



# The Producer

*Maine Sheep Breeders Quarterly Newsletter*

**SUMMER 2013**

## Message from the MSBA President

It seems that spring is finally here. Punxsutawney Phil has reportedly been placed on suspension for his misdirected prediction of an early spring. I expect that most of you have finished lambing and hope it went well. Lamb prices nationally have fallen dramatically and no one seems to have a really good explanation.

Nancy Webster and I recently visited our congressional delegation in Washington, DC. We will have a full article for the next newsletter. We have some great friends down there now with Marge Kilkelly and Don Hoenig working in Senate offices. I believe a lot is going on this week with the Farm Bill and I'm anxious to see if one can finally get passed. We ran into Jo Pearce (he was an MSBA officer in 2006) at Senator King's coffee hour. Small world!

As you can see, we have had a slight change in MSBA leadership with me taking over as President and Nancy Webster adding VP to her already Secretary title. Many thanks to outgoing President Al Maloney who will still remain very involved with the MSBA Board. Stay tuned to many upcoming events as outlined in this issue. The Fiber Frolic & Wool Pool are right around the corner.



*Brant Miller, MSBA President*

Dear Sheep Breeders,

I am once again excited about the articles that were sent to me for this issue.

Penelope Olson has put together a very informative article about how to grow great fleeces for sale and show (p. 2). I hope this article will help you when you consider entering your fleeces at the Maine Fiber Frolic, Common Ground Fair, and other fairs. Good luck!

The Maine Summer brings Open Farm Days and agricultural fairs, where our farms and animals are exposed to visitors and other farms' animals. Richard Brzozowski, UMaine Extension, has written some guidelines on how to keep up your biosecurity (p. 7).

Reflections of the first Open Farm Day of the season at Northstar Farms by Michaela Davis (p. 7).

While we all have pondered the big question "Why sheep?", Sue Faunce took the time to write down her reasons (p. 8).

Internal sheep parasites have been a problem for everyone raising sheep. The On Pasture online magazine granted permission to reprint one of their articles on this subject by Bill Fosher (p. 9).

If you plan on selling your wool at the MSBA Wool Pool, please make sure your wool meets our guidelines (p. 5).

I encourage you all to contact me with your ideas and articles for publication in this newsletter, pictures of your farm or animals you like to share with other sheep breeders, as well as your feedback, comments, questions, and suggestions. Happy reading.

*Dorothee Grimm, editor*



## Raising High-Quality Fleeces for Sale and Show

by Penelope Olson

Handspinners, yarn designers, knitters, weavers and other fiber artists in search of gorgeous fleece abound in Maine these days; and there are many gorgeous fleeces available. Opportunities to sell your fleece are many: direct from the farm, at farmers markets, and in dedicated areas at seasonal Maine fairs such as the Fiber Frolic Fleece Barn, the Common Ground Country Fair Fleece Tent, and Fryeburg Fair Fiber Center, as well as at the numerous fiber festivals around the U.S.

There are many steps to consider prior to marketing your wool. It is hoped that this article about raising fleece will be beneficial to those who are just getting started and provide new insights for those who have been in the business for a while.

The overall approach to raising fleece should be thought of in terms of fleece management, which begins at the start of the “fleece year,” the day the fleece is sheared off the sheep. It is a common issue that many producers begin thinking about their fleeces when a problem emerges or, worse, when the shearer arrives to take the fleece off. To produce great fleeces for sale, and to make them profitable, means they can’t be an afterthought. They must be part of your management plan from the first day they begin to grow. At shearing time, think about what you liked and what you disliked about any given fleece. Think about what you saw on the skirting table and what you might change to make your fleeces better next year. Start by putting those changes into practice. Remember first and foremost that sheep commit an entire year to fleece production. Don’t squander it in a careless moment!

Whether to coat your sheep or not is a matter of preference, keeping in mind what your projected market is. Covered fleeces are usually exceptionally clean (and sought after by handspinners), but coats are expensive and require a lot of attention and adjustment as the fleeces grow. The best approach is to discuss coating (or not) with experienced shepherds. Proper feeding routines (*see below*) can result in relatively clean fleece, even if you don’t coat the animal.

Nutrition plays an integral part in fleece management. Good nutrition is of utmost importance. Your sheep may have the finest fleece genetics, but that is only the foundation of their potential. If your sheep are not provided with the fuel they need to build on that foundation, the resulting fiber will be less than it could be. Animals that carry a significant internal parasite load typically produce fleece that is dull, harsh, short, and weak. Ideally, pasture rotation should be part of your summer feeding regimen, as this cuts down on the possibility of parasite ingestion. Ensure adequate salt & mineral intake, and deworm all sheep before housing for the winter. Among other things, this aids in preventing wool chewing. It’s important that pregnant ewes be fed especially well during last weeks of gestation and also through the lactation period. Insufficient energy for the pregnant or lactating ewe results in weakened wool fibers in her fleece, known as “breaks,” and also fewer secondary wool follicles in the lambs.

