

A decade of dairy goat farming and running a diverse farm: lessons learned



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The farm enterprises

- Goat Dairy-
Farmstead
creamery (2005-
present)
- Organic fruit
orchard (2004-
present)
- Farm Kitchen
(2008-present)
- Agritourism &
Education (2011
present)



Brief history of the farm

- Bought farm in 2003; 7 acres plus house and 5000 sq. ft. outbuilding – corn/soybean
- All land treated organically since beginning
- Planted all land into buckwheat cover crop
- 2004: planted 3 acres of fruit trees and berries
- 2004: purchased our first four goats
- 2005: built dairy and cheese plant; became first licensed “farmstead cheeserie” in Illinois-milked 25 goats and made fresh goat cheese

History cont'd

- 2008: expanded milking herd to 50 does; pipeline milking system; commercial kitchen, "Dinners on the Farm"
- 2009: added sheep milk cheeses (ended in 2014)
- 2011: added goat milk gelato
- 2012-present: intentional efforts to promote agri-tourism: tours, classes, workshops, farm to table experiences

How we got started

Great advice: “get some goats”



June 2004:

3 Nubian does
and 1 buck (all
yearlings)
arrive at
Prairie Fruits
Farm

Other good advice: “find a breeder who is breeding for production herd”



Humble beginnings



Started small to see what works

“Small problems are easier to solve than big problems”

Needed to decide what wanted to be and what *didn't* want to be

- Small dairy serving the local market?
- Large dairy selling fluid milk and other products within the state or out of state?
- Number of milking does?
- How much land do we need to house and pasture them adequately?
- Do we like the animal husbandry more or less than the product manufacturing?
- What kinds and how many products do we want to make?
- Who will we market our products to, how will we market them?

Our Market research

- Informal market surveys
 - Individual consumers
 - Retail stores (small scale, independent shops)
 - Chefs at local restaurants
- Visited grocery stores to see what products they carry and how much they charge
- Talked to other artisan cheese makers to see what they are producing and how they are selling their products
- Fruit price determined by surveying farmers' market prices; little premium for organic

Know the regulations and the regulators

- Contacted local health department inspector BEFORE began any construction
- Developed good working relationship with local inspector
- Educated ourselves about IL Health Dept. regulations
- Shared designs and plans with inspectors early and often
- Tried to make sure equipment would meet state and federal requirements
- Tried to develop nerves of steel and brace ourselves for incredible scrutiny during the inspection process

From dreams to build out

- Wrote business plan
- Got business loan from Farm Credit Services
- Submitted plans to IL Dept. Public Health
- Identified certified trades people to do the work
- Liquidated financial assets when loan proved inadequate
- Kept off-farm jobs

Construction

Assumptions

- Construct minimal unit to be Grade B, work into larger scale as herd increased
- Do most of construction by ourselves and with friends
- Get Certified Grade B or A by early June, 2005

