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OPP CONCERNED SHEEP BREEDERS SOCIETY
Newsletter — December 2001

Bill Duffield Joins OPP Society Board

We are happy to report that Bill Duffield (Codan Suffolks), long-time OPP Society member from Ontario, has agreed to serve out the open term which was announced in our last newsletter. A featured speaker at the '99 Wisconsin Sheep Industry Conference, Bill has also addressed OPP Society members at our annual meeting. Additionally, he has contributed to the newsletter, most recently reporting on the Ontario Sheep Health Program in which he and wife, Lynne, were the first to enroll. Sheep-L subscribers are familiar with Bill's pithy words of advice, and readers of *The Shepherd* magazine will recall his series of articles following a '95 trip to Wales and England.

Having raised sheep for nearly 40 years, the Duffields currently run 65 purebred Suffolks — good ones. While North American producers continue to search the globe for new genetics, Bill and Lynne are in the process of *exporting* semen to Australia! (In February of this year a Codan ram was listed as the 2nd placed Suffolk out of the top 150 terminal sires of *all breeds* in Lambplan, Australia's counterpart to NSIP.) This kind of success is due in large part to the existence of the Ontario Suffolk Sire Reference Association (OSSRA), of which Bill was a founding member and first chairman. An early believer in the value of objective carcass measurements, Bill has visited ram test station facilities all over North America and still "keeps track of every test station that will send me data."

Now retired from Esso Chemical Canada, Bill has been a lifelong crusader for the sheep industry — having served in just about every capacity one could imagine. A past member of the Board of Health for Sheep in Ontario, he currently chairs the Ontario ROP (Record of Performance) Advisory Group. Bill has also judged numerous shows; the Duffields exhibited extensively before closing their flock in '89. Bill and Lynne, grandparents to four boys, have a computer guru daughter who works for Bayer and a veterinarian son who is an associate professor at the Ontario Veterinary College in Guelph.

Testing and Control of Ovine Progressive Pneumonia

by Cindy Wolf, DVM, University of Minnesota

(From proceedings of the 2000 annual meeting of the Minnesota Veterinary Medical Association)

The small ruminant retroviruses, Ovine Progressive Pneumonia virus (OPPV) and Caprine Arthritis Encephalitis virus (CAEV), have confused producers and practitioners for many years. The nature of these viruses has been the source of this confusion. While these viral infections persist for life, few animals in a flock or herd actually show clinical problems. The subclinical manifestations probably occur with a higher frequency, but in a practical farm setting their effects are difficult to quantify. Literature references exist that document the economic relevance of OPP infection in flocks. 2.4 Most producers who seek veterinary assistance in controlling and even eradicating these viruses do so because they either raise a breed of sheep that has more documented clinical problems with OPPV, or they recognize that both viruses can have significant effects on productivity through reduced levels of milk production or longevity. In both control and eradication programs, producers must be seriously committed to the longterm effort, understand how the virus is spread, and use the test results correctly. These viruses can be costly to control because of semi-annual test related fees, the lost opportunity cost related to premature culling, reduced productivity, and increased cost of replacement breeding stock which includes the cost of artificial rearing. The cost of milk replacer alone to rear a lamb to twenty-five pounds body weight is a minimum of twenty-five dollars. An estimate of all other costs such as creep feed, Clostridial vaccines, labor, and facilities is ten dollars assuming less than 2% mortality.

... Cindy Wolf paper continued on next page

Presently, veterinary diagnostic laboratories use the agar gel immunodiffusion test (AGID) for OPP testing. Its sensitivity and specificity have been reported to be 91.5% and 100% respectively. ³ Based on these parameters, this test can best be used in control programs if the sheep are tested every 6-12 months. While the test only requires 0.1 ml of serum, it is advisable to send 1 ml of serum. The cost ranges from \$3.50/sample on up depending on the lab. The test takes 48 hours from the time that it is set up to a final reading. For unknown reasons some samples may be difficult to interpret so these are generally set up and read a second time. No major sheep diseases are recognized to cause false positives or negatives. My experience has been that when the same individual in the same lab runs the same samples repeatedly, the repeatability of the results is 100%. We have also found at the University of Minnesota Diagnostic Lab that seroconversion is permanent. In other words repeatedly drawn blood samples on a seropositive ewe reliably test positive when run in the same lab.

It is difficult to recommend an optimal control program to a flock owner until the seropositive rate in the flock is determined. Most flocks can be rearranged into two groups on a farm, an infected group and a test-negative group. These groups or sub-flocks are maintained for a finite period of time. This arrangement is generally not workable nor advisable for the long term unless the flock owner already has access to two farms. Several scenarios should be considered with no one approach to control being the only appropriate one without the owner embracing the proposed plan.

