

Industry Discussion Paper - Sulfa Residue Issue

October, 2002

The Issue:

Rothsay Concentrates is Canada's largest rendering company. The products of rendering are 1) meat and bone meal (MBM) and 2) inedible tallow. Raw materials for rendering are packing plant waste, restaurant waste, and dead animals (deadstock).

Deadstock accounts for about 5 to 10% of the total. Due to the Carbadox recall in the fall of 2000, and amid increasing concerns about Foot and Mouth Disease, BSE, Scrapie and Chronic Wasting Disease, changes to rendering were implemented by Rothsay to reduce liability and maintain access to markets. These changes included expanding the list of animals not accepted for rendering as well as identifying sulfamethazine (SMZ) as an unacceptable residue.

Unlike other antibiotics, antimicrobials containing sulfa compounds are not destroyed during the rendering process. The rendering process may concentrate the sulfa residue in the MBM due to the removal of water and fat. CFIA routinely monitors residues in finished product from rendering companies.

MBM from Rothsay's Moorefield plant has previously been identified as exceeding the maximum residue levels (MRL's) for SMZ of 1 part per million (ppm). CFIA has warned Rothsay to bring the residue levels into compliance or face severe penalties.

Rothsay is owned by Maple Leaf Foods, which exports hundreds of millions of dollars worth of pork to Japan each year. Japan's regulatory requirement is an MRL of less than .02 ppm for SMZ in meat products, a level, which is 50 times less than that in Canada. Maple Leaf Foods' concern is that SMZ in MBM may contaminate finishing rations for swine. If Canadian pigs then test positive for SMZ, export markets could disappear. This would have severe negative financial repercussions throughout the industry.

In May of 2001, Rothsay sent a letter to deadstock collectors advising them that within four to six weeks, carcasses testing positive for SMZ would not be accepted for rendering. Collectors were asked to sign a document indicating that they accepted this requirement. Collectors were to advise producers of this new obligation and ask them to sign a letter stating that they would not submit carcasses for rendering if the animal had been treated with, or consumed, SMZ within 14 days of death..

In response to this, a stakeholder meeting was organized by OMAF in Guelph on July 9, 2001. This meeting brought together government (OMAF, CFIA), rendering companies, deadstock collectors, commodity representatives, veterinarians, and others. Some commodity representatives were surprised to learn of the August deadline with regard to SMZ. OMAF's mandate is to assure that producers understand their responsibilities for dead animal disposal under the provincial Dead Animal Disposal Act. During the meeting there was a presentation on composting, and other options of disposal were discussed. Generally, there were more questions than answers at this meeting. The only action item from this meeting was to establish a working group, which would review any industry-driven proposals that were developed. That working group met on September 6, 2001.

On July 23, 2001, OMAF's Livestock Technology Branch published a factsheet entitled " Rendering Changes to Take Effect on August 1". This document was distributed to the farm press, commodity organization magazines, and was posted on OMAF's website.

On September 6, 2001 a meeting was held to evaluate centralized solutions for disposing of Class 1 material. Class 1 material is "high risk" product including product potentially containing sulfa residues.

Several proposals were discussed, (two rendering facilities and one composting), along with the associated costs. The costs ranged from \$3.37 to \$10.46 per pound for disposal which commodity groups found unacceptably high. OMAF stated that there was a possibility of temporary government assistance, but in the long term, solutions would have to be industry funded. Representatives were to discuss these options with their respective associations and provide feedback. No positive feedback was received by OMAF and hence no action was taken.

Another stakeholder meeting was held in Guelph on December 19, 2001. Rothsay indicated that while SMZ levels had been reduced, they were still too high. It became apparent that deadstock collectors had not communicated the SMZ concern to their bovine clients as well as they had to the swine producers.

MZ is used to treat scours and stress in calves and feedlot steers. Even though a bovine practitioner had expressed concern at the July, 2001 meeting, collectors somehow missed the message. Rothsay stated that they would commence SOS (Sulfa –On-Site) testing to monitor incoming material. They were concerned that the agricultural industry was not aware of the gravity of the situation. Commodity groups and OMAFRA agreed to become involved in producer education. The group obtained \$300,000 from the Healthy Futures for Ontario Agriculture fund for the Livestock Mortality Recycling Project. A presentation was made on the "Proposal for Centralized Composting of Deadstock" developed by OMAF and a licensed deadstock collector. This facility, when established, would process two tonnes of raw material per week and would provide scientific data for future composting endeavours.

Further written communications to producers were issued by the commodity organizations and OMAF.

Another meeting was held on June 14, 2002. Rothsay indicated that the number of samples out of compliance in May, 2002 had been reduced to 12% from 15% in October, 2001. The levels were still unacceptably high. Based on HPLC testing done at the University of Guelph, other sulfa compounds were named as giving positive test results. Rothsay stated that by late summer, 2002, no sulfa residues, from any drug of the sulfa families, would be tolerated in deadstock sent for rendering. This comment got the attention of the affected commodities.