Construction

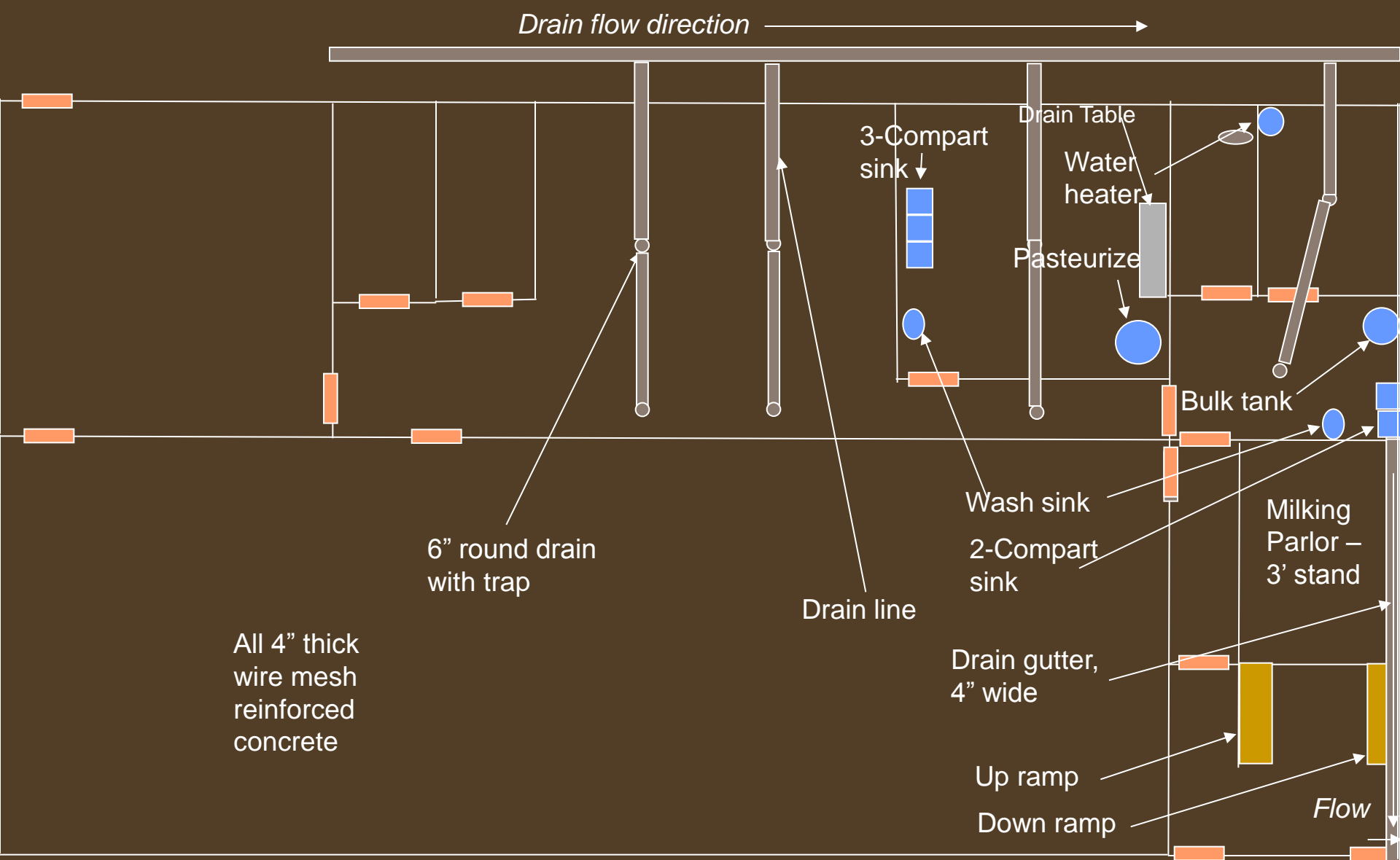
Actual

- As long as you're doing it, build out to nearly full scale: bathroom, wastewater handling system, heating/cooling
- IDPH required plumbing, electrical, concrete done by certified contractors; walls, ceilings, insulation by ourselves with friends
- Certified Grade A in second week of August 2005 (two months of milk production dumped)

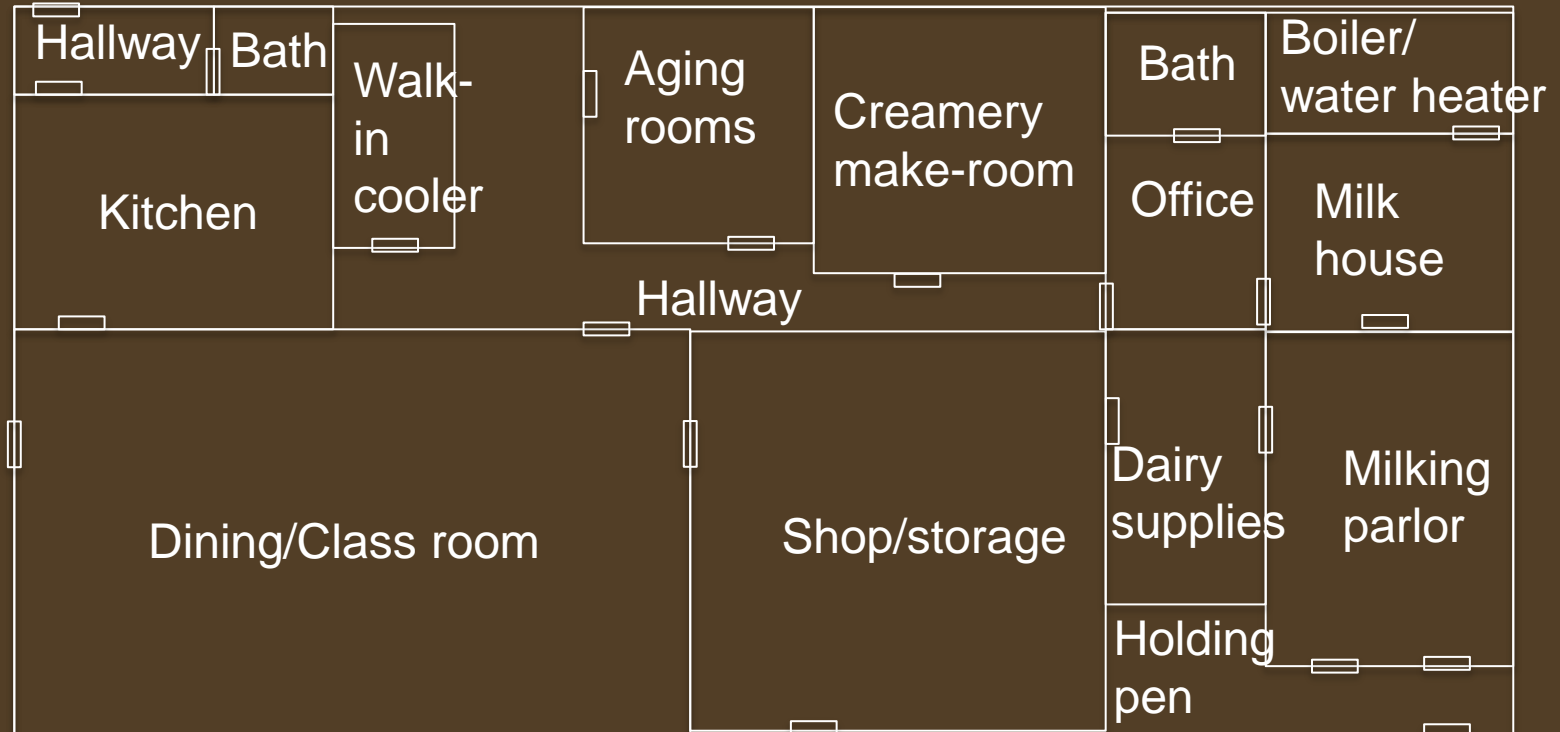
Barn at Prairie Fruits Farm & Creamery – Ground Floor 2003



