climatic conditions exist to enable animals to live outdoors without compromising their comfort, health and welfare. Conditions shall be inspected and permitted by the accredited Certification Body on producer and location-to- location basis. Outdoor open areas may be partially covered;
- viii. Housing conditions shall meet the biological and behavioural needs of the livestock and poultry by providing easy access to feeding and watering and shall ensure:

- a. Insulation, heating, cooling and ventilation of the building to ensure that air circulation, dust level, temperature, relative air humidity and gas concentrations are kept within limits which are not harmful to the livestock and poultry;
  - b. Plentiful natural ventilation and light to enter;
  - c. Appropriate fencing not harmful to the animals
- ix. Confinement shall be permitted under following conditions:
- a. Inclement weather to protect animals from injury;
  - b. Ensure health safety or welfare;
  - c. To protect plant, soil and water quality;
- x. Minimum requirement of surface area for indoor housing and for outdoor run and pens is given in Annex 1;
- xi. The outdoor stocking density of livestock kept on pasture, grassland, or other natural or semi-natural habitats, must be low enough to prevent degradation of the soil and over-grazing of vegetation.

### **6.1 Special conditions for Mammals**

- i. All mammals shall have access to open-air exercise or resting area, paddock, pen or run which may be partially covered and/or shall have space for protection from rains and hot sun;
- ii. The accredited Certification Body shall grant exceptions for the access of males or bulls to open areas to avoid mixing with female animals for controlled breeding;

- iii. Other animals may also not have access to open-air exercise area or run during the heavy rain period, harsh winter/ summer or the final fattening phase;
- iv. Livestock shed shall have properly laid and smooth floor, although not slippery. The floor shall not be entirely of slatted or grid construction;
- v. The housing conditions shall aim at providing comfortable, clean and dry laying/rest area of sufficient size, consisting of a solid construction. Wherever possible, straw bedding shall be provided;
- vi. The calves may be housed separately and never in the adult animal shed;
- vii. Pigs must be kept in groups, except in the last stages of pregnancy and during the suckling period. Piglets may not be kept on flat decks or in piglet cages. Exercise areas must permit dunging and rooting by the animal. Breeding boars may be kept separately.

## **6.2 Special conditions for Poultry**

- i. Housing of poultry in cages shall not be permitted;
- ii. Water fowl/duck shall have access to a stream, pond or lake whenever the weather conditions permit;
- iii. Poultry house floor shall be of solid construction covered with litter material such as straw, wood shavings, sand or turf. In case of layers, the floor area must be large enough to permit dropping collection. Perches/ higher sleeping areas of a size and number commensurate with the species and size of the group and of the birds shall be provided. For outdoor access appropriate exit/entry holes of adequate size must be provided;
- iv. In the case of laying hens, manipulation of day length may be permitted through the use of artificial lights;
- v. Poultry shall have access to open area as specified in Annex 1 and shall have freedom to move freely between indoor and outdoor area;
- vi. Open air areas for poultry shall be mainly covered with vegetation and be provided with protective facilities and permit birds to have easy access to adequate numbers of drinking and feeding troughs;
- vii. Where poultry are kept indoors due to restrictions or obligations imposed on the basis of provincial legislation they shall permanently have access to

sufficient quantities of roughage and suitable material in order to meet their ethological needs;

- viii. Multi-level aviary systems for layers shall have no more than three levels or tiers above ground level. Total floor space shall meet minimum indoor and outdoor surface area requirements specified in Annexure I. In all such cases access to the open air run, needs to be ensured under all-in and all-out system to avoid the mixing of birds among flocks;
- ix. Buildings shall be emptied, cleaned and disinfected, between flocks, and runs shall be left empty to allow the vegetation to grow back.

### **6.3 Special conditions for Silkworms**

- i. Silkworm rearing is done under both open and domesticated conditions. Under open situations worms are reared on host plants either in wild or under cultivated conditions. In both cases the host plants shall be certified under wild harvest collection or under crop production as specified under Appendix 1 of these rules;
- ii. Under domestic rearing situations housing shall be clean and ventilated with adequate space for movement between rearing trays. Multilayer rearing system can also be adopted provided adequate space is kept between trays and arrangements are made to ensure that trays do not get contaminated with falling excreta of worms in above layers;
- iii. Accredited certification agencies shall define the adequate housing and rearing conditions keeping in view of the local practices used and conditions required according to the species used.

### **6.4 Special conditions for Rabbits**

- i. The keeping of rabbits in cages shall not be permitted. If required for comfort and safety rabbits may be temporarily confined, for example overnight, in cages or hutches. Continuous confinement is prohibited;
- ii. Rabbits shall have space to run, hop and dig, and to sit upright on their back legs with ears erect. The minimum indoor and outdoor space requirements are shown in Annex 1.

