



## Guidelines for the Prescription, Supply, and Control of Prescription-Only Veterinary Medicines (POMs)

### Egg-Producing Chickens and Other Poultry

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#### Introduction

These guidelines are intended to assist members interpret the regulation associated with the use of POMs medications for egg-producing chickens and other poultry. Further advice can be obtained from the Royal College of Veterinary Surgeons, Veterinary Medicines Directorate, or the Veterinary Defence Society (if you are a member).

#### Regulations

In the regulations, 'poultry' includes chickens, turkeys, ducks, geese, partridges, quail, pheasants, peacocks, pigeons (reared for meat), guinea fowl, ostriches, emus, and rheas.

The regulations define certain species, including all poultry species, as food-producing animals. The regulations do not recognise the 'pet' status of any food-producing animal, including pet poultry. Therefore, pet poultry are subject to legal requirements regarding their husbandry, welfare, and veterinary treatment over and above those applying to most other pet species.

The Animal Welfare Act (2006) applies to all kept animals, including pet and food-producing species. Additional regulations concern the welfare of poultry, housing requirements, minimum stocking densities, the sale of eggs, predator control, disposal of waste (eg. chicken litter), etc.

In addition to the general animal welfare regulations applying to all species, DEFRA's Poultry Farming Welfare Regulations are at:

<https://www.gov.uk/poultry-welfare-guidance-on-the-farm>

All poultry owners are required by law to be familiar with DEFRA's Code of Recommendations for the Welfare of Livestock: Laying Hens found at:

<https://www.gov.uk/government/publications/code-of-recommendations-for-the-welfare-of-livestock-laying-hens>

Other useful guides for assessing and improving poultry welfare are the Farm Animal Welfare Committee's 'Five Freedoms' and the European Welfare Quality Assessment Protocol for Poultry.

#### Feeding Scraps



The feeding of catering waste, including owner's home kitchen scraps, to farm animals, has been prohibited under [the Animal By-products Regulations](#) since 2001. This includes farm animals kept only as pets. It also includes vegetarian homes – the only exception is homes where all the food is vegan. However, vegetation items from the garden or allotment can be fed to laying hens if given directly and not via a kitchen.

These regulations were created after the foot-and-mouth and BSE problems of the 1990s and early 2000s, and they aim to reduce the likelihood of disease transference or future outbreaks of these and other diseases, including avian influenza.

The regulations also prohibit the feeding of raw or cooked meat, fish, and most other products of animal origin to poultry.

### **Disposal of Carcasses**

It is illegal for owners to bury or incinerate dead poultry. Although it is legal for owners to bury pets such as dogs and cats at home, under [the EU Animal By-Products Regulations](#), poultry do not meet the definition of pet animals. Dead poultry that are not to be eaten are 'fallen stock' and require disposal by an approved route other than burial or home incineration. They can be disposed of by a veterinary practice or pet crematorium, or by incinerator plants approved under the above regulations. Pet crematoria are allowed to return the ashes of poultry to the owners.

### **Banned Procedures**

Devoicing of cockerels and the physical or chemical castration of cockerels are banned.

It is legal, although sometimes not necessary given the limited flight capacity of most chickens, to clip the flight feathers of one wing (check that moulting is completed). Pinioning, de-winging, notching, and tendon severing are not allowed.

For laying hens, beak trimming – ideally just beak tipping – to reduce feather pecking can be carried out only in chicks under 10 days old. In commercial flocks this is often done using an infra-red device. A complete ban on beak trimming is proposed to take effect in 2016 but has already twice been postponed. Backyard hens forage best with a full beak.

### **Regulations Relating to Notifiable Diseases**

The two notifiable diseases of birds in the UK, avian influenza (AI) and Newcastle disease (ND), have both occurred in the UK poultry industry in the last decade, have both been confirmed within the EU in 2013, and there is a constant risk of either disease entering the UK via imported or wild birds. Suspicion of either disease must



be reported to AHVLA in England and similar organisations if in Wales or Scotland. Further details can be found at:

<http://www.defra.gov.uk/animal-diseases/a-z/bird-flu/legislation/>

Salmonellosis, although not notifiable, is a reportable disease, meaning that if it is identified in a laboratory this must be reported to AHVLA.

### GB Poultry Register

It is a legal requirement that all flocks of 50 or more poultry (see above for species definitions) must be registered on the AHVLA's GB Poultry Register. This applies even if the flocks consist of a mixture of species and if there are 50 or more birds on the premises for only a small part of the year. Smaller flocks can also be registered, but few owners do so, ignoring the advantage of having disease information sent to them quickly.