Purebred flocks and those flocks where the sheep have emotional value are the more difficult ones to set up short-term eradication programs. The flock owners will invariably want to salvage genetics from some of their seropositive sheep. These select sheep need to be placed in the infected flock and kept isolated from the seronegative sheep as soon as possible. The sheep should either be synchronized for natural or artificial breeding purposes or breeding dates should be recorded on a daily basis based on breeding marks that result from the ram's marking harness. Because parturition in ewes is more difficult to induce compared to goats, lambing must be closely monitored and lambs snatched at birth to be reared artificially. If there is any suspicion as to whether or not the lambs have nursed, then they should be left on the ewes and considered infected. However, DNA from ovine lentivirus was found by PCR in 11% of 117 neonatal lambs tested prior to colostral ingestion. ¹ Seropositive sheep that do not carry an elite genetics designation can either be sold for slaughter, sold as breeding stock with their OPP status disclosed, or managed in the infected group and their progeny sold as feeder or slaughter lambs.

Heavily infected purebred flocks are faced with a tremendous challenge as to how to stay financially solvent while trying to change the percentage of the flock that is infected. With aggressive marketing, breeding stock from uninfected flocks can be worth more than the same genetics derived from infected sheep. Several years ago, a producer group formed named the OPP Concerned Sheep Breeders Society. ⁵ This group provides educational material upon request and also publishes an annual directory of members stating member flocks' OPP status, flock numbers and breed(s). This group is a valuable resource for any flock owner that is trying to purchase OPP-free breeding stock. Potential buyers should review the OPP test results from flocks in which they are considering purchasing sheep. The tests

should have been conducted within the past 6 months and within the past 30 days preceding purchase is ideal. The tests should have been run at a lab that the veterinary community trusts regarding OPP test validity.

Commercial flocks that have a low seropositive rate, arbitrarily defined here as <25%, may consider immediate separation of the test-positive sheep, followed by culling when cull prices are at a reasonable level. Again sound sheep from this group could be offered for sale as long as their OPP status is transparent even to potential buyers who are unaware of the potential impact of OPPV. When commercial flocks have a seropositive rate that exceeds 30% the owner may decide that it is not economically feasible to cull all of the sound, seropositive sheep at one time. Remember that the flock owner ought to be culling between 10-15% of his/her flock each year for reasons relating to poor production that might include the availability of genetically improved replacements, mastitis, bad mothering traits, poor weaning weights, unsoundness due to chronic disease or age. Again these seropositive sheep must be managed as a separate group from the time that they test positive to the point that they are culled.

For any of the above scenarios, the test-negative sheep should be retested every 6-12 months depending on the owner's wishes and financial situation. If only testing every 12 months, then the sheep should be tested 4 weeks prior to lambing. Test-positive sheep should be identified and removed prior to lambing. If any sheep are lacking individual identification at the time of blood sampling, these sheep should be ear-tagged so that they can be found later when the test results are available. Once the flock is found to be less than 5% seropositive, the flock can be tested on an annual basis. Once the rate is less than 1%, the flock could be tested every two years unless the seropositive rate starts increasing again. Flocks that have had no test-positive sheep in a three year time period have usually declared themselves OPP-free and stopped testing.

Management of two groups on the same farm can be practical because of the labile nature of the OPP virus in the environment. This characteristic of the virus is advantageous regarding OPP control. It means that the infected and test-negative sheep do not have to be kept on two different farms in order to manage a two-flock system. They cannot share a building, fence line, waterer, or feed space that has nose to nose contact between the two groups. But they can use these same areas if a time gap exists in between usage. For example, a barn can be used for lambing the test-negative sheep first followed by lambing the seropositive sheep 34 days later. There is nothing scientific about 34 days regarding the OPP virus except that is a reasonable target length for a breeding and subsequent lambing season. The same rotation could be used for pastures. The virus has been shown to die within minutes after being discharged from an infected sheep. Equipment such as automatic syringes, drench guns, ear taggers, tattoo pliers and water buckets can be used in between the two groups if cleaned and disinfected first.

Not testing means the status of those sheep or that flock is unknown. The statement that producers have not noticed clinical signs is meaningless to producers and veterinarians versed in the nature of how this virus naturally behaves. Serologic testing or histologic examination of biopsies or tissues collected at

... Cindy Wolf paper concluded

necropsy is the only means commercially available to confirm the presence of OPPV infection.

