Various preventive and therapeutic medicines may be used for disease management in show market livestock and poultry. These include vaccines and bacterins, antibiotics and antibacterials, parasiticides and corticosteroids. Exhibitors of show animals must ensure that carcasses are free of violative and illegal residues of drugs, chemicals and feed additives. Therefore, only substances approved for the animal species being treated should be used, and these must be administered prudently. Compounds such as tranquilizers, local and systemic anesthetics, diuretics, caffeine and alcohol are not approved for show market animals.

**Withdrawal Times**

Approved substances generally have established withdrawal times. These are printed on the product label, package, package insert or feed tag. The withdrawal time is the length of time required for the substance to be eliminated from the animal's body or to be reduced to a safe (tolerance) level prior to slaughter. The drug, chemical or feed additive is to be withdrawn for the number of days listed on the label before the animal is slaughtered. If there is no withdrawal time on a product label, it means the substance either is safe or is reduced to a safe level in the animal within 24 hours.

**Disease Prevention**

After the risk of exposure to specific diseases has been evaluated, a preventive program may be established. Animals may be given vaccines or bacterins which stimulate them to build immunity to specific diseases. Vaccination is not to be done within the published withdrawal time prior to slaughter. Vaccinated food animals are not to be slaughtered until the withdrawal time has ended.

Approved antibiotics, antibacterials and parasiticides may be used to prevent diseases for which there are no vaccines or bacterins. These substances can be administered continuously in the animal’s feed or water. But medicated feed and water are not to be fed within the products’ published withdrawal times prior to slaughter. Nor are medicated food animals to be slaughtered until the withdrawal time has expired.

**Disease Treatment**

When a medical condition is diagnosed, a therapeutic or treatment program may be established which makes use of approved antibiotics, antibacterials, dewormers, coccidiostats and insecticides. These substances are not to be administered within their withdrawal times prior to slaughter. Treated food animals are not to be slaughtered until the withdrawal time has expired.

Corticosteroids (cortisones), which are sometimes used to treat musculoskeletal conditions, are prescription or restricted (Rx) products. Restricted products can be used only by or on the order of a licensed veterinarian. The veterinarian prescribing the medication will give instructions as to the withdrawal time. These instructions are to be followed precisely.
Testing

The Food Safety and Inspection Service (FSIS) collects samples (urine, kidney, liver, fat and muscle) of show animal carcasses at slaughter. These samples are tested for residues of approved and unapproved substances. Residues of approved substances must be below the safe level, and there must be no residues of unapproved substances. Otherwise the carcass will be condemned. If the carcass is found to contain violative residues, the animal may be disqualified from the livestock show.

In addition to testing at slaughter, livestock show officials may collect urine and blood samples at the show grounds for submission to laboratory testing. If the livestock show rules require that market animals not be within the withdrawal time of any drug, chemical or feed additive at the time of weigh-in, a violative sample may cause an animal to be disqualified.

Illegal Usages

It is illegal for an exhibitor to administer a drug, chemical or feed additive by a route, at a dosage, for a condition or to a food animal species not indicated on the product’s label. Such practices can alter the determined withdrawal time and can cause violative residues at slaughter. Use of any unapproved substance in a food animal species is illegal, even if the substance is approved for a different species. This is because safety, efficacy and withdrawal time data have not been established for species not listed on the label, and carcasses may become adulterated with residues.

An exhibitor should follow all label and package insert instructions for any drug, chemical or feed additive used to prevent or treat disease or injury. This will ensure that consumers will receive safe, high quality animal food products. Also, the exhibitor should consult with a veterinarian, county Extension agent and agricultural science teacher about livestock show rules and federal laws regarding residue avoidance and food safety programs. Medication is to be used only when absolutely necessary, and never as a substitute for proper care, handling and management of show market animals.
As livestock producers, we use animal health products, commonly called drugs or medications, often on our animals. They prevent or treat disease, provide for the welfare of the animal, minimize production costs, improve rate of gain and feed efficiency. These products may be injectable, such as penicillin, or feed additives, in some cases already mixed into the feed we are using. Unfortunately, there is always the possibility of misuse of these products. One consequence of misuse of animal health products is residues of the medication in the meat. Many tissue residues in meat are caused by not following the label on medications and feed additives.

All medications and feed additives are required by law to state the trade name, active ingredient, lot number, dosage, application method (i.e. intramuscular), expiration date, and any precautions or warnings that may be associated with the use of the drug. Withdrawal times are also included. A withdrawal time is the amount of time required for the medication to be metabolized, or broken down, by the body. The withdrawal time in determined and set by research and governmental regulations and must be followed to ensure a safe, wholesome product. For example, the withdrawal time of LA-200 (oxytetracycline), is 28 days. If you decide to treat your pig with this drug the day of the show, and the animal is sold for slaughter a few days later, you have not followed the withdrawal time. This is not only unethical and illegal, it is potentially dangerous for the consumer of the meat. Many research trials were necessary to determine a drug’s safety, both for the animal and humans. Keeping complete records of medication use (which animal was injected with which drug, when, by whom, and even recording withdrawal time) will help prevent both errors and drug residues.

There are often situations when a certain medication would be more effective if used in a manner other than what is printed on the label. For instance, it may be more effective if given more often and in a higher dosage than the label states. This is considered extra label use and absolutely requires a recommendation by a veterinarian. A producer cannot legally use a drug in any manner except what is written on the label. If a producer does this without a veterinarian’s involvement, it is called “off label” drug use and is illegal. Extra label use of an animal health product requires a good working relationship with your veterinarian. While it may often be difficult to find swine veterinarians in your immediate area, their direction is absolutely required when using medications in any other way than what is printed on the label. Examples of extra label drug use include:

- Your veterinarian may change the dosage of the drug (tell you to give it more or less than the label states)
- Your veterinarian may change the frequency of administration (tell you to give it more or less frequently)
- Your veterinarian may change the treatment period (tell you to give the drug longer or stop using the drug sooner than what is printed on the label)
- Your veterinarian may prescribe a treatment for a disease other than what is stated on the label
- Your veterinarian may prescribe a drug for your pig that is not labeled for use in swine. (This is done only if it is a logical choice and if label use of an approved swine drug is not available)

Altering the label use requires a veterinarian’s guidance because it could change the withdrawal time or safeness of the meat product. Feed medication can ONLY be used as directed by the label. It is illegal for the producer or veterinarian to feed medication other than according to the label directions.

Reading labels, keeping good records and paying attention to detail can help you prevent tissue residues. It is EVERY producer’s responsibility to do everything they can to provide a safe, wholesome product for the consumer.

Questions? Contact Dr. Jodi Sterle at (979) 845-2714 or j-sterle@tamu.edu. This information is presented in the Pork Quality Assurance for Youth program. For more information on the program, contact Jodi Sterle.