### Record Keeping

Since chickens are considered food-producing animals, records must be kept of the animal, location, identification, drug, batch number, dose, date, and withdrawal advice.

### Zoonoses

The most common zoonoses are campylobacteriosis and salmonellosis. The frequency of human food poisonings associated with poultry *Campylobacter* and *Salmonella* species adds particular importance to the responsible use of antibiotics in poultry in order to prevent further development of resistance. Of course, hand hygiene is vital since the whole family gets involved with chicken keeping.

Other zoonotic organisms include *Pasteurella*, *Erysipelas*, avian tuberculosis, and leptospirosis (Weil's disease) carried by rodents: thus vermin and predator control is important.

### Vaccination

The major problem with chicken vaccines is that the majority are only effective if young birds are given a primary course. For those vaccines it is not effective to vaccinate adult chickens that have not had the primary course: hybrids are usually vaccinated, for example, against Infectious Bronchitis and Marek's disease, pure breeds rarely. Mixing them carries a slight risk of disease transference but is not generally a problem.

If the owner has an established 'closed' flock and does not buy-in birds or go to sales, and has not had previous disease problems, then vaccination for most diseases may be unnecessary. Shows are not generally a problem as exhibitors want to show



(and win with) healthy birds. Auctions and sales are a potential disaster with breeders and dealers mixing stock from multiple sites.

Routine preventative vaccination against AI is prohibited in the UK under the Avian Influenza (Vaccination) (England) Regulations 2006. Birds can be vaccinated against ND: the vaccine does not completely prevent infection but does reduce disease severity.

Vaccination has not proved to give particularly good control in outdoor birds. Because the presence of mycoplasma predisposes birds to Infectious Bronchitis, it is very important to control the incidence of mycoplasma in the flock which can be helped by keeping ammonia levels down – high ammonia paralyses the cilia and small hairs which act like an escalator in the trachea remove mucus. There is a mycoplasma vaccine marketed by MSD in Europe but it is not recommended for use in breeding birds. This appears to be because the manufacturers do not know how long the vaccine is effective. With vigilance, mycoplasma can be kept at a low level in backyard flocks thus increasing the welfare of the birds.

Most poultry keepers only vaccinate if there is a problem in the immediate area. Vaccines can mask a disease in a flock: with Marek's disease, some don't vaccinate but cull any bird with signs which eventually leads to much stronger stock, however, the use of a vaccine can hide the virus and so the whole stock gets progressively more susceptible without any symptoms. If birds are sold without the recipient being told of the vaccination, the birds can pass on the virus to unvaccinated chicks, thereby bringing Marek's to a flock which may have been free of it before.

Vaccination is feasible, especially if Silkies or Sebrights are kept because they are very susceptible to clinical signs of Marek's and there would be few of these breeds seen at exhibitions if vaccination was not used – it is sensible for the keeper to ask at purchase if they have been vaccinated against Marek's or not. Live vaccines have short immunological duration, given by spray or intraocularly, and sometimes are used to prime young birds before some inactivated vaccines.

**Table 1** – the most commonly used vaccines in free-range birds.

*Most vaccines are only available in industrial sizes (1000 or 500) but, if needed, are cheap enough for backyard poultry despite the waste.*

Disease	Vaccine	Manufacturer	Age and Method of Administration	Booster Interval
Infectious Bronchitis Newcastle Disease	Nobilis IBMULTI+ND+EDS*	MSD	16-20 weeks (not less than 4 weeks before)	Annual



Egg Drop Syndrome*	Gallimune 302 ND+IB+EDS*	Merial	lay): 0.5ml IM injection  16-20 weeks (not less than 4 weeks before lay): 0.5ml IM injection	Annual
Marek's Disease**	Nobilis Marexine CA 126 (live attenuated frozen)	MSD	Dayold-3 weeks: SQ injection, back of neck	None, but all chicks subsequently hatched on premises must be vaccinated
	Poulvac MD-Vac (freeze-dried)	Zoetis	Dayold-3 weeks: SQ injection, back of neck	None, but all chicks subsequently hatched on premises must be vaccinated
<i>E. coli</i> (type 078)	Poulvac E.Coli	Zoetis	Dayold: coarse spray	Duration >12 weeks
Infectious Bursal Disease	Nobilis Gumboro 228E	MSD	10days+: via drinking water (one dose)	None
	Gallivac IBD	Merial	0-14 days: by spray 14-28 days: via drinking water (two doses)	None
	Poulvac Bursine 2	Zoetis	21 and 28 days: via drinking water (two doses)	None
Salmonellosis	Gallivac SE	Merial	Dayold, 14 days, and 3 weeks before lay: via drinking	Annual



