

# Nuts and Bolts of Wool

Presenter:



**Lisa Surber, PhD**

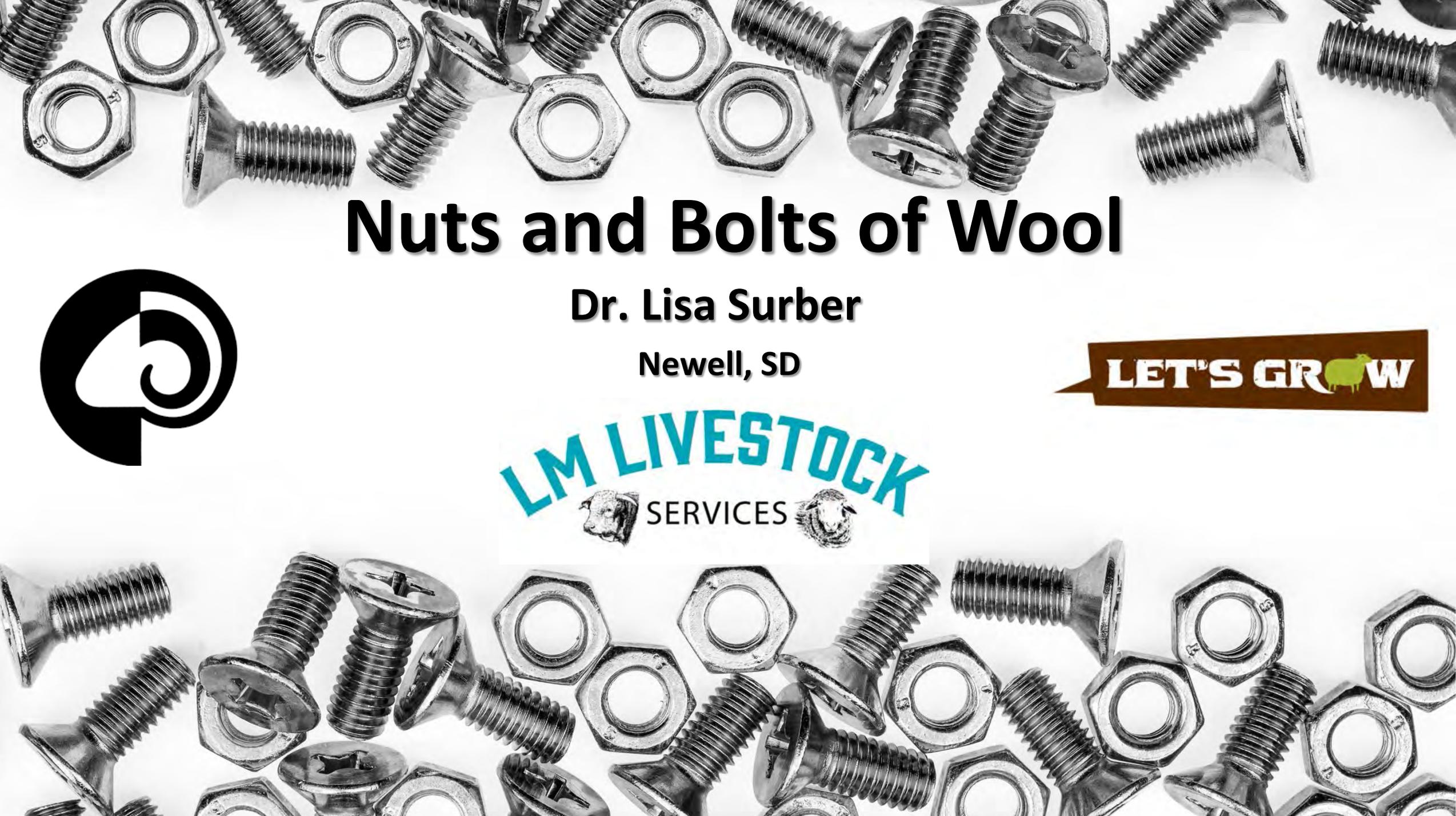
**LM Livestock Services**



Host/Moderator: Jay Parsons

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# Nuts and Bolts of Wool

Dr. Lisa Surber

Newell, SD

LET'S GROW



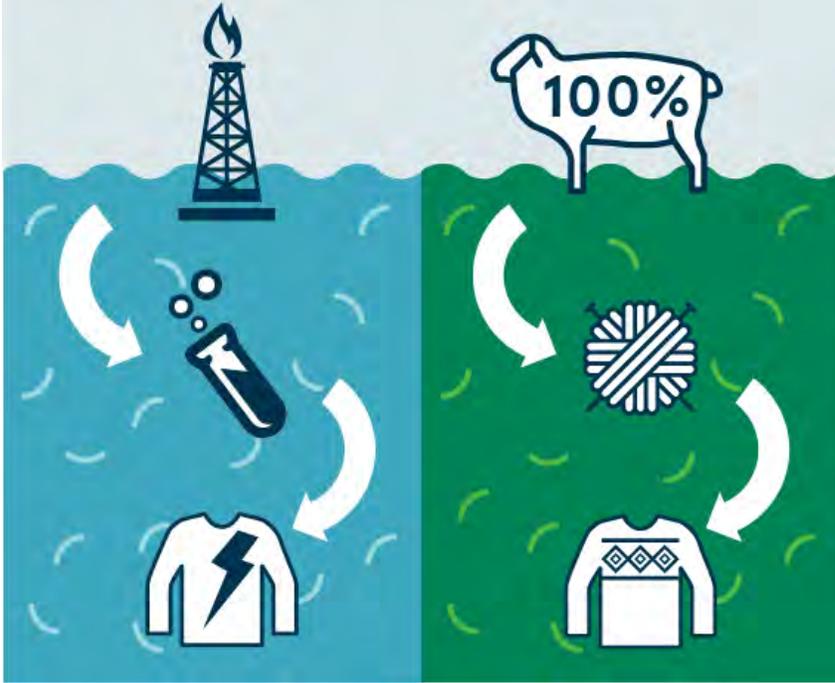
LM LIVESTOCK  
SERVICES

# Wool Advocacy

How are you spreading your love of sheep, lamb, and wool?



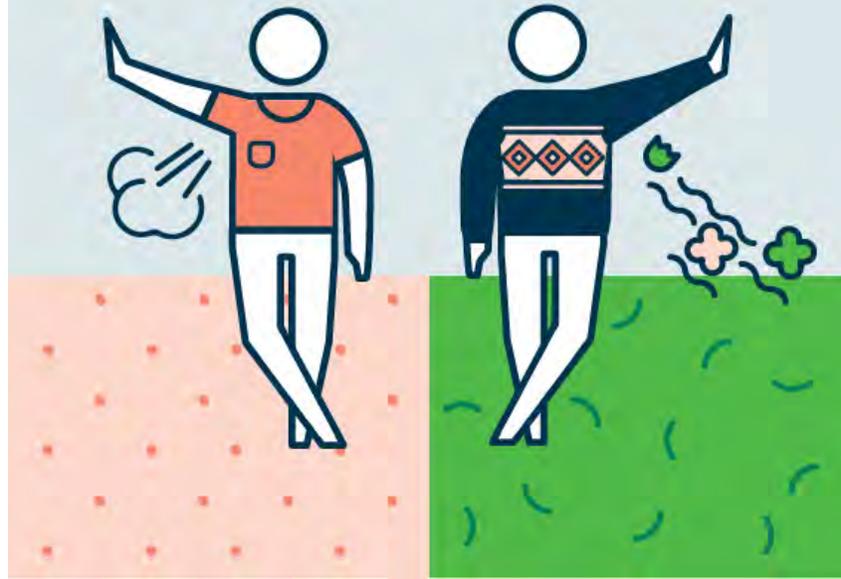
Wool is natural, renewable and biodegradable.



Moisture Wicking

Sustainable

Wool is naturally odour repellent.



Durable

Elastic

