

**INTERIM REPORT OF THE CANADA-BRITISH COLUMBIA
SPECIFIED RISK MATERIAL
MANAGEMENT PROGRAM**

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Prepared by:
British Columbia Specified Risk Material Management Program Committee

Funding provided by:

Canada 



SUMMARY

1 Background

1.1 Enhanced Feed Ban Regulation Reduces Risk of Spread of BSE

Prior to the discovery of bovine spongiform encephalopathy (BSE), commonly known as mad cow disease, in Canada in 2003, the Government of Canada had undertaken a series of measures to limit the risk of the disease entering Canada from other countries, and to reduce the potential for spread of BSE within Canada.

BSE may be spread when cattle consume feed products contaminated with proteins from infected animals. In infected cattle, BSE concentrates in certain tissues known as specified risk material (SRM). As a public health protection measure, these tissues are removed from all cattle slaughtered for human consumption. To prevent BSE spread among cattle, the Government of Canada banned SRM from cattle feed in 1997. To further speed the eradication of BSE, the Government of Canada in 2007 banned SRM from all other animal feeds, pet foods and fertilizers. SRM include the skull, brain, trigeminal ganglia (nerves attached to the brain), eyes, tonsils, spinal cord, and dorsal root ganglia (nerves attached to the spinal cord) of cattle aged 30 months or older, and the distal ileum (portion of the small intestine) of cattle of all ages.

1.2 Impact of Enhanced Feed Ban on BC Slaughter Industry

In 2009, the BC beef herd consisted of 212,000 cows, 4.5% of Canada's national herd which is quite small compared to Alberta which has 40% of Canada's herd (BC Ministry of Agriculture, 2010). The vast majority of calves born in BC are sold to feedlots in Alberta or the U.S.A. for finishing. In 2009, approximately 24,000 head of beef cattle were slaughtered in BC (Agriculture and Agri-Food Canada, 2009). The slaughter industry is dispersed throughout the province and consists of 34 small to medium sized abattoirs.

Prior to the feedban implementation, slaughter waste often had a positive economic value, but now waste disposal represents a cost to abattoirs. These added costs occur at the abattoir where waste tissue now needs to be separated and handled in two streams (SRM and non-SRM) and in tipping fees to third party companies that pick up slaughter waste, where fees for SRM are generally \$110/tonne (\$0.05/lb) more than for non-SRM.

1.3 Funding Program Established to Assist Beef Processing Sector

In April 2007, to assist the province's beef processing sector in complying with the Canadian Food Inspection Agency's (CFIA) enhanced feed ban regulations, the Governments of Canada and British Columbia entered into the *Canada-British Columbia Agreement Establishing the Facilitation of the Disposal of Specified Risk Materials (SRM) Program*. Up to \$12.5 million was made available with \$7.5 million (60%) from Canada and \$5 million (40%) from British Columbia. In BC, the funding was administered as two separate but complementary programs:

- **Canada-British Columbia Specified Risk Material Management Program (SRMMP):** - \$7.5 million – federally funded portion, administered by the BC Ministry of Agriculture.
- **Livestock Waste Tissue Initiative (LWTI):** \$5 million – provincially funded portion, administered by the Investment Agriculture Foundation of BC.

1.4 Funding Objectives

As stated in Schedule 1 of the funding agreement, the primary objectives of the agreement were:

- Improving adequate disposal infrastructure such as: regional collection and disposal infrastructure (such as rendering, incineration, gasification, landfills, composting) in place throughout the province; disposal options that are environmentally sustainable; and disposal options that facilitate and encourage the collection of deadstock from farms.
- Helping industry meet the new regulatory requirements and thereby maintain domestic and international confidence in the BSE risk mitigation measures Canada has undertaken:
 - Short and medium term disposal solutions: (a) support for capital and development costs to local governments to create or maintain immediate access to landfills for SRM disposal; (b) assistance for capital and development costs to support collection services during infrastructure development; and (c) assistance for capital investment in on-site solutions by companies (SRM separation and disposal) during the development of longer-term or regional solutions; and
 - Long term disposal solutions: (a) regional infrastructure (such as incineration, gasification, landfills, and composting); and (b) private sector infrastructure to support disposal (such as transfer stations, rendering plant, other revenue-generating processes).
- Research:
 - Research into environment impacts of disposal options;
 - Research into acceptable use of composted SRM;

- Risk assessments completed for naturally-contained landfills; and
- Exploration of processes to maximize revenue (such as gasification, other emerging technologies).

Note that the Expected Results and Outcomes from Schedule 1 are also included with this report as Appendix I.

1.5 SRMMP Program Administration

An industry advisory committee was assembled in 2007 with members from the Livestock Waste Tissue Initiative Committee (LWTI), Agriculture and Agri-Food Canada (AAFC) and BC Ministry of Agriculture (AGRI) to establish the program application funding guidelines. AGRI administered the federally funded SRMMP, adjudicating applications for funding, and managing approval and release of funds. An equivalent of three (3) full-time employees were allocated to the program.

1.6 Limitations of Interim Report

The federally funded SRMMP ended on March 31, 2010. The provincially funded LWTI will continue operating until March 31, 2012. This interim report describes only the federally funded projects of the SRMMP. A final report including all projects of both the SRMMP and LWTI will be completed shortly after completion of the LWTI. Further information on LWTI projects completed to date is available on the LWTI website at: http://www.iafbc.ca/funding_available/programs/livestock/documents/LWTI-projects.pdf

2 Key Program Achievements

2.1 Infrastructure for Separation of SRM from non-SRM helps lower costs

As BC slaughter facilities are geographically dispersed and generally small, it is difficult to attain sufficient economies of scale in most regions to support value added SRM projects. It was evident that separating the SRM from the non-SRM was a key action necessary to assist the industry in adjusting to increased costs triggered by the CFIA's enhanced feed ban regulations. In a slaughter facility that is separating SRM from non-SRM, greater than 90% of the slaughter waste can be removed as non-SRM, thereby creating a significant cost incentive. The percentage of non-SRM increases if the facility slaughters more animals under 30 months of age or species not bound by the enhanced feed ban regulations. Most abattoirs in southern BC rely on pick-up services to transport their slaughter tissue to West Coast Reduction's rendering facility in Calgary. The transport service providers typically charge a \$110/tonne (\$0.05/lb) premium on SRM over non-SRM. For example, slaughter facilities in the Fraser Valley are typically charged \$275/tonne (\$0.125/lb) for pickup of SRM and only \$165/tonne (\$0.075/lb) for non-SRM (2009 prices). The price differential is due to the greater value of non-SRM to

a rendering facility, where the products include saleable protein meal and tallow. In central and northern BC, it is more common for slaughter facilities to have a CFIA approved landfill for SRM disposal. Where approved landfills exist, this is a low cost option and there is less incentive to separate the two waste streams.

By the end of the program, of the estimated 7240 tonnes of slaughter tissue (excluding deadstock) processed each year in BC, approximately 5860 tonnes (83%) are processed in facilities with SRM/non-SRM separation capacity. The remaining 17% are in facilities where there are local low cost disposal solutions such as approved landfills. There are also a few facilities where for business reasons, the owners opted not to participate in the program.

2.2 Non-SRM composting

As noted earlier, greater than 90% of slaughter waste can safely be separated and treated as non-SRM. Further benefits can be achieved by composting the non-SRM, including a lower processing cost and generation of a value added product. An LWTI study (Sylvis, 2006) demonstrated that composting of non-SRM could be done for as low as \$0.04/lb, approximately one third of the cost of SRM pickup in southern BC. Table 1 (below) illustrates the potential annual cost savings for a small slaughter facility generating 200 tonnes per year of waste tissue. Compared to a facility without SRM separation paying a full tipping fee for all their waste as SRM, the composting operation can experience an annual operating cost savings of \$34,034 or 62%. If further value can be generated from selling the compost or utilizing it as a fertilizer/soil conditioner, the savings may be even greater. The SRMMP funded five slaughter waste composting facilities (four exclusively for non-SRM and one for separate SRM and non-SRM composting) in various regions of the province. Each operation is unique, utilizing different composting methods with differing operating costs. Specific SRM options are also variable for each site, resulting in variable potential cost savings.