	Nobilis Salenvac T	MSD	water (three doses)  12 weeks and 16 weeks: 0.5ml IM injection, breast	Annual
Turkey rhinotracheitis	Nobilis TRT inac	MSD	Chickens: 14-20 weeks, previously primed with live vaccine: 0.5ml IM injection, breast	Annual
Coccidiosis	Paracox***	MSD	Dayold up to 9 days: three drops <i>per os</i>	None
Infectious Laryngotracheitis	Poulvac ILT	Zoetis	4 weeks+: eye drop	None

\*Egg Drop Syndrome is an adenovirus causing thin-shelled eggs and not often seen in free-range birds but the combined vaccine works well for the other two diseases.

\*\*Marek's disease vaccine is no longer obtainable in 10ml bottles but is more useful as the freeze-dried version than that frozen in liquid nitrogen, Pharmsure 01954 262460.

\*\*\*Paracox is available in 100 and 200 dose containers from PHS, Thirsk (01845 577907), and is unreservedly recommended, chicks must be kept on litter, not wire, and fed coccidiostat-free chick crumbs.

### Positive Signs of Health in Chickens

- Dry nostrils
- A red comb
  - Some breeds have naturally dark ones.
- Bright eyes
  - Colour varies with breed.
- Equal pupil size
- Shiny feathers
  - All present



- Good weight and musculature for age
- Clean vent feathers with no smell
- Smooth shanks
- Straight toes
- Bird is alert and active

**Medication**

There are restrictions on the number of drugs licensed for use in chickens producing eggs for human consumption, for human protection. The drugs that are licensed cover the most common problems and must legally be considered before using the Cascade. Zero withdrawal means eggs may be eaten when treatment is finished. For those who see chickens regularly it would be most beneficial to the welfare of the hens and their owners, to keep licensed products always in stock, thus allowing eggs to be eaten after any stated withdrawal time, rather than being taken out of the food chain for an extended time. There are no licensed injectables.

Certain drugs are contra-indicated with each other such as those containing tiamulin (eg. Denagard) with some coccidiostats. If using Denagard, ensure that a medicated grower ration is not being used at the same time.

Advertising for supplements is going exponential. These may conflict with each other and are not necessary except in times of stress eg. bad weather, exhibiting, after a predator attack.

**Table 2 – Drugs licensed for use in egg-laying chickens.**

Indication	Drug	Trade Name	MFR	Size	Dose and Treatment Time (days)	Species	Withdrawal (days)	
							Meat	Eggs
Bacterial disease (Gr -ve)	Colistin	Colibird (soluble)	CEVA	250ml-1litre	75,000 IU/kg/5d	All poultry	1	0
Bacterial disease (Gr +ve)	Phenoxy-methyl-penicillin	Phenoxy-pen	Do-pharma	250g	15 mg/kg/5d	Chickens	2	0
Mycoplasmas, Gr +ve, Gr -ve	Tiamulin	Denagard 12.5% Oral sol.	Novartis	250ml-1litre	25 mg/kg/5d	Chickens and turkeys	2	0
Mycoplasmas	Erythro-mycin	Erythrocin (soluble)	CEVA	70g-1kg	25.5 mg/kg/1-5d	Chickens	6	6



Mycoplasmas, Necrotic enteritis	Tylosin	Tylan (soluble)*	Elanco	100g	0.5 g/litre/5d	Chickens and turkeys	1	0
	Tylosin	Pharmasin granules	Huve-pharma	110g-1.1kg	0.5 g/litre/5d	Chickens Turkeys	1 2	0
All helminths	Flubendazole	Flubenvet (powder)	Elanco	60g	6g/2kg of feed/7d	All poultry	7	0
		Solubenol (soluble)	Elanco	20g-500g	0.01 g/kg/d/7d	All poultry	4	0
Coccidiosis	Amprolium	Coccibal	SP Veterinaria SA	100ml-1litre	20 mg/kg/d/7d	Chickens and turkeys	0	0
		Eimeryl	Global Vet Health S.L.	100ml-1litre	20 mg/kg/7d	Chickens and turkeys	0	0
Red mite	Spinosad	Elector	Elanco	237ml-1000ml	60ml=7litre of spray for housing, residual	All poultry	0	0

\*Dissolve by vigorous shaking in a small amount of water before adding to the drinker.

