

Managing the Fiber Flock Fruit Salad or Observations on Mixed Species Farming

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A little more than fifteen years ago I caught the spinning bug. Having knitted and crocheted since my younger days I was nearing 40 and needed to do something else--to go from grass to garment. I wanted to produce the whole sweater from scratch. I was also living on a small farming space that needed some tending. It had been abandoned, leased as a corn field, used as a junk pile and finally sold in its last 20

years of ownership. At about the same time, a friend at work told me her dad was retiring from farming and needed to move his three sheep and two pet goats somewhere other than the retirement home lawn or the auction floor. My husband didn't object. We built a shed, put up some temporary fence and became a farming family.

The two goats gave us a handful of fiber the following spring. Of course I tried to spin it. Needless to say, Toggenburg crossbreeds do not give much fiber. The sheep gave us small fleeces. We diversified. I borrowed a Nubian buck, purchased two new Nubian does and a ram. We had dairy goats and Cheviots, milk, meat and fiber good for outdoor wear. It wasn't enough to really get the fiber farm going, but it gave me good practice in doing all the rest of the farm tasks. The following summer I found that the neighbor's daughter had cashmere goats. Another friend talked us into going to the MAPACA Jubilee where alpaca were all beautifully displayed and lovely. By the end of that summer we had a cashmere doe, a wether and three alpaca boys, a barn and a larger shed, more fencing, electricity and a water line.

Since that time we have had as many as 90 head when all lambs and kids were born. We have also had as few as 10. There have been times when I wondered why I had any animals at all. Normal people turn off the hot water heater, hold the mail at the post office and go on two weeks' vacation. Yarn does not need feeding, water or hay. Nor does it get caught in fencing, beat up the fence or require a guard dog to protect it at night from coyotes. Over the years I have considered selling off one or the other of the groups: sheep, goats or alpaca, but each has its advantages to the diversified approach. There are also a few drawbacks of mixing the types.

Initial considerations arise at the purchase of animals. Sheep are relatively inexpensive, unless they are in the rare breeds category. A good registered ram or ewe can run from \$150-\$500. Unless you are planning to breed seedstock as an additional income, you could purchase mixed-breed sheep with good wool and skip the registries. Cashmere goats from reliable breeders are from \$250 to \$400 in my experience. I've only ever bought four goats and bred the rest. This led me to research line breeding concepts and have a need to outcross. I chose Nubians as an experiment. These does and bucks cost between \$200 and \$350. A multipurpose goat with both fiber and milk was not really the outcome, but I did increase the body size and get nice long ears. Alpaca are expensive--unless you get "pet quality" males or undesirables that do not fit breeding programs. A good number of alpaca breeders have excess males for sale at decent prices. You may even find some deals. Check for health problems, conformation, good fiber and sound teeth.

Finding a place to house the variety of animals can bring some challenges as to door sizes, feeder heights watering containers and mineral placement. Each group has its own heat and cold tolerance. Sheep, goats and alpaca can handle the snow. Goats perhaps the least. Wind requires them all to have shelter. Freezing rain requires a roof. Alpacas will lie out in a good dry snow, but come inside for a cold winter rain. Steel pen gates that keep alpacas in place will let goats pass through roller bars. The same goats will pound the steel gates

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Cashmeres and Alpacas sharing space.

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until the welds break. They will also jump out and teach every other goat to jump out too. Heated water buckets that work for winter watering of sheep and alpaca will become solid masses of ice when the goats find that pulling the plugs is an entertainment feature. Dutch doors, rolling doors and sliding doors all become a challenge to goats. They will be able to learn to open them all unless the latches are clipped shut with spring clips. Turning lights off and on and opening water hydrants is another behavior of goats that is unanticipated. Short goats and sheep will need low feeder and water buckets. Alpaca will stick their feet in the same buckets and stock tanks to cool themselves in summer. They also reach over the stall dividers and eat hay from other stalls. In the instance of invaders or disturbances, they will turn toward the problem and hum. They will herd turkeys, attack small vermin and let you know when there are problems or new births. As the kids get lively, the alpaca will lie quietly and let the kids climb their furry bodies in exchange for the back massage.