— Door



Barn at Prairie Fruits Farm & Creamery – Ground Floor 2016



— Door

Construction spring 2005



The original milking parlor

No wood unless painted

Easily cleanable and washable floors, walls, structures

Bucket milking system—
2 goats at a time



Bucket Milker Transfer and Cleaning





The milk house

- ✓ 2 compartment sink
- ✓ Hand sink
- ✓ Bulk tanks
- ✓ Floors and walls easily cleanable and washable



The Cheeserie in 2005





Current Make Room



Current Make Room





Packaging area



The Drying Room



Aging Rooms



Dairy Size

Assumptions

- Year 1, 2005: 10 – 12 does
- Year 2, 2006: 20 does
- Year 3, 2007: 30 does, maximum

Actual and current projections

- Year 1, 2005: 25 does (14 milking)
- Year 2, 2006: 25 – 30 milking
- Year 3, 2007: 35 – 40 milking, max
- Year 4, 2008: 50 milking
- Year 7-10, 2011-15: 70+ milking

Expansion of our Business and Plans for Sustainability

- Needed more land to reduce purchased feed- friend purchased 15 adjacent acres for pasture and hay
- Upgraded milking parlor to a 14-doe stanchion and pipeline milking system in 2008
- Bought 2nd cheese vat pasteurizer
- Built commercial kitchen to offer farm dinners and do value-added products from fruits and vegetables



Expansion-Diversification 2008-2009

- Helped Amish family in Arthur become Illinois' first licensed sheep dairy
- Started picking up 100 gal/week of sheep milk in 2009
- Develop a line of artisan sheep milk cheeses in addition to our goat milk cheeses
- Increased goat milking herd to 60 goats



Expansion-Diversification

- Milk quality/ consistency challenges with sheep dairy; ended sheep milk cheese production in 2014
- Increased milking herd to 70; added gelato as new value-added product



Current Operation

- Milking 70-80 goats
- Standing herd of 90-100 goats
- Producing 14,000-15,000 lbs. cheese/yr.; 8-10 types
- Seasonal goat milk gelato (with surplus milk) ~3000 pints/yr.
- Seasonal , pastured dairy (AWA certified) – dry in Jan and Feb; 2016: purchasing cow milk for winter cheese
- Land is organic (fruits, pastures)
- Sell 50% direct to consumers—farmers' markets, CSA, on-farm sales
- Sell 50% wholesale in Champaign-Urbana area and Chicago, some out of state
- Offer classes and workshops on cheese appreciation, cheese making



Challenges of Building the First Farmstead and Artisan Cheesemaking in Central Illinois

- No community of fellow cheese makers close by
- Little supplier infrastructure for dairy farming in Central IL
- Very high capital costs to construct a new facility
- Multiple layers of regulations - learning experience for us and regulators
- Regulations “one size fits all” regardless of scale

Joys of Being First Farmstead Cheese Plant in IL

- Unique enterprise
- Showcases what Central IL has to offer
- Hard work translates to products we are proud of
- Sky's the limit on our creativity
- Tremendous community and regional support



Is there money in it?

