

# *Consorzio del Formaggio "Parmigiano Reggiano"*

Sede: Via Kennedy, 18 - 42100 Reggio Emilia - Cod. fiscale P.IVA 00621790351  
tel: + 39 (0)522 307741 – fax: 307748 – e-mail: [staff@parmigiano-reggiano.it](mailto:staff@parmigiano-reggiano.it)

## **FEEDING REGULATION FOR DAIRY COWS**

### Art.1

#### Field of Application

This regulation establishes the feeding programmes for cows that produce milk that is destined to the production of Parmigiano-Reggiano cheese. By dairy cows this regulation means animals in lactation and dry animals, and heifers from the sixth month of pregnancy.

### Art. 2

#### General Principles of Feed Rationing

The feed rationing of dairy cows is based on the use of local forage. In the daily feed, at least 50% of forage dry matter must be provided by hay.

The feed base, consisting of forage, must be appropriately integrated with pellets capable of balancing the supply of the various diet nutrients. The dry matter supplied by pellets as a whole must not exceed that supplied by the forage (forage/pellet ration not below 1).

Milking cows can neither be fed with fodders that may confer anomalous aromas and flavours to milk and alter their technological features, nor with fodders that may be sources of contamination or badly preserved.

### Art. 3

#### Origin of Forage

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In the feeding of dairy cows:

- at least 35% of dry matter must be supplied by forage produced on the farm;
- at least 75% of dry matter must be supplied by forage coming from the Region of Origin.

Based on the previous clause, a farm is considered suitable if it has an area/cattle ratio (UAA) of at least 0.33 ha per lactation cow in the plains and 0.50 ha in the mountains. Should the farm area be less, the farmer must provide the necessary documentation proving the origin of the forage purchased.

## Art. 4

### Permitted Forage

Dairy cows can be given:

- fresh forage obtained from natural meadows, mixed permanent meadows and lucern and clover crops;
- crops of ryegrass, rye, oat, barley, wheat, maize, aftermath sorghum, Italian millet, cocksfoot (*Dactylis*), fescue, timothy (*Phleum*), French honeysuckle, sainfoin, provided singularly or mixed together;
- crops of pea, vetch and field bean upon condition that they are combined with at least one of the forage essences specified in the previous point;
- hay obtained by drying the above specified forage essences in fields or by forced ventilation (air drying);
- freshly cut forage obtained from the whole milk-wax ripened or wax ripened

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corn plant, supplied immediately after harvesting and up to a maximum quantity of 15 kg/head/day;

- cereal straw, with the exception of rice straw.

For the feeding of dairy cows, it is also permitted to use dehydrated forage obtained at temperatures exceeding 100°C up to a maximum amount of 2 kg/head/day. This supply cannot be combined with the amount of dehydrated forage that may be administered by means of pellets.

## Art. 5

### Forbidden Forage and By-products

In the feeding of dairy cows, the following is forbidden:

- a) use of any type of silage, including slop feed. Furthermore, in order to prevent the contamination of the stall via the food chain, on the farm it is also forbidden to store grass silage and certain by-products, such as turnips, seed pea grass, spent hops, tomato peels, etc. preserved in wrapped bales, trenches, stacks or other techniques;
- b) use of:
  - forage heated by fermentation;
  - forage treated with additives;
  - mouldy forage, forage contaminated by parasites, decayed, soiled or contaminated by toxic, radioactive or noxious substances;
- c) use of:

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- rape, cole seed, mustard, fenugreek, fruit tree leaves and other leaves, wild garlic and coriander;
- maize and sorghum rapiers, maize bracts, straw from soy, rice, as well as lucern and seed clover;
- vegetables in general, including fresh and preserved rejects, waste and by-products;
- fresh and preserved fruit, as well as all fresh by-products derived from fruit processing;
- sugar and forage beets, including leaves and collets;
- spent hops, distiller, marc, grape stalks and other by-products deriving from the processing of beer, wine and sugar industries, distilleries, excluding molasses when used as a binder for pellets and dried beet pulp;
- all slaughtering by-products, including the rumen content;
- all by-products from the dairy industry.

## Art. 6

### Pellets

In the feeding of dairy cows, the raw materials listed below can be used in compliance with indications contained in the annex:

- cereals: maize, barley, oat, wheat, triticale, rye and sorghum;
- seed from oleaginous crops: soy, flax, sunflower;
- seed from legumes: broad beans, field bean and protein pea;

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- forage: flours of permitted forage essences;
- dried beet pulp.

Furthermore, the following substances can be used as appetisers in compound pellets:

- carob-bean, up to a maximum of 3%;
- molasses, up to a maximum of 3%.

Without prejudice to the terms envisaged in article 8, the products and feed permitted by the legislation in force for dairy cattle can be used.

## Art. 7

### Use of Pellets

With the aim of achieving a correct feeding, pellets must be given complying with the daily amounts specified in the annex. Since it is always necessary to use several raw materials, for a balanced supply of the various feed components, the annex contains the maximum percentages of raw materials vs. the total daily supply of pellets.

Pellets must be equipped with tags indicating the individual raw materials that they contain.

All raw materials must be supplied in dry form. Also the use of dried beet pulp is, therefore, forbidden if it has been previously humidified.

Pellets cannot be stored inside the stalls.