Table 1: Scenario Analysis Demonstrating Potential Cost Savings of Non-SRM Composting

Scenario	SRM Cost	Non-SRM Cost	Total Cost	Savings (%)
1. No Separation	\$55,000 ¹	\$0	\$55,000	
2. Separation of SRM and non-SRM but still paying for pick-up service	\$4,950	\$30,030 ²	\$34,980	36%
3. Separation of SRM from non-SRM, and composting non-SRM	\$4,950	\$16,016 ³	\$20,966	62%

¹Assumes 200 tonnes SRM generated per year at a pickup cost of \$275/tonne (\$0.125/lb).

²Assumes 182 tonnes are separated as non-SRM and this stream is picked up at \$166/tonne (\$0.075/lb).

³Assumes 182 tonnes are separated as non-SRM and composted at a cost of \$88/tonne (\$0.04/lb).

2.3 Assistance for Deadstock Disposal Providers

The SRMMP also sought to maintain deadstock disposal services for producers at an affordable level to ensure that farm cattle mortalities would continue to be dealt with in a safe and appropriate manner. For deadstock handlers, all waste is classified as SRM and disposal is typically charged on a volume basis. The three existing deadstock service providers are all located in the Fraser Valley. Previous practice was for the deadstock to be cut in large pieces and placed in bins that were picked up for further processing. This practice was inefficient as there was typically substantial air space in the bins. The program funded two operators with grinders that reduced the bin volume (due to smaller particle size) by up to one third, allowing the service providers to place up to one third more weight of material in each bin. Collectively, these 2 service providers handle approximately 1290 tonnes of deadstock per year. Based on a pickup fee of \$275/tonne and a cost savings of 33%, these 2 facilities can collectively save \$117,000/yr. From an emergency management perspective, the two grinders funded by this program are portable and could have potential value in processing deadstock for transportation in a mass mortality event. This is of particular value in the Fraser Valley where most farms are located on a floodplain where on-site burial is not an option.

2.4 Environmental Assessment and Public Consultation

Applications to the SRMMP under Subprogram C (Regional/Community SRM Destruction or Containment) for on-site capital projects were required to undergo an Environmental Assessment and Public Consultation to assist the decision-making process, ensuring that environmental, economic and social goals were addressed. Funding was provided under Subprogram E to conduct the Environmental Assessment and Public Consultation. In 2009, three potential non-SRM composting projects under the Community Solution subprogram underwent a thorough environmental assessment and public

consultation process. A comprehensive assessment of the three proposals identified that the environmental risks could be adequately addressed, but concluded the economic benefit for the local slaughter industry did not justify public investment of funds.

2.5 Increased Knowledge of Potential SRM Solutions and Increased Public Awareness of Challenges

Public awareness of the challenges facing the beef and slaughterhouse industry was significantly heightened over the span of the three (3) year program. Regional districts and landfill operators are much better informed and, although most landfills are still reluctant to accept SRM, they now better understand the needs of the beef industry. The various studies and pilot projects funded by the program investigated numerous technologies as possible SRM solutions. In particular, a study of SRM options for the Fraser Valley and an economic analysis of gasification pointed to the economic potential of gasification technology as an SRM solution if other materials (e.g. poultry litter) are blended in the mix. The reports from these studies are posted at:

http://www.agf.gov.bc.ca/resmgmt/SRM_Program/index.htm

The program ended on March 31, 2010 with total disbursed funds of \$3.8M. The full amount available (\$7.5M) was not used prior to the program ending due to a lack of economically viable commercial technologies to handle SRM within the BC context. Estimated operational savings to the BC slaughter industry from the funded projects are in the range of \$600,000 to \$800,000 per annum, representing a 16% to 21% return on investment for program funds.

3 Ongoing Challenges and Future Considerations

While the SRMMP was successful in supporting short and medium term disposal solutions, especially in the areas of storage and containment, and composting of non-SRM, identification of long term BC-based solutions for SRM disposal and destruction continue to be a challenge. For most slaughter facilities, the existing SRM solution of collection and transport to Alberta for ultimate landfill disposal continues to be the only viable alternative.

One of the CFIA-accepted methods for SRM disposal is containment in an approved landfill. Where such landfills exist, particularly in the Cariboo and Northern British Columbia, they provide a low cost disposal option. In other locations, landfill assessments have not yet resulted in approvals, and in yet other cases, local governments have been hesitant to pursue the necessary approvals.

Incineration of SRM at slaughter facilities was viewed as a potential SRM solution, particularly at isolated locations. Through one of the SRMMP projects, detailed testing of a small-scale incinerator was conducted at Big Lake, BC. This testing provided mixed results. The incinerator that was tested had a relatively low capital cost (~\$60,000) and was capable of meeting both the CFIA requirements for destruction of proteins and the BC Ministry of Environment emission requirements. Due to the amount of fuel consumed, the incinerator likely would not generate any economic savings to the operator. Despite this, there continued to be some interest because it allowed slaughter facilities to take responsibility for managing their waste on-site. As of March 31, 2010, there were no approved SRM incinerators operating in BC.

A key subprogram of the SRMMP was the Community Solutions Subprogram, designed to encourage collective processing and treatment of SRM and non-SRM at centralized sites. Applicants seeking funding under this subprogram generally met strong public resistance, and in the end only a single project met all three of the program requirements of environmental safety, economic benefit and social acceptability.

The research and feasibility studies identified gasification technology as a potentially economically viable method of SRM processing but it was not possible within the timelines of the program to identify a business with a suitable site willing to move forward with construction of a facility. AGRI staff is working with LWTI to investigate a site-specific assessment of gasification of SRM. This work commenced in April 2010 with funding from the LWTI. The LWTI is also continuing work initiated by the SRMMP in addressing requests for funding towards projects that employ composting of non-SRM slaughterhouse waste.

Summary of Projects

The following report summarizes the activities funded under the SRMMP. The map as shown in Appendix II shows names and locations of each project located in the province.

Forty-eight (48) projects have been completed under the SRMMP, for a combined federal funding agreement amount of \$3.8M. Individual project expenditures are summarized in Appendix III.

- Fourteen (14) were completed under Subprogram A – On-Site Slaughter Plant SRM Separation and Storage for a total value of \$1,249,968;

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- Three (3) were completed under Subprogram B – On-Site Slaughter Plant SRM Destruction Or Containment for a total value of \$321,620;
- One (1) was completed under Subprogram C – Regional/Community SRM Destruction or Containment for a total value of \$78,016;
- Four (4) were completed under Subprogram D – Bovine Dead Stock Storage, Destruction or Containment for a total value of \$274,812;
- Four (4) were completed under Subprogram E – Environmental Assessments Required for SRM Projects for a total value of \$185,152;
- Three (3) were completed under Subprogram F – On-Site Slaughter Plant SRM Separation, Storage, Destruction or Containment for a total value of \$467,785; and
- Nineteen (19) were completed under Miscellaneous funding categories for a total value of \$500,165.

The following sections describe the completed projects, the project location, project cost, the project description, and how the project helped the industry adapt to the enhanced feed ban.

ACRONYMS

AAFC	Agriculture and Agri-food Canada
AGRI	BC Ministry of Agriculture
CFIA	Canadian Food Inspection Agency
EA	Environmental Assessment
LWTI	Livestock Waste Tissue Initiative
OMRR	Organic Matter Recycling Regulation
SRM	Specified Risk Material
SRMMP	Specified Risk Material Management Program

References:

Agriculture and Agri-Food Canada. 2009. British Columbia Slaughter Report

BC Ministry of Agriculture. 2010. Ranching Task Force 2009. Retrieved July 16, 2010 from

http://www.ranchingtaskforce.gov.bc.ca/attachments/ranching_task_force_2009.pdf

Sylvis Environmental. 2006. North Okanagan/Thompson Slaughterhouse Waste Disposal Options.

