A resource guide for beef producers

Information on:
- The SCA and what it does
- Grant funding and programs
- Production information
- Regulations and practices
- And much more!

www.saskbeef.com
Welcome to the SCA’s first producer handbook

This booklet is designed to be a resource guide for Saskatchewan beef producers who are looking for information. The SCA’s job is to help producers succeed, and part of our mandate is to make sure producers know what’s available to them and how to take advantage of that information. In addition to this handbook, the SCA’s website, www.saskbeef.com, has a producer resources page with links to more information. We also post information items daily on our Facebook page: facebook.com/saskbeef. We welcome your feedback, whether you have a question, a concern or a suggestion. We’re always happy to hear from you at 1-877-908-2333 or email: info@saskbeef.com.

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THIS GUIDE IS AVAILABLE IN PDF FORM that you can download on your computer or tablet with one-click access to all the links listed in this publication.

The SCA is always adding and updating resources for our producers on our website.

Go to: www.saskbeef.com/for-producers.html
The Saskatchewan Cattlemen’s Association was established in 2009 with the mandate to provide a united voice for the province’s beef industry, with representation from all industry sectors and across all regions of the province. As a development commission, the SCA works to develop and promote the industry by investing levies collected through the sale of beef cattle in the province.

The SCA was established with 11 regional districts across the province. One director is elected from each district, with two directors appointed from the Saskatchewan Stock Growers Association (SSGA) and the Saskatchewan Cattle Feeders Association (SCFA). The sixteen-member board also includes the immediate past chair of the SCA.

Every eligible producer (any Saskatchewan cattle producer who has paid levies within the last two years and has not received a refund) is entitled to one vote and is eligible to hold office as a director for the Association.

Beef producers in Saskatchewan currently pay a $3 per head marketed levy. The administration of both provincial ($2 refundable) and national ($1 non-refundable) levies are the responsibility of the SCA. The authority to collect these levies is found under the Cattle Development Plan Regulations. This is a producer-led and controlled fund, meaning beef producers are in charge of leading and shaping their own industry.

We welcome and encourage your input and feedback.

Email: info@saskbeef.com
Fax: 306-585-2334

SASKATCHEWAN PRODUCERS PAY A $3-PER-HEAD CHECK-OFF

The levy is collected by SCA on the sale of cattle in Saskatchewan. The operations of SCA are financed by the collection of a levy in the amount of $3.00, consisting of a $2.00 refundable provincial levy and a $1.00 non-refundable national levy. For more details on the levies and how they work, go to:

www.saskbeef.com/levy-info--forms.html

Have YOU registered with the SCA?

SCA’s mandate is to promote and develop the cattle industry in Saskatchewan. The resources to do this come from levies collected when cattle are sold by Saskatchewan producers.

Industry development takes many forms. We give our producers useful information they need to run their operation. As a registered producer, you know you will be getting up-to-date information from the SCA.

Some sponsors would also like to offer benefits to cattle producers, and SCA is investigating the feasibility of producers claiming the Scientific Research and Experimental Development tax incentive. The incentive is a tax credit that producers can use to reduce their income tax payable. This incentive can only be passed along to registered members.

Stay tuned for more information about this and be sure to be registered so we can get that information to you.

To register, call the SCA office at 1-877-908-2333 or email: info@saskbeef.com with your contact information.
Research funding drives innovation

The SCA administers the Saskatchewan Cattlemen’s Association Industry Development Fund (SCAIDF) to be used for research, development and promotion of the beef cattle industry in Saskatchewan. The research committee, chaired by Mike Spratt, studies proposals to guarantee that producer check-off money is spent responsibly on effective projects that enhance the competitiveness of all production sectors of the Saskatchewan beef cattle industry. The SCA board makes decisions on funding and adheres to The Cattle Development Plan Regulations, The Agri-Food Act, 2004 and its regulations, and all applicable board orders.

**RESEARCH PRIORITIES**
**SPRING 2016**

**Economic Sustainability**
Projects which seek to improve producers’ efficiencies and lower the cost of production to ensure a sustainable beef industry, will be considered.

