

# **Wool Research in the U.S.**

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## **U. S. Wool Roundtable Meeting**

**2009 Annual ASI Convention**

**San Diego, CA**

**January 22-24, 2009**

**Presented by Chris Lupton**

**Texas AgriLife Research**

**Texas A&M System**



# Sources of information

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- **Western Extension, Research, and Academic Coordinating Committee 039 (WERA 039)**
- With participation from ASU, CSU, MSU, NMSU, NDSU, O(H)SU, O(R)U, PVA&MU, TA&MU, UI, UN-R, UW, USDA-ARS, USU.
  
- **North Central Extension, Research, and Academic Coordinating Committee 190 (NCERA 190)**
- With participation from ISU, UK, LSU, CU, NDSU, O(H)SU, O(K)SU, O(R)SU, SDSU, TA&MU, USDA-ARS, USU, UVI, VSU, VA Tech, UW.



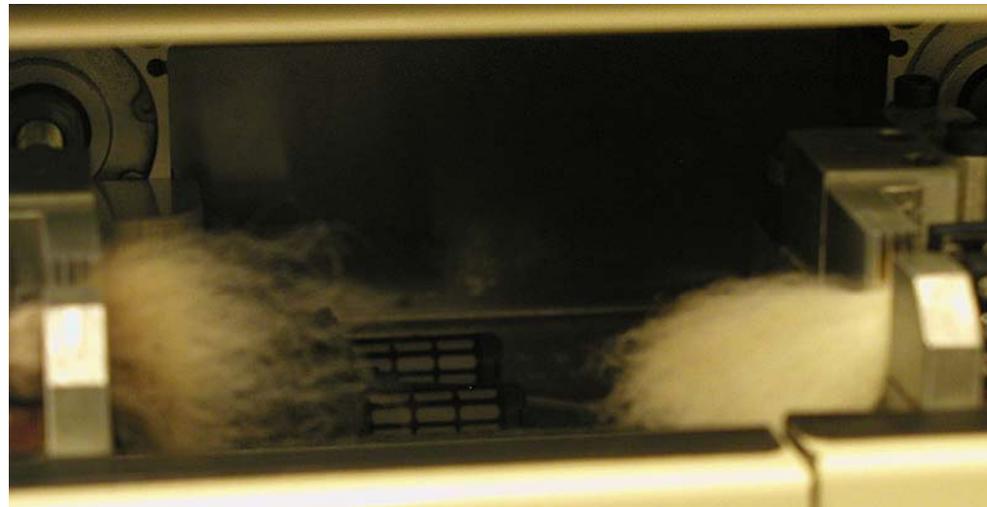
# Wool research conducted by WERA 039 members (and cooperator)

- Instrument evaluation to improve accuracy/economics of fiber testing for animal selection and wool marketing:
- OFDA 100 (UW, YM, TAMU, MSU)



# Wool research conducted by WERA 039 member (and cooperator)

- Instrument evaluation to improve accuracy/economics of fiber testing for animal selection and wool marketing:
- Length and strength (UW and YM).



# Wool research being conducted by WERA 039 members (and cooperators)

- Instrument evaluation to improve accuracy/economics of fiber testing for animal selection and wool marketing:
- OFDA2000 (MSU, PMCI, TAMU, UC-D, UN-R, UW). Also used to monitor nutrition effects on wool growth (USDA, ARS/TAMU).



# OFDA 2000

## Sorting Wool at Shearing

Sorting Lines of Wool  
with the OFDA2000

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### Proceedings of U.S. Sheep Research Programs