Wool is naturally flame resistant.



Breathable

Insulating

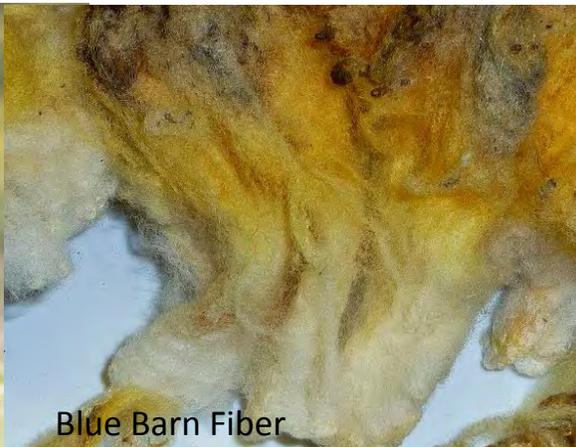


## **Topics for tonight:**

- Contamination of wool
- Factors influencing wool price
- Wool marketing
- Adding value to wool
- Trends in wool end uses

# What's wool contamination?

- Anything that is not WOOL is considered a contaminant
- Fleece contamination is either:
  - NATURAL (produced by sheep)
  - ACQUIRED (vegetable matter, mineral matter, animal matter, polypropylene)
  - APPLIED (paint brands, topical medications)
- We should care!
  - It affects value and ultimately processing of wool