## **7 Conversion Period for Animal Production**

- i. Simultaneous conversion of livestock and poultry and land used for raising feed/fodder within the same unit should be a preferred approach. Land for production of feed, fodder, pasture, grazing etc shall be certified organic as per the provisions in Appendix 1 under Chapter 3 of these rules including conversion requirements;
- ii. When a livestock production unit, with entire herd, or flock of sheep/ goat or batch of poultry birds or small mammals such as rabbits, is in transition to organic production, pasture and feed produced on the land undergone a minimum period of 12 months of conversion period may be considered organic for feeding to organic livestock;
- iii. In case of silkworm rearing, there is no requirement for conversion period, provided the larva are fed with organic feed grown in compliance of these rules for a minimum period of 12 months for their entire lifespan period;
- iv. The conversion period shall be determined by the accredited Certification Body and the conversion period shall be accounted from the date of first inspection;
- v. In cases, where the land and livestock and poultry conversion to organic status is not simultaneous and the land alone has reached organic status and the livestock and poultry from a non-organic source is introduced, these must be reared according to these guidelines for at least the following compliance periods before their products are sold as organic:
  - a. Bovine including buffalo**
    - i. Meat products: Twelve (12) months and at least 3/4th of their life span is spent in the organic management system;
    - ii. Calves for meat production: Six (6) months when brought in as soon as they are weaned and less than six (6) months old;

- iii. Milk products: Six (6) months.
  
- b. Ovine and caprine (Sheep & Goat)**
  - i. Meat products: Six (6) months;
  - ii. Milk products: Six (6) months.
  
- c. Pig**
  - i. Meat products: Six (6) months.
  
- d. Small mammals (such as Rabbits)**
  - i. Meat products: From the second week after their birth to the entire life span as determined by the accredited Certification Body.
  
- e. Poultry**
  - i. Meat products: from the second day of hatching to the entire life span as determined by the accredited Certification Body;
  - ii. Eggs : Six (6) weeks.

## **8 Feed**

Livestock and poultry farms shall provide maximum diet from feedstuffs (*including 'in conversion' feedstuff*) produced as organic as per the requirements of these guidelines. Agricultural processed residues of organic origin, such as from grain fermentation, fruit processing, vegetable processing, etc., shall be permitted for purpose of feeding, provided that the overall feeding practices satisfy the daily energy and nutrient requirements of the concerned animals.

The agriculture land committed to cultivation of feed / fodder crops intended to be used as feed for livestock and poultry shall be organically grown.

During the operations, the products shall maintain their organic status provided that livestock and poultry are fed with at least 85% for ruminants and 80% for non-ruminants calculated on a dry matter basis, feed obtained from organic sources that have been produced in compliance with these guidelines.

Accredited Certification Body can grant permission to allow a restricted percentage of feedstuffs not produced according to these guidelines to be fed for a limited time, provided that it does not contain genetically engineered/modified organisms or products thereof.

Specific livestock and poultry rations shall take into account:

- i. The need of young animals for natural feed, such as, feeding of maternal milk, milk from other mammal or milk replacer of organic origin that has maximum similarity with maternal milk, provided that it does not contain any genetically modified ingredient, antibiotics, hormone, etc;
- ii. That in herbivores, substantial proportion of the dry matter and energy in the daily rations should consist of roughage, fresh or dried fodder, or silage; need for inclusion of cereals in the fattening phase of poultry and livestock and poultry must have ample, free access to water appropriate to maintain full health and productivity;
- iii. Due to reasons of animal welfare, health and productivity, if supplements are to be added, it shall be permitted on advice of a qualified veterinarian. The permitted list of such supplements, feed materials (probiotics, and biologicals, immunologicals and procuring aids etc) and processing aids that comply the guidelines under these rules is given at Annex 2.

### **8.1 General Criteria for feedstuff and nutritional components**

Substances shall be permitted as per Annex 2. Such substances should significantly satisfy feeding requirements of the livestock and poultry fulfilling the physiological, behavioral and welfare needs of the concerned species; and such substances should not contain genetically engineered/modified organisms and products thereof; and are non-synthetic and are primarily of plant, mineral or animal origin. Accredited Certification Body may allow the use of feedstuff not included in Annex II and have been recommended by the

veterinarian, provided that all such substances are non-synthetic and are primarily of plant, mineral or animal origin

## **8.2 Specific Criteria for Feedstuffs and Nutritional Elements**

- i. The feedstuffs should not be prepared by using chemical solvents and chemical treatment. All the ingredients of the feed including supplements, fed to organic animals should be from organic sources. In case of shortage of these substances, or in exceptional circumstances, well-defined analogic substances listed under Annex 3 may also be used;
- ii. Feedstuffs of animal origin, with the exception of milk and milk products, fish, other marine animals and products derived thereof shall not be used. The feeding of mammalian material to ruminants is not permitted with the exception of milk and milk products;
- iii. Synthetic nitrogen or non-protein nitrogen compounds shall not be used.

## **8.3 Specific Criteria for Additives and Processing Aids:**

- i. The supplements should be derived from natural sources;
- ii. Feed processing aid supplements like binders, anti-caking agents, emulsifiers, stabilizers, thickeners, surfactants, coagulants if used should be from natural sources;
- iii. Antioxidants: only from natural sources shall be permitted;
- iv. Preservatives: only natural acids are allowed;
- v. Colouring agents (including pigments), flavors, odor masking agents and appetite stimulants: only natural sources are allowed;
- vi. Probiotics, enzymes and microorganisms are allowed but should not be from genetically modified sources;

- vii. Any synthetic chemicals, such as, antibiotics, coccidiostat, medicine, growth promoters or any other substance supplemented for purpose to stimulate growth or production shall not be fed to the organic livestock & poultry;
  
- viii. Silage additives, additives for enriching crop residues and processing aids may not be derived from genetically engineered/modified organisms or products thereof, and may be comprised of only:
  - a. Sea salt;
  - b. Coarse rock salt;
  - c. Yeasts;
  - d. Enzymes;
  - e. Whey;
  - f. Sugar; or sugar products such as molasses, jaggery, grain bran;
  - g. Honey;
  - h. Lactic, acetic, formic and propionic bacteria, or their natural acid product when the weather conditions do not allow for adequate fermentation and their use to be approved by the accredited Certification Body.