This can affect future yields in the whole flock.

Be mindful, also, of the *manner* in which you feed sheep when they are indoors during the winter. Use low to level hay feeders to prevent gravity contamination from high hay feeders. Avoid pitching hay over the backs of sheep. Group taller breeds separate from shorter ones, if possible, to avoid sheep eating over the backs of their pen mates. Pick up and discard any baling twine dropped in the bedding. Jute twine decomposes and works into the fleece. Polypropylene twine lasts forever, and can melt into the fibers in commercial scouring processes. Sheep out on pasture don’t require as many precautions, but be sure to clear pastures of thistle, burdock, and other plant contaminants before turning them out in the spring.

Once your sheep have come through the winter in good health, and as shearing time approaches, there are many issues to consider. Locating a skilled shearer comes first. Get recommendations from other shepherds. Discuss your goals regarding fleece quality with your chosen shearer, especially regarding second cuts, keeping the fleece in one piece, and other aspects of shearing for fleece sales and shows. Find out what the shearer needs for help to ensure that your quality goals are met. This would include, for instance, a couple of strong, experienced people to grab the individual sheep and a shearing floor sweeper. Shear before lambing, if weather permits, as the resulting fleece will be much cleaner than if you wait until after the lambs are born. At the very least, crotch ewes prior to lambing.

Pay attention to the weather forecast. You want your sheep to be dry for shearing, even if they have to be penned up for a couple of days. Provide a clean, dry area for the shearer. If shearing is done indoors, be sure there is bright artificial lighting. It’s also very important for there to be easy access in and out of the holding pen and at least a 10’ x 10’ shearing floor. The best work area is in the form of a platform a few inches off the barn floor, or off the ground if outside.

Shear lightest colored sheep first (white, then gray, brown, etc.). Shear the cleanest animals first in each group. As the shearer is done with each sheep, be sure there is a designated person to gather the fleece up and transport it to the skirting table. Follow up by making sure that the shearing area is well swept between each animal. During shearing, the shearer should discard the belly, leg, face, and head wool. This is where a designated sweeper can really help, assuring that discarded wool is removed from the shearing floor so that it doesn’t mix back in with the full fleece at the time that it’s picked up.

A great handspinning fleece is only as good as its skirting job and a great skirting job is only as good as its skirting table.

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*Raising High Quality Fleeces for Sale and Show*  
*Continued from p. 2*

The skirting table should be in a well-lit area and should be able to hold the entire fleece spread out. There are commercial skirting tables available, but home-built ones are relatively simple to construct. There are plans to be had on the Internet. PVC pipe may be used for the frame (making it relatively lightweight) and any smooth-coated wire with 1" x 1" or 1" x 2" mesh serves well for the surface. Smooth wooden slats about one inch apart can also be used. The mesh or slats allow for bits within the fleece to drop out onto the floor and will make preparing the fleece much less work for the producer. Lobster trap wire works very well. It is stiff enough to support the fleece and the opening between the wires is perfect. In addition to having a good table, provide two large trash cans or large boxes with plastic bags as liners. You will use one for fleece that is going to be composted and one for fleece that is going to be picked over and used for "something else."

Once gathered up from the shearing floor in one piece, the fleece should be flipped carefully onto the skirting table so that the cut side is down, just the way it was growing on the sheep. Lay it out flat and begin by identifying the neck end and back end. The neck is very often contaminated with vegetable matter and the fiber at this end is often a bit finer (more crimp) than at the other end. The back end is often wet with urine and may have some manure tags as well. The fiber at this end may be less crimp than the rest of the fleece. In some breeds there may be britch wool present. This looks like wiry hair rather than crimp fleece.

Since shearing day is often rushed, it's possible to simply rough-skirt the fleece initially, getting off all the dirty edges and contaminated areas which have not had the protection from a coat. This gets them pretty clean right off. They can then be wrapped in sheets and stored until there is ample time to go over each one carefully. Then on a nice spring day, with the skirting table outside in good natural light, open the fleeces one by one and critique them again, doing any additional skirting that is deemed necessary. The air seems to fluff them up. Wrap them in clean sheets and store them till it's time to take them to a sale or show. Air them out once more on the skirting table, roll them, and put them in clear bags that hold the fleece snugly. Be sure to leave the bag open and store fleeces out of the sun until they are delivered to the sale.

Whether on shearing day or later, by yourself or with the help of a group of friends, once the fleece is arranged on the skirting table, there is a logical order of work. Begin at the outside edge and remove any obviously offensive parts. A good place to start is in the neck area which may be grossly contaminated with vegetable matter consisting of shattered grass hay, timothy heads and seeds that have formed a mat within the fiber. Looking toward the center of the fleece, find the point where the contamination stops and clean fiber begins. Remove everything from the edge up to that point. On a fleece that has been covered, there is often a distinct line where the edge of the cover was, making it easy to find that spot.