American Sheep Industry Association Convention

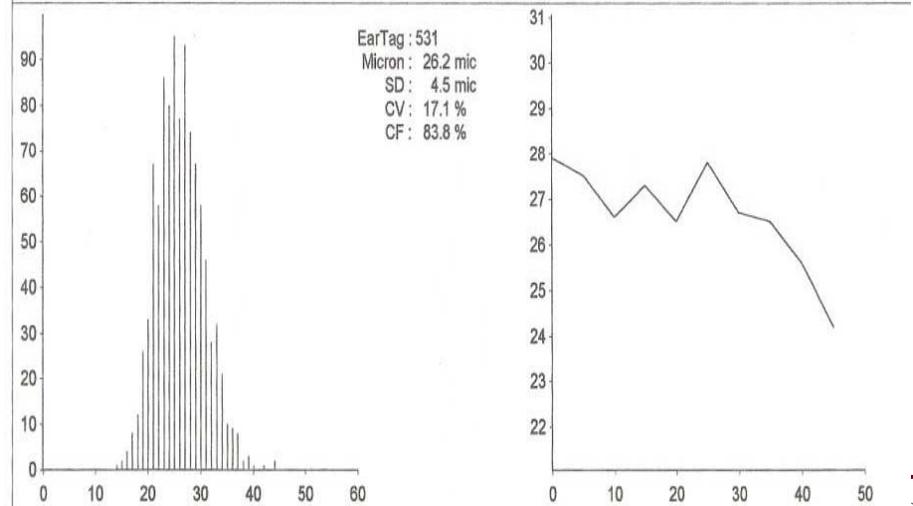
January 21-24, 2009

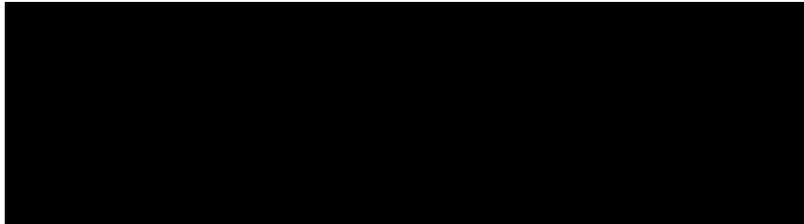
San Diego, Calif.



**Ewe Lamb Selection**

OFDA 2000 REPORT : DATE  
5 rams 1 ewe (6Records)





**Provide a local wool marketing option for producers in rural Montana where distance combined with small numbers of sheep make it difficult and cost prohibitive to market through a centralized market (warehouse)**



## Wool Pool Impacts on Montana



250,000 lbs of wool  
200 Sheep Producers  
24 Northeastern & 12 Western counties  
½ of producers had less than 2 bales of wool

Because of their small size and distance to a suitable market, marketing options for these growers are limited or nonexistent.

Growers receive a premium of about 25 cents per pound for their wool. The cost of the program is 7 cents per pound of wool.

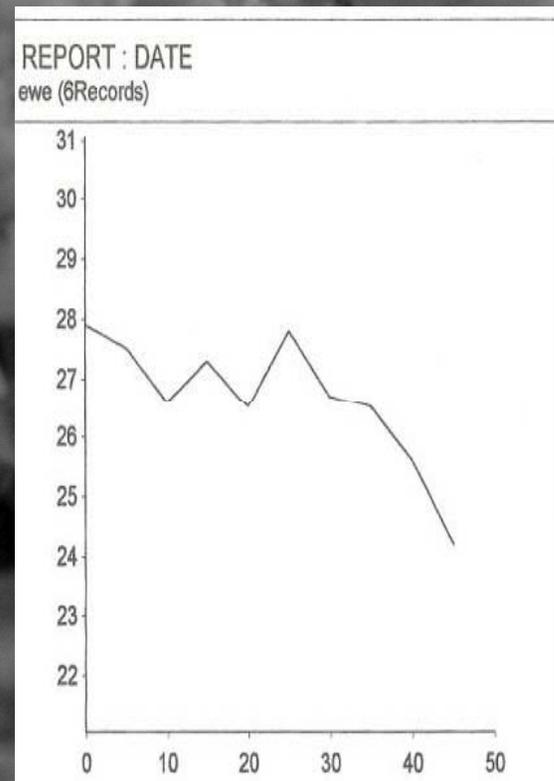
The bulk of the wool marketed through this project is exported to China and Taiwan.



Montana Sheep Institute  
Montana State University  
Montana Wool Grower's Association

# Relationship between lifetime wool production (particularly lifetime fiber diameter profile or changes in fiber diameter) and lamb production

Are sheep that have big changes in fiber diameter from year to year or from month to month **more or less** productive for lamb production traits?