## **9 Health Care**

The organic livestock & poultry, in general, should follow the basic principles of preventive health and productivity management wherein the focus would be on preventing diseases, detecting underlying fertility and production problems and its correction primarily on correcting management, nutrition and sanitation.

- i. The producer in consultation with veterinarian should draw a program of health management of animals and carry out testing of the herd as per the common diseases of herd/ flock (Annex 4). The health care shall be based on the following broad principles:
  - a. The choice of appropriate breeds or strains of animals that can acclimatize, adapt to environment as per clause 4 of these standards;

- b. The setting up of the animal husbandry practices should be appropriate to the requirements of each species and should focus on encouraging strong resistance to disease and prevention of infections;
  - c. The use of good quality organic feed, together with regular exercise and access to fodder/roughages, and/or open-air runs, so as to have positive effects on natural immunological defence of the animal;
  - d. Appropriate stocking density of livestock & poultry so as to avoid overcrowding and spread of infections or competition to feeding.
- ii. The farm should have an established system of detection of sub-clinical, sick or injured animals and if, so detected, must be treated immediately. In cases where isolation is necessary it will be so carried out in suitable housing areas. The paramount interest in case of sickness would be animal welfare and mitigating pain and suffering, and hence the producer shall not withhold medication even if the use of such medication will cause the animal to lose its organic status;
- iii. The use of veterinary medicinal products in organic farming shall comply with the following principles:
- a. All vaccinations required by law of the land shall be permitted. Where specific disease or health problems occur, or is predicted to occur, and there are no alternative permitted treatment or management practice exist, use of parasiticides, or therapeutic use of veterinary drugs are permitted under prescription and supervision of a registered veterinarian, provided that the mandatory withdrawal periods as provided under these guidelines under Annex 5 are observed. In drugs where withdrawal period is not prescribed in these guidelines, a minimum of 48 hours of withdrawal period shall be observed;
  - b. For purpose of treatment and prevention of diseases and under-performances, herbal/phyto-therapeutic (excluding antibiotics), homeopathic or ayurvedic products shall be preferred to allopathic veterinary drugs or antibiotics, provided that their therapeutic effect is

effective for the species of animal and the condition for which the treatment is intended;

- c. In case alternative therapeutic or preventive measures are unlikely to be effective in combating illness or injury, allopathic veterinary drugs or antibiotics may be used under the responsibility and supervision of a veterinarian.
- iv. The use of allopathic veterinary drugs or antibiotics or drugs derived from genetically modified source for preventative treatments and for enhancing productivity or fertility is prohibited;
- v. Hormonal treatment may only be used for therapeutic reasons and under veterinary supervision;
- vi. Growth stimulants, agents or substances used for the purpose of stimulating growth or production shall not be permitted.

## **10 Breeding and Management**

- i. The major focus of livestock and poultry management shall be to provide care, comfort, and respect to the animals and ensure their welfare in the farming system;
- ii. Livestock and poultry breeding methods shall be in accordance with and in compliance with the principles of organic farming and shall take into account:
  - a. The breeds and strains most suited to local conditions;
  - b. The preference for reproduction through natural methods, although artificial insemination may be used;
  - c. Embryo transfer techniques and any other breeding techniques employing genetic engineering shall not be used;
  - d. The use of hormonal reproductive treatment shall not be used unless prescribed therapeutic, directed towards correcting the physiological problem.

- iii. Mutilation, such as, tail docking, cutting of teeth, trimming of beaks and dehorning are not permitted. In exceptional cases, some of these may be authorized by the accredited Certification Body for reasons of safety (e.g. *dehorning in young animals, hoof trimming, cutting of pin teeth in pigs etc*) or if they are intended to improve the health and welfare of the livestock and poultry. Such surgical procedures shall be carried out by a registered veterinarian at the most appropriate age; and any suffering to and pain shall be reduced to a minimum. Wherever possible, anesthetic and analgesics shall be used. Physical castration is allowed only in order to maintain the quality of products and traditional production practices (*meat-type pigs, bullocks, capons, etc*).

## **11 Manure and Urine Excreta Management**

- i. The collection, handling and disposal of the dung and urine from shed, paddock, open run or grazing areas shall be implemented in a manner that:
  - a. Minimizes soil and water degradation;
  - b. Does not significantly contribute to contamination of water by nitrates, phosphates, and pathogenic bacteria;
  - c. Optimizes recycling of nutrients and
  - d. Does not include burning or any practice inconsistent with organic practices.
- ii. All manure storage and handling facilities, including composting facilities shall be designed, constructed and operated to prevent contamination of ground and/or surface water;
- iii. Manure application rates shall be at levels that do not contribute to ground and/or surface water contamination. The accredited Certification Body shall establish maximum application rates for manure or stocking densities as per local conditions. The timing of application and application methods shall not increase the potential for run-off into ponds, rivers and streams.