Examine the part you have pulled off to see if there is any portion of it that might be salvaged. If so, pull it out and put it in the container reserved for "something else."

Continue moving around the table. On the side of the fleece (flank of the sheep), you may find areas near the belly of the sheep that have become saturated with mud, now dried and stiff on the tips of the fleece. Test these tips by pulling out a pencil sized portion of fleece and pulling the fibers apart so the mud cracks off. Pull firmly on the tips. If they break, these parts should go in the compost container. If they're strong, they can go into the "something else" container. In this area, you will also find two places where the fleece is often very short and saturated with oily, gummy sweat. This comes from the area just behind (under) the front leg and just in front of the hind leg—the armpits of the sheep. These should also be discarded. Keep your eyes open for any fiber that is heavily contaminated with vegetable matter and remove it, too.

Coming around to the back end of the fleece, remove any fleece that is contaminated with manure and put it in the compost container. If there are wet areas, they should go into the "something else" container. If the fleece was covered, there may be a matted/felted area lying over the tail of the sheep where the back edge of the coat lay, and that should be removed. The tail wool is sometimes removed, too, if it was sticking out of the cover. The matted parts should be composted, but the tail may be saved. If there is britch wool present, remove it to the "something else" bin. Continue up the other side of the fleece repeating the process of testing and removal of unusable fiber.

Return to the neck area and now look down the midline of the fleece from the neck to the back end. This part of the fleece grew over the spine of the sheep. It is often weather-beaten and may also be full of vegetable matter if the fleece wasn't covered. If it is heavily contaminated, pull it out and compost it. If it is clean, pull out a few pencil-sized samples of fiber and give each one a good tug while holding it up to your ear. A strong fleece will ping. If the fiber is weak, it will make a crackling sound and may even break. Pull out any areas that don't make the grade and put them in the appropriate container.

Now continue to the inner area of the fleece. Pick off all obvious pieces of hay or other contamination. Gently paw around in the fleece without pulling it apart to feel for things like small sticks, straw stems or burdock that might be hiding there. Do a few more ping tests for the soundness of the fiber. Shake the fleece to dislodge any second cuts that may be hiding on the underside of the fleece. Pick up large handfuls of fleece and give a gentle shake just a few inches off the table. Put the fleece down and continue to the next area, making your way around the table until no more second cuts fall out.

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*Raising High Quality Fleeces for Sale and Show**Continued from p. 3*

Arrange the fleece to close up all the “holes” you may have made during skirting. Gently push and pull the fiber together where there are parts missing so the end result is a compact layer of fleece without straggling pieces along the edges.

Fold the fleece in thirds. You want it to be well ordered and appealing to the buyer. Carefully pick up one side, including the neck area and back end, and fold it toward the inside just a little over the midline. Now you can clearly see the underside of the fleece for the first time. Take a good look and remove anything that doesn't belong there. Go to the opposite side of the table and fold that side over top in the same way. Check the underside carefully.

Once folded, and starting at the back end of the fleece, roll towards the neck end. Make the roll fairly tight as this will help to keep the fleece compact. As you roll, check the underside carefully for bits of vegetable matter and second cuts. Roll it right into a plastic bag that fits the fleece comfortably. The neck/shoulder area of the fleece should be at the top of the bag. If the bag is too large, the fleece will flop around inside it and become tangled. Leave the bag open so the fleece can breathe until you get it to the sale barn. If you're concerned about dirt or dust getting on the fleece, leave the bag open but cover it with a towel or sheet. If you are storing the fleece for some time before putting it up for sale, store it in a bed sheet so it will be able to breathe. Thrift shops are great sources of sheets for this purpose. They are inexpensive and washable.

If your wool is destined for a sale and/or show, be sure to follow the guidelines of the particular sale/show organization. At the sale barn, put your business card or some kind of identification in the bag with the fleece. Write the name of the sheep or its tag number and breed on the back. If the fleece was covered, note that as well. Buyers are often very interested in knowing about the sheep that produced the fleece. While giving this information may not be the primary selling point for the fleece, it may bring the customer who buys it back to you another time.

About that “something else” bin: Wash that fiber as soon as possible, especially if there's wet wool in it.

If you don't have a use for it, give it away—or sell it—to someone who will use it. It's perfectly good wool, maybe just not the best.

In your overall decision-making about your fleeces, keep several things in mind: Only the very cleanest and most appealing should be designated for sales and shows for which the market is handspinners, although most sale venues will accept fleeces designated as “felting wool.”

If you don't feel that all your fleeces are of handspinning quality, you could also think about separating some out for commercial processing into roving and/or yarns. There are several excellent mills in Maine—good to keep the business in state!—but if they can't meet your time schedule for whatever reason or manage the kind of fleece you have, there are other excellent mills around the country. Information about wool processing mills is available on the Internet. An additional step might be to look into having your processed yarns made into value-added items such as socks or blankets.