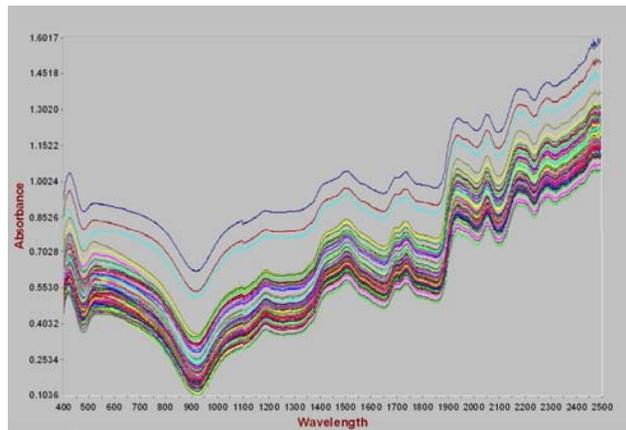
# Wool research being conducted by WERA 039 member (and cooperator)

- Instrument evaluation to improve accuracy/economics of fiber testing for animal selection and wool marketing:
- Prediction of greasy wool characteristics using NIRS (TAMU and YM).



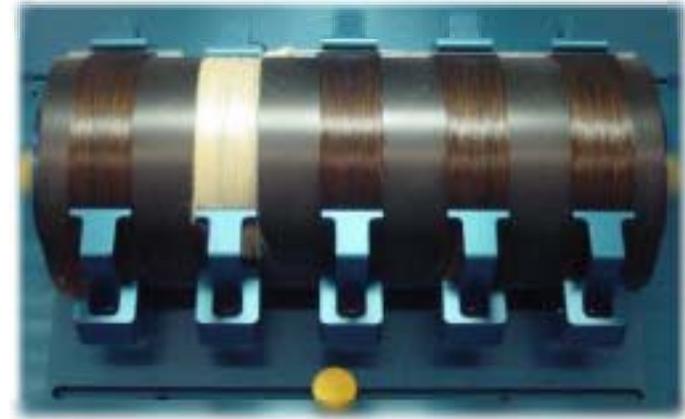
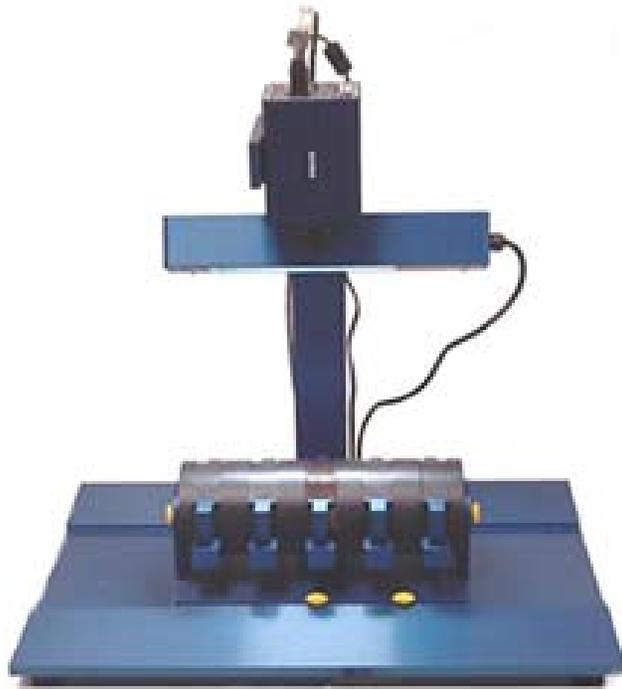
# Wool research being conducted by WERA 039 member (and cooperator)

- Instrument evaluation to improve accuracy/economics of fiber testing for animal selection and wool marketing:
- Prediction of scoured wool characteristics using NIRS (UW, YM).