## 12 Transport

- i. During transport, the producer shall prevent stress, injury, hunger, thirst, malnutrition, fear, distress, physical & thermal discomfort, pain, disease during the transport and shall observe the protocols as prescribed under law of the land including:
  - a. All necessary arrangement be made in advance to minimize length of the journey and meet the animal's need during the journey;
  - b. Animals must be fit for the intended journey;
  - c. Means of transport as well as the loading and unloading facilities must be designed, constructed, maintained and operated so as to avoid injury and suffering and ensure the safety of the animals;
  - d. Personnel that handle animals must be trained and competent as appropriate for this purpose and must carry out their tasks without using violence or any other method likely to cause unnecessary fear, injury or suffering;
  - e. Transport must carry out without delay to the place of destination and the welfare conditions of the animals must be regularly checked and appropriately maintained;
  - f. Sufficient floor area, height and other spacing requirements must be provided for the animals, appropriate to their size and intended journey and
  - g. Water, feed and rest must be offered to the animals at suitable intervals and should be appropriate in quality and quantity to their species, size and age.
  
- ii. Efforts should be made to avoid or reduce following stress factors:
  - a. Stress due to gathering and handling;
  - b. Stress due to deprivation of, or changes in quantity or quality of food and water;
  - c. Stress due to extremes of temperature or change in climatic conditions;
  - d. Stress due to the groupings of animals strange to each other both within and between species;
  - e. Stress due to separation from others of the animals' own kind;
  - f. Stress due to unfamiliar surroundings, noises and sensations;

- g. Stress due to overcrowding and isolations;
  - h. Stress due to fatigue;
  - i. Stress due to exposure to disease.
- iii. The use of electric stimulation or allopathic tranquilizers shall not be permitted during loading and unloading of animals.

### **13 Slaughter of Animals**

- i. The slaughter of livestock and poultry shall be undertaken in a manner, which minimizes stress and suffering, and shall be in accordance with the applicable rules framed for the purpose;
- ii. Approved products for cleaning and disinfection of the buildings and installations are given at Annex 6;
- iii. The slaughter, evisceration and packing of livestock and poultry should be conducted in such a manner as will result in hygienic processing, proper inspection and preservation for the production of clean and wholesome meat and meat products. Hygiene standards must comply the requirements laid down by the FSS Act with the exception that the chemicals not allowed under these rules shall be replaced with the substances allowed under these rules;
- iv. Separate rooms should be provided for:
  - a. Livestock and poultry receiving and holding;
  - b. Washing and disinfection of coops;
  - c. Slaughter and bleeding;
  - d. Feather removal;
  - e. Evisceration, chilling and packing;
  - f. Inedible products room.
- v. Water Supply: The quality of water should satisfy the requirements of potable water;
- vi. Ventilation: Particular attention should be given to ventilation. Illumination should be sufficiently strong, properly situated and should not cause glare;

- vii. Personnel hygiene: Personnel should wear special working clothes of washable material. Proper training shall be given regarding hygiene, frequent hand washing, disinfection etc and
- viii. Activities such as stunning, bleeding, scalding, plucking, feet removal, evisceration and chilling, draining, grading etc. shall be done in accordance with the applicable rules framed for the purpose.

## Minimum Surface Area Indoors & Outdoors and Other Characteristics of Housing in Different Species and Types of Production

### 1. Bovines, Ovine, Caprine and Pig

Livestock	Indoor Area (net area available to animals)		Outdoor Area (exercise area, excluding pasturage)
	Live Weight Minimum (Kg)	M2/Head	M2/Head
Breeding & fattening bovine	Up to 100	1.5	1.1
	Up to 200	2.5	1.9
	Up to 350	4.0	3
	Over 350	5 with a minimum of 1m <sup>2</sup> /100 kg	3.7 with a minimum of 0.75m <sup>2</sup> /100kg
Dairy Cows		6	4.5
Bulls for breeding		10	30
Sheep & Goats		1.5 for sheep/goat	2.5
		0.35 for lamb/kid	0.5
Farrowing Pigs with piglets up to 40 days		7.5 for sow	2.5
Fattening pigs	Up to 50	0.8	0.6
	Up to 85	1.1	0.8
	Up to 110	1.3	1
Piglets	Over 40 days and up to 30 Kg	0.6	0.4
Brood Pigs		2.5 for female	1.9
		6 for male (If pens are used for natural service: 10m <sup>2</sup> /boar)	8.0

### Poultry

Poultry	Indoor Area (net area available to animals)	Outdoor run
Layers	6 birds m <sup>2</sup>	4 bird/m <sup>2</sup>
Pullets 0-8 weeks	24 birds m <sup>2</sup>	16 birds m <sup>2</sup>
Pullets 9-18 weeks	15 birds m <sup>2</sup>	10 birds m <sup>2</sup>
Broilers/ fattening chickens	10 birds m <sup>2</sup> with maximum of 21 kg live weight/m <sup>2</sup>	10 birds m <sup>2</sup> with maximum of 21 kg live weight/m <sup>2</sup>
Turkeys/ large birds	Up to 26 kg live weight/m <sup>2</sup>	Up to 17 kg live weight/m <sup>2</sup>
Outdoor runs are not required when flocks are undergoing immunization programme and when in the final phases of fattening		

