

Wool Mill Provides Specialty Business Opportunity

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HALIFAX (Dauphin Co.) — On cooler summer days, the humidity and temperature allow the sunlit room's windows to be open. In one corner, Lydia keeps an eye on baby Megan and washes wool in steaming water while John calculates yards per pound in the other.

It's another day on the job for John and Lydia Piper, operators of the newly-opened Gurdy Run Mill, Halifax. Recently they leveled an old garage and constructed a room to hold the mill equipment and a seminar room upstairs. They opened for business in January.

Lydia, who grew up on a sheep farm in New York, and John, who worked on farms where he grew up in Williamsport, combine their knowledge and experience to care for their horses, Saint Bernard, flock of 20 Corriedale cross sheep, dairy beef, and angora rabbits on their 70-acre property. They moved to Halifax seven years ago from New York.



Carding is designed to align the fibers to put the wool in usable form, either to spin or get ready for further processing.

The business had its roots in Lydia's interest in hand spinning, which she began in 1989. John, a former contractor, was able to design and build the building that houses the mill.

"We took courses and with her understanding of spinning and both of our own experience with fleeces. We figured we just had to transfer it to machines," said John. "We both had an understanding of knitting and yarn.

"What primarily started this thing is that we thought this was a way to complete the farm and add value to the flock, besides adding income," he said. Since the Pipers were hesitant to begin a large-scale animal operation but wanted to make the farm

more economically productive, their knowledge of sheep, spinning, and wool lent itself to the idea of running a mill.

They began planning two years ago after they saw the equipment manufacturer at the Maryland Sheep and Wool Festival.

The Pipers believe specialization and variety will help to make their business more successful. The seminar room in the building, for example, will someday provide a forum for guest speakers or knitting and spinning classes.

They are also planning to put together learn-to-knit kits to sell. "We can fill niche markets," said John. We look for alternatives."

The couple is joined by Tory, 8; Nathan, 5; and Megan, 7 months.

The Equipment

The Piper's equipment was manufactured on Prince Edward Island, Canada. They traveled to Canada a year ago to learn how to operate the machinery and still

make frequent phone calls to speak with the manufacturer and ask questions.

Since industrial-size mills generally deal with Merino wool and the Pipers work with exotic fibers, the Pipers continually adjust the machines. These adjustments are necessary as they deal with differing wool types and also differing climatic conditions.

The climate-controlled room hovers around 60 percent humidity and 65 degrees.

Not only will static cling slow up the wool processing, but the wool could also absorb moisture or dry out, which not only changes the weight — which the Pipers base their prices on — but also processes differently accord-

ing to its amount of water retention.

With the equipment the Pipers are capable of providing custom scouring, carding, felting, and spinning the wool and exotic fibers. They offer batts, roving, felt, and yarn options for customers.

"This is a specialty industry," said John. "It works really well with exotic wool such as alpaca, llama, or mohair. The initial interest in the mill was specialties" such as multicolor rovings or yarns that are variegated.

The equipment brings industrial quality to a smaller-scale level, the Pipers believe. "We can do specialty blends and exotics," said John.

For example, owners can separate the three distinct colors from Jacob sheep and the Pipers can process that into roving, keeping the three distinct bands. "I call it s'mores," said Lydia.

Having a smaller mill allows the couple to process smaller orders of wool. "We can go down as low as five pounds," said Lydia. "That's our advantage."

Customers, who have come to Gurdy Run Mill from word-of-mouth advertising, are primarily hand-spinners that raise specialty sheep or alpacas. The Pipers feel that their operation appeals to those in the wool industry who are "trying to produce good quality fiber." Most of their customers are from Pennsylvania and Maryland.

Felt is another option for customers, as the Pipers can turn 1-3 pounds of carded fiber into a sheet of felt. One customer has used the leg and belly hair from their alpacas to make felt, which they sew into coats for the alpacas to wear after they are sheared. "so they're wearing their own coats," said Lydia. Customers generally use the felt to make saddle pads or to use in sewing.

To make felt the Pipers card out at batt of wool, a loosely-constructed large handful of wool, which they then place in criss-crossed layers on the table-like felting machine. Water and soap is poured over the machine, which is then closed. Putting pressure and rotating friction on the wool creates the felt, which is then flipped and trimmed.

The Process

Each fleece is approximately 10 pounds of raw weight when the Pipers receive it. They will charge \$3 to wash the fleece, which Lydia does in two sinks in 140-degree water and industrial detergent. "You need to melt the lanolin," she said. "If we don't get it off the fleece you can't process it," her husband said.

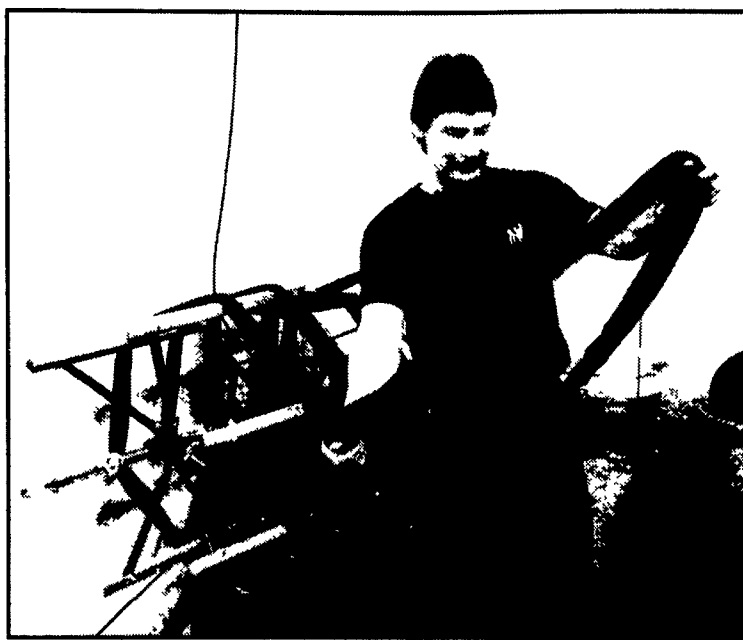
She recommends that customers take the time to skirt the fleece well, and has advised customers on how to shear the animals away from hay and vegetation, which creates challenges in processing. She has found hoof clippings, nails, pens, and plastic in the fleeces, which are potentially dangerous for the finely-tuned machinery.