# Acquired Contamination : Polypropylene

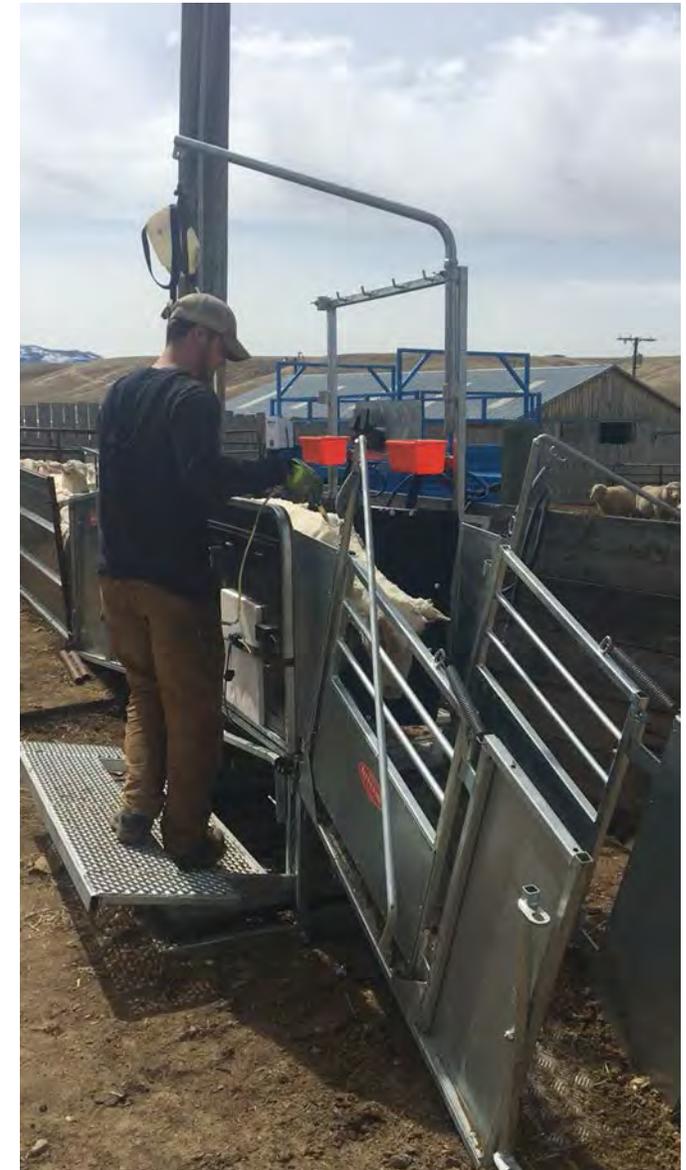


# Applied Contamination

- Paint brands
  - Don't manipulate, heat or thin
- Grease markers



Premier1



# Factors influencing wool price:

**Breed or Genetics**

**Influenced by environment & management**

**Fleece Quality**

**Influenced by level & kind of contamination, shearing skill, skirting, classing/sorting, & packaging**

**Clip Quality**

**Commercial or Specialty Marketing**



# Factors influencing wool price:

## Commercial Marketing

- Objective measurements
  - Micron
  - Yield
  - VM
  - Length
  - Strength
- Other
  - Uniformity
  - Style
  - Preparation
  - Breed
  - Other types of contamination

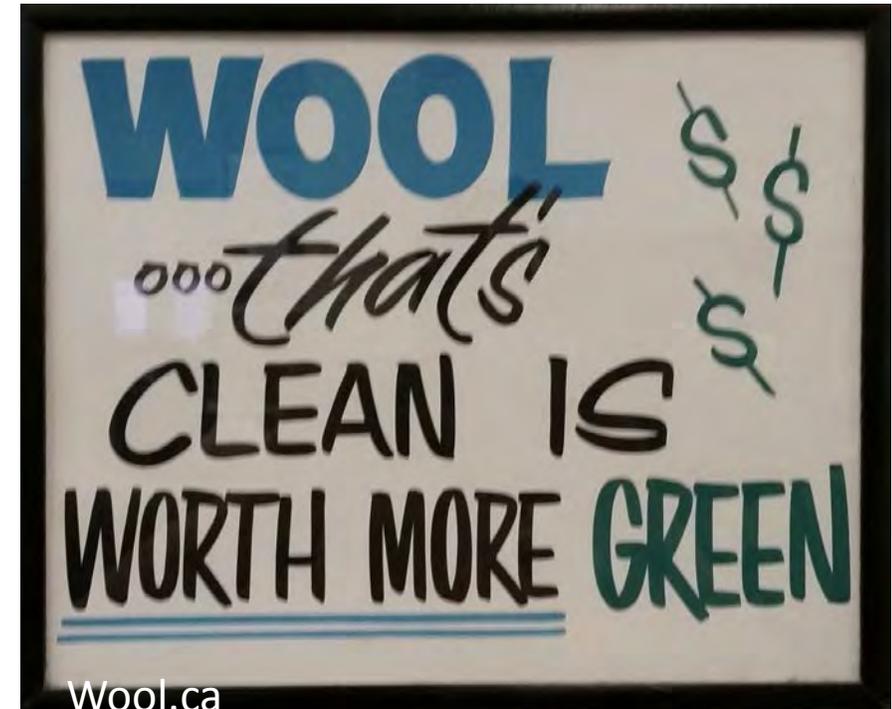
## Specialty Marketing

- Subjective factors?
  - Breed (Fine, Heritage or Unusual)
  - Cleanliness
  - Length
  - Colored
  - Connection to Ranch/Grower/Animal
- Other
  - Micron
  - Color
  - Luster
  - Handle
  - Uniformity
  - Crimp style



