



O O P P
C O N C E R N E D
S H E E P
B R E E D E R S
S O C I E T Y

DIRECTORS

BILL DUFFIELD (07)
 Ontario
 519-899-2663
 duffield@xcelco.on.ca

MARY K GLOSTER (06)
 New York
 607-898-3777
 sheepish@rockytopfarm.com

ROBERT LEDER, DVM (06)
 Wisconsin
 715-752-3459
 leder@dotnet.com

JUDY LEWMAN (08)
 CHAIR
 Minnesota
 952-472-4524
 JL6250@visi.com

HOLLY NEATON, DVM (07)
 SECRETARY/OUTREACH
 Minnesota
 952-955-2596
 hollyneat@juno.com

GENE SCHRIEFER (08)
 Wisconsin
 608-987-4337
 sheepfarm@charter.net

JEAN T WALSH (06)
 TREASURER
 New York
 315-858-6042
 jtw_42@hotmail.com

HOLLY NEATON, DVM, SEC'Y
 11549 HWY 25 SW
 WATERTOWN, MN 55388
 952-955-2596
 hollyneat@juno.com
 www.OPPsociety.org

— OPP Pilot Study for SFCP Flocks —
Test & Control Program Up and Running in Minnesota!

This news has been such a long time coming that it's hard to know where to begin. Followers of the discussion to offer OPP testing as an optional add-on component to the voluntary Scrapie Flock Certification Program (SFCP) will recall Dr. Cleon Kimberling's proposal for a national sheep health program, which he introduced in the early '90s while chairing the American Sheep Industry Association (ASI) health committee. While the ASI proposal never materialized, the OPP Society has made several attempts to assist in bringing Cleon's dream to fruition.

In 1998, we submitted a petition to the United States Animal Health Association (USAHA) Committee on Sheep and Goats. (The USAHA, a national non-profit organization formed in 1897, serves in an advisory capacity to USDA.) That effort resulted in a resolution urging USDA to develop a standardization and check system for serological tests of importance to the sheep and goat industries (OPP, Johnes, CL, and B. ovis), which was seen as a necessary first step for development and implementation of a health program.

More recently, in the fall of 2005, we returned to USAHA this time with a prepared draft for a voluntary OPP test and control program (again addressing the test standardization issue as one of several goals) that could serve as a model for adoption by individual states as an add-on to the SFCP. In response, the USAHA Sheep and Goat Committee this time recommended that the OPP Society develop a pilot project, and that all state and federal animal health authorities support the pilot. The Minnesota Board of Animal Health then unanimously approved a 4-year OPP pilot study and we were on our way.

The level of support for this program has been nothing short of amazing. The OPP Pilot has evolved as a truly cooperative effort with invaluable assistance coming from the MN Board of Animal Health, State Veterinarian, and State Scrapie Epidemiologist; U of MN Veterinary Diagnostic Laboratory; the USDA Area Veterinarian-in-Charge, Veterinary Services Scrapie Field Team, and the State Scrapie Board; as well as the USDA Animal Disease Research Unit in Pullman, WA, and the OPP Pilot Study Working Group.

... OPP Pilot Study, continued on next page

**Swiss Researchers Pursue OPP as a
 RISK FACTOR IN THE TRANSMISSION OF SCRAPIE**

by Mark Lelli, DVM

The path being taken for scrapie eradication in the U.S. — a headlong rush toward RR genotype — addresses only one of a multitude of risk factors that allow a protease-resistant transformed protein that does not contain agent-specific nucleic acid encoding of its own constituents to behave as a contagious disease. I'm concerned that we are spending a lot of money removing otherwise valuable genetics and, in the end, may not eliminate the disease. Regarding this concern, I recently wrote the following to the OPP Pilot Study working group:

Some of you may or may not be aware of ongoing research of Prof. Adriano Aguzzi and others at the Institute of Neuropathology, University Hospital of Zurich. They have clearly demonstrated the production and excretion of prions in excretory (renal) tissues in mice with chronic lymphocytic nephritis. More specifically, mice infected with diseases that characteristically cause lymphotoxin up-regulation and ectopic induction of FDC-M1+ cells. These animals when co-infected with scrapie, excreted PrPSc in their urine. Of importance to us is the fact that OPPv can cause the same chronic lymphocytic inflammatory response in the mammary tissue of infected sheep.

In a recent communication with Dr. Christina Sigurdson, an associate of Dr. Aguzzi and one of the co-authors of a recent study demonstrating folded prions in the saliva and blood of CWD infected deer, while discussing risk factors involved in the . . .

