



Avoiding Residues in Small Poultry and Game Bird Flocks

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Residues in poultry are leftovers of compounds used in the production of birds to reduce or eliminate disease organisms or parasites. Coccidiostats, antimicrobials, wormers, mold-inhibitors, and pesticides used for mites and/or lice control are potential residue producers. In addition, compounds used indirectly, such as rodenticides, insecticides, and herbicides, can become residues if birds inadvertently come into contact with them.

It is imperative that residues of these compounds be eliminated in poultry and eggs or be within the tolerances established by the U.S. Department of Agriculture and the U.S. Food and Drug Administration when your flock is marketed or eggs are sold. Commercial chicken and turkey flocks are tested for certain residues, especially drug residues. If residues exceed the tolerance level, the birds are removed from distribution. If residues are found after the birds have entered distribution, recalls are instituted, which cost the industry millions of dollars.

Additives in feed and water

The most common forms of residue in poultry meat and eggs are from additives that are intentionally added to the birds' feed or water. In feed manufactured for small flock producers, the most common additive is a coccidiostat. This is a class of compounds that controls coccidiosis, a common disease of poultry and related birds. This disease is common between hatch and 8 weeks of age.

These compounds are added to starter diets (balanced rations formulated for growing chicks) to reduce the incidence and severity of the disease.

When compounds are added to feed, the manufacturer must put a warning and withdrawal date on the feed label. Withdrawal dates vary from 0 (may feed until slaughter) to 5 to 7 days or more. Withdrawal dates are based on research in which birds are fed the compound and tested for residues after slaughter. It is important to follow the withdrawal dates.

In rare cases, some small flock producers provide home-mixed feeds to their birds. If you use a feed additive, it is important to realize that the compound will contaminate every piece of equipment it touches. Some of the drug will remain on the equipment and contaminate later batches of feed. Thorough cleaning of grinders, mixers, and storage bins in which you have stored medicated feeds is necessary to prevent contamination of the next mix. Cleaning involves the removal of all traces of the medicated feed from all surfaces touched by the feed.

In some instances, birds become sick from a microbial infection. Antibiotics may be needed to help the birds recover. In small flock production, when antibiotics or other disease-fighting compounds are needed, they usually are added to the water. Unlike the coccidiostats in starter feeds, which are added at the feed mill, antibiotics must be prepared by the producer. Just as with medications added to feed, there is a withdrawal date on the label of all water-added medications. It is important to follow the instructions for mixing the compound as well as the withdrawal dates to be assured that residues are not present in meat or eggs.

Residues from other sources

Other compounds used in the production of small poultry flocks may produce residues if ingested by birds. It is good management to use bait to control rodents. However, rodent baits, of which there are several types, can be inviting to birds. When eaten, these compounds are not always fatal, but they may result in residues.

Insecticides used as dusting powders to control mites and lice on chickens may be ingested by the birds, causing some residue.

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Herbicides used to control weeds or grasses in poultry pens also may be ingested, resulting in residues. Again, it is important to follow label instructions when using these compounds.

Ways to avoid residues in poultry and eggs

- Follow all label instructions concerning dosages, length of treatment, and withdrawal when using any medications in feed or water. If you are unsure whether market birds or egg layers have consumed medications intended for other birds in your care, follow withdrawal dates as a precaution.
- Provide medicated feeds only to birds requiring medication. For example, do not let ready-for-market or laying birds eat medicated starter diets.
- Clean up spilled feeds or medications promptly so nontarget birds do not have access to them.
- Clean all equipment used for mixing or storing medicated feeds.
- Clean drinkers and feeders following any addition of medicated feed or water.

- When baiting for rodents, use bait stations that are inaccessible to birds. Dispose of dead rodents promptly and properly.
- Follow directions when treating for lice and/or mites.
- Take care when applying herbicides or pesticides in and around poultry housing and in pastures where poultry feed.
- Do not reuse pesticide or medication containers. Dispose of them promptly and properly.
- Keep accurate records of medication and pesticide usage and of feed purchases.
- Take samples of all feeds, label them, and store them in the freezer until several weeks after that lot of feed is exhausted. These samples can be analyzed if a problem occurs.

Calculating withdrawal times

Incorrectly calculating withdrawal times is one of the leading causes of residues in poultry. On medication labels, withdrawal times usually are written in days. When considering medication withdrawal, each day is a full 24 hours, starting with the last time a flock had access to the drug,

not when you prepared the mixture.

For example, if a drug with a 5-day preslaughter withdrawal time is removed from a flock at 9 a.m. Friday, the first withdrawal day is completed at 9 a.m. Saturday. The end of the fifth withdrawal day is 9 a.m. Wednesday (Figure 1). The birds should not be processed until the full five 24-hour days are complete—in this example, after 9 a.m. Wednesday.

In certain situations, it may be necessary to extend the withdrawal time. For example:

- You left your birds on the same litter or on the same pasture after completing the course of medication
- You didn't thoroughly clean and rinse drinkers once the course of medication was complete
- You didn't thoroughly clean the feeders used with medicated feed after the course of the medication was complete

Any of these management oversights could result in residues in market chickens. Remember, as the producer, you are legally responsible for residues in the birds you produce.

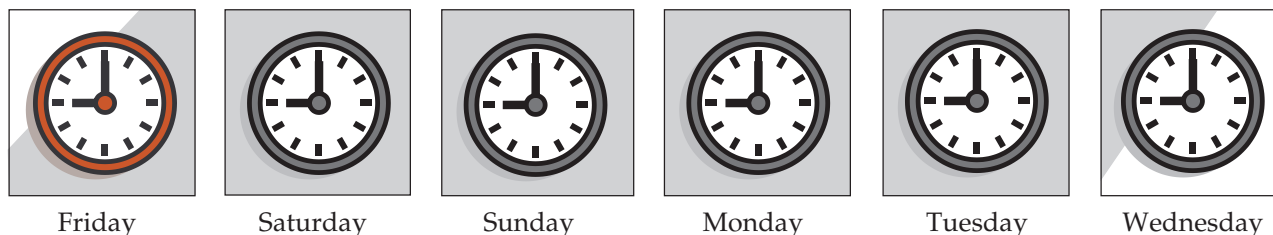


Figure 1.—If a drug is removed from a flock at 9 a.m. Friday, the end of the fifth withdrawal day is 9 a.m. Wednesday.