References

1. Brodie SJ, de la Concha-Bermejillo A, Koenig G, et al: Maternal factors associated with prenatal transmission of ovine lentivirus. *J Infect Dis*: 169:653-657, 1994.
2. A de la Concha-Bermejillo: Maedi-Visna and Ovine Progressive Pneumonia. In *Vet Clin of North Am Food Anim Pract* 13:13-33, 1997.
3. Juste RA, Kwang J, de la Concha-Bermejillo A: Comparative evaluation of the agar gel immunodiffusion test and recombinant ELISA for the diagnosis of ovine progressive pneumonia. In *Proceedings of the 99th Annual Meeting of the U. S. Animal Health Association*, 1995, pp. 536-545.
4. Pekelder JJ, Veenink GJ, Akkermans JP, et al: Ovine lentivirus indurative lymphocytic mastitis and its effect on the growth of lambs. *Vet Rec*, 134: 348-350, 1994.
5. OPP Concerned Sheep Breeders Society (updated info)
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OPP SECRETARY STEPS DOWN HOLLY NEATON ASSUMES DUTIES

In order to devote more time to a growing fiber arts supply business, Annette Bader made the decision to leave her position as OPP Secretary earlier this year. It seems as though Annette just began working with us, but it's been more than two years since she agreed to step in on very short notice when Mary Jarvis had to resign for health reasons. We're grateful for the time that Annette's given us. She's done a wonderful job and we will miss working with her. Mary and Annette both remain active members of the OPP Society.

For now, Dr. Holly Neaton, DVM has agreed to add "secretary" to her title (she already serves as our treasurer). Holly assumed the extra duties just prior to our annual meeting and the transition is nearly complete. By the time you read this, all of our promotional literature and advertising will reflect the change. A busy mom, veterinarian, and business owner, we don't know where Holly finds the time — but we sure do appreciate her help!

COMPLETE OPP "INFO PACK" AVAILABLE

The packet of OPP information we routinely distribute along with our directory and brochure is now being printed in booklet format (saves us both money and time). The 16 pages include an introductory letter as well as the following: OPP General Fact Sheet, reprint of article from WI Newsletter, reprint of "One Farmer's View of the Importance of OPP," review of Pekelder paper on adult-to-adult MV/OPP viral transmission & reduced lamb gains, OPP Testing Guidelines, reprint of "ELISA or AGID?," list of laboratories running AGID tests, and a U of M lab submission form.

Please contact Holly Neaton if you are missing any of the above. Single booklets sent at no charge; multiples available at our cost of 50 cents U.S. And any of this information may be photocopied.

OPP SOCIETY 2001 ANNUAL MEETING: Minutes & Treasurer's Report

The annual meeting of the OPP Concerned Sheep Breeders Society was held on March 24, 2001, at the Chula Vista Resort in Wisconsin Dells in conjunction with the Wisconsin Sheep Industry Conference. Approximately 20 people attended the informal meeting.

Judy Lewman announced the resignation of our secretary, Annette Bader, and thanked her for her great service over the past two years. Holly Neaton has agreed to be secretary/treasurer until someone else volunteers for either job. Judy also announced the addition of Bill Duffield to our board of directors. Bill is from Wyoming, Ontario, raises Suffolk sheep and is a founding member of the Ontario Suffolk Sire Reference Association. Thank you, Bill! The terms of Bets Reedy and Judy Lewman expire this year. Both are willing to continue, but anyone interested in serving on the board is encouraged to contact the secretary.

A round-table discussion occurred with members briefly discussing their experiences with OPP and its eradication from their flocks. Judy Lewman shared her experience of needing to test her lambs at very young ages in order to catch positives that were silently passing the infection to their pen mates. Jim and RuthAnn Schultz described the history of their flock, eradicating OPP and the events that led them and their veterinarian, Dr. Bob Leder, to create the OPPCSBS. The Schultzes and Dr. Leder volunteered to write an article summarizing this story and the years that have passed, noting that the organization now has 163 members in 33 states and 2 provinces. This represents over 11,200 sheep. When completed, the article will be submitted to several of the popular industry publications.

As few of our members or directors are able to attend the Wisconsin meetings, a discussion was held in regards to ways that other states could benefit from booths with OPPCSBS literature and informal meetings held at their local sheep conferences. We have some excellent papers discussing other diseases in addition to OPP, and videotapes available that could be used. A member would have to take on the project and we would be willing to provide the material. Travel expenses and time prohibit directors from providing this service, but if any member would like to provide this access to the organization at their local sheep meetings, please contact me or Judy Lewman. Judy reported that she had a very positive reception at the Maryland Sheep & Wool Festival the past few years.

Several of our Wisconsin members are fortunate to have their flocks enrolled in the National Animal Health Monitoring Survey, which entitles them to hundreds of dollars of free testing to screen their flocks for disease. This is occurring throughout the country and the results of this survey will hopefully give us a good overview of the status of chosen sheep diseases — including OPP — in the U.S.

The treasurer's report included an income of \$923.37 and expenses of \$1250.76 in 2000. With the balance of \$434.88 carried forward from 1999, the remaining balance was \$111.05. If you have not yet paid your dues for 2001, please do so (members will find a dues status report inserted in this newsletter). A new directory is in the making and will be mailed with the newsletter.

