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GET YOUR CUPBOARD IN SHAPE

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There is more scrutiny being paid to livestock medicines. Making them effective starts with proper storage

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MANY PRODUCERS HAVE POSED questions recently about proper medication storage.

For many, these come about while preparing for a Canadian Quality Milk validation, but correct medicine storage should be practiced on all farms at all times. Proper handling and storage of livestock medicines are vital for protecting your milk and meat products from drug residue contamination and for ensuring cattle are treated with efficacious products. This is a joint responsibility of the producer, farm employees and the herd veterinarian.

Proper storage begins with setting up a medicine cupboard. The best location is a clean, dry, temperature controlled area such as a utility room or office. Medicines should be kept away from the bulk tank or milking equipment. Your cupboard should close to protect medicine from light and dust. Exposure to light or temperature fluctuations can alter the drug's chemical structure and reduce the effectiveness and safety. If small children are around the barn, the cupboard needs to be out of reach and a lock may be necessary to keep small hands out.

Once you have a cupboard set up, you need to ensure the right products are in the cupboard. You can start by checking each product to ensure their expiry dates are valid. All products must have a legible expiry date. If you find you have expired drugs, they need to be disposed of safely. You can contact your herd veterinarian for advice. These products must not be poured down a drain or thrown out with the regular garbage. Some municipalities allow you to get rid of medicines on household hazardous waste days.

Medicines or vaccines that require mixing before use should be given special attention. These products have information supplied that indicates how long after mixing the product can be used. Some vaccines need to be used immediately after mixing and cannot be stored, while other drugs can be kept for a specified number of days or weeks once combined. The date mixed and the new expiry date should be written on the bottle immediately after mixing to avoid using unsafe and ineffective products.

Each product label should be checked to determine the product's required storage conditions. The majority of medicines fall into two main storage temperature categories - those that need to be kept cool and those that can be stored at room temperature (15-25°C or 15-30°C) in your closed drug cupboard. Some antibiotics, drugs and vaccines are heat sensitive, meaning they change and lose activity when warmed. The labels on these products will say that they must be stored at a temperature between 2-8C. These products should never be allowed to warm up -they need to be promptly returned to a fridge after administering a treatment. You should double check your medicine fridge temperature

to be sure that it is not only working, but also that it is not freezing medications. Older or second hand refrigerators are frequently not staying at the temperatures you think they are!

There are, of course, a few exceptions to these two main temperature storage categories. You might find medicines labelled "less than 15°C" or "less than 25°C". For example, many injectable penicillin product labels indicate storage at less than 25°C is required. This temperature may be achieved most of the year in your medicine cupboard, but for a few days in July the temperature in the barn may exceed 25°C. Storage in the fridge may be better to ensure the product is never warmed.

Exposure to light can affect some products. Brown bottles indicate a medicine that is particularly sensitive to light. These need to be kept in a closed cupboard or fridge. Medicines that need to be mixed with a diluent (liquid) probably need to be stored differently once this is done. The label will give you direction. You should check it to be sure. Sometimes the package insert gives additional information as well.

Once medicines are organized according to storage requirements, they should be further segregated by class, the type of animals they are to be used for. Medicines restricted for use in dry cows should be on a separate shelf. A second shelf is needed for any medicines that are to be used only in the non-lactating group of animals. Non-lactating animals commonly include calves, heifers less than 20 months of age or beef cattle. A third shelf is used for storing lactating cow products. Each shelf should have a label that clearly indicates the type (class) of animals the medicines are for. This prevents accidental milk or meat residues (costly mistakes!) that can happen when the wrong bottle or tube of treatment is used.

Medicines that are for other species or not approved for cattle should be stored in a separate location. Horse, sheep, goat, poultry, swine, dog, cat or even human medicines should have their own storage location away from the cattle medicines.

Maintaining a current inventory of livestock medicines not only ensures that the drugs used will be effective, but also reduces drug costs by preventing wastage. When purchasing new medicines, you need to consider the amount of drug needed to treat the animal or group and the expiry date on the product. For example, the number of animals that will require dry cow treatment or de-wormer can be projected and closely estimated ahead of time. Avoid purchasing more than is needed at the current time if the product will be expired before the next treatment is due, even if purchasing large quantities offers a reduced price. It may be that the expired product will be ineffective.

Storage for other treatment equipment also needs to be provided. Needles and syringes should be stored in the same location as medicines. These can be purchased at a reduced price by buying a full box. Most can be stored for a long time if kept clean and dry. Most needles and syringes are designed for single use and should be discarded after one administration. Using needles or syringes multiple times easily contaminates them making it possible to do more harm than good.

The number of abscesses and infections caused by dirty injection equipment is high on some farms and could easily be reduced. A container for used needles should be kept handy and near the medicine storage or medicine use area. An easy, safe container is a plastic jug with a narrow top to prevent needles from spilling out. Once the jug is full, you can contact your veterinarian or municipal hazardous waste to arrange for proper disposal.

Medicine bottles should never be stored with a needle in the rubber top. This leads to product contamination as the needle provides a pathway for bacteria into the medicine. The bacteria that contaminate medicines, including antibiotics, cause nasty problems if they end up inadvertently injected into animals.

Sometimes the best ideas for good medicine storage come from seeing what others have

done. In my visits to farms to help with CQM preparation, I have seen many producers who have put together excellent medicine storage cabinets. Some producers have used metal or plastic utility cupboards from farm or hardware stores that work really well. Those that have built their own wooden cupboards have found that painting raw plywood makes it much easier to wipe and keep clean.

I encourage all producers to do a walkthrough on their farm to find all the medications left in various areas around the barn that should be in your storage cupboard. Common areas where we find medicines are around calf housing, near foot trimming racks, near chutes, on rafters, in windowsills, on milking carts and in milking parlours. If you are administering a medicine at the same time as some other activity such as foot trimming or after milking, be sure to return the medicine to proper storage immediately.

If you have a separate area, either another barn or farm where calves or heifers are reared, it may be appropriate to set up another medicine cupboard in that location.

This reduces the chance you will remove a bottle from your main storage cupboard and leave it on a windowsill (or some other convenient location where it will be exposed to conditions that reduce its effectiveness) during the treatment course and after use.

Finally, it is important to review your farm's handling and storage policies with all family members or employees involved on the farm to reduce the chance of mistakes. Everyone needs to understand the protocols and procedures to be used regarding medicine storage, handling and use and why they are important.

As you make plans for your medication storage, don't forget to include your herd veterinarian in discussions. Working with your veterinarian sets up the veterinary-client-patient relationship (VCPR) that makes it possible for veterinarians to dispense medications to you for use on your farm. This shared responsibility is designed to ensure medicine use and storage on every Ontario dairy farm is optimal and that the milk produced in Ontario is of the highest quality anywhere in the world.