**Genomics**
Support will be considered for research which identifies the benefits of birth to slaughter information programs while incorporating genomic advances.

**Animal Health, Nutrition and Management**
Projects which seek to improve animal welfare, beef quality and public safety, and producer’s profitability.

**Environmental Stewardship**
One of the greatest challenges facing the growth of the beef industry is the need to adapt to evolving government environmental regulations and the need to enhance the public perception of the effects of the industry on the environment.

**Forage and By-products**
Forage research, development and technology transfer will be of mutual benefit to both the forage and livestock industries.

For more details see: [www.saskbeef.com/research.html](http://www.saskbeef.com/research.html)

**HOW TO: APPLY FOR SCAIDF FUNDING**

If you have a research project which focuses on beef, feed or forage research, we encourage you to apply for funding. The SCA has identified key research priorities (see sidebar) which it believes are critical to the future success of the Saskatchewan livestock industry.

The current intake deadline is Nov. 18, 2016. Financial statements for a one-year period are required with each application. The committee may require applicants of multiple year projects to provide more than one year’s budget. The research committee will review applications and may consult with external members (i.e. individuals with expertise in the particular area of the project) regarding the project deliverables. The research committee will meet with applicants at their discretion. Research projects must compliment the national vision while avoiding duplication and ensuring that issues of critical importance to Saskatchewan are addressed. SCA regularly communicates with other beef research funding bodies.

To find out more about how to apply for SCAIDF funding, phone 1-877-908-2333 or email: info@saskbeef.com. [www.saskbeef.com/research.html](http://www.saskbeef.com/research.html)
The Code of Practice for the Care and Handling of Beef Cattle is the Canadian understanding of the requirements and recommendations for beef cattle care. Canadian beef cattle farmers and ranchers have long been leaders in cattle care.

The current Code, published in 2013, built on the 1991 version. Today, many more people are interested in how the plants and animals that become their food are raised. The Code of Practice is industry’s answer to many of those questions.

It is also a valuable tool for new and existing producers refreshing their knowledge of what is required and recommended when raising beef cattle in Canada.

In June of 2016, Verified Beef Production Plus was launched. This program aims to give producers the tools to “show their work.” As value chains arise touting how the cattle behind the beef they are selling were raised, it is becoming more common for a verification of on-farm practices.

VBP Plus has modules on Food Safety, Animal Care, Environment and Biosecurity. The animal care module uses the Code of Practice for the Care and Handling of Beef Cattle as its base.

Not too long ago, consumers and retailers listened when producers said trust us to take care of the cattle. Nowadays, there are some who are asking for more proof. The VBP Plus program was developed to add value for producers and to be the tool producers used to show the good things they have likely been doing for years.

To find out more about VBP Plus, go to: www.verifiedbeefproductionplus.com

Looking for a producer’s perspective on VBP Plus? Contact SCA board member Arnold Balicki to talk about his experience and why he believes VBP Plus is absolutely crucial for the future of the beef industry in Canada. Phone: 306-468-7240 or email: balickiangus@yahoo.com
HOW TO: TAKE ADVANTAGE OF GF2 FUNDING

Growing Forward 2 (GF2) is a five-year (2013-2018) policy framework for Canada’s agricultural and agri-food sector. GF2 is a $3 billion dollar investment by federal, provincial and territorial (FPT) governments and the foundation for government agricultural programs and services. GF2 programs focus on innovation, competitiveness and market development to ensure Canadian producers and processors have the tools and resources they need to continue to innovate and capitalize on emerging market opportunities.

In addition, an effective suite of Business Risk Management (BRM) programs, which include AgriInvest, AgriStability, AgriInsurance, and AgriRecovery, help farmers manage risk during severe market volatility and disaster situations. Through AgriRisk Initiatives, governments will also help the industry in its efforts to research, develop and implement new agricultural risk management tools. For much more information on Growing Forward 2 programs: http://bit.ly/saskbeef-GF2

BUSINESS RISK MANAGEMENT PROGRAMS

**AgriInvest** – A self-directed risk management program. Producers paying into AgriInvest can withdraw the matched funds to offset risk of future events or to react in the case of smaller downturns. It is important to note that funds left in AgriInvest accounts are noted by governments. Producers can withdraw those funds and hold them for future risk mitigation and this will help prevent government from implying that producers do not need this program.


