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4-H 333 Wholesome Meat Animal Assurance Program

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Wholesome Meat Animal Assurance Program

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Cooperative Extension provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.
April 17, 1991

Dear 4-H Member:

Food safety is one of the most important issues in our lives today. As a participant in a 4-H livestock project, you are a food producer and share responsibility for the safety of food products from animals. New technology provides the opportunity for ever more efficient animal production. It also challenges us to use technology correctly and safely.

The "Wholesome Meat Animal Assurance Program" is a new program designed for young livestock producers. You will be among those who provide our food products for the future.

4-H members have always excelled at producing "blue ribbon animals." But the whole animal industry is damaged if these animals are managed in ways that jeopardize the safety of the food products they produce. The emphasis of this program is on the moral and legal obligations each young livestock producer has in developing a wholesome and safe product for the human food chain.

The Department of Animal Science at the University of Nebraska strongly supports this approach designed to educate youth on the proper and judicious use of all medications and additives for meat animal production. This handbook addresses safety needs in producing a quality product and provides focused procedures to meet these needs.

We encourage your careful review of this material and the application of what you learn in your livestock project. Remember, we are all responsible for the safety of our food. We wish you the best of luck with your livestock enterprise.

Sincerely,

Elton D. Aberle
Department Head
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The subject content of this manual was prepared by the Weld County, Colorado Fair Board Wholesome Meat Animal Assurance Committee and Weld County, Colorado Cooperative Extension Staff.

Nebraska reviewers include: Dr. Rick Stock, Extension Feedlot Specialist; Dr. Duane Reese, Extension Swine Specialist; Dr. Duane Rice, Extension Veterinarian, and Doyle Wolverton, Extension Animal Science Youth Specialist.

Doyle Wolverton compiled the supporting materials and would like to thank the Nebraska Cattlemen, the Nebraska Pork Producers and the Nebraska Sheep Council for their support of the animal science educational program.
Consumer concerns over possible chemical residue in the food chain are increasing. Studies have shown that a majority of the consuming public in this country believe meat supplied for human consumption is "contaminated" with such adulterants as synthetic hormones, muscle enhancing drugs (steroids), antibiotics, or pesticides.

Although testing by regulatory agencies has shown the legal drugs and compounds used in meat animal production to be completely safe, public perception is unfavorable. The entire meat industry ranging from producer associations to processors and distributors are very concerned with this perception.

Misuse of legal drugs and the possible use of illegal or non-labeled compounds can cause serious residue problems in the finished meat product. The drug and pesticide residue violations are "tiny to nonexistent" according to the director of the Federal Food and Drug Center for Veterinary Medicine.

Thus, we have a situation of concern on the part of the consumer even though scientific evidence does not substantiate the need for this concern. The yellow flag of caution signaling wavering consumer confidence is being raised.

The purpose of this publication and the assurance program is: "To ensure through education and certification that every producer of a market animal exhibited for slaughter be fed and maintained in a proper manner in order to provide a safe and wholesome product to the consuming public."

Because of the negative perception concerning drug residue in meat, several new, stringent programs and directives are being implemented in order to insure a completely safe product. Our immediate concern is with the producer of meat animals. Each 4-H and FFA meat animal exhibitor is considered a producer within this food chain.

The relative number of animals produced by an individual does not affect in any way the responsibility each producer has when developing an animal that eventually will become a part of a safe food chain. If you feed, exhibit and sell ONE hog or lamb or beef animal that is slaughtered for human consumption, your moral and legal responsibility is the same as the producer that sells thousands.

All producers of meat animals, whether in large or small numbers, will be facing more strict regulations and testing procedures in the immediate future in order to insure a safe, wholesome product.

Prevention of a possible problem is by far the most effective solution in the long run. This publication will address the areas of animal production where simple awareness and attention to directions can prevent possible residue problems.

Topics to be covered will include: feed selection and use, drug and chemical withdrawal times, proper administration and methods of treatment and the importance of consulting with a veterinarian when you have a question or need help.

This information should not and cannot replace a valid veterinarian-client-patient relationship.

Finally, this publication will contain information on the possible consequences from the USDA and FDA should violative residues be found.

The production of meat animals for a livestock show and ultimate slaughter is serious business. The cooperation of all participants in the wholesome meat animal assurance program and their willingness to develop an attitude of judicious use of all drugs is essential for success. We hope you find this material interesting and informative.
basic and very important part of developing a market animal is the proper selection of various feed ingredients. Properly balanced rations made up of high quality feedstuffs will determine to a large extent your success in raising an efficient, well finished market animal.

