

Advice for veterinarians on drug use and withholding periods in (backyard) poultry

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Restrictions on poultry treatments

Most of the major poultry species are defined as “major food producing species” in the NSW Stock Medicines Act 1989 and in similar legislation in other jurisdictions. This means that specific restrictions apply to drugs that can be used to treat them, and to withholding periods (WHP) that must be applied after treatment.

The controlling legislation in all jurisdictions requires that poultry, as food-producing animals, only be treated with registered products and, for non-prescription treatments, that they be registered for the species or poultry generally and used strictly in accordance with the label directions.

However all jurisdictions allow off-label use or direction (“prescription”) by veterinarians. The main power available to veterinarians is that they may “prescribe” treatment off-label with products registered for poultry or using products registered for other food producing species (such as cattle or pigs).

Residue issues

Changing dose rates or methods of administration will affect the residues resulting from the use. If they do vary label directions for food species, including dose rates or methods of administration, veterinarians must provide written directions for use which include a withholding period sufficient to ensure that meat or eggs produced by the birds do not contain illegal residues.

Illegal residues are any residues which exceed the Maximum Residue Limit (MRL) set for the chemical in the food product. If no MRL exists, then any detectable residue is illegal. Many jurisdictions hold

a prescribing veterinarian legally liable for such illegal residues.

In general, if there is no registered (on-label) use for a drug in a species there will be no official MRL set for the meat or eggs. Very few MRLs have been set for veterinary chemicals in eggs¹. Thus for food-producing birds the prescribing veterinarian should ensure that any WHP they set for any off-label use is long enough to ensure no detectable residues will occur. As a rough rule of thumb, 10 tissue half-lives is suitable, but this can be a problem because there is often little or no data on tissue half lives in birds on which to base the advice. (Serum half lives, which are much more readily available from the literature (and internet) as they are used to support efficacy, are not the same and cannot be used for this purpose.)

Single animals and permits

In most states legislation does allow a single animal of a major food producing species (including poultry) to be treated by a veterinarian with any unregistered product, including a

¹ The following are the only veterinary chemicals with MRLs set in eggs: amoxicillin, amprolium, bacitracin, chlortetracycline, cyromazine, kitasamycin, lasalocid, levamisole, lincomycin, neomycin, salinomycin, spectinomycin, sulfadimidine, sulphadiazine, sulfaquinoxaline, toltrazuril, trichlorfon, tylosin, and virginiamycin.

Note that many pesticides have MRLs in eggs, based on transfer via treated feeds, and these could be taken into consideration when pesticide treatments of birds are required.

companion animal or human product. However the above requirement for a written WHP and compliance with MRL standards still applies. Obviously a single animal exemption is not much use for commercial or even, in many cases, domestic or pet or show birds. In such situations, if large numbers require off-label treatment, then a permit should be sought from the Australian Pesticides and Veterinary Medicines Authority (APVMA). As an example, PER12288² has been issued by the APVMA to allow the use of doxycycline to treat certain commercial flocks suffering from Chlamydiosis and PER12328 has been issued to allow use of toltrazuril to treat layer pullets. Note that before such permits are issued by the APVMA they usually require the provision of suitable residue data to support either the establishment of an MRL or evidence that no residues will occur following the proposed WHP.

Show and backyard birds

There are, however, two areas where the legislation does not seem to provide appropriate control:

- birds not being used for human consumption (such as show poultry), and
- backyard birds where meat/eggs are consumed only by the owner³.

In the case of show birds, where no produce (i.e. any bird) is being consumed, then any lengthy WHP may be set as the veterinarian decides is appropriate. Eggs from these birds should be considered as for backyard birds.

Legislation requires that all treated poultry of food-producing species not be killed to be eaten, or eggs collected to be eaten, before the relevant WHP has expired. This restriction under the legislation applies equally to backyard birds, as they still fall within the definition of food-producing species.