Respectfully submitted,
Holly Neaton, DVM

4 OPP CERTIFICATION: *It Would be Tough!*

(title courtesy of Don Drewry post to Sheep-L)

The following dialog began on Sheep-L and AASRP-L, and we want to thank everyone for agreeing to share their comments. **While the OPP Society does not certify health status — and does not intend to do so in the future** — we're often asked why a separate list of "OPP-Free" sheep couldn't be compiled and published. This 'round-table' discussion begins to illustrate the complexity of the certification issue, which will soon be covered in more depth by "The Mohawk Valley Shepherd," Jean Walsh, in her monthly column for *The Shepherd* magazine.

Janet McNally, Minnesota:

"There are enough things in agriculture that we cannot control. It seems that success, in part, depends on minimizing the variables. There are definitely some things regarding sheep health that we constantly put up with that are controllable, but they require an organized educated approach that only a national program can achieve."

Don Drewry, Minnesota:

"Certification would be nice, but it seems that not enough is known of the disease to have this level of standard available. The things that get you are the little things: fence line contact with the neighbor's sheep or purchased feeder lambs, silent carriers, shared waterers and/or feed pans, shared trucks to/from sales. From what I've been told these routes of transmission are not considered to be the primary means. But it does seem clear that adult to adult transmission occurs so any nose to nose opportunity seems to at least allow for the spread of the disease. Certification in my mind really has to mean something or you devalue the word. My experience is that most flocks that test for OPP subscribe to the theory that they will be very open with the test results, and how they try to isolate their sheep from non-tested sheep. Guarantees I've encountered and received have been limited to replacing the sheep if it should test positive for OPP within the first so many weeks of ownership."

Jean Walsh, New York:

"The lady who was running around at the show fervently telling people the sheep were 'certified OPP Free' by 'the vet' set my teeth on edge for weeks. Quite frankly, I don't see how it is possible for the OPP Concerned Sheep Breeders Society to 'certify' because there are so many variables and we don't have a police force at our disposal."

Janet McNally, Minnesota:

"If there was a certification process it would have to be quite stringent. Such as requiring four continuous years of negative results for the entire flock, no contact with any outside sheep — that includes double fencing from the neighbors if they also have sheep — no feeder lambs, and no positive animals on the same farm. . . Achieving OPP negative status does not have to be that intimidating. Test and cull ruthlessly every 6 months and you will (usually) get there. Quarantine new purchases, and test them every 6-12 months. . . It is difficult to offer an extensive warranty regarding OPP for sheep sold because in most situations the purchased sheep will become mixed with an already existing flock of unknown OPP status."

Joan Bowen, DVM, Colorado:

"For many years, I have tried to discourage regulatory officials from establishing 'rules' for 'certifying herds free' of OPP and CAE. In my experience, most producers move their animals around too much for any type of certification to mean anything. They go to shows, pen with and next to animals from other herds, board outside animals for months on end for breeding, and generally import too many new animals. My practice is mobile so I am seeing these herds on the farm on a routine basis. The changing herd dynamics are dramatic. While several of my producers have flocks/herds that consistently test CAE or OPP negative, I would never consider them 'certifiable.' I think my clients have normal management practices — not extreme. I would rather have producers refer to their herds as whole-herd test-negative than certified free."

Paul Hunter, DVM, Ohio:

"Test programs are how many diseases have been eliminated or minimized in the past. I feel that certification programs can be very useful when they are very specific in stating certification of test status rather than disease status. While the tests for these two viruses are not perfect, we need to start somewhere. The industry needs some type of standardization of disease status or risk. Otherwise it is very difficult for producers to compare the test status between herds/flocks. . . Not all flocks or herds move animals in and out. Some producers do run fairly closed flocks and want some independent assurance of the risk of introducing animals from another source. I agree with Janet. Four negative whole-flock tests would be a minimum to gain test-free status"

Joan Bowen, DVM, Colorado:

"Those diseases for which regulatory programs have been established (brucellosis and tuberculosis) are zoonoses — they cause disease in humans. It is because of their human impact that test and cull programs were started. If there had been no human impact, no program would ever have been established. Neither CAE nor OPP cause disease in humans, and this is well-researched and well-documented. The tests for brucellosis and tuberculosis are well-standardized and well-regulated. Currently, there is no standard procedure established for CAE or OPP testing, and there are currently no check tests available to make sure that a laboratory is running the test properly and interpreting it accurately. I see this as a major drawback to running a test and cull program for these two diseases. While I strongly support individual herd owners attempting to control the diseases in their herds, I do not want to see a regulatory agency tell a herd owner how to respond to test results when the test is not completely standardized or replicable."

