

# Points of View

A forum for sharing perspectives from across the Canadian Sheep Industry



CANADIAN SHEEP FEDERATION

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## **Myth: Producers are not interested in genotyping their flocks to help identify animals that have increased resistance to scrapie.**

Between 2005 and 2008, the National Genotyping Survey offered genotyping for sheep to help determine animals that are genetically resistant to scrapie. During that time, the program helped fund the testing of about 18,000 purebred sheep across Canada.

Since then, producers have continued to inquire about genotyping. Many producers have commented that genotyping should be a major component of the overall scrapie eradication plan in Canada, advocating that it should be used in conjunction with brain testing and flock monitoring. Genotyping can be used to develop strong breeding programs that produce more resistant off-spring, but it's not enough to have an animal that is scrapie-resistant if it's a poor- doer. So genotyping is one piece of the puzzle – those producers who support it think it's a very important piece. It's also important to note that genotyping continues to be a key element of scrapie programs in many countries.

The biggest challenge to genotyping Canadian sheep is likely cost. Although producers may feel genotyping is important, for many it's just too expensive. It costs about \$30 per head to test blood samples at labs in Canada. US labs are less expensive. Veterinarian costs also need to be included. There is also the option of inserting the DNA ear tags which cost about \$4 each, plus the cost of the tagger.

CSF continues to receive questions about genotyping and there are varying opinions in the following pages. Many people want to know whether the Canadian sheep industry plans on subsidizing genotyping in the future. We'll add all the points raised in this issue of Points of View to future discussions on scrapie programs.

Send your comments to [pointsofview@cansheep.ca](mailto:pointsofview@cansheep.ca), or contact Jennifer MacTavish directly by phone at 1-888-684-7739 or [jennifer@cansheep.ca](mailto:jennifer@cansheep.ca).

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P.S. Please turn to pages 4-5 to read about producer Darryl Hoskins' experiences with genotyping on his farm.

# Contributions

## Ryk ter Beek

Prince Edward Island

In 2003, at the world sheep and wool congress in Quebec City, they announced funds for genotyping of 36,000 purebred sheep. The uptake in the next few years was only around 4,000 sheep. Farmers were not interested because the government made one big mistake. They didn't make it mandatory to first use QR rams and maybe after two years, only RR rams. In The Netherlands they made funds available for genotyping and made it mandatory to use only rams tested at least QR and a few years later only RR. There, nearly every purebred breeder did genotype their sheep because they could recover money by selling tested rams that everyone had to buy.

*"Genotyping would be useful if everyone participates and it's mandatory to use only QR and later RR rams, otherwise it is a waste of money."* - Ryk ter Beek

Here in Canada it is not mandatory to buy tested rams so nobody bothers with it. The ones who did test have no way of recovering any money. I do sell breeding rams and have genotyped all my sheep and rams for two years, but since nobody ever asked me for genotyped RR rams I did quit testing. I think there is value in genotyping. I use QR or RR rams. If they had made using genotyped QR or RR rams mandatory we would be at least five years ahead of what we have now. The money they made available is now totally wasted. Canada is behind every country in the world because of the lack of decision making. In Great Britain every sheep that goes to a sale has to be genotyped – not so in Canada. If Canada wants to become scrapie-free the government or whoever makes the decisions should put some strict rules in place or we are going nowhere.

*"Are all countries still convinced that genetic selection is the best way to deal with this problem?"* - Rebecca Parker

## Rebecca Parker

Bethany, Ontario

I did not participate in scrapie genotyping for a few reasons, the most important was the cost and the second most important being the fact that I am running a primarily commercial operation and therefore saw little long-term benefit. I am also concerned that selecting for one "resistant" strain might come back to bite us if a new strain of scrapie turns up in the industry. We are already seeing an atypical strain that has turned up in New Zealand as well as other places. Are we selecting for sheep that might be more susceptible to something like that? What are other countries doing along this line? Are all countries still convinced that genetic selection is the best way to deal with this problem?

## Letters to the Editor

### Comments in Relation to Mandatory RFID Tags (July 2010 'Points of View')

#### Howard Morry

President Sheep Producers Association of Newfoundland and Labrador

I hope and pray that your new tags are better than the pink ones as I have a bad taste in my mouth when it comes to them. Over half my lambs lost most of their ear that the tag was in and they got infected and stunted the lamb's growth. At two dollars a lamb it is expensive. I am not a new kid on the block – there are very few sheep farmers in Canada who have 67 years experience. We had a symposium in Springdale a few weeks ago and 100 per cent said they are happy with the present system.