Residues of drugs used to treat animals are generally below any level likely to cause adverse health effects in humans consuming the meat/eggs, though this may not be invariably true. In some cases unregistered treatments (including

² These permits may be viewed and obtained from the website of the APVMA at <http://www.apvma.gov.au/permits/search.php>. Use under permit requires the user to obtain a copy of the permit and comply with the permit instructions.

³ In NSW, and probably other jurisdictions, anyone supplying eggs commercially must be licensed if they produce more than 20 dozen eggs a week. Smaller producers must still register with the NSW Food Authority. See <http://www.foodauthority.nsw.gov.au/industry/industry-sector-requirements/eggs/>.

companion animal treatments) which a veterinarian may wish to use on backyard birds may even be the same products routinely used in human medicine. As a result concerns related to their use are not about trade and human food residues, as they are for commercial poultry/egg production, but about immediate human health and any likely impact on persons consuming treated produce.

Since this is the case, a veterinarian could discuss the use of the product with the owner and provide a relatively short WHP on their written advice such that it can be easily complied with and would fulfil the legal requirements of the legislation.

Obviously this should only be done where the veterinarian has discussed the residue issue with the owner and advised them about the likelihood and consequences of them and their family consuming such residues in eggs/meat. Potential allergy issues should be specifically considered (e.g. with beta-lactams). The client must understand that anyone eating eggs will be exposed to active residues if a short WHP is applied. An alternative would be to provide a longer WHP of some 2-4 weeks after which detectable residues are not likely to be present for many drugs that might be used as a one-off treatment. However, low-level residues may well persist much longer than this – even for many months – particularly with repeated or continuous treatments using fat-soluble drugs which will accumulate in egg yolks.

Note that cooking will often reduce residues significantly but generally does not remove them completely.

Certainly owners should be advised that any produce from treated birds should not be sold, given away or otherwise supplied outside the premises where it has been produced. Supplying food with residues which are not within an MRL is illegal under the various state and territory Food Acts.

Pesticide sprays

Animal pesticide treatments which require dilution prior to application to animals cannot be used off-label in NSW but may be legally used off-label in all other jurisdictions. Because such sprays are defined as pesticides in NSW no off-label exemptions are provided for veterinarians under the controlling Pesticides Act.

There is no legal provision for agricultural or home pest treatments to be used off-label on poultry.

As indicated above, a large number of pesticide residue MRLs are in place for eggs and chicken meat, because of their legal presence in grain used as feed. To check whether a pesticide MRL is

published for meat or eggs, consult the MRL Standard at:

<http://www.apvma.gov.au/residues/standard.php> in relation to the chemical being considered for use. The presence of a low-level MRL does not mean that any chemical can be used safely or will comply with the published MRL. Only after a significant WHP has been observed for direct bird treatments would levels decline below the MRL resulting from grain treatment residues.

Published by the Department of Primary Industries, a part of the Department of Trade and Investment, Regional Infrastructure and Services.

PUB12/117

Other information on maximum residue limits

MRLs are usually set at the expected level of residue occurring after the expiry of the label withholding period. While there may be relevant WHPs to be applied to allow egg residues to decline to the published MRL, in most cases where Australian MRLs have been set for eggs (see APVMA web link) the WHP is "Nil".

Some generic information on European or Codex MRLs for poultry is available from:
<http://www.thepoultrysite.com/articles/743/maximum-residue-limits-in-poultry-tissues-and-eggs>.

Note that this information still requires knowledge of related dose rates and may not be relevant to Australia.

State variation

Note that similar legislative principles apply in most jurisdictions. However there may be some detailed differences which should be checked by veterinarians not based in NSW.

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ISSN 1832-6668

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Any decision to treat birds and provide WHPs based on these considerations is made entirely at the decision of the attending veterinarian. No recommendation is made that any such use is or will be effective or that it will be safe to either the birds or humans consuming food produced by treated birds.