Jean Walsh, New York:

"APHIS with the scrapie program has the full weight of the federal government, but even that relies a great deal on the honor system. Who REALLY knows if the sheep that was buried in the backyard had scrapie or some other disorder??? Ditto for OPP — the only practical way to have a certification program would be to piggyback on the voluntary scrapie program. However, there have been several attempts to date to have health programs synchronized with the scrapie program, and I don't believe that any have succeeded."

JEAN WALSH TO HOST MARYLAND 2002 OPP GATHERING

We're pleased to announce that New York Suffolk breeder and OPP Society member, Jean Walsh, has agreed to coordinate an informal meeting and information session at the Maryland Sheep & Wool Festival next May. Assisting will be NY Romney breeder Kathy Maynard, a new OPP Society member. Actually, Jean was scheduled to host an OPP gathering at *this* year's Festival but had to cancel when her husband, Tom, suffered a serious heart attack just days before she and Kathy had planned to leave for Maryland. Happily, Tom is now doing well after a 5-way bypass.

Since Jean has also been working hard to help get the new Northeast Sheep & Goat Genetics Alliance up and running (see back cover), we expect some good discussion at Maryland and hope that many of our members from the east coast will be able to join her and Kathy. The Maryland Festival is always held on the first full weekend in May — the 4th & 5th for 2002 — so mark your calendars and plan to bring a friend or two!

WISCONSIN CONFERENCE MOVING: *New Site & Fall Date*

The Wisconsin Sheep Industry Conference was the birthplace of the OPP Society and remains the site of our annual meeting. We've just received exciting news from conference chair, Bob Black, and thank him for allowing us to share the following:

"... The board has finally OK'd the shift to a new date/site: September 6-8, 2002, at the Jefferson County Fairgrounds in Jefferson, WI. That's just west of Milwaukee off I-94.

"This is a huge sea change for the WSBC (Wisconsin Sheep Breeders' Cooperative) and a lot is riding on this decision. The event will become more like a Maryland Sheep & Wool Festival, though hardly that size or scale, obviously. We will include a sale with it, plus educational sessions, trade show, dog demos, and it will be open to the public. That is the key I believe.

"We have to get a message out to the public. When we have 'environmentalists' that think wool is 'grown' in a field (true story), then we definitely have a PR problem, not only in this industry but in agriculture in general."

INFORMATION ON HEALTH ISSUES OTHER THAN OPP:

At our '99 annual meeting the decision was made to begin distribution of literature on additional health concerns. The enclosed paper on testing for scrapie by Ohio State University Extension Veterinarian and OPP Society member, Dr. William Shulaw, is one of several items now available. Dr. Shulaw also has a new paper on Johne's, published in *The Shepherd* in March, and one on internal parasites. (All 3 of Bill's papers are posted on the Internet; see list of URLs on last page.) Another excellent paper we have on hand, this one dealing with Caseous Lymphadenitis, is from Dr. Marie Bulgin, DVM, of the University of Idaho.

OPPCSB Secretary/Treasurer Dr. Holly Neaton, DVM, is also happy to research specific concerns for you and your veterinarian. For now, single copies of requested papers not available on the Internet will be mailed to members-in-good-standing at no charge. As always, anything you receive from the OPP Society is OK to reprint for distribution so long as proper credit is given.

GENOTYPING FOR SCRAPIE RESISTANCE: *A Good Idea?*

by Judy Lewman

Since the new U.S. scrapie interstate transport regulations allow genotyping (DNA testing for scrapie resistance/susceptibility) to be used for some risk assessment categories, we figured it was finally safe to pry the lid off this can of worms. The nagging question that continues to be studied by various researchers is whether or not "resistant" animals — particularly those testing QR at codon 171 — can be infected silent carriers of scrapie.

Is scrapie genotyping a good idea for your flock? Not surprisingly, the best answer may be, "It all depends." In deciding whether or not to codon test you'll need to consider not only the current health status of your animals, your marketing objectives, breeding goals and selection criteria, but also how you might use the genotyping results. While we don't presume to have all the answers, we can offer information that should be of interest.

Researcher Brian Hosie, of the Scottish Agricultural College, has graciously shared with the OPP Society specific recommendations developed for several breeds in the U.K. The following reprints can be requested from Holly Neaton: Bluefaced Leicester, Border Leicester, Charolais, Cheviot, Dorset, Hampshire, Scottish Blackface, Shetland, Suffolk, Welsh Mountain, and Texel.

Having made the U.K. genotyping protocol available, we also offer the following caveat from Dr. Marie Bulgin, DVM, of the University of Idaho. This was excerpted from a posting to AASRP-L early in 2001, and is used here with Marie's permission:

"The Pullman group (USDA ARS) aren't the only ones working on the question of the QR sheep and scrapie. Here at the U of Idaho's Caine Center we have been following QR sheep that have been exposed to natural scrapie for the last 4 years. So far none have been diagnosed with scrapie. However, we don't really expect to see it in these sheep until 6-10 years of age, if, indeed, we do see it at all.