Finding a veterinary service that will provide care to all species in your area may be challenging. Sheep get low priority in our area. Goats are considered expendable by many and alpacas are exotics. You may even need an extra insurance rider on alpacas unless you provide in writing that they are no more valuable than any other farm animal. All three species require rabies, tetanus and worming. Rounding up the herd/flock for a vet visit takes planning and several groupings. We keep three types of wormer on hand. Sheep and goats get drenches or pastes. Alpacas get injectable. Most things are interchangeable. Alpacas require additional care of teeth and toenails that are a bit different than the hooves of goats and sheep. Foot trimmers, hoof pick and rasp file are enough to keep the feet in good shape on all three groups. In keeping male alpacas, castration is recommended if there is no breeding program.

Feeding a mixed group requires some segregation. Sheep eat grass, require greatest pasture upkeep and rotation, but require very little minerals and grain to keep on weight and wool. Pasture rotations for sheep need to be adjusted based on stocking rate. More sheep need more frequent movements. We have our pasture in a mix of clover, orchard grass, birdsfoot trefoil and what grows as it grows. I tend to look for clumps of toxics like nightshade or milkweed and pull them out or hope nobody is reduced to eating the nasties. The trefoil took a few years to get established, but seems to make all of them happy. They seek it out.

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Sheep shelter--good thing they have all that wool; this looks *really* cold!



Sheep and goats share a short pen feeder.

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Likewise goat browse needs to be monitored for tree health and animal condition. Together the two species can decimate a pasture with trees if they are left on the area for long times. Goats love trees and woody shrubs, stripping trees to nothing, and will eat your apple trees to literal death. They do eat entire thistles and weeds that sheep leave. They also will clean fences if the power is off when the sheep stay mostly to flat areas.

Moving groups, one following the other into a pasture area, keeps down the thistles without using herbicides. The alpaca seem to be happy with both pasture and wooded areas. They are easy keepers ripping leaves off trees and grazing. They create manure piles that are easy to recycle into soil amendment for garden or flower beds. Alpaca require next to nothing as far as special grasses. They will eat thistle flowers. Since they tend to intimidate the sheep, we only graze the sheep, goats and alpaca together if the alpaca are in an area separated by electrified tape fence. They move pretty slowly unless running down the field to check out a curiosity and tolerate the goats going under, over and around them.

Our current fencing is high tensile eight stranded or staggered spacing six strand. The top line is white wide electrified tape for visibility where alpacas are pastured. Pasture division netting has vertical struts for sheep at 48". For goats it is higher, finer grid and stronger with more struts. Separation fencing for bucks is solid, repairable wood, steel or concrete. I've learned to use highest grade gates and latches I can afford at the time or they will be destroyed.....even those heavy steel ones will have stress and testing. Alpacas are respectful of electric. They will sometimes challenge tape or netting.

Sheep feeds contain low or no copper. Sheep feed is purchased and kept separately from the goat chow. Grains are shared among the groups. Sheep and goats eat corn in all of its forms, whole, steam flaked and cracked. Alpaca can choke on it. They seem to prefer the 16% pelleted goat chow and smaller pieced grains. Goats require minerals high in copper relative to sheep and require their mineral feeders to be inaccessible to the sheep. Alpaca seem to be doing fine with what's available in goat chow and minerals. We at first purchased separate alpaca feed pellets and minerals, but later cut expenses by letting the goats share theirs. Everybody likes apples and vegetables. They get what I can find from gleanings or leftover cabbage leaves and boxes at food banks.

Water is needed in varying amounts. Figure one gallon per head per day on average. Access needs to be varying in height.



Alpacas stick their feet in it and muck up 50 gallons in a flash. Goats prefer warm water, nearly painfully hot, in winter. Sheep get a good amount of water from grazing. Babies need access, particularly in weaning times, but also protection so they don't fall in, or get stuck under and around tanks.