### Minimum indoor and outdoor space requirements for rabbits

Rabbits	Indoor Space	Outdoor -runs and concrete exercise	Outdoor - pasture
From weaning to slaughter	0.3 m <sup>2</sup> / head	2 m <sup>2</sup> / head	5 m <sup>2</sup> / head
Pregnant does	0.5 m <sup>2</sup> / head	2 m <sup>2</sup> / head	5 m <sup>2</sup> / head
Does and litters	0.7 m <sup>2</sup> /head	2 m/head	-
Bucks	0.3 m <sup>2</sup> / head	2 m <sup>2</sup> / head	5 m <sup>2</sup> / head

## Permitted List of Feed Materials, Feed Additives & Processing Aids for Animal Nutrition

### 1. Feed materials from plant origin

**1.1. Cereals, grains, their products and by-products. The following substances are permitted:**

- ◆ Oats as Grains, Flakes, Middlings, Hulls and Bran;
- ◆ Wheat as Grains, Wheat as Germ, Middling, Bran [IS 2239:1971], Gluten Feed, Gluten and Germ; [IS 2239:1971]
- ◆ Barley as Grains, Protein and Middlings;
- ◆ Maize as Grains; Bran [IS 2153:1985] Middling; Germ Expeller and Gluten [IS 2152:1972];
- ◆ Sorghum as Grains;
- ◆ Rice Germ Expeller and bran;
- ◆ Millet as Grains;
- ◆ Rye as Grains and Middlings;
- ◆ Triticale as Grains, Bran, Middlings, Brewers' Grains.
- ◆ Other cereals & grains

**1.2. Oil seeds, oil fruits, their products and by-products. The following substances are permitted:**

- ◆ Rape seed and mustard [IS 1932:1986] as expeller and hulls;
- ◆ Soya bean as bean, toasted, expeller and hulls;
- ◆ Sunflower seed [IS 14702:1999] as seed and expeller;
- ◆ Cotton as seed and seed expeller;
- ◆ Linseed [IS 1935:1982] as seed and expeller;
- ◆ Sesame seed [IS 1934:1982] as expeller;
- ◆ Groundnut seed [IS 3441:1982] as expeller;
- ◆ Palm kernels as expeller;
- ◆ Safflower decorticated cake [IS 6242:1985]
- ◆ Toria Cake
- ◆ Taramira Cake
- ◆ Pumpkin seed as expeller;

- ◆ Other oilseeds
- ◆ Vegetable oils (from physical extraction).

**1.3. Legume seeds, their product and by-products. The following substances are permitted:**

- ◆ Bengal gram as seeds, middlings and hulls
- ◆ Black gram as seeds, middlings and hulls
- ◆ Pigeon pea as middlings and hulls
- ◆ Green gram as middlings and hulls
- ◆ Horse beans as seeds middlings and bran
- ◆ Lentil as middlings and hulls
- ◆ Chickpeas as seeds, middlings and bran;
- ◆ Ervil as seeds, middlings and bran as seeds submitted to heat treatment, middlings and bran,
- ◆ Peas as seeds, middlings, and bran;
- ◆ Broad beans as seeds middlings and bran; and
- ◆ Lupin as seeds, middlings and bran.
- ◆ Other legumes

**1.4. Tuber, roots, their products and by-products. The following substances are included in this category:**

- ◆ Sugar beet pulp, potato
- ◆ Sweet potato as tuber,
- ◆ Potato pulp (by-product of the extraction of potato starch), potato starch, potato protein and manioc
- ◆ Carrot
- ◆ Turnip
- ◆ Other tubers

**1.5. Other seeds and fruits, their products and by-products. The following substances are permitted:**

- ◆ Fruits & Fruit Pulps of apple, citrus fruits, pears, peaches, grapes, figs, Pineapple, quinces, pumpkins;
- ◆ Chestnuts, walnut expeller, hazelnut expeller; cocoa husks and expeller; acorns.
- ◆ Mango seeds [IS 12829:1989], tamarind seeds meal.

**1.6. Forages and roughages. The following substances are permitted:**

- ◆ Cultivated fodder crops. Only the following fodder crops are included in this category:
  - Sorghum (*Sorghum vulgare*)
  - Maize (*Zea Mays*)
  - Bajara (*Pennisetum typhoides*)
  - Teosinte (*Euchlaena Maxicana*)
  - Cow Pea (*Vigna ungui culata*)
  - Guar (*Cyamopsis tetragonoloba*)
  - Oats (*Avena sativa*)
  - Berseem (*Trifolium Alexadrinum*)
  - Lucerne (*Medicago Sativa*)
  - Senji (*Melilotus Parviflora*)
  - Hybrid Napier
  - Para Grass (*Brachiaria mutica*)
  - Rhodes Grass (*Chloris Gayana*)
  - Guinea Grass (*Panicom Maximum*)
  - Sudan Grass (*Soreghum Sudanenes*)
  - Mustard (*Brassica spp*)
- ◆ Clover, Clover meal, Grass (obtained from forage plants), Grass meal,
- ◆ Hay, Silage & Straw of ceral crops and Root vegetables for foraging.
- ◆ Pasture Grass & Legumes: Following are included in this category:
  - Anjan (*Cenchrus ciliaris*)
  - Marvel (*Dichanthium Annulatum*)