Finally, if any of your wool is destined for a wool pool, take the time to bag and class wools separately, e.g.: white faced, black faced, natural colored, belly wool and tags. There will be a wool pool at the 2013 Fiber Frolic at Windsor Fairgrounds, on Saturday, June 1, from 8:00-11:00. Check out the Fiber Frolic website for details.

Keep up all the good work!

*We are grateful to those who contributed their years-long experience and insight for this article. In particular, many thanks to Pam Child, Hatchtown Farm, Bristol, for her observations and for her in-depth treatment of the skirting process. Additional thanks to Louise Hessert, Pleasant Valley Farm, Cumberland, and Elaine Cloutier, Shepherd's Purse, Abbot, for their thoughtful contributions.*

*Penelope Olson (Appleton) - coordinator of the Fleece Tent at Common Ground Fair (and designated sweeper at several area farms) - served as editor for this article.*



Marge Kilkelly (Senator King's Senior Policy Advisor and Maine goat farmer), Nancy Webster (MSBA Secretary and Vice President), Don Hoenig (Retired Maine State Veterinarian on Fellowship in Senator Collins' Office), and Brant Miller (MSBA President) fully satiated with American Lamb Chops at the ASI Washington, DC Spring Legislative Trip Lamb BBQ on May 8, 2013.

Full article to appear in the next issue.



## Sheep Shearing at the 13th Annual Maine Fiber Frolic June 1, 2013

Jeff Burchstead will be shearing sheep Saturday morning at the Fiber Frolic. Cost will be \$7 per head. The Wool Pool will be going on at the same time, 8am-1pm, so you have an opportunity to sell your wool at the same location.

If you plan to bring sheep to be shorn, please contact Al Maloney at [newaim@midcoast.com](mailto:newaim@midcoast.com) so we know how many to plan on shearing. Please enter the fair grounds via the back gate. There will be wool pool signs directing the way.



## 2013 MSBA Wool Pool

The Annual Wool Pool of the Maine Sheep Breeders Association is scheduled for Saturday, June 1, 2013, from 8:00am to 1:00pm at the 2013 Maine Fiber Frolic at the Windsor Fairgrounds in Windsor, Maine



Wool producers will be paid 55 cents per pound of wool.

The buyer of the 2013 MSBA Wool Pool will be Bartlett Yarns, Harmony, Maine

### Guidelines for selling your wool at this Wool Pool:

We will be accepting clean, well skirted wool only. Wool must be dry. Wool must be from current year's shearing.

Wool should be separated into white wool (from white face sheep only) and colored wool (incl. white wool from black face sheep).

All bags with wool will be opened and inspected.

MSBA will reject any wool that does not meet our stated guidelines.

### The following will absolutely not be accepted:

- Cap and belly wool, tags or manure
- Wet, muty, and moldy wool
- Heavy hay chaff - pull out neck wool that is heavily contaminated
- Straw, shavings, hay, old wool- must be from current year's shearing
- Cotted wool
- Moth damaged wool and/or moth infested wool
- Hoof trimmings
- Burdocks
- Wool contaminated with hair

Wool will be purchased from MSBA members and non-members.

For new MSBA members, a pro-rated MSBA 2013 membership fee of \$10.00 will be accepted at the Wool Pool.

Replacement wool bags will be available for producers to purchase at the cost of \$5 per bag.

Questions: Please contact Richard Brzowski [richard.brzowski@maine.edu](mailto:richard.brzowski@maine.edu) or Joe Miller [rivercroft@dialmaine.com](mailto:rivercroft@dialmaine.com)

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## MSBA Calendar of Events and Board of Directors (BOD) Meetings 2013

May 29, 7:15pm: BOD meeting via conference call.

June 1-2: Maine Fiber Frolic at the Windsor Fairgrounds, Windsor, ME.  
More information at [www.fiberfrolic.com](http://www.fiberfrolic.com) or contact Nancy Williams  
[nancy@fiberfrolic.com](mailto:nancy@fiberfrolic.com)

June 1, 8am-1pm: MSBA Wool Pool at the Maine Fiber Frolic.  
For more information, see p. 5 in this issue.



June 1, 11am-1pm: FAMACHA training for sheep and goat producers, at the Maine Fiber Frolic. For more information, see p. 11 in this issue.

June 6, 6pm-8pm: MSBA BOD meeting, at the Great Wall Buffet, Augusta, ME. We meet at 6pm to eat; business meeting starts at 6:30pm Open to all MSBA members. For more information, incl. meeting agenda, please contact Nancy Webster  
[woolweb@aol.com](mailto:woolweb@aol.com)

June 15, 11am-1pm: FAMACHA training for sheep and goat producers, at the MOFGA Farm & Homestead day, Unity, ME. For more information, see p. 11 in this issue.

July 13: Pasture Walk, focus on fencing, with Ben Hartwell. Collyer Brook Farm, New Gloucester, ME. More information will be posted on the MSBA website as it becomes available.