Most feeds that are purchased do not present problems as to their quality. However, as a market animal producer, it is prudent to be aware of things such as color, temperature, odor, moisture and foreign matter when you handle or visually inspect various feed ingredients.

Grains that are stored with too high of a moisture content or roughages harvested when too wet can quickly develop mold problems. Mold can easily ruin feed quality and if fed to animals can make them extremely sick. Aflatoxin poisoning is a relatively common type of mold induced poisoning. Aflatoxin can cause abortions in pregnant animals as well as sudden death in all animals.

Once high quality feed is either harvested or purchased for your animal(s), the proper storage of this feed is equally important in order to maintain quality.

Grains should be stored in a building or containers that will not allow moisture, birds, rodents, etc. to gain entry. Birds and rodents not only consume your feed but can cause disease via their droppings left in the feed. If you store various feed ingredients in containers, be especially careful of the type of container you use. Using an old oil or solvent barrel is not a good choice and NEVER use a container that was originally used to carry any type of pesticide. The residues from these container could easily contaminate your feed which in turn would be an excellent source of residue problems in the meat.

Also, you should be careful to not store any type of pesticide near your feed supply. A leak or spill could again provide the avenue for residue contamination of the meat.

Feed that is stored outside, such as baled alfalfa, should be covered to keep sun and moisture damage to a minimum.

The presence of high nitrates in feedstuffs can also cause problems. The concentration of nitrates very often comes from harvesting of immature crops. An example might be corn that has been hailed and therefore cut for silage before it has matured. Another problem area could be high nitrates in the water used for the animals. Excessive nitrates can cause abortions, inefficient feed conversion or possibly death. The only sure method for detecting excessive nitrates is with a test of the feed or water.

Several types of pesticides (insecticides and herbicides) used in crop production today can cause residue problems in livestock if these pesticides are not used judiciously. Alfalfa hay that has been sprayed for weevil and/or aphids normally must not be harvested for 10 to 14 days after application. Corn that is harvested for silage could have residue problems if sprayed too late in the growing season. These are examples of possible problem areas. If you purchase feed from others, ask them if pesticides were used and at what time in the growing/harvesting season they were applied. It is your responsibility to make sure all feeds are of high quality and residue free.

There are several feed additives and medicated feeds you might use for your market animal project. It is very important that medicated feeds be used carefully and according to label directions. There are withdrawal times on most of the medicated forms of feed that must be adhered to judiciously. It is suggested that you consult a veterinarian as to his/her recommendation on appropriate use of these ingredients.

The major emphasis to remember in feeding your animal(s) is to ensure that no contamination of the meat being produced can take place by possible harmful residues in your feed supply.
REMEMBER

- Check feedstuffs for color, temperature, odor, moisture and foreign matter.
- Maintain quality by proper storage techniques to keep moisture, rodents and birds away from your feed supply.
- Be especially careful to use clean, residue free containers to store your feed.
- Be aware that high nitrate concentrations in feed or water can cause problems such as abortions or even death.
- Apply ALL pesticides carefully and judiciously to any feed you raise yourself to avoid possible pesticide contamination of your feed supply.
- Use medicated feeds with care since most have withdrawal times that must be followed as labeled before slaughter of the animal is allowed.
- ALWAYS consult your veterinarian when you have questions or are not exactly certain in the use of a various feed ingredient or compound.

PRODUCER CONSUMER WIN WIN POLICY

| Safe Feed Practices | Safe Disease/Parasite Medication | Safe Use Follow Label | Safe Meat Product |

Proper Use of Legal Drugs on Meat Animals

Use of various drugs, medicines and other substances on market animals can return their cost many times over when used properly. Vaccines are normally used early in the feeding period as preventative steps to control various respiratory diseases. Worming medications are widely used to rid the animal of nutrient robbing internal organisms and increase the feed efficiency of the animal. External parasite substances will control mites, ticks, grubs, etc. which will also increase efficiency and reduce damage to the pelt or hide of the animal. Misuse of these agents can also be very costly to you as a producer by not only harming the animal but rendering the meat from the animal worthless if dangerous residues remain at time of slaughter.