### The Cascade

Under the Cascade regulations, if there is no suitable veterinary medicine authorised in the UK to treat a condition, a veterinary surgeon may, in particular to avoid unacceptable suffering, treat with another product provided the pharmacologically active substances appear in Table 1 of the Annex to Commission Regulation EU (European Union) No 37/2010 (eg. NSAIDs). This even applies for birds producing eggs for human consumption where the data sheet or summary of product characteristics (SPC) for that product specifically states not to be used in such birds. This table can be found at:

[http://ec.europa.eu/health/files/eudralex/vol-5/reg\\_2010\\_37/reg\\_2010\\_37\\_en.pdf](http://ec.europa.eu/health/files/eudralex/vol-5/reg_2010_37/reg_2010_37_en.pdf)

A veterinary surgeon prescribing for, or administering a medicine to, any poultry under the Cascade is required to specify an appropriate withdrawal period to the animal produce. When setting the withdrawal period, a veterinary surgeon must take into account known information about the use of the product on the authorised species when prescribing to another species under the Cascade. Unless the medicine



indicates a withdrawal period for the species concerned, this should not be less than: 7 days for eggs, 28 days for meat from poultry, and longer withdrawal times are recommended.

In respect of eggs it is important to emphasise that if the active substance administered does not have an MRL for eggs, the presence of any residues of that substance in eggs (irrespective of the levels) will be illegal. The cascade requires that a *minimum* withdrawal period is applied. However, it is the responsibility of the prescribing veterinary surgeon to ensure the withdrawal period they specify for such products will ensure no residues will be present in the eggs collected for human consumption. They may therefore wish to take a precautionary approach when specifying the withdrawal period in relation to the use of an active substance which has no egg MRL. Where an egg MRL exists, the vet should specify a withdrawal period which will ensure that any residues of the substance in eggs are below the MRL. Since an egg takes 15 days to make, withdrawal times above this are recommended.

It is currently illegal to use medicines whose pharmacologically active substances *do not* appear in Table 1 of the Annex to EU 37/2010 in poultry or other food-producing species (eg. fipronil), although their inclusion on the list at some later date has not been specifically excluded.

The use of medicines whose pharmacologically active substances appear in Table 2 of the Annex of EU 37/2010 have been specifically banned from ever being used in food-producing species and will never appear in Table 1. Such substances include: *Aristolochia* spp (and preparations thereof), Chloramphenicol, Chloroform, Chlorpromazine, Colchicine, Dapsone, Dimetridazole, Metronidazole, Nitrofurans (including Furazolidone), and Ronidazole.

It bears repeating that the cascade can only be legally considered where there is no suitable veterinary medicine authorised in the UK to treat a specific condition.

**Table 3** – Drugs licensed for use in meat chickens and other poultry.

*None of the products in this table are licensed for chickens producing eggs for human consumption and most state DO NOT USE.*

*If any of these products are used under the Cascade for these birds, the egg withdrawal time must be at least 7 days, if not longer.*

Indication	Drug	Trade Name	MFR	Size	Dose and Treatment Time (days)	Species	Withdrawal (days) Meat



Bacterial disease	Chlortetra-cycline	Chlorsol 50	Veto-quinol	200g - 2kg	20 mg/kg/5d	Chickens Turkeys	3 5
	Apramycin	Apralan Soluble Powder	Elanco	50g	20-40 mg/kg/5d	Chickens	7
	Tetracycline	Tetsol 800	Novartis	125g - 2kg	60 mg/kg/5d	Chickens	6
Bacterial disease, Gr +ve, Gr -ve	Amoxicillin	Octacillin WSP	Eurovet	??	8-16 mg/kg/5d	Chickens	1
	Amoxicillin	Vetremox	Zoetis	75g-500g	20 mg/kg/5d	Chickens Turkeys	2 5
	Amoxicillin	Amoxinsol	Veto-quinol	75g	15-20 mg/kg/5d	Chickens Ducks Turkeys	1 9 5
Bacterial and <i>Mycoplasma</i> disease	Enrofloxacin	Baytril 10% Oral	Bayer	100ml-1litre	10 mg/kg/3-5d	Chickens Turkeys	8 13
	Enrofloxacin	Enroxil Oral Solution	Eurovet	1litre	10 mg/kg/3-5d	Chickens Turkeys	10 13
	Difloxacin	Dicural Oral Solution	Zoetis	250ml-1litre	10 mg/kg/5d	Chickens Turkeys	1 1
	Lincomycin/spectinomycin	Linco-Spectin	Zoetis	150g	10 mg/kg/7d	Chickens	5
	Doxycycline	Soludox	Eurovet	1kg	10 mg/kg/3d 20 mg/kg/4d	Chickens Chickens	3 12