July 21: Maine Open Farm Day. More information at [www.getrealmaine.com](http://www.getrealmaine.com)

September 1: The Producer to be sent out. Submission deadline August 15.

September 5-8: Fiber College of Maine, Searsport, ME. More information at [www.fibercollege.org](http://www.fibercollege.org)

September 20-22: Common Ground Fair, Unity, ME. More information at [www.mofga.org](http://www.mofga.org)

September 24: BOD meeting via conference call.

October 18-19: Sheep and Goat School, with John Porter, UNH. Followed by the annual MSBA meeting. More information will be posted on the MSBA website as it becomes available.

Please check the MSBA website frequently for updates to the calendar [www.mainesheepbreeders.com](http://www.mainesheepbreeders.com)



### MSBA Board of Directors

**President:** Brant Miller, Bowdoinham, ME; [bsmiller99@gmail.com](mailto:bsmiller99@gmail.com)

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Philip Webster, North Star Farm, Windham, ME; [northstarfarms@me.com](mailto:northstarfarms@me.com)

## North Star Sheep Farm Hosts Open House & Farm Tours

by Michaela Davis



Have you ever wondered what its like to be on a working sheep farm? On Saturday, March 30<sup>th</sup>, Phillip and Lisa Webster opened their farm up for all to see. Visitors had the opportunity to take a tour of the lambing barns with Lisa, watch shearing demonstrations with Phil in the stable, and feed the bottle lambs. There was also an educational display to learn not only about the many different breeds of sheep, but the history of sheep farming, the processing of wool, the history of the Mayall Mill in Gray, where North Star houses some of their sheep. Children had the opportunity to read some of the books about sheep, eat cookies and enjoy a day at the farm. We had a variety visitors, some were stopping by just to see the farm, others were part of the MSBA's Emerging Sheep farmer program and others were fellow sheep farmers just dropping by. Visitors had the opportunity to ask questions and visit the 200 acre sheep farm on a beautiful day. All had a great day, and a lot was learned. Thanks to all who came and enjoyed the day!

For more information on Northstar Farms please visit our website at [www.nsfarms.com](http://www.nsfarms.com).

For more information on the Emerging Sheep Farmer program please visit <http://www.mainesheepbreeders.org>.

Michaela Davis  
Education Programs  
Northstar Farms, Windham, ME

## Biosecurity

### -Your Responsibility as a Farmer Visiting Another Farm -

by Richard J. Brzozowski



When you visit a farm, you take the risk of contaminating that farm with disease organisms. You also take the risk of bringing pathogens back to your home farm and livestock. The pathogens (bacteria or viruses) ride along on your boots, clothing and skin. The most practical way to prevent contamination is to wash and disinfect your footwear as well as to wash your hands.

#### Steps to a health-minded farm visit:

1. Wear washable (waterproof) footwear
2. Wash all organic matter from boots with water, soap (if available) and a brush
3. Dip clean boots in disinfectant before entering a farm building and holding areas
4. Repeat the process before entering your vehicle
5. Wash hands thoroughly if you handled animals during your visit

Or

1. Wear plastic boot covers on your feet
2. Remove and discard the boot covers upon leaving the farm and before entering your vehicle.
3. Wash hands thoroughly if you handled animals during your visit

These precautions might seem like a hindrance at first. However, the time spent in keeping disease from your farm is worth the effort. Consider the time, money and the headaches that diseased animals bring you as a producer. Get into the habit of thinking and practicing bio-security.

Richard J. Brzozowski,  
Extension Educator, University of Maine Cooperative Extension



## The Yin and Yang of Being a Shepherd

by Sue Faunce

I used to make quilts. I went to quilt shows and belonged to a quilting group. Now my fabric lies about in storage, gathering dust.

I used to be a gardener. I had beautiful flower beds full of countless varieties of perennials and annuals, worthy of a gardening magazine layout. The beds are still there, but now they hold more grass and weeds than anything else.

What happened? Well, now I have sheep.

In Chinese philosophy, the concept of *yin yang*, normally referred to in the West as "yin and yang" is used to describe how polar or seemingly contrary forces are interconnected and interdependent in the natural world, and how they give rise to each other in turn. Opposites thus only exist in relation to each other. The relationship between yin and yang is often described in terms of sunlight playing over a mountain and in the valley. Yin (literally the 'shady place' or 'north slope') is the dark area occluded by the mountain's bulk, while yang (literally the 'sunny place' or 'south slope') is the brightly lit portion. As the sun moves across the sky, yin and yang gradually trade places with each other, revealing what was obscured and obscuring what was revealed.



In one long past issue of *The Producer*, the president's message posed the question, "why do you have sheep?" I have spent quite a while pondering my answer to that one, and it has filled my head and heart, the reasons, curses, and blessings are so numerous. To me, being a shepherd brings balance to life, and, in so many ways, beautifully expresses the idea of yin and yang.