A preventative program to ensure animal health is the best program; taking steps to prevent problems rather than treating a disease or parasite infestation after it has occurred. The best preventative program, however, cannot eliminate the need for occasional treatment when disease strikes. The possibility of residue contamination or other carcass damaging procedures is most likely to occur when drug therapy is used to treat a disease or parasite problem that has invaded the animal. Therefore, we need to address the importance of strict adherence to label directions on the various medications available, proper administration techniques and the veterinary-client-patient relationship.
Label Directions and "Extra Label Drug Usage"

The single most important thing that you as a producer can do to help in elimination of possible drug residues in meat animal production is to READ THE LABEL before administration of any drug or medication. Once you read and understand the label the next most important step is to COMPLY WITH THE LABEL DIRECTIONS. All medication labels list the animal species for which this drug is approved, the proper dosage, the proper route of administration and the withdrawal time required for this particular drug. If there are any questions you have about usage of a particular drug, then it is always appropriate to consult a veterinarian before you use it.

Use of a medication other than in strict compliance with label directions, including use in species or for indications not listed on the label, or used at dosage levels higher than those stated on the label and failure to observe the stated withdrawal time is commonly referred to as "extra label drug usage." It is in this area that you are most likely to cause violative drug residue problems. Any deviation from label directions will require a veterinarian's prescription. A common misconception is that it is OK for you to use the same product and procedure that a veterinarian prescribed for your neighbor when his animals displayed the same symptoms as yours. This is not allowed and the Center for Veterinary Medicine (CVM), a division of the Food and Drug Administration (FDA) has the following criteria which must be met before "extra label drug usage" is permitted:

1. A careful diagnosis is made by an attending veterinarian within the context of a "valid veterinarian-client-patient relationship." (See below)

2. A determination is made that there is no marketable drug specifically labeled to treat the condition diagnosed or the dosage recommended by the labeling was not effective.

3. Identity of any animal given "extra label" treatment is carefully maintained.

4. A significantly extended period of time is assigned for drug withdrawal prior to marketing of the animal. A veterinarian is the only one that can make this determination of proper withdrawal time based on his/her best professional judgment.

Because the role of the veterinarian is so critical in "extra label" drug usage, the CVM has established the following guidelines to determine when a veterinarian-client-patient relationship exists:

1. The veterinarian has assumed the responsibility for making clinical judgements regarding the health of the animal and the client has agreed to follow the veterinarian's instructions.

2. The veterinarian has seen and is personally acquainted with the keeping and care of the animal by virtue of examination and timely visits to the premises where the animal is being kept.

3. The veterinarian is readily available for follow-up evaluation in the event of adverse reactions or failure of the treatment prescribed.
Utilizing the correct administration technique is an important part of the proper use of animal health products. Again, the process of reading and understanding the label before any product is given is most important. Labeling will describe exactly how the medication is to be administered and the proper dosage level.

Basically, there are three routes of administering medications:

1. Orally — given by mouth. Liquid medications are generally easily administered orally by squirting the liquid towards the back of the mouth and making sure the animal swallows it. If a tube or balling gun is used to place the liquid or pill down the throat of the animal, care must be taken so the animal is not choked.

2. Pour-on — as the name implies, this refers to simply pouring the medication on the back of the animal and is generally used to rid an animal of external parasites; mites, ticks, grubs, etc. Care must be taken to not allow any of the product to come in contact with the animal's eyes, nose or mouth.

3. Injections — accomplished by use of a syringe and needle. The label again specifies which of three types of injection to use with the particular medication.

   IM or intramuscular is probably the most common route of injection. An IM injection is given into muscle tissue such as the round, lower thigh or neck.

   SC or subcutaneous injections means the medication is placed under the skin or hide of the animal.

   IV or intravenous injections are given directly into the bloodstream and normally the jugular vein in the animal’s neck is the best site. IV injections require more skill in administering since the vein must be located and the depth of penetration is critical so that the medication is directed into the bloodstream.

   Injection is the most common method of administering medications and when done improperly can cause many problems. Some guidelines to insure correct injection technique are:

   First, never inject a substance meant to be given orally or externally. Again, the label will always specify the correct route of administration.

   Second, injections given in dirty or wet conditions and without proper disinfectant can cause abscesses in the injection site. Surface abscesses can result in significant carcass trim at the processing plant. Hidden abscesses or scar tissue located deeper in muscle tissue can cause more serious problems. These abscesses can be cut open during the fabrication process at either the packing plant or local meat distributor and may cause contamination of another portion of meat or even the entire carcass.

   Third, injections given without proper disinfectant may cause cross contamination of disease organisms from one animal to another.

   Fourth, selecting an injection site in the neck or lower thigh will help prevent the possible loss of expensive meat cuts.