Document #723-06. Retrieved August 9, 2010 from

[http://www.iafbc.ca/funding_available/programs/livestock/documents/LWTI-19 %20DisposalOptions_FinalReport.pdf](http://www.iafbc.ca/funding_available/programs/livestock/documents/LWTI-19%20DisposalOptions_FinalReport.pdf)

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Funding Provided Under Subprogram A – On-Site Slaughter Plant SRM Separation and Storage

Subprogram A: On-Site Slaughter Plant SRM Separation and Storage directed funding towards projects which established slaughter plant infrastructure for separation and handling of SRM in order for them to be in compliance with amended Canadian Food Inspection Agency (CFIA) regulations under the Feeds Act, Fertilizer Act, Health of Animals Act and the Meat Inspection Act which came into effect July 12, 2007.

The total funding made available to individual slaughter facilities for on-site separation, storage and disposal works under Subprogram A (On-Site Slaughter Plant SRM Separation and Storage) and Subprogram B (On-Site Slaughter Plant SRM Destruction and Containment), used alone or in combination, was up to 100% for the first \$100,000 of eligible expenditures, 75% for the next \$200,000, and 50% of eligible expenditures between \$300,000 and \$500,000. Reimbursements associated with expenditures greater than \$500,000 were determined on a case-by-case basis but did not exceed \$500,000 per applicant. Fourteen projects, with total payments of \$1,249,968, were funded under Subprogram A as follows:

Funding Summary for Subprogram A				
Proj. #	Funding Recipient	Location	Project Summary	Amount
1	Country Locker	Vanderhoof	SRM & non-SRM cold storage	\$ 59,936
2	Johnston Packers 1995 Ltd.	Chilliwack	SRM separation; refrigerated storage	\$ 154,207
3	Kam Lake-View Meats ltd.	Kamloops	SRM separation; refrigerated storage	\$ 58,478
4	Kawano Farms "A"	Vanderhoof	SRM separation, refrigerated storage, non-SRM composting	\$ 182,948
5	Lawrence Meat Packing Co. Ltd.	Dawson Creek	Trailer for SRM transport, refrigerated storage	\$ 22,877
6	Medallion Meats	Westwold	Temporary refrigerated storage	\$ 29,780
7	North Okanagan Game "A" + "B"	Enderby	SRM Storage/Destruction building; refrigerated storage	\$ 154,284
8	Pitt Meadows Meats Ltd.	Pitt Meadows	Waste handling building for SRM and non-SRM storage	\$ 292,037
9	Rainer Farm "A"	Darfield	Refrigerated SRM storage	\$ 18,493
10	Riverside Meats Ltd	Salmon Arm	Refrigerated SRM and non-SRM storage	\$ 95,482
11	Rodear Meats Ltd. "A"	Big Lake	SRM separation; refrigerated storage	\$ 97,126
12	Spoken Lake Meats	150 Mile House	Trailer for SRM transport, refrigerated storage	\$ 45,572
13	Valleyview Farms	Nanaimo	Roofed storage area for SRM & non-SRM	\$ 7,064
14	Westholme Meat Packers	Westholme	Rotary screen for SRM removal from wastewater; concrete tank	\$ 31,684
Total				\$ 1,249,968

Funding was provided to the following:

COUNTRY LOCKER

Location: Vanderhoof
Funding: \$59,936

Project Description:

To improve transport efficiency, funding was provided to construct a refrigerated storage room to hold combined SRM and non-SRM. Included in the work was the funding of a trailer approved by the CFIA to transport SRM to the CFIA-permitted Clearview Landfill.

Results:

Additional cold storage capacity was needed to meet enhanced feed ban regulation requirements. The local landfill amended its operating certificate to allow the acceptance of SRM on certain days during the week. The additional disposal requirements of SRM require specific protocols to be in place during the receiving and handling process. As a result, Country Locker needed additional cold storage capacity to facilitate the disposal schedule of the local landfill. The landfill is more amenable to acceptance of the material as shipping occurs approximately once per week instead of daily, thereby reducing public exposure to the material.



*Country Locker
New Refrigeration Room and Waste Trailer*

JOHNSTON PACKERS 1995 LTD.

Location: Chilliwack
Funding: \$154,207

Project Description:

Prior to the enhanced feed ban, Johnston Packers handled all its waste as one stream. Subsequent to the new regulation, Johnston Packers needed to find a way to separate its waste streams and reduce its waste disposal costs. Funding was provided to allow them to separate their combined waste stream into four separate streams (non-SRM, SRM, porcine waste, and paunch material). Funding was provided for new equipment to handling non-SRM as a separate waste stream from SRM and other animal waste generated at the facility. As part of the required separation process, funding was provided for a separate porcine waste handling system. It was shown to be economically most efficient, and the best use of public funds, for Johnston packers to use their original waste disposal path for the bovine waste, and provide funding for the new porcine system. They chose to build a new porcine waste system as opposed to a bovine system due to the layout constraints of their facility. Construction of a SRM refrigerated storage room and development of a blood handling system was also funded as part of this project.

Results:

Separating the general waste stream into four separate streams has resulted in significant waste management cost savings. Before separation all waste was mixed and deemed as SRM. The majority of the waste being produced is now non-SRM, resulting in lower disposal fees.



*Johnston Packers
Blood Handling System*

KAM LAKE-VIEW MEATS LTD.

Location: Kamloops
Funding: \$58,478

Project Description:

The project funding involved building an SRM separation room to separate the SRM from the non-SRM, construction of a cold storage room to store and refrigerate the separated wastes, as well as the purchase of containers to handle the waste materials.

Results:

Having to accommodate only one waste collector's schedule, the much-needed cold storage has proven very useful in managing bovine waste. Separating the SRM from the non-SRM has resulted in less expense to the operator as pickup costs for non-SRM are much lower.

KAWANO FARM "A"

Location: Vanderhoof
Funding: \$182,947

Project Description:

As a result of the enhanced feed ban, Kawano Farm needed to find a new solution to dispose of their waste. They were previously landfilling on-site. Construction of a non-SRM composting building was funded as well as the purchase of a bone crusher. The project also included construction of a refrigerated waste handling room and acquisition of two trailers for waste handling. This has allowed them to separate SRM from non-SRM. The waste handling building provided space to separate and store separated waste before being taken either to the landfill as SRM or composted as non-SRM. One of the trailers was required to haul the SRM to the CFIA-permitted Clearview Landfill. This landfill is outside of Kawano Farm's regional district and is accepting Kawano's SRM on a year-to-year basis because the volumes are low. The second trailer is used to move the non-SRM from the slaughter plant to the composting building. Another solution for the higher volume non-SRM waste was needed and composting was selected.

Results:

The funding has facilitated Kawano Farm the ability to separate SRM from non-SRM waste resulting in reduced costs. The smaller SRM volume is being hauled to a permitted landfill.



*Kawano Farm
Composting Underway at 57 Degrees C.*



Carcass Grinder



*Kawano Farm
Non-SRM Composting Structure*

LAWRENCE MEAT PACKING CO. LTD.

Location: Dawson Creek
Funding: \$22,877

Project Description:

Lawrence Meat Packing Co. separates SRM from non-SRM. The non-SRM is rendered on-site and the SRM is now landfilled at the CFIA-permitted Bessborough Landfill. Shipping the SRM material to the Bessborough Landfill was facilitated by funding a self-dumping trailer and a refrigerated trailer storage container to house the trailer between trips to the landfill. The landfill has scheduled weekly SRM drop-off times with Lawrence meats. This allows them to have staff available to manage the SRM after it has been dropped off. Because the landfill is only handling the SRM once a week, additional cold storage was required to store the SRM between trips.

Results:

Increased storage capacity for SRM has facilitated more manageable drop-off times with fewer trips to the landfill. The trailer is designated for SRM, aiding in separation and handling for trips to the landfill.

MEDALLION MEATS

Location: Westwold
Funding: \$29,780

Project Description:

Funding was offered for permanent separation and storage facilities, but in the end only Reefers were purchased. As well, temporary rental was provided when the previous waste transport service provider stopped picking up SRM in the region. A scale was also funded for accurate record-keeping of the weight of SRM material held back for contractor pickup.

A concrete slab containment area, a requirement of the CFIA, was funded to house the refrigerated storage containers.

Results:

Separation has reduced pickup costs as the cost for pickup of non-SRM waste is lower than the rate charged for SRM. The permanent cold storage facility has enhanced the management of the slaughter waste, allowing for increased time between pickups.