... Swiss Researchers, continued on next page

NEW & RETURNING MEMBERS WELCOMED

Randy & Tationa Barnhill, California (Border Leicester)
 Linda A Detwiler, DVM, New Jersey (Suffolk)
 Nancy & Bill Dieterle, Pennsylvania
 (Romney, Romney x Romanov, Goats)
 Steve Ernest, California
 Sister Eugenia, New York
 (Romney, Icelandic, Corriedale, & Crossbreds)
 William D Kerns, DVM & Sharon Kerns, Massachusetts (Tunis)
 Eleanor Kollmar, DVM, New York (Veterinary Referral List)
 Skye & Penny Krebs, Oregon (Large Range Flock)
 Mark Lelli, DVM, Michigan (Mules: BFL x CF, BFL x NCC)
 Maryrose Livingston, New York
 (Dorset / Texel / East Friesian Crosses, Icelandic)
 Joe Malsom, South Dakota (Katahdin)
 Skip & Darline Mason, California (Border Leicester, Oxford)
 Kent Z Ozkum, MD & Will Morrow, Maryland (Katahdin)
 Barbara Burrows Renfro, Texas
 (Teeswater %, Wensleydale %, Natural Colored Rambouillet)
 Kristine & Jon Tappe, Wisconsin
 (East Friesian x Suffolk x Border Leicester)
 Frank H & Ellen F Wiles, New York

OPP CONTROL-ERADICATION PROJECT IN 4,000 EWE RANGE FLOCK OPERATION

Update from Cleon V. Kimberling, DVM, MPH

To read more about this project, which was featured in our 2005 newsletter, check the website: www.OPPsociety.org, or contact Holly Neaton to request that a hard copy be mailed.

Some preliminary results on our recent testing:

We currently have results on the first group of 1,400+ ewes from our negative group of about 3,600. We had 56 positives (less than 5%; on our first test 3 years ago we had 68% positives). It was interesting that about 60% of these positives were from the 2-year-old group. We had a gap in our isolation during lambing when these 2-year-olds were born. This could be part of the explanation for the number of positives in that group. The remainder were older ewes in the 5-7 year group. These had been negative on 2 previous tests.

Jay and I sorted the first 1,400 head on Monday and number 56 was the very last animal to be scanned. (We were beginning to worry about missing one and the need to go back through the entire bunch.) We bled another 1,500 head this week and I should have these results soon. We are still using the AGID as our standard. We have noticed a marked decrease in mammary and joint problems.

HELPING SPREAD THE WORD

The following have presented on OPP and/or distributed our brochures, etc. Let us know what you've been up to!

Jim Baglien and son at *Sedalia Ram Show and Sale*, MO
 Dr. Bill Kerns with various presentations on OPP, MA
 Joanie Livermore at *The Black Sheep Gathering*, OR
 Sister Eugenia at *Cornell Sheep & Goat Symposium*, NY
 Yvonne Uhlianuk at her *Mt. Bruce Station* events, MI
 Dr. Holly Neaton at *Great Lakes Dairy Sheep Symposium*, WI
 Judy Lewman at *Farm Bureau/U of MN-VDL Sheep Day*, MN

Swiss Researchers, continued . . .

transmission of TSEs, I asked about sheep co-infected with chronic lymphocytic inflammatory latent diseases, (OPPV/Johnes) and scrapie. To this she replied the following:

the possibility of concurrent disease increasing risk for TSE transmission seems very likely. We have performed coinfections with maedi-visna and scrapie in sheep and have found PrP^{Sc} in the mastitic mammary gland. We are next trying to determine whether the milk could contain infectious prions that could be transmitted to naive lambs.

This work is extremely important as it may demonstrate OPPv as a direct risk for the horizontal and lateral transmission of PrP^{Sc} in co-infected flocks. Not only would this show yet another hidden liability of OPPv in infected flocks, but should this work be completed, the OPPv pilot program should become mandatory for all scrapie traceback flocks on a national level.

EDITOR'S NOTE:

Dr. Lelli continues to follow Prof. Aguzzi's work and will keep us posted.

OPP Pilot Study, continued . . .

Since OPPv does not present a threat to human health and its economic importance is still being debated, the challenge was to develop and administer a meaningful program without funding. Pilot Study enrolled producers understand that all costs associated with annual AGID testing will be their responsibility. Further, they are required to submit their annual SFCP flock inventories electronically and agree to communicate via email.

In return for producers doing their own SFCP data entry a significant time saver in the office Minnesota's Scrapie Field Team is assisting with the collection of samples for OPP testing when individual animals are being handled for routine SFCP inspections or scrapie genotyping. Producers are also expected to pre-label blood collection tubes, have extra help on hand for SFCP inspections, and generally assist to streamline the inspection/blood collection process. Producers then deliver samples promptly to their local flock veterinarian.