   Fifth, use needles that are no larger than necessary to adequately complete the injection. Use of larger needles than necessary contribute to possible abscess problems.

   Sixth, the volume of solution injected at one site will directly influence tissue damage, scar tissue and the potential for abscesses.

   Seventh, if implants are used it is essential that label directions be followed as to their proper location. An implant is basically a subcutaneous injection of small, medicated pellets on the backside of the ear. Proper location of the various implants differs from one type to the next and the label will provide the correct site information.
• The benefits of using legal drugs, vaccines and other medications far outweigh their cost in a sound market animal production program when used judiciously. Conversely, misuse or use of substances not specifically labeled for the animal or condition can have disastrous effects and long term ramifications.

• "Extra label drug usage" has the potential of causing most residue problems in market animals.

• A valid veterinarian-client-patient relationship is an important part of any market animal production program. This relationship is essential when extra label drug usage is contemplated.

The medication label is your guide to the proper route of administration, dosage level and withdrawal time required for the specific substance.

• The proper administration of medications is very important in striving to produce the best possible quality carcass. Carcass trimming due to bruising and abscesses is simply the result of poor management on the part of the producer.

• When in doubt, your veterinarian is always the best source of information and should be consulted when you have questions.

The Responsibility and Obligation of the Market Animal Producer

In concluding this material on safe and judicious use of the various medications available to market animal producers, the obligation of moral responsibility each young producer must have cannot be stressed too greatly. The meat processor and USDA meat inspection personnel are well aware of where they are most likely to encounter violative residues in meat animals. Unfortunately, livestock show animals fit into this residue prone category along with cull breeding livestock and realizers (down or crippled animals).

The final analysis of the success or failure of an animal drug awareness program will be determined by your interpretation of "winning at all costs" and "the end justifying the means." The incentive to exhibit an award winning animal has always been and will continue to be the value of live animal shows. Competition is good and tends to promote a continuing effort to strive for excellence. If this drive for excellence includes misuse of legal medications or use of illegal drugs, then our priorities are misplaced and our responsibility to provide wholesome meat is jeopardized.

The following are examples of drug misuse that could result in residues thereby making you legally liable, clouding the image of livestock shows and definitely eroding consumer confidence even more.

• The use of injectable steroid substances to enhance muscle development in the animal. This is not an acceptable use for steroids. There are no withdrawal times established and no one knows the harmful effects this could cause to the consumer that eats this meat.

• The use of diuretics to reduce the water content of the animal and therefore reduce weight before show animals are weighed for classification. Use is not allowed without a veterinarian's prescription. Withdrawal time is a problem since it is used within a few days of slaughter.
• The use of various back pour insecticides as a "hair set" for beef cattle. This practice is very hazardous since a 30 to 45 day withdrawal period is common for most of these products.

• The use of tranquilizers and/or anesthetics as a means of calming animals at shows. Again, only with a veterinarian's prescription since there are no labeled tranquilizers or anesthetics for meat animal use.

These examples would constitute "extra label" or illegal drug use since they do not conform to label directions. Your legal liability increases tremendously if these types of misuse occur. The risk involved does not justify any possible gain in award or recognition.

You can read this material on how drugs and medications should be used. Your veterinarian can instruct you on how you are to treat a specific animal. But, the final criteria in ensuring a wholesome product for the human food chain lies in your willingness to be morally responsible in all of your production techniques as you develop this animal.

The thing that generally separates man from animal is man's ability to reason and the ability to know right from wrong. Can you legislate morality? No. But, there are rules and regulations in place to help achieve doing the right thing rather than the alternative. Therefore, if you deliver an animal to a federally inspected processing plant for slaughter and a violative residue is detected, the following rules apply:

1. When a residue is detected in the animal(s), the inspector or laboratory making the detection will report to the USDA's Food Safety and Inspection Service (FSIS) that a specific residue was found. At this time a case number and identification number is assigned to the owner of the animal. The case is filed with the USDA office nearest the point of origin. This USDA office then reports to the producer in question with the information that pertains to the residue which was detected. They will also ask for details concerning the anima that tested positive for the residue.

2. The individual must notify the USDA office the next time he/she delivers any animals for slaughter.

3. The USDA also reports the residue violation to the Food and Drug Administration (FDA). The FDA then makes a decision as to the type of follow up procedure it will pursue which can include civil or even criminal prosecution of the producer for not complying with FDA regulations as pertaining to use of illegal or misuse of legal drugs and medications.