- Cow's milk
 - Range from \$15 –\$25/hundredweight commercial price
- Goat's milk
 - Supply to cheese plant: minimum 300 milkers
 - Range \$35- \$40/hundredweight
 - PFFC: estimated cost (70 goat herd, seasonal): \$90/hundredweight
 - Costs:
 - Salary: about 40% (not counting owners)
 - Feed: about 40%
 - Overhead: about 20%
 - Revenue:
 - Sale of kids, on the hoof or meat: 8%
 - Balance: Assume break-even for dairy, so balance is sale to creamery at \$90/hundredweight

Is there money in it?

- Economies of scale may not be there for less than 100 goats
- Feed and salary expensive for amount of milk produced
- Critical to have high value products: artisan cheeses, gelato
- Control of all aspects of quality: feed, environment, animal health and welfare, milk handling, purity
- Sell high quality, high value cheese products (\$13-\$28/lb. depending on wholesale/retail, style of cheese, average about \$18/lb.)
- Also accounting for cheese yield (14–30%, average 16%), 100 lb. of milk produces \$288 worth of cheese
- Sell raw milk in Spring for \$14/gallon (Meyenberg goat milk @ \$17/gallon (\$4.25/qt.) at WalMart)

Overhead

- **Utilities: Electricity, Gas**
 - Assumed: \$200/month
 - Actual 2006: estimate about \$300/month (air conditioner/furnace, hot water)
 - Actual 2007: about \$500-600/month because of utility rate hikes
 - Actual 2008/09: over \$800 per month due to rate hikes
 - Actual 2014/2015: \$1200/month, increased use
- **Wastewater treatment**
 - Assumed septic system constructed could handle black and grey water
 - Drain field exceeded capacity following expansion in 2008
 - Whey went “down the drain for first 5 years of production, then switched to whey collection and field application.
- **Supplies: cheese making, dairy, etc.,**
 - Assumed \$500/month
 - Actual 2006 & 2007: close to \$1000-2000/month
 - Actual 2008: close to \$3000/month
 - Actual 2014/15: \$4000/month

Overhead cont'd

- **Animal feed and health maintenance**
 - Hay at \$3.00/bale: dry year, \$4.25 - \$6.00
 - 2006 grain at \$8/50 lb. bag
 - 2007 grain at close to \$12/bag
 - 2008/09 grain at close to \$15/bag
 - 2009-12 self-sufficient in hay
 - 2013-15 grain and purchased hay costs are \$38,000/year.
 - 2014/15 milk replacer for kids: \$5,500
 - current vet costs range \$2,000-4,000/year
- **Labor**
 - 2006: \$8.50 – 10.00/hr., more for construction; 1 full-time, 2 part-time
 - 2007: \$8-15/hr., depending on responsibilities; payroll was approx. 30% of total costs; 1 full time, 2-3 part-time
 - 2008—herdsman and assistant cheese maker at \$15/hr.; 3 additional seasonal laborers (2 foreign interns)
 - 2014-15: six full time staff—wages start at \$10/hr. and go to \$17/hr.; chef is full-time and salaried; 35% of total costs go into payroll
 - Payroll taxes, workers' compensation, etc. need to be factored into total labor cost

Yes, we're profitable, but..

- Constant challenge to uphold our values and make money
- We are working harder every year to keep retail sales at least 50% of our business
- Took on lots of debt to grow business fast; debt burden impedes cash flow of our hyper-seasonal business

The Orchard: Then



The Orchard: Now



Orchard versus Dairy

- Original plan was to emphasize both enterprises—local organic fruit, small, organic goat dairy
- High cost of dairy start-up shifted resource allocation away from orchard
- Time lag to viable fruit harvest, challenges of managing orchard organically exacerbated shift
- Working with incubator farmers to revitalize fruit part of farm

A look toward the future

- We're not getting any younger, succession planning
- Now able to evaluate the profitability of our enterprises by type (dairy, creamery, kitchen, agritourism, orchard) so we can decide where best to allocate resources
- Working with The Land Connection to train next generation of sustainable farmers
- Setting up "incubator" farmers on our land—vegetables, fruit, flowers
- Focus on improving sustainability of our farm with financial solvency at the forefront, while not compromising our environmental and social goals.