Like so many members of MSBA, we are a small farm, with a small flock. We have a variety of other livestock and products that all contribute to the farm income, and we hold jobs off the farm. First and foremost, the farm is a business. The sheep are here to make money. When we make decisions about them, it is that ultimate goal we keep in mind. Having said that, we try to balance that goal with care and respect for the animals as both a group, and as individuals; we are not solely focused on the bottom line. I can safely say, my sheep have quickly found a permanent place in my heart and soul, and I can not imagine living a life without them.

I *could*, however, imagine winning the lottery, traveling on fabulous adventures around the globe (while I had a crew of farm hands taking care of my sheep and my immaculate, perfectly fenced, farm), but I would always have to come home to my sheep. Therein lies one of the many trade offs of a shepherd. You can't really leave. Overnight trips or longer vacations require a farm sitter or a trusted, knowledgeable friend. I hire a farm sitter. Even though she is great, I still spend many hours of my week long vacation worrying about my flock, and it takes a few days before any real relaxation can seep in. Those hours of worry are balanced by hours of peace, as I walk through my pastures and see my flock grazing in the sun. Bright, clean fleeces blowing in the breeze. Even a glance out the window to observe the sheep and lambs in the green grass, brings a soul soothing moment of contentment. Yin yang.

Anyone who has ever had lambs knows the excitement of that particular anticipation, and the joy and wonder of the birth process. Lambing season can be filled with so many highs and lows, and the accompanying exhaustion makes it hard to appreciate the balance while you are in the middle of the chaos.

There are many ewes that go through it with ease, with lambs that jump up and nurse within minutes. You can almost see the clouds breaking, the sunbeams shining down, and the angel harmonies! This is the way it's supposed to be!

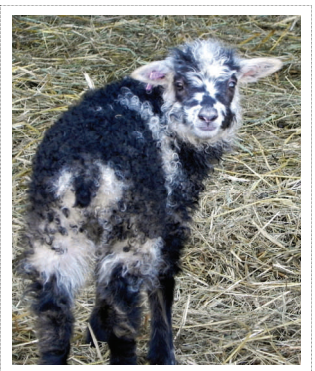
Then there are the ones you work hard to deliver, feeling around inside for legs and correct positions, pulling, drying, warming, tubing, whatever it takes, and still sometimes it is just not enough.

How could we fully appreciate the first scene without having experienced the second? Yin Yang.

We sacrifice one certain way of life for another, and unless you can stop and appreciate the balance, being a shepherd may not be your calling. Most people who raise livestock already are aware of this and that is why they do it.

Many visitors to the farm see it as romantic, bucolic, peaceful, and spend time saying things like "oh, you are so lucky. I have always wanted to have a farm!" They are only seeing the Yang (bright sunny slope), and can't see the Yin. We know about the bitter cold days of winter where the water spigots are frozen solid and you have to haul water out in buckets through a blowing snowstorm. Or the sweaty, itchy, dog days of July when you are throwing hundreds of bales of hay into the barn while your friends are at the beach or the lake. Then again, they don't get to walk down to the barnyard on a late May evening and sit, watching a new crop of lambs chase each other and leap, and pop, and play, in a joyful celebration of life and springtime.

Hard work, balanced with accomplishment and satisfaction, biting cold days balanced with warm, soft spring evenings; yin and yang; that is why I have sheep!



Sue Faunce

Pondview Farm, Limington, ME

[www.pondviewmaine.com](http://www.pondviewmaine.com)



## Are Parasites a Limiting Factor In Your Flock?

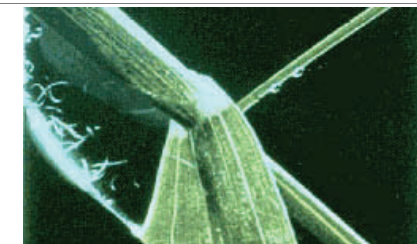
by Bill Foshier

The parasites that infest sheep can be an enormous drag on sheep production. Year in and year out, they probably cause more death and disease in some producers' lamb crops than any other single factor, including predators.

The days when the answer to parasite management was to drench all the sheep every month are behind us. Parasites have started to evolve resistance to various classes of dewormers. The problem with chemical resistance is so pronounced in some parts of the Southeast US that there are farms where no wormer works anymore, and there's at least some degree of chemical resistance nearly every place where worms are a problem.

The first step in knowing how to manage parasites in your own farm is to know what's going on in your flock's guts and in the environment they inhabit. The second step is to know what environmental factors play into parasite reproduction and infectivity. In the final analysis, the answer for how to manage parasites is probably going to be a little bit different in every flock.

### The standard life cycle of parasites



Worm larvae on grass (Photo courtesy of <http://www.dpi.vic.gov.au/agriculture/farming-management/organic-farming/organic-sheep-and-lamb/internal-parasites->

Most internal parasites of sheep follow the same basic life cycle. An infested sheep sheds parasite eggs in its dung. The egg incubates in the pellet, and hatches into a larva. As the larva develops, it migrates up the vegetation, where the sheep ingests it. It matures in the sheep's stomach, reproduces, and starts the cycle over again.