"The question of carrying the agent and NOT showing signs is the bigger concern, I think. There has been a report of scrapie which has been adapted to hamsters being inoculated into mice. The mice, which are generally immune to this strain of scrapie, did not show any clinical signs. However, when they were sacrificed and their brains reinoculated back into hamsters, the hamsters became clinically affected with scrapie. So, obviously, the agent was present in the mice even though there were no signs of disease. If this could happen in species which are not naturally affected by scrapie, why not sheep?"

"I do believe that by using genetically 'resistant' sheep we can probably reduce the amount of scrapie disseminated, but it will make total eradication much more difficult if a carrier state is found to be maintained by the 'resistant' sheep."

RELATED WEB SITE OF INTEREST: Dr. Bob Wagner of Gene Check, a private testing lab in Colorado, offers extensive and clearly written genotyping information at www.genecheck.com

AND MORE TO PONDER: Bill & Lynne Duffield report tough requirements for their upcoming export of Suffolk semen (please note cover article). Aussie regulations specified that the ram to be collected be at least 5 years old and test QQ at codon 171. Further, the ram had to be euthanized and his brain examined for scrapie before the semen would be allowed into Australia!

WAKE-UP CALL: *Whiteface Sheep Not Immune to Scrapie*

Scrolling through the APHIS scrapie Web site awhile ago I nearly fell off my chair when Dr. Paul Hunter's flock of Finnsheep came up on the "Infected" list! Thinking that surely the list must be in error — this is the guy who derives disease-free stock via caesarean section and is fanatic about biosecurity — I picked up the phone. Paul verified that he did indeed have Finnsheep with scrapie. How could that be? We sincerely appreciate Paul having allowed us to print the following excerpt from an e-mail:

"To make a long story short I purchased a group of Finns from another shepherd who wanted to get out of Finns and concentrate on club lamb sheep. Since half the flock was from my bloodlines and the other half were from defunct breeders, I agreed to buy him out. The price was 'cheap.'

"Since I was concerned with OPP, I bled the flock before purchase — and they were all negative. I saw sheep at the farm that were limping so I was also concerned with foot rot. I put them on a separate farm 11 miles from my home place. I added a few of my best ewes from home to the group and took them to be AI'd by Gourley at Ohio State with the new imported Finn semen and Friesian semen. Four of five bred to the Finn, and five of eight settled to the Friesian — great, huh?"

"Well, the first one to lamb had triplets, not bad for a 10-year-old. Three weeks later she was unable to rise on her own. After two weeks I weaned the triplets, put her down and sent her head in since I am in the voluntary scrapie program. Since I routinely send in heads, the lab thought that it was going to be just another one of paranoid Hunter's negative samples. The histopath was negative but, low and behold, the PrP and Western blot were positive.

"I guess there really is a reason to keep sheep in isolation. I am just glad I exceeded the customary 30-60 days. The isolated group has been purchased by the federal government for research."

Paul Hunter, DVM, Ohio

NOTE: We're hearing of more and more whiteface sheep being diagnosed with scrapie in the U.S., no doubt in large part due to heightened awareness. While scrapie in North America has been primarily a problem with blackface sheep, this has not been the case in other countries with the disease. In the U.K., for example, many whiteface breeds have a history of scrapie infection. At this writing (prior to removal of infected flocks from the APHIS Web site), six of our common whiteface breeds were represented among scrapie-infected flocks in the U.S.

DO WE HAVE YOUR E-MAIL ADDRESS?

Do you have an e-mail address that isn't shown in the new directory? Or have we published an out-of-date address? While we understand that not everyone is online, we hope that those of you who do have e-mail will keep your addresses current with Holly. We're also happy to publish your Web site URL.

Nearly all of the money we spend each year now goes toward photocopying and postage. The more we can accomplish via e-mail and the Internet, the more efficiently we can utilize your dues dollars in carrying out the OPP Society's mission to enhance awareness of ovine health issues. *Thank you!*

FOOT AND MOUTH: (Still) A Most Worthy Menace

by Cathie Shiff

(This article first appeared in the spring newsletter of the American Border Leicester Association. In the aftermath of September 11th, most would agree that continued vigilance is now more important than ever.)

When the editors of major metropolitan U.S. newspapers place ag stories above-the-fold on page one, you can bet the articles address something really bad. Such has been the case with the unfolding tragedy of Foot-and-Mouth Disease (FMD), as America collectively holds its breath.

What other health issue on the horizon strikes such terror into the hearts of sheep, beef and hog farmers? It is not a question of changing husbandry practices or locating superior genetics. A virus which can remain viable on clothing — or even up one's nose — for days, then travel miles on a summer breeze seems to be the product of a sci-fi writer's most diabolical imagination. I wish.