**AgriStability** – Whole farm disaster program. AgriStability is a complex program by its very nature. It is designed to mitigate disaster level drops in profit margins. This program is made more complex as it adjusts as farms change in size and as assets change in value. While the program is often difficult to master, it is a relatively inexpensive disaster coverage portion. Governments have also been repeatedly pointing out that the programs that are offered are all that are going to be available when disasters occur.

http://saskcropinsurance.com/agriability/

**AgriInsurance** – Forage and Hay, WLPIP Pilot Project, Annual Crop Insurance, Predator and Wildlife losses. These programs evolve every year. In 2015 the tame hay program’s variable price option’s cap was removed, making that program much more responsive in times of drought when hay prices move much further than the previous 50% cap. These programs are always worth discussing with SCIC representatives. When producers do not use these programs they send the message that they are not worth using to manage risk. SCA continues to work with SCIC on these programs to make sure they are of value to those who choose to pay to offset some of their risk.

http://saskcropinsurance.com/ci/

WESTERN LIVESTOCK PRICE INSURANCE PROGRAM (WLPIP)

The Western Livestock Price Insurance Program is a pilot project business risk management program. The program allows a producer to capture what the market is offering at a future date that coincides with when they plan to market their cattle. If cattle sell for less than it was forecast when a policy was bought, then a payout is made. If the market improves and cattle sell for more than was forecast then no payout is made but your cattle are able to sell for that higher amount.

WLPIP is a pilot project that will end in March of 2018 unless governments decide differently. SCA supports WLPIP becoming a permanent program. Producers can help this become reality by enrolling in WLPIP (that means you are able to buy, not that you are buying). Producers can also let their MLA and MP know that its continuation is important. For more info: wlpip.ca
Premises Identification (PID) is one of the three pillars of traceability and links livestock and poultry to land locations or premises. PID was established to plan for, control, and prevent, the spread of animal diseases. It can also be used as an early warning system to notify producers of a natural disaster such as a flood or fire which could affect animals under their care.

If you own, rent or for any other reason have control of a premises where livestock or poultry are grown, kept, assembled, slaughtered or disposed, you should obtain a PID number for that location. Participation in Saskatchewan’s PID Program is voluntary; however, it will only work if you join.

If your number was issued before mid-2015, you will likely need to get a new number through this system.

PID links livestock and poultry to identifiable geographic locations for planning and managing during emergencies. The national traceability system is expected to encompass all livestock and poultry species produced in Canada. It is recommended that producers with other livestock species also apply for a PID number and be entered into the Saskatchewan PID Program. A PID number is a unique alpha-numeric identifier assigned to a parcel of land where livestock or poultry is grown, kept, assembled, slaughtered or disposed.

The other two pillars of traceability are animal identification and movement reporting. Together with PID, these three pillars enable veterinarians and others to track where animals have been located and to identify other animals with which they have been in contact.

**HOW TO:** REGISTER ONLINE FOR PID

First, have the following info handy: **Legal Business Name** of your business enterprise (if applicable); **Location details** of your premises (legal land description or street address); and **Contact information** for the person (people) who should be contacted in the event of an animal health emergency.

Next, go online to [bit.ly/saskbeef-PID](http://bit.ly/saskbeef-PID) and click “start.” Then follow the instructions from there.

**Do your part to keep our markets open:**

**TEST FOR BSE**

For Canada to have a strong bovine spongiform encephalopathy (BSE) surveillance program, producers need to be involved. As a cattle producer, your participation in BSE surveillance is crucial to maintain Canada’s international market access.

BSE testing numbers have a direct impact on international market access. Currently, Canadian producers have international market access because we have demonstrated a low and declining level of BSE through participation in BSE testing. It is important that producers continue to support this essential program through their submission of samples for testing.