- Dinanath (*Pennisetum pedicellatum*)
  - Kazungla (*Setaria Sphacelata*)
  - Sain (*Sehima nervosum*)
  - Siratro (*Macroptilum atropurpureum*)
  - Stylo (*Stylosanthes Humilis*)
  - Bankulthi (*Atylosia Scarabaeoides*)
  - Field bean (*Dolichos lablab*)
  - Butterfly Pea (*Clitoria termatea*)
- ◆ Leaves of common Indian trees. Following trees are included in this category whose leaves can be fed to animals
- *Acacia Arabica* (Babul)
  - *Acacia Senegal* (Kumat)
  - *Adina cordifolia* (Haldu)
  - *Ailanthus excelsa* (Ardu)
  - *Amaranthus spinosus* (Goja),
  - *Albizia lebbek* (Siras)
  - *Azadirachta indica* (Neem)
  - *Banahinia variegata* (Kachnar)
  - *Cassia auriculata* (Tarwad)
  - *Dalbergia Sissoo* (Sissoo)
  - *Ficus benghalensis* (Bargad)
  - *Ficus religiosa* (papal)
  - *Ficus Glomerata* (gular)
  - *Hardwickia binata* (Anjan)
  - *Leucaena leucocephala* (Subabul)
  - *Morus alba* (Tut)
  - *Morus indica* (Mulberry)
  - *Prosopis cineraria* (Khejri)

**1.7. Other plants, their products and by-products. The following substances are included in this category:**

- ◆ Molasses

- ◆ Seaweed meal (obtained by drying and crushing seaweed and washed to reduce iodine content),
- ◆ Powders and extracts of plants,
- ◆ Plant protein extracts (solely provided to young animals),
- ◆ Spices and herbs.

## **2. Feed materials from animal origin**

### **2.1. Milk and milk products. The following substances are included in the category:**

- ◆ raw milk
- ◆ milk powder, skimmed milk, skimmed-milk powder,
- ◆ buttermilk, buttermilk powder,
- ◆ whey, whey powder, whey powder low in sugar, whey protein powder (extracted by physical treatment),
- ◆ casein powder, lactose powder, curd and sour milk.

### **2.2. Fish, other marine animals, their products and by-products. Only the following substances are included in the category:**

- ◆ fish, fish oil and cod-liver oil not refined;
- ◆ fish molluscan or crustacean autolysates, hydrolysate and proteolysates obtained by an enzyme action, whether or not in soluble form, solely provided to young animals.
- ◆ Fish meal [IS 4307:1983]

### **2.3. Eggs and egg products for use as poultry feed, preferably from the same holding.**

## **3. Feed materials from mineral origin [IS 1664:2002]**

### **The following substances are included in this category:**

- ◆ **Sodium:**

- unrefined sea salt
- coarse rock salt
- sodium sulphate
- sodium carbonate
- sodium bicarbonate
- sodium chloride [IS 920:1972]

◆ **Potassium:**

- potassium chloride;

◆ **Calcium:**

- lithotamnion and maerl
- shells of aquatic animals (including cuttlefish bones)
- calcium carbonate
- calcium lactate
- calcium gluconate;

◆ **Phosphorus:**

- defluorinated dicalcium phosphate [IS 5470:2002]
- defluorinated monocalcium phosphate
- monosodium phosphate
- calcium-magnesium phosphate
- calcium-sodium phosphate;

◆ **Magnesium:**

- magnesium oxide (anhydrous magnesia)
- magnesium sulphate
- magnesium chloride
- magnesium carbonate
- magnesium phosphate;

◆ **Sulphur:**

- sodium sulphate

## **4. Feed additives, certain substances used in animal nutrition and processing aids used in feeding stuffs**

### **4.1. Feed additives**

#### **4.1.1. Trace elements the following substances are included in this category:**

##### **◆ Iron**

- ferrous (II) carbonate
- ferrous (II) sulphate monohydrate and / or heptahydrate
- ferric (III) oxide;

##### **◆ Iodine:**

- calcium iodate, anhydrous
- calcium iodate, hexahydrate
- sodium iodide;

##### **◆ Cobalt:**

- cobaltous (II) sulphate monohydrate and/or heptahydrate
- basic cobaltous (II) carbonate, monohydrate;

##### **◆ Copper:**

- copper (II) oxide
- basic copper (II) carbonate, monohydrate
- copper (II) sulphate, pentahydrate;

##### **◆ Manganese:**

- manganous (II) carbonate
- manganous oxide and manganic oxide
- manganous (II) sulfate, mono- and/or tetrahydrate;

##### **◆ Zinc:**

- zinc carbonate
- zinc oxide
- zinc sulphate mono- and/or heptahydrate;

◆ **Molybdenum:**

- ammonium molybdate,
- sodium molybdate;

◆ **Selenium:**

- sodium selenate
- sodium selenite

**4.1.2. Vitamins, pro-vitamins and chemically well defined substances having a similar effect. The following substances are included in this category:**

- ◆ preferably derived from raw materials occurring naturally in feeding stuffs, or
- ◆ synthetic vitamins identical to natural vitamins only for monogastric animals

*By derogation from the first subparagraph, and during a transitional period as determined by the competent authority, the use of synthetic vitamins of types A, D and E for ruminants may be authorized in so far as the following conditions are met:*

- ◆ the synthetic vitamins are identical to the natural vitamins, and
- ◆ the authorization issued by the Competent Authority is founded on precise criteria.