All samples are submitted to the diagnostic lab by the local flock veterinarian, who will also assist the producer with development of an eradication and/or control plan in the event of positive test results. The OPP Concerned Sheep Breeders Society provides educational literature to all enrolled producers and their veterinarians and is also available for consultation on request.

With the exception of the initial application and an annual flock status report, the OPP Pilot is a paperless program. Electronic OPP test reports are checked against electronic SFCP annual inventories by volunteer members of the State Scrapie Board.

That's the program in a nutshell. On page 4 you'll note a copy of our *Year One Progress Report*, which was presented to the USAHA Sheep and Goat Committee in October and to the MN Board of Animal Health earlier this month. For more information, see the enclosed/attached 12-page *OPP Pilot Study Booklet*.

NOTE: While we'd like to see this program picked up in more states it does take some work to get it up and running, and most important continued volunteer commitment to keep it going. To discuss further, feel free to contact Judy Lewman at 952-472-4524 or JL6250@visi.com

YAHOO DISCUSSION LIST FOR OPP SOCIETY MEMBERS

Director Mary Gloster got this project off the ground a few years ago. To date, there are over 30 of us signed on and more than 160 messages archived we've copied a few samples below. If you'd like to join the group or want to know more about how it works, send Mary an email at: sheepish@rockytopfam.com

It scares me when I hear of a producer introducing a ram into a clean flock based on the result of one negative test on the individual ram. . . It would be much better to buy a ram from a flock that had at least 5 consecutive annual negative whole-flock tests. While keeping the new ram separate from the flock decreases the risk it does not eliminate it.

Have any of you ever had the lambs you orphaned turn positive later on, or is the success rate pretty high?

Try to get other producers with your breed to test and eliminate the disease. The Finn breeders made a concerted effort more than a decade ago. . . We included informational sessions at our annual meetings, articles in our newsletter, and mentioned it in our guide for new buyers. Most of the active purebred Finn breeders are now, and have been, test free for many years.

One of two ewe lambs we purchased tested positive at 4 months, but my vet urged me to wait for a couple of months and retest. . . She was negative at 7 months and again at about 15 months. We did add her to the flock. My vet said that she probably had a positive dam and was reacting to the dam's antibodies. . . She is still negative at 30 months.

INFORMAL SURVEY OF VETERINARY DIAGNOSTIC LABS

Late in 2005, in preparation for our USAHA presentation, a group of OPP Society volunteers conducted an informal survey of diagnostic laboratories. We had just 2 weeks to complete this work and are indebted to the cooperating labs as well as to those who helped gather data on short notice: *Barbara Burrows Renfro, Linda A Detwiler, Nancy Dieterle, Mary K Gloster, Paul J Hunter, Brenda C Lelli, Holly Neaton, Donna Onstott, Bev Pearsall, Tim Reese, Janet Seavey, Stephen Shafer and Jean T Walsh.*

With reports received from 25 labs in 24 states, combined total numbers of tests completed during year 2004 were as follows:

OPP	12,928	Toxoplasmosis	368
B. ovis	13,094	Leptospirosis	761
Q fever	165	Johnes	3,426

In alphabetical order, Colorado, Minnesota, New York and Washington state performed the highest numbers of OPP tests. It's important to note, however, that many producers and veterinarians ship biological samples out of state for testing.

Other states surveyed were Arizona, California, Florida, Iowa, Kentucky, Maine, Maryland, Michigan, Nebraska, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Wisconsin and Wyoming. These 24 states combined account for 54% of all breeding sheep and lambs. Unfortunately, labs accounting for another 20% of all breeding animals were unwilling to release data.

SOME THOUGHTS ON OPP

Taken from SHEEP-L and used here with Dr. Bulgin's permission.

Dear Sheep-L'er:

When a lot of controversy exists about a subject, chances are that both sides are right to some degree. OPP, like any viral disease, is quite contagious and depending on breed (i.e. genetics), age, stress, management practices and the owner's austerity, the disease can be a problem or not.

The Dubois Sheep Station, which hasn't had a veterinarian on board for years and let the one go that they did have because she insisted on some ordinary disease management practices has, no doubt, had OPP in the flock for as long as it has been there. I believe that they have probably selected unknowingly for OPP symptomless sheep. However, that said, I do believe they don't have a clue what their losses really are from OPP in the flock. For example, they cull a number of young sheep for arthritis which is undoubtedly OPP. When we did a survey for them 20 years ago and necropsied about forty thin ewes, ages 2 years to 5, the problem was either OPP or CL, about 50% for one or the other. So they do have a problem, but not enough of one to get their attention. As they say, there is no disease research in their mission.