If each cattle producer tested one animal a year, we would exceed BSE testing targets, maintain current market access and contribute to Canada’s efforts to become recognized as a negligible risk for BSE.

Protect your most important investment, your cattle herd, by testing your eligible animals for BSE. For more information, go to [http://www.saskbeef.com/for-producers.html](http://www.saskbeef.com/for-producers.html) and click on BSE Testing.
PREDATORS

Dealing with them and compensating losses

Predation is a serious threat on Saskatchewan cattle farms and ranches. The Saskatchewan Crop Insurance Corporation has a program to assist in preventing wildlife losses.

Information on protecting feed from wildlife can be found at bit.ly/saskbeef-prevention1

There is also a program for helping to prevent losses from predators at http://bit.ly/saskbeef-prevention2

When losses cannot be prevented, SCIC has compensation programs. More details on predator losses can be found at bit.ly/saskbeef-predation

As to protecting your livestock, producers do have the right to control predator populations that are threatening their livestock. Coyotes are not notable to the Ministry of Environment, but if a cougar or wolf is killed, then notifying your nearest Conservation Officer is required. Even if you spot a cougar or wolf, notifying a Conservation Officer will allow the Ministry to get involved to deal with the predators.

Communication key to dealing with hunters

Land owners and leaseholders on most crown land have the right to control access for hunting. The hunter’s guidebook is clear that private lands must be respected. Experience shows the vast majority of hunters are respectful of landowners.

But bad experiences linger and occur across the province. The Ministry of Environment offers signs for posting land.

For those allowing hunting on your land, ensure you are clear what you do and do not allow. Over what time frame are you granting permission? What kind of access are you granting (driving, walking, ATV)? Who are you granting permission to (just the person you are speaking to, their hunting party)?

It’s important to be clear in all communications with hunters requesting access to your land. Talk about gates, about invasive species and about respect for the land. It’s better to have a discussion about these topics beforehand than an argument or legal battle after the fact.

Don’t forget the camera in your pocket!

SCIC strongly recommends producers use their smart phones to take photos of any instance of predation or suspected predation. The more evidence you have, the easier your claim will be.
Cattle theft is still a serious problem – and you can be part of the solution

If you’ve had cattle stolen or need more information on dealing with theft, contact the SCA at 1-877-908-2333 (BEEF)
MOOVING ALONG: 
Transport regulations and your operation

Transporting cattle is likely the most visible aspect of beef cattle production. The whole industry is painted with one brush when transport incidents that lead to poor cow welfare are highlighted.

Most incidents can be avoided with solid pre-transport decision making. Cattle should only be loaded for trips they will weather in the same condition they began. Freshly weaned calves and cull cows are the most at-risk cattle. In short, some cattle should never end up on the truck.

The CODE OF PRACTICE FOR THE CARE AND HANDLING OF BEEF CATTLE has extensive information:


All cattle being transported in Saskatchewan need to travel with a properly filled out manifest.

All cattle transported in Canada fall under the Health of Animals Act Regulations Part XII.

Guidance can be found at http://bit.ly/saskbeef-transportation

ARE YOU KEEPING A RECORD?

Information is a key tool for your operation’s profitability

Record keeping has always been an important practice in the beef industry, particularly to track genetic performance and profitability. But since the 2003 BSE crisis, record keeping is also coming into the spotlight for biosecurity reasons.

Recording origin and date of birth for calves is becoming an increasingly important record to have now. While record keeping does mean more effort on the part of the producer, seedstock and commercial producers should also view it as an important and powerful tool.

Along with documenting when calves are born in preparation for export source verification programs, keeping well-documented ranch records can help producers monitor where they are and help determine where they need to go for production. Records can give you the tools to help determine how to increase profitability.

For example, it’s critical for beef producers to know Unit Cost of Production (UCOP), which is determined by variable and fixed costs minus non calf revenue divided by pounds of weaned calf. To make decisions you can then analyze the unit cost of production, identify areas of high leverage, and make effective management decisions.

The Government of Saskatchewan has many resources and calculators for producers to use. Talk to your Livestock and Forage Specialist to find out more. A number of ranch management software applications are also available online.