# Value-Determining Factors

- Grade – refers to fineness of wool fibers
  - Micron
- Length – Staple wools meet or exceed minimum length for that grade
  - Each Grade has minimum length
- Yield – % of useful fiber that can be obtained from grease or raw wool
  - Most trading of raw wool is based on yield
- Vegetable Matter - % of VM present
  - Less than 3 % is desired, Less than 1% is ideal



# OFDA Technology

- One of the fastest and cost effective means of determining some wool quality factors
  - Fiber diameter and associated measurements of variation (SD and CV)
  - Comfort factor and spinning fineness
  - Curvature
- University labs at MSU, NDSU, USU and TAUM
- Fiber testing also available from Yocom McColl in Denver, CO
- On-site testing services available through LM Livestock Services



# Quality factors matter!

- No matter what route you chose to market your wool (commercial or specialty), due to the speed and complexity of wool processing equipment, quality factors matter.
  - Fiber diameter and FD uniformity
  - Staple length
  - Staple strength

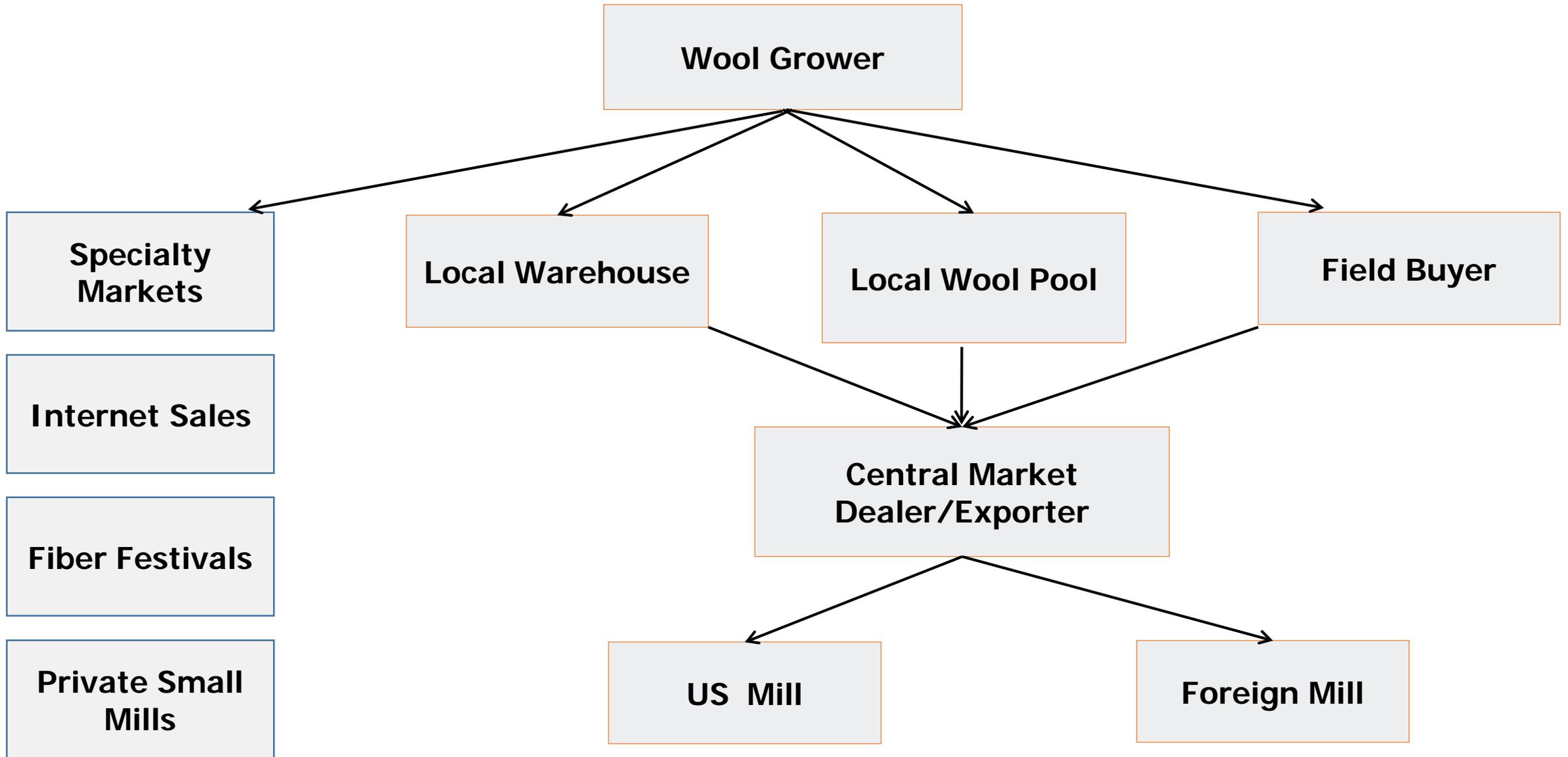


# Pricing Raw Wool

- Many small producers sell on a grease price
  - Do not get info on micron, yield, VM
- Larger growers sell based on a core test
  - Grease price = (Clean price X Yield ) – Handling/overhead costs
    - = (\$ 5.00 x 50 %) - \$.25
    - = \$ 2.50-.25
    - = \$ 2.25
- Handling costs = freight, warehouse/pool charges, grading charges, commissions, coring/testing charges



# Wool Marketing Systems



# Wool Pools

- Collection, sometimes a grading point location, where smaller producers can consolidate wools into larger lots of wool to be offered to buyers, warehouses or mills. (put similar wools together?)
- Costs, labor and expertise to handle wool locally?
- Volume of wool to market?



# Private Treaty

- Grower offers wool to buyer, broker or mill based on “reputation” or core test of this year’s wool.
- Often done on sealed bid basis to all buyers on a specific date.
  - Advertise and open bidding process
  - Determine bidder with highest bid
  - Determine delivery/pickup date
- Grower can accept or reject bids



# Wool Auctions



- Usually via warehouses where wools are sent following shearing
  - Core Tested for Micron Diameter, Length, Strength, Yield and Position of Break
  - Sale held in person or via electronic bidding basis on a lot by lot basis.
  - Buyers have each lot data and study actual grab samples on which to base bids

# Mid Western Warehouses

- Grade wools in order to put “ like wools together “ in load lots of 44,000 lbs +
- Goal is to help growers realize more \$\$ by separating and sorting out wools of differing grade/quality



# Specialty/Niche Marketing

- Marketing local wool products locally, regionally or nationally
- Direct to mini mills
  - Selling fleece
  - Making product – selling product
- Sheep and wool festivals
  - Fleece sales
  - Selling product
- Farmers markets



# Who are we marketing to...Specialty Markets?

- Fiber artists, hand spinners, Indie yarn dyers and companies