We can therefore conclude that the MISUSE of drugs, vaccines, pesticides and various other medications in market animal production can have serious consequences. It is hoped that this material will increase the awareness of all readers to the moral and legal obligation associated with the market animal production project.

A livestock project is a most rewarding experience for all young people that take the initiative to participate. The feeding, caring for, grooming, fitting and showing aspects of such a program are experiences that will remain a lifetime. The unique aspect of the market animal project is that ultimately this animal will become a link in the food chain. Quite possibly you, your family, a bus driver in New York City and fifty other people will consume the meat from this animal. Can you guarantee a wholesome, safe product?
March 11, 1991

Dear 4-H Member:

Those of us in the livestock business tend to focus on things like the weather, the cost of feed, keeping our animals healthy, and the market. We get so intent on production issues that we sometimes forget we are in the food business.

Being a food producer means we have a special responsibility...to both consumers and our fellow producers...to ensure that we produce a safe product. It only takes one "bad apple to ruin the barrel," and it only takes one incident to give the whole industry a bad reputation.

The livestock industry has assumed this responsibility with Safety Assurance Programs, of which Nebraska's beef program has been a forerunner. The purpose is to: (1) heighten awareness among producers of the need for safety assurance, (2) provide materials and resources on Good Manufacturing Practices, (3) troubleshoot problems which might arise and (4) respond to consumer or media concerns about the safety of meat.

Following GMP's really doesn't take extra time or money...just a little more effort is all. But the results are worth it. The industry can maintain its good image, and we can take pride knowing that we are fulfilling a vital role in an important profession.

Good luck as you implement your own Safety Assurance Program.

Sincerely,

DeLayne Koseke
Co-Chairman
Nebraska Beef Safety Program

Bob Bohlender, DVM
Co-chairman
Nebraska Beef Safety Program

204 East 3rd Street, P.O. Drawer 40, Alliance, NE 69301, (308) 762-3005

Executive Building - Suite 101, 521 South 14th Street, Lincoln, NE 68508, (402) 475-2333

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Dear 4-H Members:

The "Pork. The Other White Meat" promotional campaign has been a challenging and successful effort by the national and state pork producer organizations to improve the consumers perception of pork.

Education can change people's attitudes. This change is very deliberate, painstakingly slow, and often very expensive.

If we as livestock producers want to change the consumer's attitude, we must approach the task with a carefully planned, long term series of activities. Contrast this with the change in public attitude that can result from one irrational event. For example, will we ever feel a space shuttle trip is safe again? One single event can trigger a series of headlines which in an instant can challenge a lifetime of education.

We must strengthen our efforts to protect the wholesomeness of pork. But who is "we"? Is it the packer, the grocer, or the fast food retailer?

Obviously, any of the above could trigger an emotional attack by the public which would reduce pork sales. But the "we" that protects the favorable image about meat must start with "you" as a producer.

Like it or not, it is clear that our consumers, the public, are losing confidence in our food supply. This loss of confidence is caused by safety issues stemming from the continued use of drugs in animals produced for food. Over three quarters of all consumers have some concern about the ingredients added to their food. Antibiotics and growth hormones are a perceived problem by almost every consumer. The use of drugs in swine is beneficial both for the health of the animal and for human health. Drugs should be used to assist good management, not cover up poor management.

We challenge you as 4-H members to properly handle and administer animal health products in your livestock production projects. We also challenge you to take part in the Pork Quality Assurance Program. For information about enrolling in the pork producers commitment to quality program, visit with your county extension agent or contact the Nebraska Pork Producers Association state office.

We wish you the best with your livestock projects.

Sincerely,

Arnie Stuthman
President

A103 Animal Science ■ University of Nebraska ■ Lincoln, NE 68583-0834 ■ PH: 402/472-2563
Dear 4-H Member,

The Nebraska Sheep Industry wishes to support the Food Safety Assurance Program. Food needs to be recognized as a "clean wholesome free from drug" product. To accomplish this, animals must be healthy and free from feed which contains contaminants, as well as being treated with non-approved drugs. Those treated must be done by prescribed programs and regulations including proper withdrawals. These responsible acts will give creditability to your product.

The purpose of the Safety Assurance Program is to:

1) heighten awareness among producers of the need for the program
2) provide material and resources on good practices
3) trouble-shoot problems which might arise
4) respond to consumers concern about meat supply

Help keep the image of wholesale meat products. Your help is very much appreciated.

Sincerely,

Robert Ahlschwede
President
NEBRASKA SHEEP COUNCIL

Arlen Gangwish
Vice President