*Producers may benefit from this authorization only if they have demonstrated to the satisfaction of the inspection body or authority that the health and welfare of their animals cannot be guaranteed without the use of these synthetic vitamins.*

**4.1.3. Microorganisms: following microorganisms are included in this category:**

- ◆ microorganisms such as lactobacillus, yeast, etc., that are not genetically modified.

**4.1.4. Preservatives: the following substances are included in this category:**

- ◆ Sorbic acid

- ◆ Formic acid
- ◆ Acetic acid
- ◆ Lactic acid
- ◆ Propionic acid
- ◆ Citric acid

The use of lactic, formic, propionic and acetic acid in the production of silage shall be only permitted when weather conditions do not allow for adequate fermentation.

**4.1.5. Binders, anti-caking agents and coagulants. The following substances are included in this category:**

- ◆ Calcium stearate of natural origin
- ◆ Colloidal silica
- ◆ Kieselgur
- ◆ Bentonite
- ◆ Kaolinitic clays
- ◆ Natural mixtures of stearites and chlorite
- ◆ Venniculite
- ◆ Sepiolite
- ◆ Perlite

**4.1.6. Antioxidant substances. The following substances are included in this category:**

- ◆ Tocopherol – rich extracts of natural origin

**4.1.7. Silage additives. The following substances are included in this category:**

- ◆ enzymes, yeasts and microorganisms that are not genetically modified.

## **4.2. Certain products used in animal nutrition**

**The following products are included in this category:**

- ◆ brewer's yeasts

## **4.3. Processing aids used in feeding stuffs**

**4.3.1. Processing aids for silage. The following substances are included in this category:**

- ◆ sea salt, coarse rock salt, whey, sugar, sugar beet pulp, cereal flour and molasses,

## **4.4. Biologicals and Immunologicals in feed:**

- ◆ Colostrum powder / whole colostrum provided that it is preferably derived from animals that are reared under organic farming.

Ayurvedic and plant-derived products that are claimed to have immunopotentiating properties

**Enzymes and their Sources Permitted for Use in Animal / Poultry**

<b>Name of the Enzyme</b>	<b>Source</b>
alpha-Amylase	<i>Aspergillus niger</i> , var. <i>Aspergillus oryzae</i> , var. <i>Bacillus amyloliquefaciens</i> <i>Bacillus lentus</i> <i>Bacillus licheniformis</i> <i>Bacillus stearothermophilus</i> <i>Bacillus subtilis</i> , var. Barley malt <i>Rhizopus niveus</i> <i>Rhizopus oryzae</i> , var.
Maltogenic alpha-Amylase	<i>Bacillus subtilis</i>
beta-Amylase	Barley malt
Cellulase	<i>Aspergillus niger</i> , var. <i>Humicola insolens</i> <i>Trichoderma longibrachiatum</i> (formerly <i>reesei</i> )
alpha-Galactosidase	<i>Aspergillus niger</i> , var. <i>Mortierella vinaceae</i> var. <i>raffinoseutilizer</i> <i>Saccharomyces</i> sp.
beta-Glucanase	<i>Aspergillus niger</i> , var. <i>Bacillus lentus</i> <i>Bacillus subtilis</i> , var. <i>Humicola insolens</i> <i>Trichoderma longibrachiatum</i> (formerly <i>reesei</i> )
β-Glucosidase	<i>Aspergillus niger</i>
Glucoamylase also known as amlyo - glucosidase	<i>Aspergillus niger</i> , var. <i>Aspergillus oryzae</i> , var. <i>Rhizopus niveus</i> <i>Rhizopus oryzae</i> , var.
Hemicellulase	<i>Aspergillus aculeatus</i> <i>Aspergillus niger</i> , var. <i>Bacillus lentus</i> <i>Bacillus subtilis</i> , var. <i>Humicola insolens</i> <i>Trichoderma longibrachiatum</i> (formerly <i>reesei</i> )
Invertase	<i>Aspergillus niger</i> , var. <i>Saccharomyces</i> sp.
Lactase	<i>Aspergillus niger</i> , var. <i>Aspergillus oryzae</i> , var. <i>Candida pseudotropicalis</i> <i>Kluyveromyces marxianis</i> var. <i>lactis</i> (formerly <i>Saccharomyces</i> sp.)

<b>Name of the Enzyme</b>	<b>Source</b>
beta-Mannanase	<i>Aspergillus niger</i> , var. <i>Bacillus lentus</i> <i>Trichoderma longibrachiatum</i>
Pectinase	<i>Aspergillus aculeatus</i> <i>Aspergillus niger</i> , var. <i>Rhizopus oryzae</i>
Pullulanase	<i>Bacillus acidopullulyticus</i> <i>Bacillus licheniformis</i> containing <i>Bacillus deramificans</i> gene for pullulanase
Xylanase	<i>Aspergillus niger</i> , var. <i>Bacillus lentus</i> <i>Bacillus subtilis</i> , var. <i>Humicola insolens</i> <i>Trichoderma longibrachiatum</i> (formerly <i>reesei</i> )
Lipase	<i>Aspergillus niger</i> , var. <i>Aspergillus oryzae</i> , var. <i>Candida rugosa</i> (formerly <i>cylindracea</i> ) <i>Rhizomucor (mucor) miehei</i> <i>Rhizopus oryzae</i> <i>Rhizomucor (Mucor-) miehei</i> <i>Rhizopus oryzae</i>
Bromelain	Pineapples – stem fruit
Ficin	Figs
Papain	Papaya
Protease (general)	<i>Aspergillus niger</i> , var. <i>Aspergillus oryzae</i> , var. <i>Bacillus amyloliquefaciens</i> <i>Bacillus licheniformis</i> <i>Bacillus subtilis</i> , var
Catalase	<i>Aspergillus niger</i> , var. <i>Micrococcus lysodeikticus</i>
Phytase	<i>Aspergillus niger</i> , var. <i>Aspergillus oryzae</i> , var.