- What kind of market is there?
  - Needle Art Enthusiasts
    - 1 million adults Spending \$750 to 850 Million
    - Ave. spending \$819 annually
    - Shopping at local and specialty retailers
  - Needle Art Participants
    - 30-40 million adults, spending \$2-3 Billion
    - Ave spending \$60 annually
    - More likely to shop at chain retailers
- What is important to enthusiasts?
  - Made in the USA – 30%
  - Hand made – 19%
  - Locally produced – 18%
  - Fair trade – 13%
  - Socially conscious – 12%
  - Organic – 9%



# Adding Value:

- When direct marketing wool, you have some options.
- You can sell just the fiber, or you can add varying degrees of value
  - All cost time and \$
- So what is the value-adding sequence for fiber?
  - Not just simply shearing and selling!
  - Many of the additional steps will require a relationship with a processor/mill



# Raw Fleece Sales

- Very common
- It is an option that appeals strongly to customers who happen to be hand spinners or weavers
- Many wool growers who direct market are surprised to find that raw fleeces are their most profitable and best-selling products



# Raw Fleece Sales:

- Customers like the local feel and knowing the farm/sheep
- You can also take an additional step(s)
  - Washing
  - Selling locks (for arts and crafts, doll hair)
    - Long wool breeds (Lincoln, Wensleydale, Leicester,



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Advantages	Disadvantages
Increase wool prep (i.e. sheep blankets)	Pricing for parts/sections, shipping
May only sell parts/sections and not the whole fleece	Having marketable breeds

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# Roving Sales:

- Roving is wool that has been washed, carded, and twisted up to hold the fibers together in a sort of rope.
- Roving is a versatile product used primarily for felting, but also for stuffing, spinning, and more.



# Batting Sales:

- Batting is used to fill pillows, blankets, and other bedding.
- Coarse wool works particularly well for making batting.
- Batting can be made to salvage wool too short to make into roving.
- The batting concept can be taken another step further by making finished bedding and pillows.
  - Wool bedding is hugely popular
  - IWTO article - Wool and Sleep



# Felt Sales:

- It can be sold in sheets such as those you might buy at the craft store, but most producers who get this far choose to add still more value.
- Take value-adding to the next level by creating finished products like felted crafts.
- Another way to offer felt is in the form of do-it-yourself felting kits for beginners

120 shares on FB  
Reached 26K



*Wool Dryer Balls*



# Spun Yarn Sales:

- The spinning step is going to cost you in one of two ways—time or money.
- Having your fiber spun into yarn at a spinnery or fiber mill can be very expensive, and the mill may require a minimum amount of wool to process.
- Some companies also have long delays depending on the demand.
- Spinning it yourself will take some know-how plus valuable time.