On the other hand, most of the western whiteface range flocks have OPP and other than a 1/2 to 5% hardbag prevalence, they don't recognize a problem. The key word is recognize. Once in awhile the flock will change hands, management changes, weather conditions are particularly bad, nutrition is compromised and a wreck occurs. When the diagnostics are actually done, OPP is the culprit. Ask Clay Center what disease killed the majority of their Texels when they first imported them. Ask Cornell why they couldn't seem to raise enough replacement Finns to keep their numbers stable.

So, in my mind, living with a chronic disease is like living with a time bomb. You never know when it is going to go off. One year of bad luck, drought, mouldy hay, flooding, enforced confinement fill in the blanks you will start losing good middle-aged ewes from what appears to be bacterial pneumonia, or they won't be able to raise their lambs, or they can't bounce back after weaning, etc.

You folks with small flocks who can afford to test, why not do it? At least have your dead animals necropsied. Find out what little gremlins live under your fingernails. I'd test your oldest ewes, those 4 or older, or any ewe that was having problems keeping her weight or raising her lambs. If they are negative, you are probably free of OPP.

But that is my opinion. My own flock of 450 animals is free of OPP. I tested years ago, removed the two positives that we found, and I necropsy all my dead animals unless they died of obvious problems, i.e. dog bites, green alfalfa bloat / bad fences, etc. I have plenty of other problems but OPP isn't one of the straws on the camel's back.

Marie

Dr. Marie S. Bulgin (mbulgin@uidaho.edu)
Idaho-Caine Center Coordinator
Caine Veterinary Teaching Center
University of Idaho
Caldwell, ID 83507 (208-454-8657)

Voluntary OPP Test & Control Pilot Program for SFCP* Flocks

Report to the Minnesota Board of Animal Health — December 13, 2006

ACTION TAKEN PER NOVEMBER 7, 2005 RECOMMENDATION OF USAHA COMMITTEE FOR SHEEP & GOATS:

2005

NOVEMBER

¥ Letter mailed to 200+ targeted producers; 56 post cards returned indicating interest

DECEMBER

¥ Working Group assembled; development of program standards begins

¥ USDA-ARS-ADRU, Pullman, WA, offers assistance with confirmatory testing

2006

JANUARY

¥ MN Board of Animal (BAH) unanimously approves an OPP Pilot Program for 4 years

MARCH

¥ Due to heavy response, decision made to limit OPP Pilot to flocks enrolled in SFCP

¥ MN State Veterinarian, DSE, USDA Veterinary Services, and Scrapie Certification Board approve combining the voluntary OPP Pilot Program with the voluntary SFCP

¥ USDA-VS offers full support, including assistance with sample collection where feasible

MAY

¥ SFCP producers who returned post card notified of their eligibility for OPP Pilot Program

¥ Veterinarians of eligible producers are called to introduce program, answer questions

¥ Ineligible producers notified that they remain in database should program expand in future

¥ U of MN VDL offers specialized OPP Pilot submission form; monthly electronic reports

¥ Program standards continue to evolve with input from Working Group

JUNE

¥ Eligible producers invited to comment on program draft

¥ Scrapie Board approves inclusion of 06 testing done prior to receipt of application forms

¥ Specialized VDL submission form drafted

AUGUST

¥ Program standards finalized; standards and general info sent to eligible/enrolled producers

SEPTEMBER

¥ As producers applications received, complete packets are mailed to their veterinarians

OCTOBER

¥ Total 7 flocks participating to date; 5 have completed testing for 06

¥ Annual OPP Pilot Program Status Reports mailed to producers with completed 06 tests

¥ Specialized VDL submission form finalized and posted on their website; monthly reporting system up and running

¥ OPP Pilot Program progress report presented to USAHA Committee for Sheep & Goats; expressed need to expand study in order to include more OPPV infected flocks

NOVEMBER

¥ MN BAH staff approves expansion of OPP Pilot to 20 flocks maximum for year 2007; to be offered to newly enrolled SFCP flocks as well as initial respondents who agree to enroll in the SFCP as well as the OPP Pilot; priority given to flocks not previously tested

DECEMBER

¥ Expansion notice mailed with application packets to 50 producers per above

GOING FORWARD:

¥ Will continue to move enrolled flocks through the annual testing routine

¥ Will gather feedback from pilot study participants, their veterinarians, scrapie field staff, and the working group; update program standards as needed

¥ Need to consider how best to include large Selectively Monitored SFCP flocks

*SFCP: USDA-APHIS-VS voluntary Scrapie Flock Certification Program