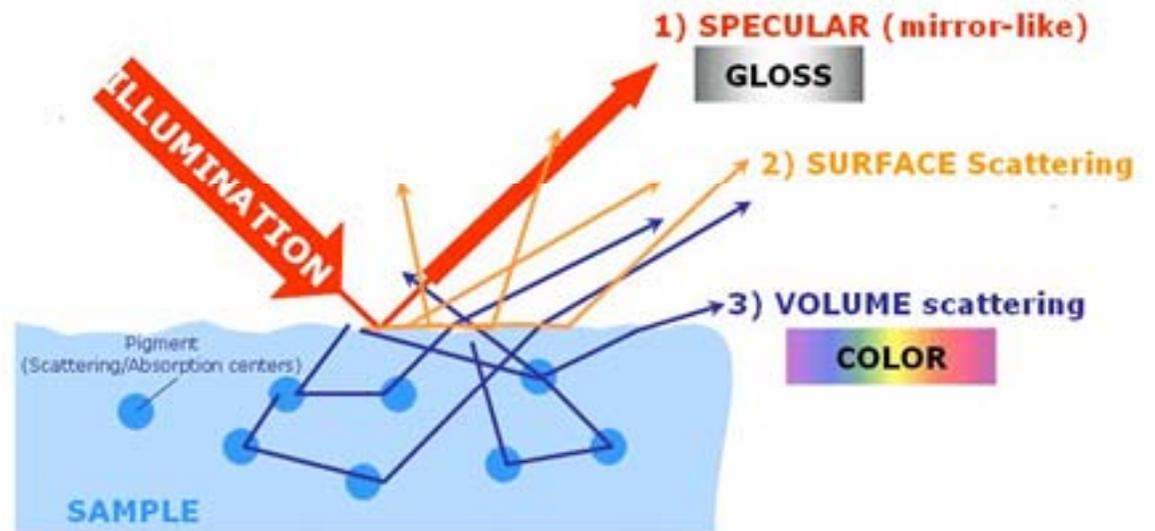


# **Wool research being conducted by WERA 039 member (and cooperator)**

- **Instrument evaluation to improve accuracy/economics of fiber testing for animal selection and wool marketing:**
- **Luster measurement (TAMU and YM).**
- **Goniophotometer.....slow, expensive**
- **Near-infrared reflectance spectroscopy.....unproven**



The SAMBA System (AIA)  
for measurement of fiber  
luster



# Wool research being conducted by WERA 039 members (and cooperators)

- Ram central performance tests for finewool sheep (TX, ND/SD, WY, MT).



## Wool research being conducted by WERA 039 member

- **Hair at birth vs AFD and staple length (ASU).**



# Wool research conducted by WERA 039 member

- Color/whiteness/yellowing propensity of U.S. wools (UW).