On average, it takes about three weeks for an egg to develop into a mature reproductive adult during the growing season. However, there are lots of things that affect how this happens. Eggs hatch faster when it's warm and moist, more larvae survive when there's surface moisture on the vegetation. Cold or dry conditions can slow or even stop the life cycle without actually killing the eggs and larvae. Even eggs that are shed at the same time will hatch as much as two weeks apart.

We can use an understanding of this life cycle and its subtle changes to help us manage parasites in our sheep. Basically, we need to understand that there's really no such thing as clean pasture in most of the US, unless sheep have been off the land for a full growing season or more.

We can also figure that if rain comes after a long dry spell, there will be a major hatch of eggs and movement of larvae, and be extra vigilant to mount whatever intervention is most appropriate for our operations.

### The worst of the worst

In North America, there are several species of parasites of concern to sheep producers. The Godzilla of small ruminant parasites is *Haemonchus contortus*, commonly called the barberpole worm. It draws its name from the appearance of the female. Under a microscope, it appears to have a clear skin, through which you can see two filaments, wrapped around one another in a spiral. One is red, and one is white, like a red and white barber's pole.

The red filament is its digestive tract, which is full of your sheep's red blood. The white filament is its reproductive tract, full of white eggs. This tells you what this worm does: it sucks sheep blood and lays eggs. It does both prodigiously. A single female can lay tens of thousands of eggs in her lifetime. A single adult ewe can support a thousand or so of these worms without showing much in the way of symptoms. If you start multiplying a few hundred ewes times a thousand worms times 25,000 plus eggs per worm, you can see how this parasite can come to dominate others in terms of its impact on the sheep flock.



Barberpole worm (*Haemonchus contortus*) from <http://bio390parasitology.blogspot.com/2012/03/haemonchus-contortus-bite-in-gut.html>



*Haemonchus contortus* from the abomasum of a sheep. (Photo by Dr. Nabavi, Shooshstar City, Iran, June 2009)

It is also this excellent reproductive efficiency that has allowed the barberpole worm to develop resistance to chemical dewormers so much faster than other species of parasites. Even the very best wormer, administered perfectly, isn't absolutely 100 percent effective. Maybe it's 99.9 percent effective. If the ewe is carrying 1000 worms, that means one survives, and — more importantly — that one that survived is resistant to the dewormer. The eggs it lays will carry that trait.

In the next generation, the dewormer might only be 98 percent effective. That means that 20 resistant worms survive to pass on their resistant genes. Like the pond lily that doubles the amount of the pond it covers every day, the resistance grows very slowly at first, and then very suddenly makes the wormer fail.

Moreover, *Haemonchus* can go from an egg in a dung pellet to a reproductive adult in as little as three weeks in ideal conditions. That means in some parts of the country, it can go through five, six, or even seven generations in a single growing season. Each of those generations that is exposed to a wormer will develop more resistance to that wormer.

All the other species of internal parasites are undergoing the same process, but they tend to shed fewer eggs and have longer generational intervals, so it takes them longer to develop resistance to the drugs we have to fight them.

*Continued on p. 10*

*Are Parasites a Limiting Factor In Your Flock?**Continued from p. 9***So, is the drench gun a thing of the past?**

For most producers — particularly those who graze their sheep in areas with high rainfall and humidity — the drench gun is definitely still an important tool. But we also need to learn to be smarter than the parasites we're fighting. Our brains will be more important than our drug cabinet.

We must learn how to disrupt the parasite life cycles on our farms. For instance, most sheep worms cannot survive in the guts of cattle. If cattle graze after sheep, they will ingest most of the parasites that the sheep have left behind, reducing the number of larvae that can infect the sheep the next time they graze that same ground.

Or, we could allow a field to regrow after the sheep have grazed it and then take a cutting of hay. The drying process will kill the vast majority of the larvae, and very few will survive in the stubble after the hay is removed.

But for most farms, there will be times when drenching is necessary, especially in lambs. Adult sheep develop a certain level of immunity to parasites, but lambs are extremely vulnerable. However we approach it, the goal should remain to manage the parasites both inside and outside of the sheep.



From Premier 1's website on how to drench sheep in a handling chute (<http://www.premier1supplies.com/sheep-guide/2012/07/how-to-drench...using-a-chute/>)

**Breeding the right kind of worms**

We've all heard that you get what you select for. The problem is that we apply it to our sheep and not to our worm populations.

If you wanted to develop a parasite that would be immune to a particular drench substance, the best way to do it would be to follow the old advice about how to control worms in sheep: drench every three weeks, drench every animal, and move them to clean pasture. Let's explore how this program favors the parasites in the long run.

Every time we administer a drench, some percentage of the worms survive. Whatever traits the worms had that allowed them to survive are passed on to their offspring. If you drench every three weeks, you're ensuring that every new generation of worms gets culled — any parasites that don't have the traits to survive are killed.