FOR THE FULL ARTICLE IN BEEF MAGAZINE, GO TO:

TOP 10 RECORDS YOU SHOULD BE KEEPING ON YOUR OPERATION

1. Inventory
2. Individual Animal ID
3. Market Weights
4. Pregnancy Data
5. Calving Data
6. Pasture Usage
7. Feed Purchase Records
8. Sire Information
9. Enterprise Costs
10. Enterprise Revenues
Estate planning is not something that can be accomplished in a few days. Your plan may take several years to finalize. In the course of your discussions you will run into issues that are difficult to resolve and objectives that may conflict. Some of your goals may need to be reconsidered when circumstances change. Don't be dismayed when you encounter these roadblocks on the path to a completed estate plan. When your plan is finalized, you will have the satisfaction of knowing that you have done your best to meet the needs, goals and wishes of everyone involved.

Communication is a vital element in the process. Initially the discussions will be between you, your wife or husband, as the case may be, and perhaps your professional advisors. Subsequently your farming child or children will be involved, and ultimately your other children as well. A successful estate plan is one that is well understood by all of your children.

The first step in the estate planning process is to collect financial and other information to help in family discussions and assist your advisors. The second step is to review a number of personal and financial issues to decide on some broad objectives regarding the transfer of the farm. In the third phase, you should set your goals by continuing to focus on broad objectives or goals and arrive at some decisions based on your discussions in Step 2.

In the fourth and final step in the first part of the process, you need to gain an understanding of the “tools” that can assist you in getting where you want to go.

Once you complete the first half of the process, you need to decide how to get started on the second half. As with the first half, producers are encouraged to get assistance from their lawyer, accountant, insurance agent and financial planner. Provincial Ministry staff will be able to review your goals and objectives and offer some preliminary advice on the options that seem to be available to you.

Your accountant can provide assistance depending on his or her experience and qualifications. Some have a great deal of expertise in this area and will be able to oversee the entire process as well as provide the detailed income tax information you will need. Others will have much more limited skills and should be prepared to refer you to an more experienced accountant.

Your lawyer will, of course, become important when the final plan begins to take shape and you need to consider the form of the agreement, your security, the updating of your wills and other similar matters.

For the full document of Estate Planning For Farm Families, go to: bit.ly/saskbeef-succession
GETTING THE MOST
FROM THEIR FOOD

SUCCESSFUL GRAZING

SUCCESSFUL GRAZING UTILIZES PLANTS, WATER SOURCES, AND THE SOIL TO YIELD HEALTHY ANIMALS AND ECONOMIC BENEFITS. THE LOCATION OF YOUR FARM, ITS SOIL TYPE, YOUR HERD’S DISTANCE TO A WATER SOURCE, AND EVEN THE QUALITY OF THAT WATER, AMONG OTHER FEATURES, WILL AFFECT YOUR GRAZING PRACTICES. SO CONTACT YOUR PROVINCIAL LIVESTOCK SPECIALIST AT 1-866-457-2377 FOR ASSISTANCE IN DEVELOPING A PLAN FOR YOUR FARM.


EXTENDING YOUR GRAZING SEASON INTO THE COLD SEASON THROUGH BALE GRAZING, SWATH GRAZING, AND STOCKPILING CAN REDUCE YOUR FARM’S RELIANCE ON LABOUR, AND DECREASE MANURE AND FEEDING COSTS. SWATH GRAZING, FOR EXAMPLE, HAS BEEN SHOWN TO REDUCE TOTAL DAILY FEEDING COSTS BY 41% TO 48% PER COW, COMPARED TO DRYLOT FEEDING AS A RESULT OF LOWER YARDAGE AND FEED COSTS. STOCKPILE GRAZING, IN WHICH A HERD TAKES ONE LAST PASS IN LATE FALL AND EARLY WINTER, ARE BEST WHEN THEY INCLUDE 45%-50% ALFALFA. BALE GRAZING CAN ALLOW FOR MANURE DISTRIBUTION WITH A FIELD WITHOUT THE COST OF CLEARING YOUR FEEDLOT. HOWEVER, ELECTRIC FENCING, ADEQUATE SHELTER, BEDDING, AND ALTERNATIVE WATER SOURCES MUST STILL BE CONSIDERED CAREFULLY.