# Spun Yarn Sales:

- Offering the yarn without any dye can be an advantage to some, because there are customers who prefer to dye their own yarns either for fun or to avoid chemicals.
- However, dying your yarn can increase its value to customers who are interested in knitting but not dyeing.
- All-natural botanical dyes can be popular
  - Take it a step further and grow your own dye plants



# Hand Knit Sales:



- Selling knit or crocheted clothing, afghans, and other gifts is an excellent way to sell your ranch or farm's story
- One of the most common challenges with this level of value-adding is keeping up with the demand
- Can you make enough products?
- What type of products you can produce will depend primarily on your interests, but the breed of sheep you raise will also have a huge impact

# Other thoughts...

- Quality is key in direct marketing wool or wool products, no matter what form they take.
- The best wool comes from healthy, well-cared for sheep and also adds to your appeal to socially conscious consumers
- It usually also comes from sheep that may need to wear lightweight coats to protect their fleece from damage due to wet conditions or intense UV light.
- May have higher husbandry costs but higher returns



# Sounds too good to be true?

- Do you have the product that will be in demand?
- What volume of product do you have?
- How will you get the word out?
  - You have to find your market based on the product you are selling
  - Website? Blog, Vlog, Podcast, newsletter?
  - Social media – FB, IG, Twitter
- You need good photos
- Are you prepared to participate in Fiber Festivals or Farmer's Markets?
- Are you prepared to open your farm to visitors?
- What payment method will you use?
- What are the shipping cost from your area?



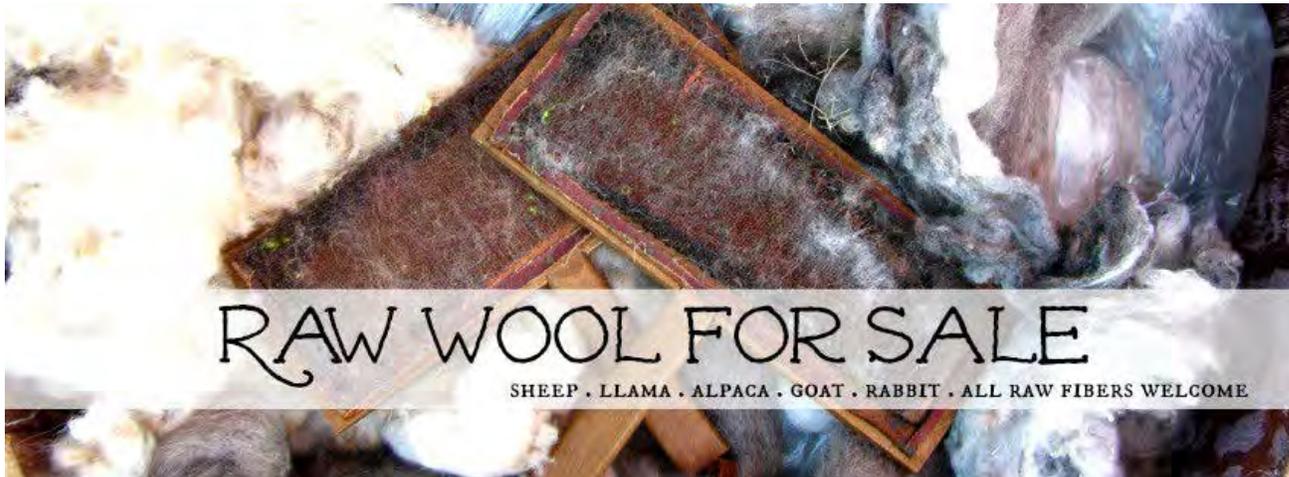
# Websites and Facebook sales:

- Websites:

- Etsy
- EBay
- Literally 100's of personal/ranch/farm sites too numerous to mention