*Medallion Meats
SRM Storage Containers on Concrete Containment Slab*

NORTH OKANAGAN GAME MEATS

Location: Enderby
Funding: \$154,284

Project Description:

Funding was provided to construct an SRM storage/destruction building containing a pre-fabricated cooler to store separated SRM and non-SRM. A weigh scale, pallet jack, containers, bins and skid steer were also funded under this application.

Results:

Refrigerated storage has created room for separation and improved management of the slaughter waste, allowing for less periodic pickup by the custom service provider. The scale has allowed for accurate record keeping of SRM.



*North Okanagan Game Meats
Cold Storage and Potential Incinerator Housing*



Skid Steer Loader



*North Okanagan Game Meats
New Scale and Pallet Jack*

PITT MEADOWS MEATS LTD.

Location: Pitt Meadows
Funding: \$292,037

Project Description:

In order to separate a combined waste stream into three separate waste streams (SRM, non-SRM and paunch), Pitt Meadows Meats was funded to construct a waste handling building to facilitate the storage and separation of SRM waste. Funding was also provided to relocate a boiler room and hide room to allow for the proper movement of SRM and waste through the facility without contamination.

Results:

The project has allowed for waste separation, reducing the chance of contamination and reducing pickup costs.



*Pitt Meadows Meats
New waste handling building*

RAINER FARM "A"

Location: Darfield
Funding: \$18,493

Project Description:

The project was funded to build a refrigerated SRM storage room and buy containers for SRM storage. Cold storage will allow greater SRM storage capacity to facilitate pickup service providers. Funds were also provided to purchase a front-end loader bucket tractor for non-SRM wastes.

Results:

SRM storage capacity has been achieved. In addition the project has allowed for separation of SRM from non-SRM.

RIVERSIDE NATURAL MEATS LTD.

Location: Salmon Arm
Funding: \$95,482

Project Description:

Construction of a refrigerated waste storage room was funded to hold both SRM and non-SRM. Included in the funding were the purchase of bins and machinery to handle the waste materials. .

Results:

The project is allowing for separation of SRM and non-SRM and storage between waste pickups.



*Riverside Natural Meats
Refrigerated Waste Storage Room*



Storage Containers



*Riverside Natural Meats
Skid Steer Loader*



Barrel tipper on loader

RODEAR MEATS LTD.

Location: Big Lake
Funding: \$97,126

Project Description:

Funding was provided to construct a waste handling room to separate SRM from non-SRM and to build a cold storage room to house a trailer and the separated waste products. Purchase of a trailer and associated waste handling equipment was funded.

Results:

All waste is taken to the CFIA- permitted Big Lake landfill. A trailer to haul and store SRM allows for less frequent trips to the landfill.



*Rodear Meats
Refrigerated Waste Storage Room.*



Trailer for Moving Waste

SPOKIN LAKE MEATS

Location: 150 Mile House
Funding: \$45,572

Project Description:

This project involved funding the construction of a cold storage room to store both SRM and non-SRM, purchasing the bins to house the separated waste materials, as well as purchasing a dump trailer for hauling SRM and non-SRM to the landfill.

Results:

All waste is taken to the CFIA- permitted Big Lake landfill. A trailer to haul and store SRM allows for less frequent trips to the landfill.

VALLEYVIEW FARMS

Location: Nanaimo
Funding: \$7,064

Project Description:

Construction of a roofed storage area was funded to provide storage for separated SRM and non-SRM bins. A cart to handle the bins was also funded.

Results:

The project has provided for storage and a separation area, thereby preventing contamination of non-SRM.

WESTHOLME MEAT PACKERS

Location: Westholme
Funding: \$31,684

Project Description:

The project involved funding for a concrete tank and a rotary screen to remove SRM from waste water. SRM and non-SRM are separated and held for custom pickup. Wastewater is discharged to a septic field, therefore necessitating the separation of SRM from the wastewater.

Results:

By utilizing a rotary screen the SRM is being effectively separated from wastewater.



*Westholme Meat Packers
Rotary Screen*

**Funding Provided Under Subprogram B –
On-Site Slaughter Plant SRM Destruction or Containment**

Total funding made available to individual slaughter facilities for on-site separation, storage and disposal works under Program A (On-Site Slaughter Plant SRM Separation and Storage) and Subprogram B (On-Site Slaughter Plant SRM Destruction and Containment), used alone or in combination, was up to 100% of the first \$100,000 of eligible expenditures, 75% of the next \$200,000, and 50% of eligible expenditures between \$300,000 and \$500,000. Reimbursements associated with expenditures greater than \$500,000 were determined on a case-by-case basis but did not exceed \$500,000 per applicant. Three projects, with total payments of \$321,620, were funded under Subprogram B as follows:

Funding Summary for Subprogram B				
Proj. #	Funding Recipient	Location	Project Summary	Amount
15	Campbell's Farm "B"	Saturna Island	SRM separation and containment	\$ 2,968
16	Gunter Bros. Meat Co. Ltd.	Courtenay	SRM separation, refrigerated storage, non-SRM composting	\$ 201,176
17	Rainer Farm "B"	Darfield	Non-SRM composting	\$ 117,476
Total				\$ 321,620

Funding was provided to the following:

CAMPBELL FARM

Location: Saturna Island
Funding: \$2,968

Project Description:

A screening and catchment system was built to separate SRM solids from entering the sewage system. The SRM and non-SRM are separated. Funding was also provided to construct an SRM vault and protective shed.

Results:

The low volume of SRM is landfilled on-site and the disposal site meets Ministry of Environment slaughter code of practice requirements. Separation will reduce possible contamination.

GUNTER BROS. MEAT CO. LTD.

Location: Courtenay
Funding: \$201,176

Project Description:

In order to reduce the reliance on using a contracted waste pickup provider and in order to reduce waste handling costs, Gunter Bros. Meat Co. was funded to construct a refrigerated storage building to house separated SRM and non-SRM. A non-SRM compost building was also funded, as were a related bone crusher, skid steer loader and scale for weighing SRM.

Results:

Composting non-SRM waste has reduced operating costs for Gunter Brothers and the refrigerated building has enhanced management of the material, allowing for reduced number of SRM pickups and improved compost time management sequencing. The scale assists in the management of SRM handling and monitoring.



*Gunter Bros. Meat Co.
Cold Storage Building*



Compost Building



*Gunter Bros. Meat Co.
Compost Building With Aerated Floor*

RAINER FARM “B”

Location: Darfield
Funding: \$117,476

Project Description:

A non-SRM compost facility was funded. Work included all materials for a bin style aerated floor composting structure with related equipment, including an Enviroprocessor (grinder / mixer) and excavator. The facility is designed to meet the BC Ministry of Environment’s Organic Matter Recycling Regulation requirements.

Results:

The new composting facility has provided a low cost disposal option and has facilitated the recycling of a waste product into a value-added organic fertilizer on the farm.



*Rainer Farm
Bin style Compost Containment With Aerated Floor. Computerized Blower System in Shed.*

**Funding Provided Under Subprogram C –
Regional / Community SRM Destruction or Containment**

Funding made available to individual regional/community facilities for SRM destruction or containment under Subprogram C (Regional/Community SRM Destruction or Containment) was determined on a case-by-case basis. For all applications, decisions regarding the total amount of eligible funding and the share of costs to be borne by the applicant were based on the guiding principles developed for Subprogram C. Funding was determined on the basis of level of potential benefit to the Province, the potential for value adding or revenue generation, the extent to which the project was a comprehensive regional or community solution and supported by SRM generators, the total disposal cost per unit of SRM and non-SRM, and the cost effectiveness and overall efficiency of the project. One project, with a total payment of \$78,016, was funded under Subprogram C as follows:

Funding Summary for Subprogram C				
Proj. #	Funding Recipient	Location	Project Summary	Amount
18	Interior Agri Solutions	Salmon Arm	Forklift and containment tubs to facilitate slaughter tissue transport	\$ 78,016
Total				\$ 78,016

Funding was provided to the following:

INTERIOR AGRISOLUTIONS

Location: Salmon Arm
Funding: \$78,016

Project Description:

Interior Agri Solutions operates a slaughter waste pickup service in the Southern Interior of the province. Funding was provided for storage containment tubs and a piggy back forklift. The tubs were distributed to the slaughter plants being serviced allowing separate storage of SRM from non-SRM.