## Art. 8

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## Forbidden Raw Materials and Products

The following substances cannot be used in the feeding of dairy cows:

- feed of animal origin (fish flour, meat, blood, plasma, feathers, by-products of the slaughtering industry, as well as any dried by-products from milk and egg processing);
- cotton seeds, vetch (including scourings), fenugreek, lupine, rye, cole seeds and grape seeds;
- by-products of rice processing: chaff, tailings, thin chaff, flour middlings, buds and green grain;
- extraction flours, cake and expeller of peanut, rye and cole seeds, seeds of tomatoes, sunflower with less than 30% protein, babassu, common mallow, Niger seed, baobab, cardoon Mary thistle, coconut, tobacco, poppy, palmisto, olives, almonds and walnuts;
- manioc, potato and derivatives;
- dehydrated feed obtained from vegetables and fruit and by-products from their processing;
- molasses in liquid form, wet yeasts and all by-products from the sugar industry, with the exception of molasses used as a binders for pellets and dry beet pulp, of breweries (spent hops, including dried) and baking industries;
- fermentation soils;
- urea and derivatives, ammonium salts, beet protein concentrate (BPC), still

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slops and distillers of any type and origin.

Dairy cows cannot be given directly nor as pellet ingredients, fats and soaps of animal or vegetable origin. Lipids of vegetable origin can be used only as support and protection of micronutrients, up to a maximum of 100 g/head/day.

Dairy cows cannot be given pellets containing:

- additives belonging to the group of antibiotics;
- anti-oxidants, such as butylated hydroxianisole, butylated hydroxytoluene and etoxikin.

As a support for mineral and vitamin integrators, products not permitted by this Regulation cannot be used.

Dairy cows cannot be given pellets that are rancid, mouldy, contaminated by parasites, decayed, soiled or contaminated by toxic, radioactive or noxious substances.

Dairy cows cannot be given pellets containing forage coarsely cut or prepared outside the farm.

## Art. 9

### Silage-fed Cattle

In farms that produce milk destined to the making of Parmigiano-Reggiano cheese, only heifers within their sixth month of pregnancy (and slaughter cattle, if applicable) can be given maize silage (maize silage and mash feed), only in the case that the following conditions are respected:

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- these animals must be bred in stalls that are separate from the ones where dairy cows are bred and the silage must be managed in such a way so as to make sure that the areas and utensils for tending milking cows are not contaminated;
- collection and distribution of silage must be carried out by using equipment other than that used for dairy cows; in any case, all the necessary measures to prevent possible contaminations must be adopted;
- liquid and solid manure from stalls where silage is used cannot be spread on fields being cultivated thereby preventing the contamination of forage crops and the accumulation effect linked to the cycle of spores.

Heifers and cattle coming from other farm sections and fed with silage can be introduced in the farm section dedicated to milking cows only when silage administration has been suspended for at least three months and after they have been accurately cleaned. It is only then that they can be introduced into the herd of dairy cows. During this period of time, they cannot live in contact with cattle that continue to eat silage.

If farms that ask to supply milk to dairies producing Parmigiano-Reggiano cheese have used silage, they can be authorised to supply milk only six months after having stopped silage administration, upon condition that all other provisions established by the Regulation are complied with.

Art. 10

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## Unifeed Ration

Feed can be given to cows by means of the “Unifeed” technique, which consists in the preparation of a homogeneous mix of all the ingredients of the feed ration (dry forage and simple pellets), before administering them to animals.

The preparation of the mix must take place on the farm that is using it.

Furthermore:

- no addition of fresh forage is permitted in the feed wagon, not even if freshly cut maize is used. If green forage is used, it must be administered separately;
- preparation operations must not be carried out inside the stall;
- if maize silage is used, in compliance with paragraph 1 of art. 10, the same feed wagon cannot be used for dairy cows;
- if the mass is humidified, mixing must be carried out at least twice a day and distribution must immediately follow preparation.

## Art. 11

### New Products and Technologies

The possible use of feed not contained in this Regulation, as well as variations in the usable amounts and introduction of preparation and administration methods that are not envisaged herein, are subject to positive results of experimentations and studies assessed by the Parmigiano-Reggiano Consortium and, in the event of positive results, they may be the subject of a request for amendment of the Production Regulations.

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## *Annex*

Permitted raw materials and maximum usable amounts

Raw materials	Maximum daily amount kg/head/day	maximum % vs. total pellets administered daily
Maize flour	4	35
Crushed maize and/or maize pellets	3	30
Maize flakes and/or extruded maize	2	20
<i>Total maize</i>	<i>6</i>	<i>50</i>
Barley (crushed and/or flour)	3,5	30
Barley (flakes)	2	20
<i>Total barley</i>	<i>4</i>	<i>40</i>
Wheat + triticale + rye:	2	20
Bran, middlings, groats, flour middlings and wheat flour middlings	3	30
<i>Total wheat and derivatives</i>	<i>4</i>	<i>40</i>
Sorghum	2	20

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Oat	1	10
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Dry beet pulp (in strips and/or pellets)	2	15
Soy extraction flours	2,5	25
Whole soy (crushed, flaked, toasted, extruded or micronized)	1	10
Sunflower extraction flour ( $\geq 30\%$ protein)	1	10
Extraction flours and/or expeller and/or cakes of flax and maize germ and wheat germ	1	10
Broad beans and/or field bean	1	10
Protein pea	1,5	15
Wheat gluten meal, maize gluten and soybean mill run	1	10
Whole linseed	0,3	3
Cut dehydrated waxed cereals (maize, barley, wheat, rye and triticale)	2	20
Other dehydrated forage crops	2	20

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Total dehydrated forage crops	2	20
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