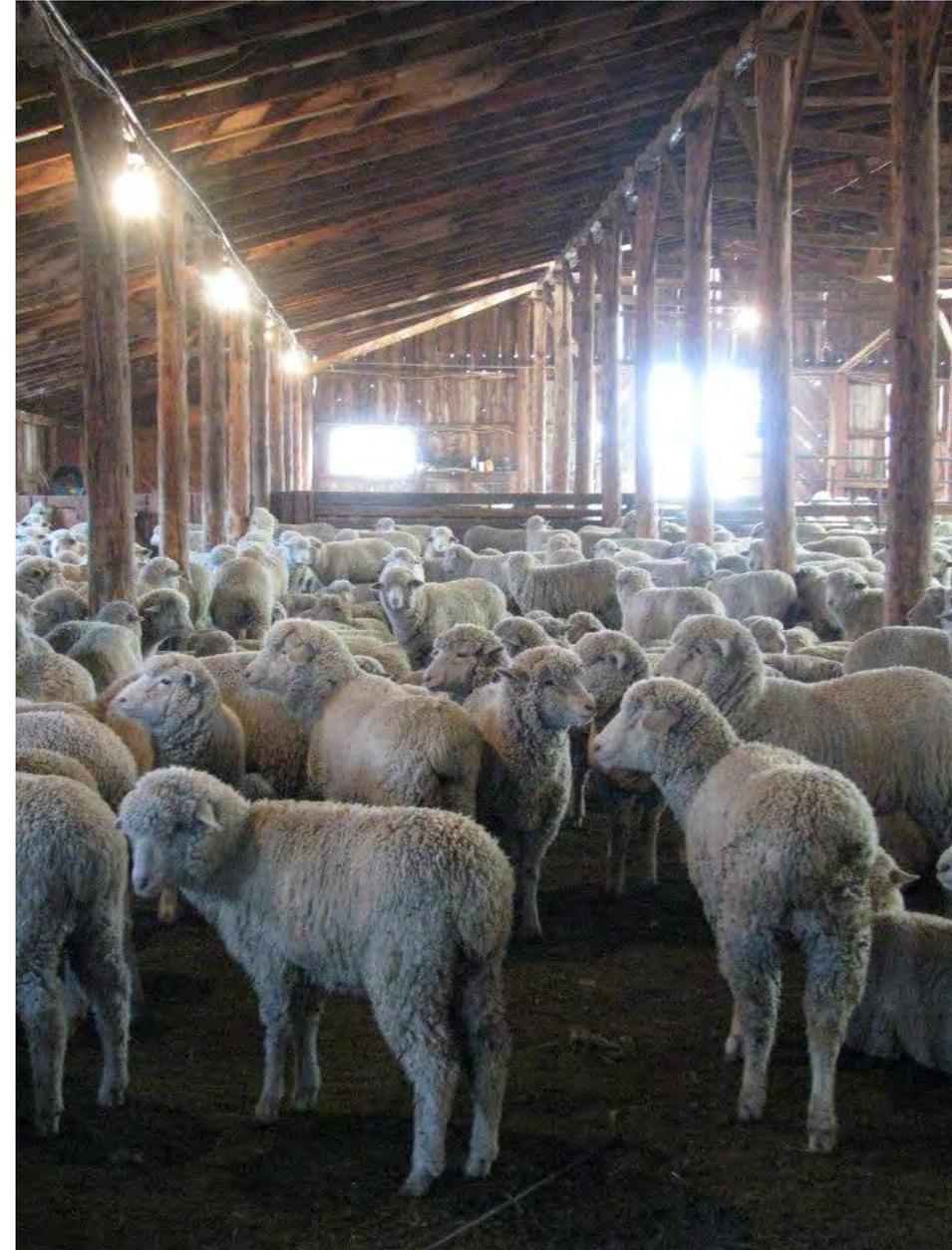
- Facebook:

- Raw wool for sale
- Fleece – Canada, Groomed or Greasy
- Canadian Yarn, Roving & Fleece BUY SELL, ISO
- Dirty Fleece Done Dirt Cheap



# Helpful Shearing Reminders:

- The day before shearing, sheep should be penned in clean, contamination-free pens.
- According to the 2017 revised edition of the Sheep Care Guide, sheep should be held off of feed and water for a period of at least six hours and preferably 12 hours prior to shearing.
- Emptying sheep can be a controversial issue for producers and shearers



# Helpful Shearing Reminders:

- Sort the flock in order to separate in advance of shearing: lambs, yearlings, rams, and ewes by wool type, fiber diameter, fiber length and style.
- Meat or mutton-type, black, colored, or spotted sheep should be isolated and shorn as the very last group.
- Talk to your wool marketing warehouse, agent or buyer prior to shearing



# Helpful Shearing Reminders:

- Shearing sheep and handling wool is hard work so take good care of your shearer and helpers.
- A good hot meal will do wonders for a hard working person and help increase performance for the remainder of the day.
- Remember, a day's shearing is the equivalent of running a marathon!