 REGARDLESS OF THE METHOD YOUR FARM USES TO FEED ITS CATTLE, TESTING YOUR FEED ENABLES YOU TO PROVIDE HEALTHY AND RECOMMENDED RATIONS, IT AVOIDS ILLNESS IN YOUR HERD DUE TO DISEASES IN YOUR FEED LIKE ERGOT OR FUSARIUM, AND ASSISTS YOU IN MAKING FINANCIAL DECISIONS AS YOU CAN ASSESS A MORE ACCURATE AMOUNT OF FEED AND NUTRITION NEEDED FOR YOUR CATTLE ON A LONG TERM BASIS. SEE HERE: bit.ly/saskbeef-feedtesting FOR THE INFORMATION ON FEED TESTING, OR TALK TO PROVINCIAL LIVESTOCK SPECIALIST AT 1-866-457-2377 FOR ASSISTANCE.

DIFFERENT FEEDING PRACTICES DEPEND ON THE AMOUNT OF TIME AVAILABLE FOR LABOUR THROUGHOUT THE YEAR, THE FARMS’ WILLINGNESS TO INVEST IN EQUIPMENT AND STORAGE FACILITIES, AND SO ON. GREENFEED REQUIRES PRODUCERS TO CUT THEIR CROP, TYPICALLY BARLEY OR OAT, IN THE SOFT DOUGH STAGE THROUGHOUT THE SUMMER MONTHS. WHILE CUTTING IN THIS STAGE TENDS TO HAVE BETTER LEVELS OF PROTEIN AND ENERGY, CUTTING IT LATER INCREASE THE TOTAL YIELD OF THE CROP. SILAGE REQUIRES CHOPPING A CROP BEFORE FERMENTING IT IN A SILAGE BIN OR EVEN IN A SILAGE PIT. THERE MUST BE NO OXYGEN IN THESE CONTAINMENTS WHILE THE CROP FERMENTS. HOWEVER, PROPERLY CONTAINED SILAGE IS ABLE TO RETAIN ITS NUTRITIONAL PROPERTIES FOR A PROLONGED PERIOD OF TIME. MORE FEEDING MANAGEMENT OPTIONS CAN BE FOUND AT www.foragebeef.ca.

BACKGROUNDING AND FINISHING OPERATIONS TEND TO IMPLEMENT STEP-UP PROGRAMS, WHICH NOTE THE SPECIFIC NEEDS FOR CATTLE AS THEY GROW, AND IT ALLOWS FOR A BETTER TRANSITION TO A HIGHER ENERGY RATION, THAT IN TURN REDUCES BLOAT, ACIDOSIS, AND OTHER POTENTIAL DIGESTIVE UPSETS. THE FIRST STAGES IN THE STEP-UP PROGRAM USE MORE FORAGE, WHICH THEN DECREASES TO INCLUDE MORE SILAGE OR GRAIN. PROVINCIAL LIVESTOCK SPECIALISTS CAN PROVIDE MORE INFORMATION, AS WELL AS YOUR NUTRITIONIST OR FEED COMPANY REPRESENTATIVE.
Livestock industries are also often criticized due to misinformation and misunderstanding around the use of antimicrobials to promote growth.

In some cases, the method of drug delivery is confused with why it is being used. For example, when a drug is fed to an animal, rather than injected, an incorrect assumption may be made that the purpose of the fed medication is to promote growth.

In fact, if a large number of animals need to be treated on a daily basis for a period of time, it is much safer and less stressful to deliver the drug through feed or water than to handle each animal individually and repeatedly for daily drug injections.

Modern cattle feeding operations and feed mills are equipped with highly sophisticated feed processing, mixing and delivering equipment that help to ensure that each animal receives the amount of antimicrobial needed, if delivered through the feed. Injectable antibiotics are delivered even more precisely, with a specific volume given to an animal depending on its individual body weight.