Results:

Tubs allow for containment and separation of waste and the forklift has reduced labour costs, thereby keeping disposal costs to the slaughter plants as low as possible.



Interior Agri Solutions Piggy Back forklift



Containment Tub

Funding Provided Under Subprogram D – Bovine Dead Stock Storage, Destruction or Containment

Total funding made available to individual dead stock collectors for storage and disposal works under Program D (Bovine Dead Stock Storage, Destruction or Containment) was determined on a case-by-case assessment, and was based on the level of potential benefit to the Province, the ability of the project to provide a comprehensive regional or community solution, and the cost effectiveness and overall efficiency of the project. Four projects, with total payments of \$274,812, were funded under Subprogram D as follows:

Funding Summary for Subprogram D				
Proj. #	Funding Recipient	Location	Project Summary	Amount
19	Canal Farms	Abbotsford	Carcass grinder	\$ 78,850
20	Carson Stock Farm	Aldergrove	Refrigerated SRM storage	\$ 40,601
21	Carson Stock Farm	Aldergrove	Carcass grinder	\$ 85,000
22	Dargatz	Chilliwack	Refrigerated SRM storage	\$ 70,361
Total				\$ 274,812

Funding was provided to the following:

CANAL FARMS

Location: Abbotsford

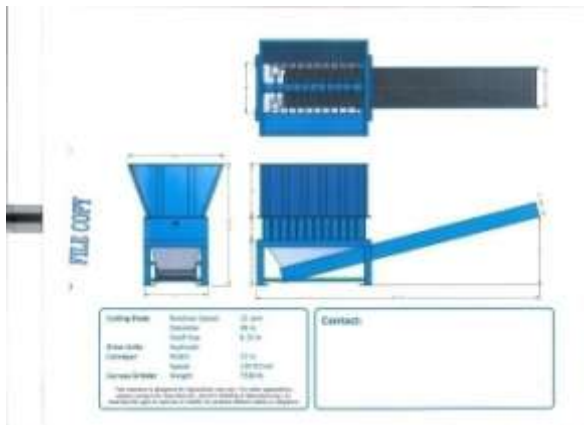
Funding: \$75,850

Project Description:

Canal Farms operates a dead stock collection business handling approximately 490 tonnes of SRM annually. The project involved funding a carcass grinder with a discharge conveyor powered by an air-cooled engine.

Results:

Volumes of SRM waste have been minimized, reducing disposal costs by approximately one-third. Improving the operation improves the management of dead stock handling and disposal, thereby potentially reducing the number of animals being buried in sensitive areas.



Canal Farms
Carcass Grinder Design



Canal Farms
Grinder Being Loaded

CARSON'S STOCK FARM

Location: Aldergrove
Funding: \$40,601

Project Description:

Two (2) refrigerated containers were funded to store SRM waste for longer periods. This provides a backup in case West Coast Reduction is unable to pick up waste on a frequent basis. A skid steer loader was also funded to handle SRM material.

Results:

The dead stock service for the Fraser Valley has improved with this project, resulting in less dead stock burial in sensitive areas. The refrigeration units will allow for better, higher quality material to be transported to the BC Ruminant Waste Transfer Station in Abbotsford and in subsequent improved quality of waste at West Coast Reduction's ruminant-only rendering plant in Calgary. The expected end result is that deadstock disposal costs will be kept manageable.



*Carson's Stock Farm
Refrigerated Containers*

CARSON'S STOCK FARM

Location: Aldergrove
Funding: \$85,000

Project Description:

To reduce the volume of dead stock waste being handled, a carcass grinder was funded. The disposal cost of this SRM waste is based on volume, not weight. The grinder, which cuts up whole animals into 10-inch pieces, reduces the overall bulk volume being handled and reduces disposal costs to Carson's Stock Farm.

Results:

Carson's Stock Farm believes that they can reduce their disposal costs by approximately one-third. In doing so, their dead stock service will be improved, encouraging the collection of deadstock from farms and resulting in less dead stock burial in sensitive areas.



*Carson's Stock Farm
Carcass Grinder*

DARGATZ MINK RANCH LTD.

Location: Chilliwack
Funding: \$70,361

Project Description:

Dargatz Mink Ranch is a dead stock collector located in the Chilliwack area. Dead stock are picked up by Dargatz from the eastern half of the Fraser Valley. Funding was provided to build a cold storage room for pre-processing product, and additional refrigeration space was added to an existing post-processing storage room.

Results:

Expanding the overall cold storage capacity has improved service to the beef and dairy industries, creating a better facility to harvest non-SRM from SRM. Dargatz has more space to store cattle carcasses before they are processed and more space to store SRM. Less reliance on frequent pickups is a beneficial result.



*Dargatz Mink Ranch
Refrigerated Separation Room.*



Cooling Condenser Unit for Storage Room

**Funding Provided Under Subprogram E –
Environmental Assessments Required For SRM Projects**

To be eligible for funding under Subprogram E, proponents and their SRM projects must have been eligible for consideration under one of the other four subprogram areas. A project proposal must have been submitted to one of the other subprogram areas and the project was required to undergo an environmental assessment in order for it to be advanced for decision. Eligible expenses were limited to direct expenses related to conducting an environmental assessment. Reimbursement of eligible expenses was based on the proponent submitting an acceptable environmental assessment report from a qualified professional. Four projects, with total payments of \$185,152, were funded under Subprogram E as follows:

Funding Summary for Subprogram E				
Proj. #	Funding Recipient	Location	Project Summary	Amount
23	Robertson Farms	Grindrod	Environmental assessment and public consultation for non-SRM composting	\$ 71,853
24	Spa Hills Farm	Silver Creek	Environmental assessment and public consultation for non-SRM composting	\$ 26,825
25	Tarzwell Farms	Creston	Environmental assessment and public consultation for non-SRM composting	\$ 22,448
26	Westwold View Farms	Westwold	Environmental assessment and public consultation for non-SRM composting	\$ 64,026
Total				\$ 185,152

Funding was provided to the following:

ROBERTSON FARMS

Location: Grindrod
Funding: \$71,853

Project Description:

An application for a combined environmental assessment and public consultation process was funded for a proposed community composting project planning to compost non-SRM from potentially three (3) slaughter plants. A consulting firm was engaged to assess the proposed composting operation and location. Public consultation was conducted via an open house and a town hall-style public meeting to facilitate input from the public, composting specialists and government officials.

Results:

The environmental assessment and public consultation processes were completed, garnering a large amount of public and media interest. A comprehensive assessment of the proposal identified that the environmental risks could be adequately addressed, but concluded the economic benefit for the local slaughter industry did not justify public investment of funds. Funding for capital infrastructure was not approved.

SPA HILLS FARM

Location: Silver Creek
Funding: \$26,825

Project Description:

A combined environmental assessment and public consultation was funded for a proposed small scale community composting project planned to compost non-SRM from a single nearby abattoir. A consulting firm was engaged to assess the proposed composting operation and location. Public consultation was conducted via an open house and a town hall-style public meeting to facilitate input from the public, composting specialists and government officials.

Results:

The environmental assessment and public consultation processes were completed, garnering a large amount of public and media interest. A comprehensive assessment of the proposal identified that the environmental risks could be adequately addressed, but concluded the economic benefit for the local slaughter industry did not justify public investment of funds. Funding for capital infrastructure was not approved.

TARZWELL FARMS

Location: Creston
Funding: \$22,448

Project Description:

Tarzwel Farms was funded to engage a consulting firm to conduct public consultation for a planned on-site composting facility solely for the abattoir's non-SRM waste. Funding was also provided to conduct an environmental assessment

Results:

The public consultation process identified public concerns to be addressed in the environmental assessment. No significant impacts to the environment were identified in the environmental assessment from the proposed operation of the composting facility. In the case of soil quality, impacts were determined to be beneficial as a result of the application of compost to the farm's agricultural land. The composting project under Subprogram F was constructed and mitigation measures identified by the consultant and the public were implemented

WESTWOLD VIEW FARMS

Location: Westwold
Funding: \$64,026

Project Description:

A combined environmental assessment and public consultation were funded for a proposed community composting project planned to compost non-SRM from potentially three (3) slaughter plants. A consulting firm was engaged to assess the proposed composting operation and location. Public consultation was conducted with an open house and two (2) town hall style public meetings facilitating input from the public, composting specialists and government officials.