As to behavior, there are some caveats. It is important to know the difference between leading a herd to another location and coercing them when stressed. Sheep, goats and alpacas all react differently to body language. Open the gate. Alpacas are curious and move toward the sheep. The sheep run in fear with alpacas in pursuit. Rodeo results! Some people report that they get along. I cannot seem to get these sheep to trust the alpaca. Goats are aggressive, feed hogs, jumpers and head bashers. The sheep get pushed out of feeders and shelter. Goats are climbers. Sheep get pushed out and horned from above. Alpacas coexist with the goats. Sheep and goats can be pastured together as long as perimeter fencing is adequate and appropriate.

The horns on goats and some sheep are a blessing and a curse. If you handle horned animals, you need to be conscious of their behavior. Goats will twist sideways, hook under other animals or just hone the horns on fencing. Rams will, in general, charge to pummel with their heads or horns. Alpaca use their necks to wrap around each other aggressively, spit the dreaded green gunk or lash out with back feet to defend. They will also run down a flock of wild turkeys invading their pasture.

Using dogs to work the mixed groups has been a learning experience. We have a Great Pyrenees who has been here for nearly nine years. He has gone from sheep pup/harasser to goat dog/harassee to general mixed pasture roamer. Lately he

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has moved indoors most days since his joints are catching up with him in his age. He has defended by barking, attacking vermin, patrolling, defending against intruding dogs and just being there. Herding dogs we have never tried as I don't have the time to train a good one. Learning to work with the guard dog has trained me as much as the dog.

Our animals have provided mutton, lamb, goat, hides, milk for personal use and fiber. Fiber collection in mixed type farming boils down to some simple considerations: growing yield, shearing, sorting, cleaning, processing yield, end products, storage, marketing, public perception and the cost of production.

Wool growth depends like all fibers on the animal health, stress, pregnancy timing, and nutrition. Scheduling lambing, shearing, and processing take a few years to get the kinks worked out. It is weather resistant in the growing stage. A large number of sources for breed variety exist in the states. Wool is high volume, lower processing cost per pound than cashmere or alpaca, but poundage is larger overall for the flock at 6-10 usable pounds per fleece. A cleaning loss of 30-50% can be seen depending on grease. The added shearing cost, \$10/head, scouring, and shipping of large weights can make the processing much more expensive than you might think. Several mills charge on incoming weight so a lack of good skirting of the fleeces can cost you significant dollars. Wool has a great versatility, blends well with alpaca, takes dye well and is easy to get in white or cream colored fiber. The handspinning market is readily available, but competition to sell wool products is stiff and, from looking online, the market seems to be filled with plenty of options for the consumer. Wool felting, needle felting, felted sheets, roving, weaving, knitting and crochet yarns are the primary products. Selling quantity over high-priced product is an option--if you can bear to do that after spending so much of yourself on production. Fiber color, diameter, staple length, crimp, strength and grease content are all parameters that can be the focus in a breeding improvement program. These can be changed noticeably in one generation with selective breeding. Breed specificity is one approach lately that is used to advantage in marketing. Wool has sometimes a negative public perception, being seen as low value and high in fiber care needs (and itchiness). In some circles it is seen at the opposite perspective as ecofriendly, renewable and cost effective, even sporty! Education here might be the key to marketing wool.

In producing cashmere fiber, animal health, stress, pregnancy, weather and kidding also combine to affect the fiber. The

cashmere has a low yield, 4 oz. per animal, relative to wool. The timing and labor for brushing is crazy to schedule, depending on animals' individual bloodlines and shedding. So far my breeding improvement program for fiber has been less predictable. It is difficult to secure bucks consistent with desired outcome. Combing by yourself is at times dangerous and exasperating, and weather dependent. Animal handling one-on-one is a fierce task. Hiring help realizes mixed results. Some people come expecting to brush a docile puppy. Others brush with a vengeance and damage the fiber, getting upset when asked to comb a particular way. Goat fiber collection needs the boxes and bags and brushes to comb out the fiber and some way to hold them individually without harm to goat or human.