Lydia spins out the fleeces and washes it again before spreading it on a rack and placing it in a cabinet with a fan to circulate the air. After a day in the drying rack, the wool is placed in a bin, weighed, and tagged so the owners get the same fiber back.

For the next step, "a shop vac is a vital part of mill equipment," said Lydia. The couple cleans the closet area and teeth of the picking machine to remove any color from the previous fleece. The ma-



Lydia washes the wool in 140-degree water to melt the lanolin, which allows for easier processing. After drying, the wool is placed in a bin, weighted, and tagged so the owners get the same fibers back.



The finished product is long skeins, which will be twisted together and sent to the customer.

chine, a rotating bed of nails, opens the fibers and blows them into fluffy bundles in the closet.

Weighing the now-fluffy fibers allows the Pipers to calculate how much anti-static spray to put on the fleece, which they mix around through the fibers.

At the next step, the carding machine, the fiber is weighed out in ounces and placed in increments along the belt for consistency in the end product. The Pipers can layer or blend colors at this point for the customers.

The carder produces a batt, cloud, or roving that is slightly twisted to help the fibers hold together. Hand-spinners order the roving, which they will make into their own yarn. According to John, carding is designed to align the fibers to put the wool in usable form, either to spin or get ready for further processing.

To make the fibers into a yarn, the draw frame aligns the fibers, evens out the roving, and creates a consistent size and weight. John passes it through the machine several times before taking the fibers to the spinning machine.

He then feeds the buckets of fibers into the spinner, which he has set according to the size and feel of the yarn that the customer has requested. Categories start at lace and move to fingering, sport, double knit, worsted, and lastly bulky, spun by yards per pound.

Alpaca fiber and heavy wool may yield 600 yards per pound of fibers while finer wools spun into lacy threads may yield 3,500 yards per pound.

At this point he can spin three different colors together to create a variegated thread.

After the single-thread spinning is done, John reverses the

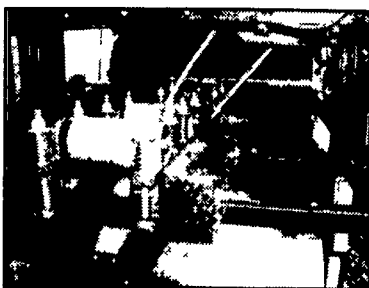
direction of the machine to ply the yarn, combining two or three single threads into a balanced yarn.

Making a consistent, balanced yarn is a touchy process, since an unbalanced yarn can create a thread that will skew when the garment is washed, instead of hanging nicely.

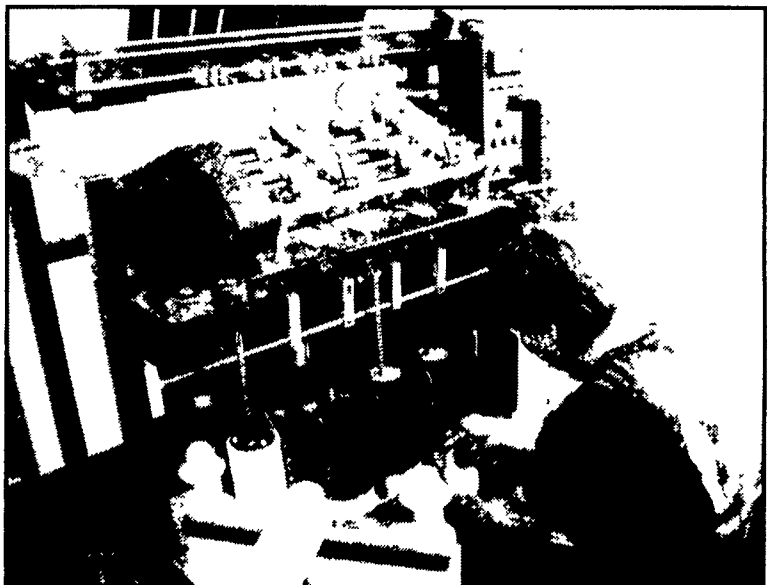
Skeining is the last part of the process, as the thread is moved from the bobbins by the skein winder to produce large, twisted skeins that are the finished product.

Customers are charged for the finished amount of product, since several pounds of wool — typically 5½-6 pounds in a fleece with heavy lanolin — are lost in the processing. The Pipers may do 70-100 pounds of roving and 10-15 pounds of yarn per week.

Although expansion is in their long-range vision, the couple is not looking for rapid growth, as they like to keep their turnover rate at its current point of two to three weeks. "This gives us a chance to keep up with it," she said. The majority of the wool goes out as roving, since most of the customers are hand-spinners.



The carding machine produces a batt or roving that is slightly twisted to help the fibers hold together.



John prepares the bobbins to receive their newly-plied yarn.