On July 9, 2002, Rothsay made good their promise to distribute a letter concerning this additional requirement to producers and deadstock collectors. This time, due to the limited success of their efforts to reduce sulfa residues to acceptable limits, all sulfa compounds were named as unacceptable in the rendering industry. This letter required producers and collectors to sign a new form stating that they would not provide sulfa-treated carcasses to the rendering industry.

In response to this letter, and in an effort to communicate this latest information to producers and veterinarians, a meeting was held at the Ontario Cattlemen's office on July 18, 2002. This meeting brought together commodity groups and veterinarians to develop a strategy on how to further communicate to producers and veterinarians. Again, Bob Rusk updated everyone on the progress, or lack thereof, in compliance. Maple Leaf Foods had been conducting their own research and indicated that the results just raise more questions about sulfa withdrawal times and residues.

There is a very tight timeline involved and the following action items were delegated:

- Develop a proposal for funding to support a communications strategy.
- Place an article in Ontario Beef and Ontario Veal News magazines. Bob offered the Rothsay letter from July 9th for publication.
- Place an article in the Ontario Farmer authored jointly by Ontario commodity groups (OVA, OCA, Ontario Pork and DFO).
- OABP, OASP and OMAF to communicate with bovine, swine and equine practitioners about the severity of this issue.
- Contact the feed industry via OABA (Ontario Agri Business Association) to consider supplying information with each shipment of feed containing SMZ.
- Schedule a follow-up meeting in August to reassess situation and consider further actions.

Subsequent meetings were held with Canadian Animal Health Institute (CAHI) and Alpharma, a pharmaceutical company seeking their input and support for producer education efforts. CAHI provided a list of all sulfa compound medications. We have ascertained that producers using sulfa compound drugs may recognize them by their label name but are generally not aware of the active ingredients.

On July 31, 2002, some commodity groups received a copy from Atwood Pet Food of an ad that they would be inserting in the Ontario Farmer, Tuesday, August 13, 2002. Collectors were concerned about the viability of their business if, as a result of sulfa-positive deadstock being unacceptable for rendering, 50% of deadstock were managed on-farm. Rothsay and the collectors were already at a stand-off. Collectors said that they would refuse to sign the latest letter for September 15, 2002. They threatened to park their trucks as they could not meet Rothsay's requirements and continue to operate.

Current Situation:

With a looming deadline and no apparent solution to the standoff, another meeting was held at the Ontario Cattlemen's office on August 22, 2002. The purpose of this meeting was to set in motion an action plan that would result in acceptable levels of sulfa in rendered meat and bone meal.

Bob Rusk and Dr Bill Ballentyne representing Rothsay, stated that the September 15 deadline is firm. Collectors and producers have had over a year to get the situation under control. While noncompliant samples have been reduced to 12% from 31%, Rothsay's stated policy is zero tolerance for sulfa residues. Having said that, Bob acknowledged that it is unclear just what zero means. It could be anywhere from 0 to 100 ppb, but will definitely be less than Canada's current MRL. Bob Rusk also acknowledged that resolution of the problem of SMZ residues, if successful, would meet Rothsay's requirements. Those present were eager to find a solution that will enable the continuation of deadstock collection in Ontario.

A review of the action items from the July 18 meeting revealed that this issue has received priority status.

A draft has been completed requesting funding from AAC to support a communications strategy. Partners are Ontario Pork, DFO, CAHI, OCA, OVA, OMAF, and Rothsay. The proposal still has to be distributed to the various partners. Isabel stated that the funding should be in place by October.

Articles have appeared in Ontario Beef, Ontario Veal News, Ontario Milk Producer, and Pork News.

The Ontario Farmer ad is pending, depending on the success of the first action item.

OABP and OMAF prepared and directly mailed a communiqué to all private practitioners.

OABA included a small article about the need for feed companies to advise producers about this issue in their newsletter of August 8, 2002.

Rothsay restated its position that as long as animals have met or exceeded the labelled withdrawal time for food, they may be sent for rendering.

Veterinarians present at the meeting suggested that Over the Counter (OTC) SMZ products are by far the largest source of the problem although documentation of this fact is needed. Banning the use of SMZ was discussed although product removal without a scientific risk assessment and analysis could set a negative precedent for subsequent product-related challenges. The process for this would have to be investigated. Another option would be remove SMZ from the provincial list of OTC products and to restrict the use of SMZ to veterinary prescription only under the provincial Livestock Medicines Act.

Key messages and action items endorsed at this meeting were:

- Animals receiving a product containing any sulfa compound must meet or exceed the labelled withdrawal time before being shipped for meat or as deadstock.
- Publicise that producers still have two viable on-farm alternatives for deadstock containing sulfa residues. Dead animals must be buried in at least two feet of earth, or composted if they are not eligible for removal from the farm by licensed collectors.