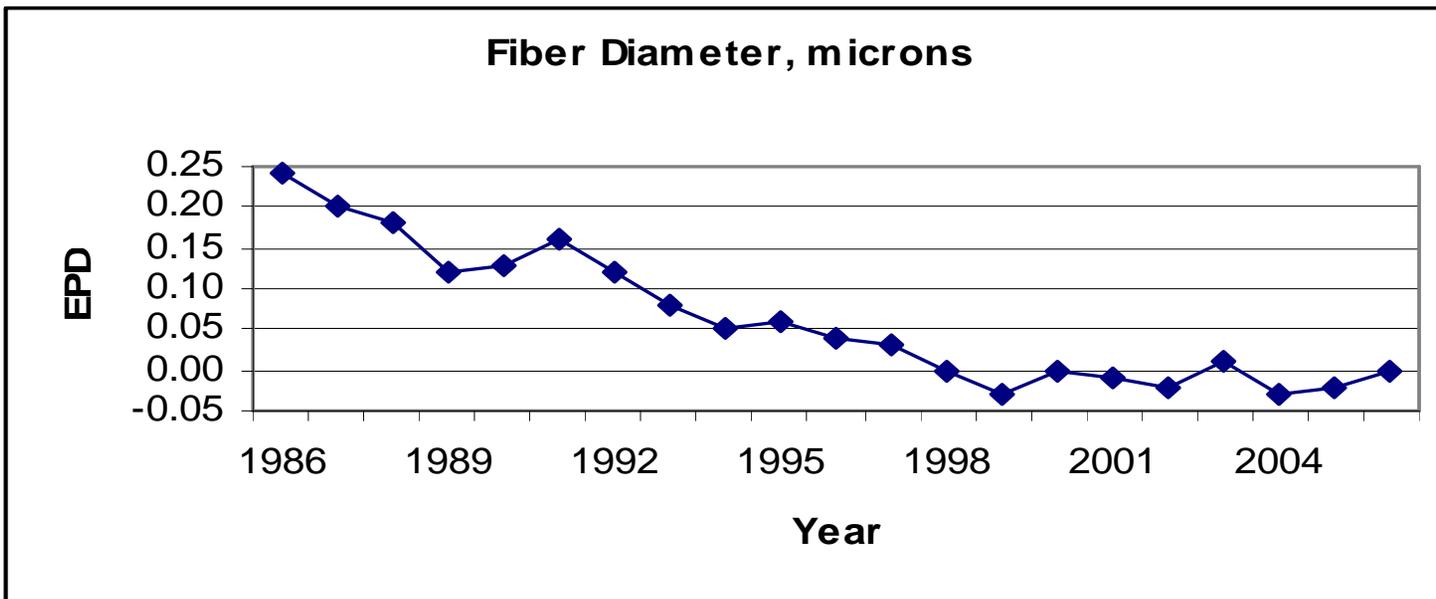
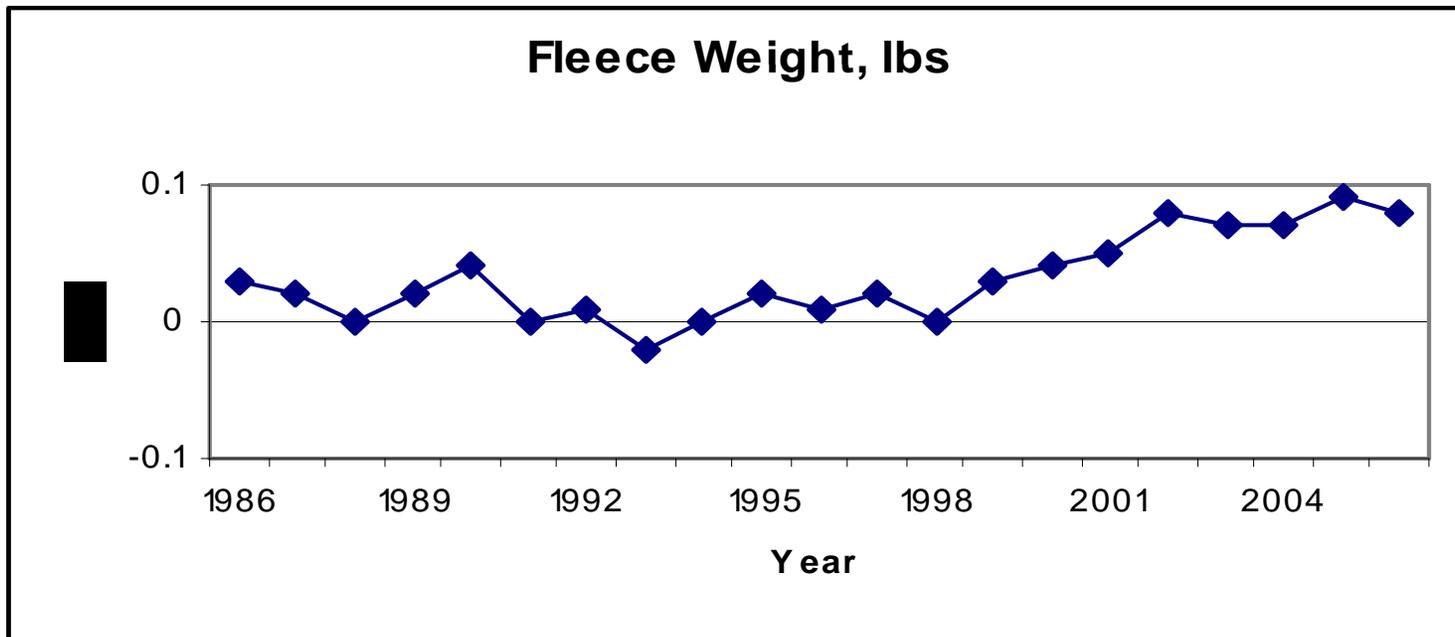


# Wool research conducted by WERA 039 member (and cooperators)

- Development of breeding objectives for Targhee sheep (MSU/VA-Tech).



# Genetic Trends in Targhee Sheep



# Wool research conducted by WERA 039 member

- Effects of juniper and DDG lamb feed lot rations on wool growth (as well as carcass characteristics and parasite viability, TAMU).



# Wool research being conducted by WERA 039 members and cooperators

- Increasing the productivity of Rambouillet sheep (TAMU and Texas Rambouillet Superior Genetics).



## Wool research being conducted by WERA 039 members

- Using Merino genetics to improve wool production and fineness of Rambouillet ewes in range production systems.....avoiding the pitfalls.....less lambs, smaller lambs, wrinkled sheep, etc. (UN-R, TAMU).



# Wool research conducted by NCERA 190 members and cooperators, recent past and present

- Wool characteristics of crossbred sheep (USDA-ARS/TAMU).
- NSIP (VA Tech, MSU, breeders) has wool components (quantity and fineness) especially for Targhee breed.
- Ram test reports/Sire summaries have wool components (TAMU).