# Letters to the Editor

I don't know how you are going to enforce the law as there isn't a federal slaughterhouse in Newfoundland and there is not going to be one. When asked, the head man for the Coleman string of supermarkets stood up and said he is more than happy with the local producers.

I think there should be another way to handle Newfoundland sheep producers. Most of our farmers in certain areas put their sheep on islands as soon as the snow goes and don't bring them home until it is time to stable them. You will never enforce the law as I am sure inspectors are not going to the islands and round them up. One farmer I know keeps 200 plus sheep on islands; me and my two sons keep 250 on islands. The pink tag system was a farce in this way. Once the lambs were inspected they went on to the supermarkets. In that shipment there are probably lambs belonging to several people; if one of those lambs is full of penicillin and somebody gets sick who owns the lamb? There is no way you can tell a lamb that is full of penicillin by vision. My motto is what I won't eat myself I will not sell to anyone else. I have not received a complaint in all those years and the status quo is okay with us. So why screw up a good thing? All those new rules are only making it harder and more expensive for all of us. There was just as many who didn't use the pink tags as did, and they won't use this system either.

It is probably necessary on the mainland where sheep are going back and forth across the border (scrapie, etc). We don't have any of those diseases in Newfoundland and Labrador and we certainly don't want them. I think a representative from every province should attend a general meeting and express their view. You will find out that the majority won't be in favour of it. As president of Sheep Producers Association of Newfoundland and Labrador (SPANL) for 20 plus years, I can tell you there is not one in favour. It is another way of making it tougher for us to sheep farm.

*"Communications are very important, especially with the introduction of legislated traceability and resulting mandatory CSIP RFID tags in 2012."* - Margaret Cook

## Margaret Cook

Alberta Lamb Producers

Limited resources are a common problem in the sheep industry due to its size, no less in sheep organisations. Communications are very important, especially with the introduction of legislated traceability and resulting mandatory CSIP RFID tags in 2012. The Alberta Traceability Pilot project is in its third year; updates on both the program and the project are circulated to all Alberta producers through Alberta Lamb Producers' N'ewesletter six times each year. This publication also includes management resources and information on all aspects of the sheep industry. We are happy to share the electronic publication with stakeholders from other provinces.

The latest four issues of N'ewesletter are available on our website, [www.ablamb.ca](http://www.ablamb.ca). Anyone wishing to receive advice of a new issue being posted is invited to send a request to [info@ablamb.ca](mailto:info@ablamb.ca) – we will be happy to oblige. Your e-mail address will be kept in confidence and all group messages are sent out as blind copies. N'ewesline is a concise e-mail advice (small file – no photos or graphics, rarely attachments) containing industry news, info about new resources, events, programs, etc as soon as it is available. Often, a website link is provided for further information. This service has an Alberta focus but many messages are relevant to all producers (if not, use the delete key!).

We already advise sister organisations including CSF of newsletter issues and appreciate receiving their publications. We welcome the opportunity to expand communications in the industry by advising the availability of our newsletter via your e-mail. Look forward to hearing from you.

# Genotyping and Scrapie Eradication

Darryl Hopkins has always been involved in agriculture. He grew up on a dairy farm near Owen Sound, Ontario. When he was 12 years old he joined 4-H, a decision that shifted his interest from cattle to sheep. What began as a hobby for a young boy has now developed into Benlock Livestock, a full-time sheep operation that runs 220 registered Suffolk ewes and 20 registered Charollais ewes.

Hopkins has increasingly made genotyping an important tool in his farm management tool box. He's been genotype testing for about 14 years and runs tests on both his males and females. The Canadian Sheep Federation recently sat down with Hopkins to talk about genotyping and its role in the Canadian sheep industry.

### Q: Why do you genotype test your flock?

The number one reason we originally started genotyping was to be able to help control and eradicate scrapie from the national flock. We wanted to incorporate it into our breeding program to develop a flock that is healthy, has good production and a strong resistance to scrapie. Genotyping is one tool that we use to accomplish that. We also wanted to use genotyping as a marketing tool.

### Q: What are the benefits of genotyping?

Being able to produce and sell sheep that carry one or two genes that are resistant to scrapie and having the scientific data to back it up.