The antimicrobials known as Ionophores, which are not used in human medicine, allow for calves to grow faster. They allow the animal to use feed energy and protein more efficiently, while also reducing the risk of digestive illnesses.

### HOW TO: USE ANTIMICROBIALS RESPONSIBLY

- Monitor cattle health on an ongoing basis to ensure prompt treatment or care.
- Prompt treatment will usually give a better response rate and require fewer treatments.
- Delayed treatment can be responsible for treatment failure and then prolonged therapy as a result.
- Delayed treatment will increase the risk of spread of infection.
- Monitor effectiveness of treatment so that ineffective treatments are remedied quickly.
- Have an accurate diagnosis before using antimicrobials.
- For example, not all lameness is footrot (a bacterial infection).
- Viruses are not susceptible to antibiotics.
- Antimicrobials that specifically target the pathogen should be selected over broader-spectrum agents and local therapy should be selected over systemic therapy when appropriate.
- Choose the right product to treat the condition.
- Have a conversation with your veterinarian to help determine whether the health benefit of treatment from a particular antimicrobial drug outweighs the potential risk and burden on resistance.
- Follow veterinary and/or label instructions.
- Use the proper route of delivery (oral, subcutaneous, intramuscular, or intravenous).
- Deliver the drug in the proper dose.
- Administer the drug for the proper number of days.
- Treatment should not be stopped earlier than veterinary and/or label instructions indicate as reduced symptoms may be confused with a cure.
- Provided veterinary and/or label instructions are followed, antimicrobials should be used for the shortest time period required to reliably achieve a cure. This minimizes exposure of other bacterial populations to the antimicrobial.

Find out much more about antimicrobials from the Beef Cattle Research Council: http://bit.ly/saskbeef-antimicrobials

### Advances in pain mitigation encouraging

FROM THE BEEF CATTLE RESEARCH COUNCIL

Consumer pressure to avoid painful practices on cattle when possible, and to reduce pain when castration, dehorning, or branding are necessary, is building. The new Code of Practice for the Care and Handling of Beef Cattle also makes strong statements about pain control.

The knowledge of pain in livestock has advanced steadily over the past 22 years. Researchers’ ability to measure animal responses associated to painful procedures have improved, and research has developed new pain control drugs that are registered for use in cattle in Canada.

Still, cattle’s experience with pain is not fully understood. Research that has used electroencephalographs to monitor brainwaves in cattle during painful practices detects clear differences, so it is clear that cattle experience pain, however as prey animals, cattle have evolved to not show behavioural signs of pain, which is a sign of weakness to predators.

Most previous research into pain control for castration and dehorning has been done in dairy calves that were weaned at birth, or in feedlot calves. Little or no research has been done in young beef calves in a herd environment. Therefore, it’s unknown whether the relief that beef calves get when they return to their mothers and nurse may also help to eliminate pain-associated behaviours.

More research is also needed to practically and effectively control pain in cattle. In Canada the most common routine management procedures that cause pain are castration, dehorning, and branding. Ongoing research is working to develop ways to reduce animals’ experience of pain during these procedures or find effective alternative practices.

Find out much more at: http://www.beefresearch.ca/pain
On-Farm Euthanasia Recommendations

Human Safety

Operator safety is critically important when gunshot is used in euthanasia. Only people who have all the necessary licenses and permits should use firearms. Great care should be taken to ensure that human safety is protected. Measures to protect operator safety include:

- Using appropriate caliber gun and ammunition for the animal being euthanized.
- Assuring that a gun is ALWAYS loaded.
- Positioning the animal in front of a backdrop that will stop any bullet that misses or ricochets from the animal.
- Ensuring that all people present stand behind the person who is firing the gun.
- Placing the muzzle of the gun at a range of approximately 6' from the animal and NEVER指向 the animal’s head, as this could cause the barrel to explode.
- Taking care to stay clear of any reflex animal movements resulting from euthanasia.