The disease seems to be the 'gift which keeps on giving,' as it continues to affect livestock on all continents save North America, Central America, and Australia, plus New Zealand, Japan and Chile. Another stop on its global sojourn seems to be Argentina, where an outbreak has been traced through orders of pharmaceuticals used to treat the disease. The nation's Ministry of Agriculture issued a voluntary ban on beef exports in August of last year. The ban was lifted in December, but the ban on all beef, swine and ruminant products produced after February 19 has been reinstated by the USDA.

But what really made me spill my morning coffee was a tiny item printed on an inside page of Section A in the Washington Post on April 18. May I quote: "Foot-and-Mouth Prospects Here Called 'Quite Great' "The director of the only U.S. lab that studies and tests for foot-and-mouth disease said yesterday that the chances of an outbreak in the country are 'quite great' given the amount of travel between the U.S. and Britain. "If the virus has already reached the United States, it could have been in the country for only 24 to 48 hours because 'signs of the disease would appear quite quickly,'" said David Huxsoll, director of the Department of Agriculture's Plum Island laboratory in New York.

Dr. Dennis Gourley of Elite Genetics is not surprised at the prognosis. A part of the company's AI business has been imported sheep semen from the British Isles. "USA Today reported yesterday (April 17th) that a number of government agencies have gotten together and studied the possibility of FMD arriving here and they term the chances as 'probable,'" he said.

Gourley described the ongoing tragedy in the British Isles, noting that this particular strain of the virus has proven to be more resistant than earlier believed. It can live in a sausage for three months, and an asymptomatic carrier animal can spread the disease for three years. The governments of several Northern European countries are now concerned about the possible spread of the disease on the feet of migratory birds who had stopped en route to feed on unburned corpses of diseased animals.

Our conversation leaves me with fear gripping my throat and my stomach in knots. I had earlier been told that the American Southwest might be better off should FMD arrive, given the region's hot temperatures and lack of rain. Dr. Gourley discounts

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FMD, continued . . .

the climate advantage. He had just viewed a government model where the disease entered the U.S. at Brownsville, TX, via livestock trucks traveling across the U.S. between Canada and Mexico. An even worse scenario would be a landfall on the West Coast. This would also doom the East Coast, given the prevailing west-to-east winds across the nation.

"The best place that FMD could arrive in the U.S. would be the East Coast, but that would be bad enough," he said. FMD has the potential to shut down entire agricultural regions and economies, and would involve the National Guard, numerous governmental agencies and another generation of ruined farmers.

The prospects for tragedy make you want to do crazy things, like load up your sheep onto a trailer and make a run for it. But to where? And if there is an outbreak in my region, wouldn't residents in the region(s) to which I would travel have the right to defend their flocks? As I run the scenarios through my head, I see scenes of potential violence. It is time to take a breath and look at this with a cooler head.

Fortunately, cooler heads full of much more knowledge than mine have been working the problem for many weeks. The staff of the Department of Agriculture's unsung Animal and Plant Health Inspection Service (APHIS) has been pulling double shifts formulating contingency plans. They have established a toll-free telephone center for information about FMD. By dialing 1-800-601-9327, you can speak with APHIS veterinarians and import/export experts.

In addition, the Executive Summary of the APHIS National Emergency Response to a Highly Contagious Animal Disease is available on the Internet in PDF format at <http://www.aphis.usda.gov/oa/fmd/emergewp.html>. If you don't have access to the Internet, call your state veterinarian for assistance. The 14-page summary includes specific steps to be taken for an index case (possible-but-unconfirmed positive case) and a confirmed positive case, plus movement control zones. The bottom line regarding the movement control zones is a minimum of six miles or 10 kilometers beyond the presumptive or confirmed infected premises. The final size will also be determined by factors such as terrain, prevailing wind, weather conditions, the distribution and movements of susceptible wildlife (hadn't thought of that, had you?) and known characteristics of the agent.

At the same time, the FY 2002 federal agricultural budget provides increased funding to APHIS and the USDA Agriculture Quarantine Inspection Program. With the funding, both agencies will hire additional personnel to work at critical ports and international airports to locate and seize banned agricultural products which could introduce FMD.

Meanwhile, state departments of agriculture are following suit with their own contingency plans. On the Internet, you can find their Web sites and FMD-related information by using a search engine such as google.com.

So, let's learn something about FMD. A detailed tutorial is on the APHIS Web site, but here are some basics:

FMD is a severe, highly contagious viral disease of cattle, swine and other cloven-hooved animals. Deer can get it, too, and mice are susceptible.

FMD can be spread by animals, people, or materials that bring the virus into physical contact with susceptible animals.

The virus can survive drying and can be carried on inanimate objects. It can persist in contaminated fodder and the environment for up to one month, depending on the temperature and other conditions.

There are seven types of the FMD virus, and immunity to one type does not confer immunity to another.