Results:

The environmental assessment and public consultation processes were completed, garnering a large amount of public and media interest. A comprehensive assessment of the proposal identified that the environmental risks could be adequately addressed, but concluded the economic benefit for the local slaughter industry did not justify public investment of funds. Funding for capital infrastructure was not approved.

**Funding Provided Under Subprogram F –
On-Site Slaughter Plant SRM Separation, Storage, Destruction or Containment**

Funding criteria for individual slaughter facilities for on-site separation, storage and disposal works under Subprogram F were established as follows:

1. Existing plants already funded under Subprograms A or B were eligible to receive up to 75% of the first \$300,000 of further eligible costs for projects or components of projects not previously funded under Subprograms A or B. Total funding, including all amounts approved under Subprograms A, B and F, was capped at \$350,000 per applicant.
2. Existing plants not previously funded under Subprograms A and B and new plants in “underserved” areas that were licensed by January 30, 2009 were eligible to receive 75% of the first \$300,000 in eligible expenses to a maximum of \$225,000 per applicant. “Underserved areas” referred to areas in which plants were situated more than 200 kilometres from an existing licensed slaughter plant.
3. All other SRM-generating plants licensed by the BC Centre for Disease Control by January 30, 2009 were eligible to receive 50% of the first \$200,000 in eligible expenses, with a maximum up to \$100,000 per applicant.

Three projects, with total payments of \$467,785, were funded under Subprogram F as follows:

Funding Summary for Subprogram F				
Proj. #	Funding Recipient	Location	Project Summary	Amount
27	Chilcotin Abattoir ¹	Alexis Creek	Plan and construction of composting facility for SRM and non-SRM	\$ 223,976
28	Northwest Premium Meat Co-op	Telkwa	SRM and non-SRM storage	\$ 58,843
29	Tarzwell Farms	Creston	Non-SRM compost facility	\$ 184,966
Total				\$ 467,785

¹Project 27 with Chilcotin Abattoir involved 2 agreements, described separately below.

Funding was provided to the following:

CHILCOTIN ABATTOIR

Location: Alexis Creek
Funding: \$6,349

Project Description:

Before physical works to the proposed composting facility were undertaken, Chilcotin Abattoir received funding to hire a qualified professional to prepare a compost facility plan and notification of operation for on-site composting of SRM and non-SRM slaughterhouse waste.

Results:

A concise design and operating plan was completed and used towards the development of engineering parameters to be implemented in the construction of the compost project.

CHILCOTIN ABATTOIR

Location: Alexis Creek
Funding: \$217,627

Project Description:

Funding was provided to develop a compost facility handling both SRM and non-SRM. Costs included an engineered design, hard-surface composting pad, wildlife fencing, skid steer loader (partially funded) and related equipment.

Results:

A local, on-site slaughterhouse waste disposal program that is in compliance with the enhanced feed ban has been achieved at this new facility. Funding has enabled the producer to build a waste disposal solution with low operating costs.



*Chilcotin Abattoir
Fenced Compost Pad*



Skid Steer Loader



*Chilcotin Abattoir
Separation wall at compost pad*



Marked SRM container

NORTHWEST PREMIUM MEAT COOPERATIVE

Location: Telkwa
Funding: \$58,843

Project Description:

A new abattoir under construction, Northwest Premium Meat Cooperative, received funding to build a waste storage room for the separation of SRM from non-SRM waste. Funding was also provided to purchase bins and equipment for waste handling and to purchase a Reefer trailer for storage of SRM waste.

Results:

By separating SRM from non-SRM, Northwest Premium Meat Cooperative was able to meet the requirements of the enhanced feed ban by hauling SRM to the local CFIA-permitted landfill. The cooperative is able to manage its non-SRM separately from its SRM.



*Northwest Premium Meat Cooperative
Waste Storage Room Construction Underway*

TARZWELL FARMS

Location: Creston
Funding: \$184,966

Project Description:

The project involved the construction of a non-SRM compost facility. SRM is separated and frozen for third-party pickup. Funding was provided for two (2) steel pre-manufactured Biovator composters to compost non-SRM material, for construction of a covered finished compost storage building, and for related equipment.

Results:

An on-site waste treatment system was realized for non-SRM slaughterhouse waste at Tarzwell Farms. Tarzwell is no longer dependent on shipping non-SRM waste off the premises. The separation of the SRM from the non-SRM has resulted in lower overall ruminant waste disposal costs.



*Tarzwell Farms
Biovators in Place Ready to dump Non-SRM Composted Waste into Covered Holding Area*



*Tarzwell Farms
Loading the Biovator with non-SRM waste*

Funding Provided Under Subprogram – Miscellaneous

Various projects and studies were funded under the “Miscellaneous” category for situations where proposed work did not fit the description of other Subprogram criteria. Funding amounts were determined on a case-by-case basis but were generally funded at 100%. Nineteen projects, with total payments of \$500,165, were funded under Subprogram Miscellaneous as follows:

Funding Summary for Subprogram Miscellaneous				
Proj. #	Funding Recipient	Location	Project Summary	Amount
30	Adrian Baiton	Rock Creek	On-site landfill disposal assessment	\$ 5,271
31	Cariboo Regional District	Williams Lake	Hydrogeological survey of Big Lake Landfill	\$ 5,712
32	Central Kootenay Reg. Dist.	Creston and Slocan Valley	Slaughter tissue disposal options assessment	\$ 7,100
33	CGI Consulting	Creston	Public consultation for Tarzwell composting proposal	\$ 14,199
34	Clinton Economic Development Society	Clinton	Feasibility assessment for regional non-SRM composting facility	\$ 15,000
35	Comox Valley Economic Development Society	Comox	Options assessment for slaughter tissue disposal on Vancouver Island	\$ 46,000
36	Ference Weicker & Company Ltd	Vancouver	Options assessment for SRM in the Fraser Valley	\$ 40,000
37	Greenwave Transport	Grindrod	Refit waste transport trailer to meet new CFIA requirements	\$ 6,750
38	Intertek Testing	Burnaby	Lab testing to assess fuel value of various waste materials	\$ 5,467
39	Johnston Packers 1995 Ltd.	Chilliwack	Study to assess feasibility of small-scale on-site rendering	\$ 10,059
40	Lawrence Meats	Dawson Creek	Temporary assistance with SRM transport to landfill	\$ 2,112
41	North Okanagan Game Meats	Enderby	Upgrade electrical services for SRM cold storage	\$ 13,000
42	Northwest Premium Meat Co-op	Telkwa	Waste handling options assessment	\$ 3,675
43	ON Strategy	North Vancouver	Public consultation services for potential composting facilities	\$ 12,000
44	Peace River Regional District	Peace River	Electric fence around SRM disposal area at landfill (for wildlife exclusion)	\$ 43,976
45	Regional District Okanagan-Similkameen	Oliver	Feasibility study of Oliver Landfill for possible SRM disposal	\$ 18,000
46	Riverside Meats Ltd 2.	Salmon Arm	Incinerator testing	\$ 178,965
47	Stantec Consulting Ltd.	Burnaby	Economic assessment of combustion technologies for SRM disposal	\$ 30,000
48	Tk'emlups Indian Band	Kamloops	Economic feasibility of gasification for processing slaughterhouse waste	\$ 40,331
n/a	2009/2010 Supplies / Expense	n/a	Miscellaneous	\$ 2,548
Total				\$ 500,165

Funding was provided to the following:

ADRIAN BAITON

Location: Rock Creek
Funding: \$5,271

Project Description:

A disposal assessment was conducted to determine if an on-site landfill for SRM and non-SRM waste would meet Ministry of Environment requirements.

Results:

The study determined that an on-site landfill was feasible. Disposal of slaughter waste on-site is very favourable and cost effective. Waste is managed in accordance with the CFIA.