## List of Diseases for Herd / Flock Diagnosis

In consultation with the veterinarian should draw a program of health management of the animals and carry out testing of the herd for following diseases:

### **Cattle including buffaloes:**

- Brucellosis:
- Leptospirosis
- Mastitis
- Tuberculosis
- Para-tuberculosis

### **Sheep and Goat:**

- Brucellosis:
- Leptospirosis
- Tuberculosis
- Para-tuberculosis

### **Pigs:**

- Swine fever
- Brucellosis

### **Poultry:**

- *Mycoplasma gallinarum*
- Fowl Typhoid

## Antibiotic / Antibacterial Withdrawal Period

Intramammary Preparations		Discard time for milk
1	Benzathine cloxacillin	72 Hrs (of milk discard)
2	Cloxacillin sodium	48 Hrs (of milk discard)
3	Hetacillin potassium	72 Hrs (of milk discard)
4	Procaine penicillin G (Peanut oil)	84 Hrs (of milk discard)

### Withdrawal periods (Sheep and Goats)

Sr. No.	Drug	Pre-slaughter withdrawal time (days)
1	Chlortetracycline (Oral)	2
2	Procaine penicillin-G	9
3	Procaine penicillin-G, dihydrostreptomycin sulphate	30
4	dihydrostreptomycin sulphate	30
5	Erythromycin	3
6	Sulphamethazine	10
7	Sulphamethazine (Oral)	10
8	Sulphaquinoxaline(Oral)	10
9	Sulphisoxazole(Oral)	10
11	Tetracycline(Oral)	--
12	Thiabendazole (Oral)	30

### Withdrawal periods (Swine)

Sr. No.	Drug	Pre-slaughter withdrawal time (days)
1	Chlortetracycline (Oral)	2
2	Procaine penicillin-G	30
3	Procaine penicillin-G, dihydrostreptomycin sulphate	30
4	Dihydrostreptomycin sulphate	30
5	Erythromycin	7
6	Ampicillin trihydrate	15
7	lincomycin hydrpchloride	2
8	Oxytetracycline HCl	26
9	Tylosin	4
10	Amoxycillin trihydrate (oral)	15
11	Ampicillin trihydrate (oral)	15
12	Chlortetracycline, Sulphathiazole, Procaine penicillin (oral)	7

13	Chlortetracycline, sulphamethazine, penicillin (oral)	15
14	Chlortetracycline HCl (oral)	5
15	Dihydrostreptomycin (oral)	30
16	Erythromycin (oral)	7
17	Furazolidine (oral)	5
18	Hygromycin B (oral)	2
19	Lincomycin (oral)	6
20	Nystatin (oral)	--
21	Oxytetracycline (oral)	26
22	Penicillin 50gm/900kg feed (oral)	0
23	Spectinomycin dihydrochloride pentahydrate (oral)	21
24	Streptomycin, sulphathiazole, phthalylsulphathiazole (oral)	10
25	Sulphachloropyridazine sodium (oral)	4
26	Sulphaethoxy pyridazine (oral)	10
27	Sulphamethazine (oral)	15
28	Sulphaquinoxaline (oral)	10

### Withdrawal periods (Poultry)

Sr.No.	Drug	Pre-slaughter withdrawal time (days)
1	Bacitracin	0
2	Carbomycin	1
3	Chlortetracycline	1
4	Erythromycin	2
5	Gentamycin sulphate (inj)	35
6	Lincomycin	5
7	Monensin sodium	5
8	Nitrofurazone	5
9	Novobiocin	4
10	Oleandomycin	--
11	Oxytetracycline (50-200gm/900kg feed)	0
12	Penicillin (2.4-125 gm/900kg)	0
13	Spectinomycin	5
14	Sulphadimethoxine	5
15	Sulphaquinoxaline	10
16	Tylosin Phosphate	5

Reference : Jones Veterinary pharmacology and Therapeutics, Vth edition. Toxicity of drug and chemical residues

## **Products Authorized for Cleaning and Disinfection of Livestock Buildings and Installations**

- Potassium and sodium soap
- Water and steam
- Milk of lime
- Lime
- Quicklime
- Sodium hypochlorite (e.g. as liquid bleach)
- Caustic potash
- Hydrogen peroxide
- Natural essences of plants
- Citric, peracetic acid, formic, lactic, oxalic and acetic acid
- Alcohol
- Nitric acid (dairy equipment)
- Phosphoric acid (dairy equipment)
- Formaldehyde
- Sodium carbonate