Signs of the disease are fever and blister-like lesions and erosions on the tongue and lips, in the mouth and on the teats, and between the hooves of infected animals.

The disaster on the British Isles is expected to continue, with its apex in September. The cool, wet spring this year in Britain is considered to be a major factor in the growth of the disease, as the virus thrives in such conditions.

What about showing? I wish I knew. Some veterinarians quietly advise to stay home. I have received several dreary e-mails from fellow Border Leicester breeders who have decided not to bring sheep to the Maryland Sheep & Wool Festival. Everyone is scared stiff. The festival staff has responded to competitors' fears by enacting stringent rules for all attendees who have recently traveled overseas to FMD-affected regions. The rules are included in all festival-related mailings, etc.

All we can now do is watch and wait. State and local governments are doing all they can to avert a catastrophe. But Dennis Gourley says the person who actually brings the disease to North America could just as easily be a careless traveler who has nothing to do with agriculture. It could just be some 'joe' with some poop on his shoes who does not 'get' what all the fuss is about — unfortunately, a lot of the current prevention measures require honesty and care from a population out of touch with the farms which produce the nation's food supply. *"Americans, unfortunately, are a bunch of people eating popcorn on the living room sofa when it comes to matters like this,"* Gourley said.

So, watch your sheep and wait. Show your sheep if you feel comfortable: Dave and I shall, as long as no confirmed FMD is found in the nation. If you see any suspect signs on your sheep, call the vet and get it checked. Yes, it's scary, but do the right thing. We all know that a number of animal diseases cause bumps on lips. APHIS investigated more than 400 situations last year, and none proved to be FMD. And, more than anything, pray that the doctor at the Plum Island lab and Dr. Gourley are wrong.

SOME GOOD SITES TO VISIT ON THE WEB:

We want to thank Maryland Texel breeder, Bev Pearsall, for contributing many of the following URLs. Several of these sites are relatively new, and all were valid at the time of this printing.

OVINE PROGRESSIVE PNEUMONIA (OPP, Maedi Visna, MV)

<http://www.sheepusa.org/resources/diseases/shopp.html>
(Dr. Randall Cutlip's "OPP Update" from the SID book)

<http://www.extension.edu/distribution/livestocksystems/D15750.html> (Dr. Cindy Wolf's color fact sheet)

<http://www.interrain.com/opp> (OPP Society; soon to include directory)

http://www.cvmbs.colostate.edu/dlab/webdocs/ext_vet/cleon.html
(Dr. Cleon Kimberling's site; several topics including OPP)

. . . more URLs on next page

NORTHEAST SHEEP AND GOAT GENETICS ALLIANCE, INC.

When sheep and goat producers in New England and New Jersey banded together to market high quality, healthy animals and genetics (semen and eventually embryos), a dynamic organization was born — the Northeast Sheep and Goat Genetics Alliance. Since its founding, the group has expanded dramatically and now encompasses producers of both wool and meat sheep, as well as several breeds of dairy goats.

The Alliance's aim is to market healthy, genetically sound animals. Those who purchase genetics from Alliance members know that extra emphasis has been placed on economically important traits and animal health. Alliance members are aware of OPP in sheep and CAE in goats. Sheep producers who attain Level 3, the highest Alliance sheep classification, have had their flocks tested free of OPP. Alliance members are also on the Scrapie Flock Certification Program, with several flocks having attained "Certified" status.

For more information about the Northeast Sheep and Goat Genetics Alliance, please contact:

Jean Walsh
Executive Secretary, NSGGA
228 Main Street
Jordanville, NY 13361
315-858-6042
jtw_42@hotmail.com
www.sheepgoatgenetics.org

Web sites, continued . . .

SCRAPIE

<http://www.aphis.usda.gov/vs/scrapie.htm> (official USDA site)

<http://www.animalagriculture.org/scrapie/media/QandA.htm>
(good info on the new eradication regulations)

<http://ohioline.osu.edu/vme-fact/0004.html>
(Dr. William Shulaw's paper on testing; hard copy enclosed)

PARASITES

<http://prevmed.vet.ohio-state.edu/Teaching/illinois/illinois.html>
(Dr. William Shulaw's paper; long download but worth it)

JOHNE'S DISEASE

<http://www.johnes.org/sheep/faqs.html>

<http://ohioline.osu.edu/vme-fact/0003.html> (Shulaw paper)

HEALTH CERTIFICATION IN ONTARIO & THE U.K.

<http://www.uoguelph.ca/~pmezies/mv> (excellent info on OPP)

<http://www.sac.ac.uk/vet/external/SGHS/> (several programs)

COMPOSTING

<http://ag.smsu.edu/compost.htm> (disposal of dead animals)

SHEEP-L (joining the list)

<http://www-listserv.uu.se/cgi-bin/wa?SUBED1=sheep-l&A=1>