CARIBOO REGIONAL DISTRICT

Location: Williams Lake
Funding: \$5,712

Project Description:

A hydrogeological survey was funded to determine the geological characteristics of the Big Lake Landfill to satisfy CFIA requirements prior to assessing whether an SRM permit might be issued.

Results:

The objective of the project was to determine whether an adequate disposal site for SRM could be developed at the Cariboo Regional District's Big Lake Landfill. The landfill met CFIA requirements and provides a site for SRM to be disposed of if generated within the Regional District.

CENTRAL KOOTENAY REGIONAL DISTRICT

Location: Creston and Slocan Valley
Funding: \$7,100

Project Description:

To assist the Regional District of Central Kootenay in its search for a community solution to dispose of SRM, funding was provided to engage a consultant to review composting, incineration, landfilling and rendering as possible disposal options for SRM and non-SRM in the Creston and Slocan Valley.

Results:

At Creston, composting of SRM at the landfill was identified to be the least-expensive option, but was determined to be feasible only if an engineered landfill cell was to be made available. The least-expensive option for SRM disposal in the Slocan Valley was found to be one where freezing the SRM would be conducted on-site with subsequent periodic trucking to Calgary for rendering.

CGI CONSULTING

Location: Creston
Funding: \$14,199

Project Description:

It was determined that public consultation was required to satisfy the environmental assessment process for the Tarzwell composting proposal. Neighbours' environmental concerns were identified and included in the assessment. Two meetings were held with nearby neighbours and the general public.

Results:

Neighbours' concerns were identified and taken into account in the environmental assessment.

CLINTON ECONOMIC DEVELOPMENT SOCIETY

Location: Clinton
Funding: \$15,000

Project Description:

The Clinton and District Economic Development Society was funded to explore the viability of developing a regional solution for disposing of SRM. A preliminary feasibility assessment was conducted to evaluate composting of non-SRM from suppliers in the central areas of the province at a possible composting facility in the Clinton area.

Results:

Based on preliminary analysis (particularly cost to transport the waste), the operation of a slaughterhouse waste and composting facility for profit in the Clinton area did not appear to be viable. The handling of SRM in particular would generate losses for the proposed facility. The estimated revenue from the handling of non-SRM material would only cover estimated direct costs but was determined unlikely to cover any indirect, overhead and capital costs.

COMOX VALLEY ECONOMIC DEVELOPMENT SOCIETY

Location: Comox
Funding: \$46,000

Project Description:

The Comox Valley Economic Development Society undertook an initiative to find a regional solution for the management of SRM on Vancouver Island. Funding was provided to engage a consulting firm to identify site-specific solutions and assess their related feasibility for managing slaughterhouse waste as an alternative to off-Island management and transport.

Results:

Various solutions were studied as alternatives to the current practice of shipping waste off Vancouver Island by West Coast Reduction. Through consultation with Vancouver Island abattoirs and the analysis of cost benefits associated with possible alternative solutions, it was concluded that the waste pickup service provided by West Coast Reduction is generally considered satisfactory. Concerns surrounding the implications of West Coast Reduction terminating its services remain.

FERENCE WEICKER & COMPANY LTD.

Location: Vancouver
Funding: \$40,000

Project Description:

A study was funded addressing the strengths, weaknesses, opportunities and threats associated with various options for SRM containment and destruction in the Fraser Valley. Options studied were alkaline hydrolysis, thermal hydrolysis, incineration/gasification, rendering, anaerobic/aerobic digestion, composting, acid hydrolysis and lactic acid fermentation.

Results:

The potential exists to use four (4) technologies approved by the CFIA for SRM destruction in the Fraser Valley: incineration and alkaline hydrolysis for small scale destruction and gasification and thermal hydrolysis for a larger scale centrally located plant.

GREENWAVE TRANSPORT

Location: Grindrod
Funding: \$6,750

Project Description:

Funding was provided to refit a waste transport trailer to meet new SRM requirements to be made available during the introduction of the new CFIA regulations.

Results:

CFIA requirements were met for the transportation of SRM material.

INTERTEK TESTING SERVICES

Location: Burnaby
Funding: \$5,467

Project Description:

A recommendation from a study conducted by Stantec Consulting Inc. (discussed later in this report) was to investigate whether biomass fuels such as SRM, non-SRM, spent hens, turkey litter, and broiler chicken litter could be economically feasible as a fuel for various combustion scenarios. Funding was provided for expenses incurred for lab tests for proximate and ultimate analyses.

Results:

Of the various potential fuels considered, it was determined that SRM, not including turkey litter, offers the highest heat content and the lowest moisture content. . Data collected from these analyses has been used in supplemental gasification studies.

JOHNSTON PACKERS 1995 LTD.

Location: Chilliwack
Funding: \$10,059

Project Description:

Johnston Packers, on behalf of the British Columbia Association of Abattoirs, was funded to hire a consultant to determine the feasibility of building and operating a small-scale on-site rendering facility at slaughter plants typically found in BC.

Results:

Batch rendering was determined to be financially viable for larger-sized abattoirs generating volumes of non-SRM waste exceeding 2,500 tonnes per year, but did not seem viable for medium to small slaughter plants. There are few plants producing such volumes of waste in BC. A central plant accommodating waste from several sources would be necessary to be feasible. Careful evaluation of site specifics would need to be undertaken to determine the feasibility of medium-sized facilities.

LAWRENCE MEATS

Location: Dawson Creek
Funding: \$2,112

Project Description:

At the onset of the enhanced feed ban regulation imposition in April 2007, Lawrence Meats did not have a solution to manage its SRM. As an emergency measure, the plant rendered its SRM so that it could stabilize the waste and dispose of it at a suitable time following the implementation of a local SRM solution. As an emergency measure, funding was provided to cover transportation and landfill costs to move SRM meat and bone meal to the Bessborough Landfill until the waste streams were able to be separated.

Results:

A temporary solution was found for transporting the rendered SRM waste to the local landfill.

NORTH OKANAGAN GAME MEATS

Location: Enderby
Funding: \$13,000

Project Description:

Funding was provided for the installation of an upgraded electrical service to accommodate cold storage Reefer trailer rentals.

Results:

Temporary cold storage Reefer rentals allowed for the storage of separated SRM and non-SRM until permanent cold storage was constructed.

NORTHWEST PREMIUM MEAT CO-OP

Location: Telkwa
Funding: \$3,675

Project Description:

Funding was provided to evaluate options for waste handling by investigating various options for managing SRM from the new Northwest Premium Meat Co-op slaughter plant, including incineration, composting and landfilling. Off- site disposal options were considered such as trucking to the regional Knockholt landfill.

Results:

The project determined that the most viable option was to transport the waste to the Knockholt landfill. Incineration was determined to be a feasible means of destroying the SRM, but the operating cost was considered to be relatively high. Composting the SRM was considered the least costly but a suitable land base was not available to accept the SRM compost as all land in the immediate vicinity of the plant is used for livestock grazing or hay production.

ON STRATEGY

Location: North Vancouver
Funding: \$12,000

Project Description:

Consulting services were funded for facilitating public consultation of four (4) potential composting facilities being considered at Westwold, Salmon Arm, Grindrod, and Creston.

Results:

Professional chairmanship skills provided for strategic planning and facilitation services to conduct orderly and informative public meetings.

PEACE RIVER REGIONAL DISTRICT

Location: Peace River
Funding: \$43,976

Project Description:

The project accepted funding for the installation of 2300 meters of electric wildlife fence around the SRM disposal area of the Bessborough Landfill. The Bessborough Landfill site is the only landfill permitted to accept SRM in the Peace River Regional District.

Results:

The facility has provided a viable alternative to on-site/on-farm disposal of bovine mortalities as well as SRM waste from local abattoirs. The facility is providing vital disposal services to local abattoirs and to commercial government-inspected slaughter and processing facilities.