Effective Gunshot

For gunshot to be an effective method of euthanasia, it is important that the bullet contain enough energy to penetrate the skull and kill the animal. Ideally, farm animals less than 190 kg (420 lbs) require 200 ft-lbs of energy, whereas animals larger than 190 kg require 1000 ft-lbs. Energy is determined by the weight of the bullet and the speed at which it leaves the gun. Because of this, the bore of the gun is not a guarantee that the shot will be effective. The make-up of the bullet is critical. If using a .22-caliber bullet, combinations of less than the ideal, there is much less margin for error in the selection of the site and angle of the shot, increasing the risk of failure.

Guide to Ballistics for Euthanasia of Farm Animals

Appropriate caliber and ballistics decisions will improve the effectiveness and safety of gunshot euthanasia in all species.

<table>
<thead>
<tr>
<th>Calibre</th>
<th>Bullet</th>
<th>Muzzle Energy</th>
<th>Target Species</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>.22</td>
<td>.22 Solid</td>
<td>67-100</td>
<td>Not Recommended</td>
<td>Unreliable skull penetration</td>
</tr>
<tr>
<td></td>
<td>.22 Hollow Pt</td>
<td>67-100</td>
<td>Not Recommended</td>
<td>Unreliable skull penetration</td>
</tr>
<tr>
<td>.22Lr</td>
<td>.22LR</td>
<td>85-140</td>
<td>Polled sheep and goats, calves</td>
<td>Very little margin for error in location, due to low energy of shot</td>
</tr>
<tr>
<td>.22 Mag</td>
<td>.22 Mag</td>
<td>324</td>
<td>Horned sheep and goats, cattle</td>
<td></td>
</tr>
<tr>
<td>.223</td>
<td>Ballistic</td>
<td>1100-1400</td>
<td>Cattle</td>
<td>Overpenetration poses significant risk to operator</td>
</tr>
<tr>
<td></td>
<td>Full Metal Jacket</td>
<td>1100-1400</td>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>.30-06</td>
<td>Part Fragmentation</td>
<td>3076</td>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deformation (soft point)</td>
<td>3076</td>
<td>Cattle</td>
<td></td>
</tr>
<tr>
<td>.410 Shot Gun</td>
<td>1/5 oz slug, #4, #6 shot</td>
<td>750-850</td>
<td>Sheep, goats, calves</td>
<td>#4/#6 shot spread out inside skull, reducing the risk of overpenetration</td>
</tr>
<tr>
<td>20aa Shot Gun</td>
<td>5/8 oz slug, #4, #6 shot</td>
<td>1400-1800</td>
<td>All Ruminants</td>
<td>#4/#6 shot spread out inside skull, reducing the risk of overpenetration</td>
</tr>
<tr>
<td>12ga Shot Gun</td>
<td>1 oz slug, #4, #6 shot</td>
<td>2806-3109</td>
<td>All Ruminants</td>
<td>#4/#6 shot spread out inside skull, reducing the risk of overpenetration</td>
</tr>
</tbody>
</table>

Confirmation of Death

As with any method of euthanasia, it is important to ensure that gunshot has been effective. The following signs can be used to confirm loss of consciousness and death:

- Lack of heartbeat (check with a stethoscope or palpable)
- Lack of respiration (cautious, since respiration can be erratic in unconscious animals)
- Lack of normal reflex (gently touching the eyeball should cause the animal to blink)
- Presence of eye motion
- Lack of heartbeat, respiration, and inability of the animal to blink in response to the touch on the eyeball for a duration of 5 minutes is a reliable indication of death.

If any sign of consciousness remains, including those above, or attempts to right, rise, vocalize, shudder, or move remain, the animal should be re-euthanized with another method of euthanasia.

Resources

For more information, refer to the American Veterinary Medical Association (AVMA) and the American Horse Council (AHC).
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Click “Sign Up.”
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Click “Sign up for Twitter.” They will send you an SMS text message with a code. Enter the verification code in the box provided.
Once you’ve clicked Sign up for Twitter, you can select a username (usernames are unique identifiers on Twitter) — type your own or choose one we’ve suggested. We’ll tell you if the username you want is available.
Click “Create my account.”
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