Mycoplasma disease	Tylvalosin	Aivlosin 625 mg/g Granules	ECO Animal Health	40g-400g	25 mg/kg/3d	Chickens Pheasants	2 2
	Tilmicosin	Pulmotil AC	Elanco	240ml	15-20 mg/kg/3d	Chickens	12
				960ml	10-27 mg/kg/3d	Turkeys	19
	Tilmicosin	Tilmovet 250 mg/ml Oral Solution	Huvepharma	960ml	15-20 mg/kg/3d	Chickens	12
					10-27 mg/kg/3d	Turkeys	19
	Coccidiosis	Toltrazuril	Baycox 2-5% Oral Solution	Bayer	1litre	7 mg/kg/2d	Chickens

### Prevention of Disease

In order to ensure that poultry remain healthy it is important to provide good ventilation (at the top and on two sides) in their living quarters so that respiratory disease can be prevented: damp stale air will quickly cause problems.

High levels of ammonia from the litter stop the removal of mucus in individual chickens and so invite bacteria and viruses to multiply – if ammonia can be smelt in the hen hut, there is too much, so litter needs cleaning out more often and ventilation increased.

Hens are omnivorous and will enjoy catching and eating mice, but the disease risk is high from rodents.

As hens do not have teeth, food is ground up in the gizzard (always provide poultry grit), old long grass needs avoiding as this can impact and kill, as can polystyrene (eg. ceiling tiles) which they just adore to peck at, or pieces of plastic string.

Feed must be stored dry and vermin-proof and used before the date on the label to avoid degradation of the feed quality.

Muddy areas encourage harmful parasites to breed so putting down slats or moving the hut more regularly if the area becomes muddy is useful. In a static house and



run, maintain grass cover by placing a mesh grid over the grass before adding hens which allows grazing but not root destruction.

A dust bath is much appreciated by hens and helps prevent parasite infestation. Monthly dunking of legs in surgical spirit prevents scaly leg infestation.

Generous and continuous use of diatomaceous earth (fossilised algae which slowly desiccates the chitin) in the hut prevents red mite numbers escalating. It should not be fed to hens but can be put on them if northern fowl mites are found. Or Elector (Elanco:spinosad) has no egg withdrawal period and can be used in the presence of hens, lasts for 12 weeks.

Cider vinegar (10ml:500ml, plastic drinker only to avoid zinc toxicity) in the drinker one week a month helps reduce bacteria and parasites in the drinker and in the gut of the hens and is said to support the immune system.

Hens have evolved to scratch around in the dirt, but over a wide area. Problems occur if they are kept on the same small area of ground all the time which then becomes “sour” and harbours harmful parasites and other pathogens. It is important to worm them with Flubenvet (the only licensed wormer) 2-3 times a year, either directly in to the feed, or feed can be purchased with it already mixed in, and should be fed for 7 days: a little vegetable oil added to the feed first helps stick the powder. Herbal products are not effective wormers. Aquasol (fenbendazole) in water is licensed as of 2014 just for chickens but only covers nematodes.

Feathers are good insulators and it is sometimes harder to keep birds cool in summer than warm in winter. Birds that are too hot will hold their wings out from their body and pant.

Clean, fresh, and flowing water is vital for chicken health as they dehydrate easily. Water is vital to maintain egg production. Biofilm should be scrubbed away from drinkers and a safe disinfectant such as Virkon or F10 used (phenolic products are toxic to birds).

### **Biosecurity for All Poultry**

These are common-sense measures which can easily be incorporated into daily routine.

- Isolate new stock for 2-3 weeks (quarantine).
- Isolate birds after taking to an exhibition for 7 days.
- Change clothes and wash boots before and after visiting other breeders.
- Change clothes and wash boots before and after attending a sale.
- Keep fresh poultry disinfectant at the entrance to poultry areas for dipping footwear.



- Disinfect crates before and after use, especially if lent to others. However, it is preferable not to be sharing equipment.
- Disinfect vehicles which have been on poultry premises but avoid taking vehicles onto other premises.
- Wash hands before and after handling poultry.
- Comply with any import/export regulations/guidelines.