- Develop a discussion paper for distribution to Rothsay and government. Input from several people will be required.
- Post notices at auction markets so that those purchasing young calves and feedlot calves will be targeted with information on the implications of treating these animals with sulfa products. Stress the fact that several feedlot starter rations contain SMZ. In addition to this, promote the concept of declaration forms for producers to sign stating the sulfa status of any stock they are selling.
- The upcoming Ontario Livestock Auction Markets Association (OLAMA) meeting of September 30th should be used as another opportunity to raise awareness of this issue.
- The Animal Nutrition Association of Canada (ANAC) will be consulted as to how to achieve buy-in and action from feed plants on educating producers about sulfa products.
- The issue will be presented to the Nutrition Committee of the OABA, to endorse greater communications of the withdrawal times by Ontario feed mills to producers purchasing feeds containing SMZ.
- There will be further investigation into two "streams" of deadstock. A clean stream and a contaminated stream.

Ontario Pork, Dairy Farmers of Ontario, Ontario Cattlemen's, and Ontario Veal collaborated on an initiative to provide a producer letter and an information sheet to producers that could be distributed by deadstock collectors.

Five thousand of each of these were printed. Kevin Joynes of OMAF distributed them to four deadstock collectors on September 11, 2002. As of September 18, we understand that deadstock collection has continued, albeit with strict guidelines for producers. Twenty thousand more of each are currently being printed (Oct. 2' 02)

The OLAMA meeting was attended and information provided. A representative from OLAMA will be asked to join the group, as they felt that they should have been involved earlier.

On September 17, at the International Plowing Match, Liberal leader Dalton McGuinty unveiled a plan to develop biodiesel using deadstock and soybeans.

On October 23, a large group of stakeholders met at the new office of Ontario Pork Producers.

A list of handling options, current status, and pros and cons has been compiled and is contained in Appendix III.

Appendix III

Options	Current Status	Lead	Pros	Cons
Centralized Composting	<p>1. Attempting to re-zone property and obtain a building permit. 2 – 3 months before operation</p> <p>Kawartha Lakes project – still doing studies. Project is moving slowly.</p>	Ping Wu – OMAF	<p>Centralized solution offers economy of scale and ability to control process and product.</p> <p>Would accept excluded product.</p>	<p>Economic feasibility yet to be determined.</p> <p>Difficulty in developing sites (Not in my back yard).</p> <p>Process slows down in winter.</p> <p>Insufficient supply of sawdust</p>

Class 1 Rendering	On hold		Centralized solution offers economy of scale and ability to control process and product.	Expensive, Disposition of end product? Difficulty in developing sites (Not in my back yard). Will producers pay more deadstock that must go into this stream?
Incimal Inc (Quebec option)	Available		Will handle Class 1 product immediately. Facility meets environmental laws.	\$.31/lb. Collection from predetermined deadstock depots. Product must be frozen in bins provided by Incimal. Minimum 1000 lbs. per pick-up. Large volumes will cost \$.35/lb.
On-farm burial	viable option under most circumstances		Cost effective if producers have proper equipment	Environmental concerns Difficult with large animals and during winter months.
On-farm composting	viable option		Proven method of disposal that provides nutrients for land application	Labour intensive for a small operation. Education required at the farm level.
Centralized incarceration	Under consideration May be included in new regulations in April' 03		No further disposal required. Able to handle large volumes Meat and Bone meal could be used as fuel	Environmental concerns. Expensive Difficulty in developing sites (Not in my back yard).

On-farm incineration	Under consideration May be included in new regulations in April' 03		No further disposal required.	Environmental concerns, Education required Possibly expensive, depending on regulations
Bio Refinex	Being tested in the UK		Research is ongoing to determine if prions are destroyed.	Expensive, Final assessment for effectiveness is pending.
Class 1 Chemical Destruction (WR2 Tissue Digester www.wreurope.net/	System is operating in Europe		Destruction of all pathogens. Used for destruction of carcasses of confirmed cases of BSE. moderate operational costs. Reduces waste volume by 98%	High initial cost End product is not environmentally friendly.
Re-classify SMZ to Prescription-only	For consideration	Dr. Ann Godkin OMAF	Provides more opportunity for one-on-one communication of residue problems by veterinarian to producer. Residue responsibility partially shouldered by the veterinary practitioner. Will reduce overall usage. Other equally effective products are readily available.	Limits options for handling scours and stress in livestock. Delay in obtaining medicated feed if veterinary scripts must be obtained before the feed mills can manufacture the feed.
Ban the use of SMZ in animals to be used for food	SMZ not allowed for use in Canadian swine herds certified under CQA. SMZ banned in dairy animals over 20 months in the US		Removes barriers to export sales of Canadian finished food and feed products. Would be In accordance with Quality Assurance initiatives in all commodities (dairy	Product licensing is federally regulated, hence it would have to be a national initiative. Potential precedent setting action that could open the door

	<p>Severe restrictions in SMZ tolerance in finished product in countries such as Japan.</p>		<p>beef, veal and pork).</p> <p>Would be In accordance with recommendations made by the Expert Committee on the use of Antibiotics in Agriculture.</p> <p>Additional regulatory testing required to detect the sulfa compounds (beyond that needed for antibiotics is very expensive (milk and meat).</p> <p>SMZ residues are being detected in soil and water far from agricultural sites.</p>	<p>to banning other products. (scientific risk assessment and analysis is required)</p>
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