Color variations in a herd require small batches to be kept separate. Sorting as to length, style, fineness, crimp, and body region takes considerable time. Or you can toss it all together and send it to the mill. The latter approach assumes you have enough fiber to even get a minimum weight shipment prepared. Finding a well-functioning mill to do the processing takes a while and some loss. Cashmere is delicate. Processing requires patience, more patience and a fair degree of delayed gratification. Of the three animals we raise, this fiber has the most noticeable processing-dependent yield.

Variance among animals requires close sorting. After several classes on fiber judging I'm not sure that everyone agrees on what makes the best fiber animal for the best fiber produced. Cashmere fiber brings lots of ooh and ahhs, but if you don't produce and market, you've just got cute goats with horns. Our production is too small to base any reliable income solely on cashmere fiber.

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Mixed fiber fabric.

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The low yield, dehairing, and processing to fluff or cloud, is reasonably inexpensive since the weight is low, but making yarn requires large amounts. Small scale is pointless and slow-or a multi-year investment. Hand processing from combing to dehairing and spinning requires hours, days and weeks to see progress. Profit? Handspinners may buy raw fiber. To handspin it yourself demands either skill with a takkli or a very high spinning ratio and a light touch to get all together in a single, but not coarse and hard spun. Blending of wool or alpaca with the cashmere is generally not workable due to fiber length. Why would you want to? By itself, cashmere has a high perception of value among customers, but cheap imports have devalued it, push pricing downward. Consumers may want the luxury of the fiber, but also want the price of large chain stores.

Alpaca requires scheduling of shearing. Animal care at shearing is pretty easy once you have a shearing team. We have the same shearer for our sheep. We make separate days for the two events. Handling the animals for fiber collection requires a halter, lead and cross ties. Some use chutes for the alpaca. Others use leg ropes and pulleys to handle them during shearing and lay them on a matt. Processing, shearing, sorting, blending, processing are all pretty smooth and available. Multiple colors are available. The fiber takes dye well if you choose to do that to this fiber.

The fleece volume is pretty good per animal and sorting can be done at shearing by selective bagging of fiber into blanket (prime) neck (so so) and legs (felting fiber if you care to spend money processing short coarser fiber). Alpaca fiber blends well with wool once compatible staple length and hand are determined. It contains lots of dust, but no grease and kills your shearing blades. It is reasonably easy to find more fiber if you need it and choose not to buy more animals. The fiber has no memory in garment construction as is found in wool. The length of fiber and drape and slickness make it a spinning challenge and a blessing. Perception of alpaca products is generally positive and upscale, but much of the market is resale of imports. These compete with any US products unfavorably due to mill costs for farm producers.

Marketing of the products of the mixed fibers has been my weakest point. What could I realistically make from wool that people want? From cashmere? From alpaca? I have offered yarn, batts, roving, fleeces, raw fibers, hides, scarves, sweaters,

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Bearlin Acres farm products

Alpaca/wool socks, mixed fiber sweater, mixed yarn scarves



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hats, mittens, ornaments and animals, alive and for the freezer. It is a constant circus to produce....something. The markets have seasonality. Packaging is critical for garments or hand produced items as is lately the "story of production". Finished garments have demanded a different approach from yarn. I can only produce and market small scale. The day job inhibits production and selling times. Being away from the farm is expensive and difficult to arrange. This is the same as for farming one or ten species. With three types of animals I can say that we only ever travelled with the goats due to the convenience of the Virginia and New York shows and their flexibility. Alpaca expos usually permit only papered animals to take part. Sheep events are either fairs, breed shows and sales or FFA/4H. Most of the local exhibits for sheep are geared to meat animals. Very few classes smile on wool breeds in full wool in summer. If you are marketing wool products, getting ribbons in classes is not really where the audience might be found. The explanation to the public about fiber animals is a long one no matter which breed or type you raise.

Fiber specific venues have given the most profit and continued sales for all products as compared to general craft shows. You never know what is going to be the top selling item. One weaving weekend I sold all my sheep hides as bench covers and very little yarn left the supply. At another show all of my dyed roving left the bins. On farm open-houses brought people to our door. That is good and bad depending on their demands and attitudes. I have continually asked myself, "How much time and money can you spend on marketing each type of product?" Life is short.



Cashmere babe.

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