### Q: How do you use your genotyping results on the farm?

We incorporated the test results into our breeding program and over the years resistant genes have become more prominent in the flock.

If you use a double resistant 'RR' male it's pretty much a self-sufficient process. We're at the point now where we've completely genotyped the base of our ewe flock and stud rams so we don't have to complete that much testing anymore. We know the genetics and we can predict the outcome and as a breeder that gives me peace of mind.

We also use the test results as a marketing tool. We've run advertisements in industry publications and promoted our resistant genetics to buyers. Not every buyer cares about resistant genetics and genotyping but to those who do care, it matters and we're able to meet those buyers' needs.

### Q: When it comes to genotype testing, how should a producer get started?

Whether the producer is keeping or selling their replacements, a good place to start would be to test their stud rams. Breeding with a 'RR' ram will develop progeny that will automatically carry one resistant gene regardless of the ewe base.

## CASE STUDY

By doing very little you can throw an 'R' factor into the flock. If you're keeping the replacements the 'R' factor will continue to grow through generations. .

### Q: What have you learned about genotyping?

There's a trickle down affect with genotyping throughout the entire industry. Flocks that were genotype tested 10 to 15 years ago are still playing a role today because their resistant genetics are still being passed down.

Through my experience of talking to other producers, I've learned that there is some confusion around what information you can gather by genotyping testing. You're testing for the scrapie resistance and not for the actual disease. It is important for producers to know the difference.

### Q: What would you tell other producers about genotyping?

I would tell producers that genotyping is one tool among many when it comes to raising strong healthy sheep. If you're only objective is to produce 'RR' sheep at the expense of the quality and breed characteristics you won't be able to market the animal regardless of their genotype. Producers should not be blind to this and they should not lose everything at the expense of having an 'RR' sheep.

I'd also say it seems that producers are worried about genotyping because they feel they will automatically start out with a susceptible flock. They then take this thought and relate it to lengthy breeding

programs or being forced to ship good quality animals simply because they have susceptible genes. This isn't always the case. When we first started testing our sheep we quickly realized that we had a high level of resistance in our flock so we didn't have to make too many major changes.

### Q: What position do you think the Canadian sheep industry should take when it comes to genotyping?

The Canadian sheep industry could be further ahead with genotyping if it was better explained and supported by the industry and the government. In the United Kingdom there are some breeds that you can't even register unless they are 'RR.' Now I don't think we need to be that drastic here in Canada but we are behind in genotyping when you look at the international community. I think that people in influential positions within the industry should take genotyping seriously. It's been my experience in the past that this hasn't always been the case. I hope the industry improves on this as we move forward.

I think it would be valuable if the industry could develop a subsidized program for producers, which includes genotyping as part of the larger scrapie eradication plan. This is where the trickle down affect could come into play. As more producers genotype the overall genetics of the national flock will become more resistant. I am not saying that if Canada has all 'RR' sheep it will be scrapie free, but building genotyping into the eradication plan will only make it stronger.

## Your feedback is essential!

This forum will only be successful if everyone weighs in with their own perspectives from their place in the industry. Tell us:

- What you think about "Points of View"
- If you had a strong reaction – either good or bad – to the first feature editorial
- If you want to contribute to an upcoming issue
- If you have a topic you'd like to see addressed
- If you have a story that would make a good case study for others to learn from

What's in it for you? Most people don't often get a chance to have their opinion heard. This is yours. Use it to help make an impact on the future of our business. **Send your comments, suggestions and questions to [pointsofview@cansheep.ca](mailto:pointsofview@cansheep.ca) or call CSF at 519-824-6018 or 1-888-684-7739.**

## In the next issue...

**Myth: The intention of mandatory RFID tags is to be able to trace animals to the original producer for the purpose of penalizing that producer in the event of a disease or food safety issue.**

Establishing traceability systems provides benefits for all stakeholders – from producers to consumers. When it comes to dealing with liability for disease and food safety outbreaks, a strong traceability system gives the sheep industry the ability to identify, isolate, effectively manage and minimize the impact on all producers and the products they produce.

Following the rules of a traceability system also gives producers the ability to demonstrate due diligence as an effective defence to a liability claim.

We'll discuss this issue further in the next edition of Points of View.

- What do you feel are the risks if tainted sheep (i.e. either a disease or food safety issue) can't be traced to its source?
- How would the inability to trace an outbreak impact the Canadian sheep industry?
- Could it impact you as an individual producer?

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