

## Sheep Health Committee

April 7, 2004

The meeting was held from 8:00 a.m. to 11:00 a.m. and was moderately well attended. Speakers addressed a number of somewhat controversial topics.

Dr. Katherine O'Rourke from the USDA, ARS research group based in Pullman WA adroitly tackled the challenging topic of "BSE, is it a real threat to the sheep industry?" She explained the application of mouse bioassay in determining a TSE bioassay signature that can be used to differentiate one TSE from another. Bioassay signatures in mice are based on the length of incubation, the distribution of the degenerative lesions, and the severity of the lesions. The downside to mouse bioassay systems is the long turnaround time, related high cost and the large numbers of mice that are required when looking for a potentially low prevalence event, i.e. differentiating BSE from sheep Scrapie. In comparison molecular bioassay using gels that show protein bands' at their molecular weight location using Western Blots was also discussed. She concluded that this technique alone will not be used to differentiate TSEs from each other as it is challenging to produce films of satisfactory quality and often demanding to interpret them. Dr. O'Rourke said that two experiments are needed in the very near future. First a study needs to be conducted that determines if a BSE-like agent transmits via the placenta of experimentally infected sheep. Second a simultaneously conducted control experiment needs to be performed whereby it is determined if a Scrapie-like agent transmits via placenta of experimentally infected Scrapie sheep. In closing she stated that BSE is not a threat to the sheep industry after all TSEs are eradicated from the national flock.

Next the audience heard an interesting presentation from Jeff Goodwin who is a 4H and Youth specialist at the University of Idaho. For years the show ring industry has promoted an extremely short tail dock length which is reported to create an illusion that accentuates the musculature of the lamb's rear quarters. Jeff asked us not to report detailed findings out of respect for the paper that he, as the primary author, has submitted to the Journal of Animal Science. While we wait for that paper to be published, we can say that they have come up with an objective method for measuring tail dock length that can be used as a guide at docking, purchase and also upon entry at exhibitions.

With audience input a three person panel discussed the value, pitfalls, interest, etc. of an OPP certification program as an add-on to the USDA Scrapie Flock Certification Program. The panelists included Dr. Don Knowles, Professor, WSU-CVM and Research Leader from USDA, ARS at Pullman, WA; Dr. Katherine Marshall from USDA, NAHMS; and Dr. Diane Sutton from USDA, APHIS. Key areas of discussion included conflicting findings demonstrating the economic importance of the disease, acceptance of the test results' data by our trading partners, clear understanding of meaning of test results, challenge of eliminating the last few seropositive animals in a low prevalence flock, and the need for more research regarding the interaction of genetics and clinical disease. One participant suggested that a similar model could be set up based on the voluntary Bovine Johnes disease program now in place in certain states. It was agreed that a subgroup of committee members would develop a pilot project using testing, management awareness and possible MHC characterization. This subgroup (Don Knowles, Cindy Wolf, Diane Sutton, Kris Petrini) will report back to the committee at next year's meeting.