# Is my wool worth the time and effort or should I just throw it away?

- ALL WOOL HAS VALUE
- Small steps can improve quality
- Whether you are a small or large sheep producers, fiber enthusiast, wool processor, or hand spinner your goals are the same
  - Get the wool prepared properly
  - Minimize contaminants
  - Allow wool to have the highest potential for \$ with the least inputs



# Uses of Wool:

Micron Range ( $\mu\text{m}$ )	Value-Added End Use
16 – 19	Fine worsted, intimate wear, next-to-skin knitwear
19 – 23	Apparel, outerwear, quilt-batting, felts, knitwear, socks (Military)
23 – 28	Sweaters, light upholstery coatings, fiberfill
28 – 32	Upholstery, tapestries, some carpets
32 – 38?	Carpets, industrial use



# Wool Trends:

- Focus on finer microns
  - China wanting finer micron range
  - Increased demand for next to skin circular knit wool clothing for active and leisure wear
  - US domestic users want finer microns sports wear and some military clothing
- Big challenge to produce enough <20 micron for specialty fabric demand in the North America
  - Growing fine wool breeds (Merino, Rambouillet, Targhee) is not suited to all parts of the US and Canada



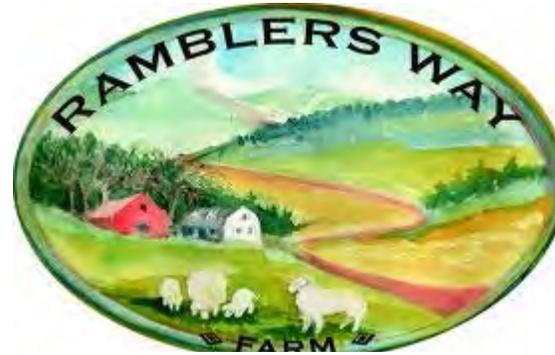
# Superwash and the Sock Industry:

- Superwash was a game changer for our industry
- Sock Industry expansion
- American made, American wool brands
  - Farm to Feet
  - Wigwam
  - Crescent Sock Co. – Hiwassee and Omiwool brands
  - Duckworth
  - Coming soon – Fishhook Sock Company



# Popularity of wool apparel increasing:

- Rambler's Way
- Duckworth
- Voormi
- Icebreaker
- Smartwool
- Minus33
- First Spear
- Polarmax
- ioMerino
- Woolrich
- Woolx
- Showshed
- Pendleton
- Filson
- Weather Wool
- American Woolen
- Simms
- XGO
- First Lite
- Wool & Prince



# Wool shoes are new and cool!

- Allbirds, Giesswein, Nike, New Balance

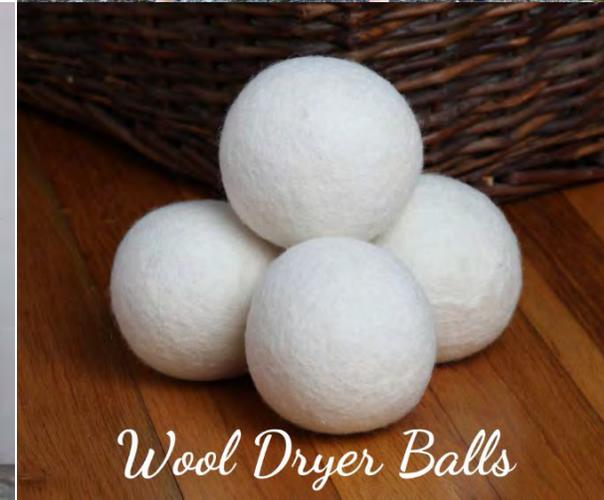


# Why is coarse wool worth so little?

- In the last 12-18 months fine wools from all origins have achieved unprecedented record prices
- Unfortunately, the crossbred and broader wools which are much more plentiful in supply have been left behind
- Lower prices for coarse wools in the last three years
  - There is still an over-abundance of coarse wool in storage and yet to process
  - Expansion of uses for these wools has not been emphasized as much as fine wools on a commercial scale
  - There can be a quality issue from primarily farm flock wools with high black fiber content and VM
- **WE NEED TO CREATE LOCAL USES FOR THESE TYPES OF WOOLS**

# Alternative uses of wool:

- Insulated packaging - Woolcool
  - Using about 10% of UK wool clip
- Solid Wool – a wool and bioresin that is molded into various uses (tables and chairs)
- Wool Pellets for gardening
- Twool - wool twine for gardening
- Wool dryer balls
- Wool surf boards
- Wool insulation – blow in or batting
- Road side reclamation



*Wool Dryer Balls*

# How do we create more value for wool?

- Local food/local wool movement
- Fibersheds
- My Local Wool
- LocalFiber
- Wool Advocates
- Shave 'em to Save 'em
  - The Livestock Conservancy
- We need to become innovators again!

**Navigating the Fiber Supply Chain:  
The Animals, The Process, The Products**

SATURDAY, JULY 27TH, 9AM - 4PM  
TRUMANSBURG FAIRGROUNDS  
TRUMANSBURG, NY

LocalFiber  
*The Local's Choice*

 localfiber.ny



# Wool Advocacy

How are you spreading your love of sheep, lamb, and wool?





**Thanks to Jay Parsons – Optimal Ag Services**

**Thanks to the Let's Grow Committee ASI**

**Dr. Lisa Surber**

**LM Livestock Services**

**Wool Education and Classification Services**

**NSIP Certified Ultrasound Scanning**

**OFDA On-Site Wool Testing Services**

**Livestock Nutrition Consulting**

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