*Peace River Regional District
Electric Wildlife fence*

REGIONAL DISTRICT OF OKANAGAN-SIMILKAMEEN

Location: Oliver
Funding: \$18,000

Project Description:

In seeking a community solution for the management of SRM, the Regional District of Okanagan-Similkameen was funded to conduct a study of the Oliver Landfill. To determine the technical feasibility of SRM disposal at the site, a consultant was engaged to conduct a hydrogeological assessment of the existing landfill to determine its attenuation capacity and to define related additional technical features. The assessment also included the review of existing landfill operations and related impacts.

Results:

The Conestoga-Rovers & Associates study determined the site to be technically feasible to dispose of dead animal and slaughterhouse waste. The regional district will be determining if it wishes to proceed with allowing slaughter waste disposal within the landfill. Concerns expressed by the CFIA must still be addressed.

RIVERSIDE MEATS LTD. 2

Location: Salmon Arm
Funding: \$178,965

Project Description:

Funding was provided to Riverside Meats for costs related to the purchase, importation, shipping, installation and testing of a small incinerator at Rodear Meats in Big Lake. Project tests evaluated the overall convenience of incinerating slaughterhouse waste, measured air emissions for comparison with Ministry of Environment requirements, evaluated time/temperature scenarios and ash analysis to meet CFIA stipulations, and assessed operating costs such those associated with fuel and labour.

Results:

The objective was to source a small inexpensive incinerator that could be sited at a slaughter plant for the purposes of disposing of SRM material at a low operating cost, while meeting CFIA and Ministry of Environment regulations. The test results of the unit successfully met CFIA requirements for prion destruction and Ministry of Environment requirements for air emissions. Fuel and labour costs to incinerate SRM waste, however, were determined to be similar to the current costs of contracted waste pickup fees.



*Riverside Meats
Inciner8 incinerator with diesel tank*



Inciner8



*Inciner8
Incinerator Air Emission Testing Underway*



*Riverside Meats
Firing the Slaughter Waste*

STANTEC CONSULTING LTD.

Location: Burnaby
Funding: \$30,000

Project Description:

Stantec Consulting was engaged by the BC Ministry of Agriculture to study the economic assessment of combustion technologies for SRM disposal in BC. The technologies studied were fixed bed gasification, fluidized bed gasification, fluidized bed combustion, plasma gasification and reductive thermal processing.

Results:

The study concluded that current technologies were suitable for gasification and combustion of SRM and slaughterhouse material. Pilot plant testing of the SRM fuel in an existing test facility or boiler plant is the next step required to verify the fuel characteristics and related economics.

TK'EMLUPS INDIAN BAND

Location: Kamloops
Funding: \$40,331

Project Description:

A feasibility study was funded to determine the economic viability of establishing a slaughterhouse waste disposal gasification plant for the generation of heat and electricity to be used by a business park and a potential greenhouse in Kamloops.

Results:

The study determined that it is feasible to use SRM material as a fuel source for a pellet plant converting forestry wood waste to wood pellets. Considering many factors, and particularly transportation costs, the study determined that it was not economically feasible to use the SRM for heating a greenhouse. The current low cost of electricity out-weighs the cost benefits of using SRM to produce electrical power.

APPENDIX I: EXPECTED RESULTS/OUTCOMES

From Schedule 1 of the *Canada-British Columbia Agreement Establishing the Facilitation of the Disposal of Specified Risk Materials (SRM) Program*

- 2.1 The federal contribution will assist the province in achieving the following results:
 - 2.1.1 Mitigate the impact of full SRM removal upon the processing sector in terms of competitiveness (cost falling disproportionately on small and medium-sized operators)
 - 2.1.2 Put in place adequate infrastructure for disposal across the province to ensure the efficacy of the regulations to enhance the feed ban;
 - 2.1.3 Increase industry's ability to meet or to exceed market requirements by demonstrating an effective feed ban that will better position the Canadian beef and cattle industry with key international trading partners;
 - 2.1.4 Increase consumer confidence in the safety and quality of food produced in British Columbia;
 - 2.1.5 Provide opportunities to develop longer-term solutions to the SRM disposal question – such as a safe end use which mitigates the costs of disposal and returns value to SRM;
 - 2.1.6 Short term disposal solutions in place
 - 2.1.7 Medium term disposal solutions in place
 - 2.1.8 Long term disposal solutions under development
 - 2.1.9 Decrease (minimize) the use of on-farm burial in sensitive areas;
 - 2.1.10 SRM disposal infrastructure in place and usable for managing FADES and other mass animal mortality events; and
 - 2.1.11 Reduce the distances SRM material must be moved to disposal.

APPENDIX II: PROGRAM FINANCIAL SUMMARY

Program	Funding Recipient	Total Paid 2008 - 2010
A-1	Country Locker	\$ 59,936
A-2	Johnston Packers 1995 Ltd.	\$ 154,207
A-3	Kam Lake-View Meats Ltd.	\$ 58,478
A-4	Kawano Farms "A"	\$ 182,948
A-5	Lawrence Meat Packing Co. Ltd.	\$ 22,877
A-6	Medallion Meats	\$ 29,780
A-7	North Okanagan Game "A" + "B"	\$ 154,284
A-8	Pitt Meadows Meats Ltd.	\$ 292,037
A-9	Rainer Farm "A"	\$ 18,493
A-10	Riverside Meats Ltd	\$ 95,482
A-11	Rodear Meats Ltd. "A"	\$ 97,126
A-12	Spoken Lake Meats	\$ 45,572
A-13	Westholme Meat Packers	\$ 31,684
A-14	Valleyview Farms	\$ 7,064
	Subtotal – Subprogram A	\$ 1,249,968
B-15	Campbell's Farm "B"	\$ 2,968
B-16	Gunter Bros. Meat Co. Ltd.	\$ 201,176
B-17	Rainer Farm "B"	\$ 117,476
	Subtotal – Subprogram B	\$ 321,620
C-18	Interior Agri Solutions	\$ 78,016
	Subtotal – Subprogram C	\$ 78,016
D-19	Canal Farms	\$ 78,850
D-20	Carson Stock Farm	\$ 40,601
D-21	Carson Stock Farm	\$ 85,000
D-22	Dargatz	\$ 70,361
	Subtotal – Subprogram D	\$ 274,812
E-23	Robertson Farms	\$ 71,853
E-24	Spa Hills Farm	\$ 26,825
E-25	Tarzwel Farms	\$ 22,448
E-26	Westwold View C Compost	\$ 64,026
	Subtotal – Subprogram E	\$ 185,152
F-27	Chilcotin Abattoir	\$ 223,976
F-28	Northwest Premium Meat Co-op	\$ 58,843
F-29	Tarzwel Farms	\$ 184,966
	Subtotal – Subprogram F	\$ 467,785

Appendix II Cont'd

Program	Funding Recipient	Total Paid 2008 - 2010
Misc-30	Adrian Baiton	\$ 5,271
Misc-31	Cariboo Regional District	\$ 5,712
Misc-32	Central Kootenay Reg. Dist.	\$ 7,100
Misc-33	CGI Consulting	\$ 14,199
Misc-34	Clinton Economic Development Society	\$ 15,000
Misc-35	Comox Valley	\$ 46,000
Misc-36	Ference Weicker & Company Ltd	\$ 40,000
Misc-37	Greenwave Transport	\$ 6,750
Misc-38	Intertek Testing	\$ 5,467
Misc-39	Johnston Packers 1995 Ltd.	\$ 10,059
Misc-40	Lawrence Meats	\$ 2,112
Misc-41	North Okanagan Game	\$ 13,000
Misc-42	Northwest Premium Meat Co-op	\$ 3,675
Misc-43	ON Strategy	\$ 12,000
Misc-44	Peace River Regional District	\$ 43,976
Misc-45	Regional District Okanagan-Similkameen	\$ 18,000
Misc-46	Riverside Meats Ltd 2.	\$ 178,965
Misc-47	Stantec Consulting Ltd.	\$ 30,000
Misc-48	Tk'emlups Indian Band	\$ 40,331
n/a	2009/2010 Supplies / Expense	\$ 2,548
	Subtotal – Subprogram Miscellaneous	\$ 500,165
Total Project Costs		\$ 3,077,520
Total Administration Costs		\$ 707,658
Total Program Funds Spent		\$ 3,785,178

APPENDIX III: MAP OF PROJECTS FUNDED UNDER the SRM PROGRAM