If you drench every sheep in the flock and then move them to clean pasture, the only worms left to breed will be the ones that are resistant to the drench. The longer you do that, the more you concentrate the trait.

If these were sheep, concentrating the trait might be a good thing. But with worms, we want to keep the susceptible worms so that they will breed with the resistant worms and dilute the trait. The two keys to doing that are to drench as infrequently as you can, leave a few sheep untreated, and don't move freshly drenched sheep to clean pasture.

This advice is at odds with what would seem to be the common-sense goal of getting rid of all the parasites any time they show up. But the fact of the matter is that where there are sheep, there will be parasites of sheep. We can't ever kill them all, so we had better start figuring out how to choose the ones we live with. We can help slow down the parasites' development of resistance by reducing the amount of drenching that we do, and by trying to make sure that we maintain a stock of susceptible parasites to breed with the resistant ones.

**What about parasite resistance in sheep?**

St. Croix sheep have shown resistance to parasites and tolerance to hot weather. Photo courtesy of ARS photo gallery

There is some very interesting research and breeding going on that looks very promising in the development of sheep that are resistant to parasites, or that are resilient. The difference between resistance and resilience is that a resistant sheep will be able to fight off parasites and prevent an infection, and a resilient one may get infected but is able to withstand the effects of the infection.

As with most broad generalizations, it's probably dangerous to believe that certain breeds of sheep or types of sheep (such as hair sheep) are resistant to parasites. There are breeders within some breeds (Katahdins in particular) who have developed resistant lines using sophisticated computer programs that predict how well a particular ram or ewe will pass along resistance to its offspring. These breeders work with the National Sheep Improvement Program to document parasite resistance in their sheep.

**Can we just manage our pastures better?**

Organic producers in some parts of the country have shown that parasite losses can be kept to acceptable levels via pasture management and other non-chemical interventions. But simply using rotational grazing won't usually be enough. We'll share examples of how parasites are controlled in organic, dairy, show, and fiber flocks in a future article.

For most flocks, there won't be any silver bullet. Parasites have had a very long time to evolve with sheep and adapt to our methods of controlling them. We need to use all the tools at our disposal — most importantly our brains — to fight them.

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As a paid member of MSBA you receive this newsletter four times per year. Please make sure we have your correct email address/ mailing address on file. You are entitled to participate in the annual cooperative Wool Pool sale of fleece (at the Maine Fiber Frolic, see p. 5). You receive marketing and political representation at state, regional and national levels. You meet a great group of people who love to share information about their animals, their farm and their products, as well as information about breeding, management, and marketing techniques. Your MSBA membership makes you a member of the American Sheep Industry Association (ASI), and you receive their monthly newsletter 'Sheepnews'.



The MSBA board of directors (BOD) meets 6-8 times per year. We encourage membership involvement at the board of directors meetings, as well as on committees, and volunteering for one of our events and educational programs. Everyone has something to contribute. Please contact Nancy Webster or Richard Brzozowski and volunteer a few hours for the good of all. Maine Sheep Breeders' Association - by sheep people for sheep people.

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Join the Facebook group at <https://www.facebook.com/groups/331285921205/>

### Three FAMACHA Workshops for Sheep and Goat Producers Offered in 2013:

To register, go online <http://umaine.edu/cumberland/programs/2013-famacha-workshops/> or mail in form below:



#### 2013 FAMACHA Workshops for Sheep and Goat Producers

FAMACHA workshops are designed to equip sheep and goat producers with the skills and knowledge to determine the degree of infection of *Haemonchus contortus* (barber pole worm) in sheep and goats using blood color of the capillaries around the eye. The barber pole worm is a blood sucking internal parasite that is a common cause of death and poor-doing in small ruminants. The workshops will be presented by Dr. Thomas Settlemire & Dr. Richard Brzozowski. Participants will receive an information packet, record sheets and a FAMACHA card.

**The fee to participate in a FAMACHA workshop is \$20.00 PER FARM.**

Please fill out this form and mail it in with a check for \$20.00, payable to "University of Maine Cooperative Extension," at least one week in advance of the workshop to:

FAMACHA Workshop/UMaine Cooperative Extension  
75 Clearwater Drive  
Falmouth, ME 04105

Select the workshop below by marking the appropriate box:

- ☐ FAMACHA 10:00 am-12:00 pm, Sunday, May 19, 2013, at Northeast Livestock Expo (NELE) on the Windsor Fairgrounds, Windsor, Maine
- ☐ FAMACHA 11:00 am-1:00 pm, Saturday, June 1, 2013, at Maine Fiber Frolic on the Windsor Fairgrounds, Windsor, Maine
- ☐ FAMACHA 11:00 am-1:00 pm, Saturday, June 15, 2013, at MOFGA Farm & Homestead Day, Unity, Maine

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Olga's Lambs  
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