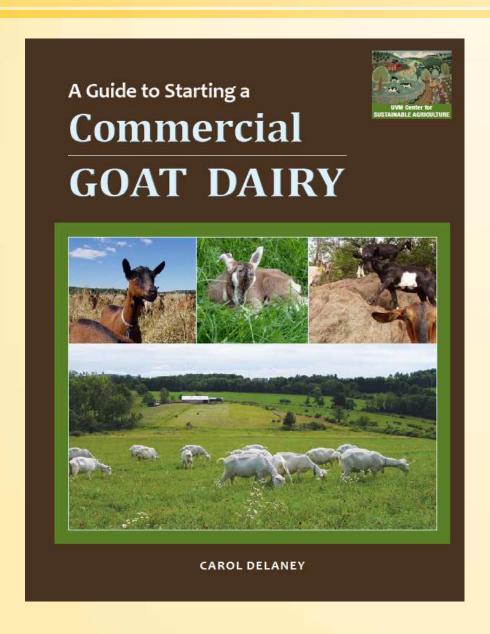
# Starting a commercial goat dairy: Are you ready?

New Farmer Project Webinar, University of Vermont Extension

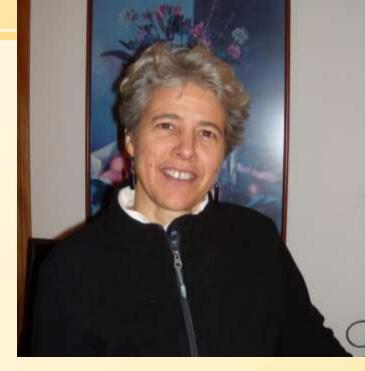
March 26, 2013

Carol Delaney Small ruminant dairy specialist www.caroldelaneyconsulting

All rights reserved ©



### **Carol Delaney**



#### www.caroldelaneyconsulting.com

M.S. Ruminant nutrition, Cornell University

Small ruminant dairy specialist, UVM Extension, 1998-2008

Sheep and goat production training, Winrock volunteer, Mali, 2012

International Goat Association member; attended 3 Conferences in France, Mexico, Spain

Barn layout, nutrition, milk processing, grazing/browsing, milk quality, breeding out of season, etc.

## Laying the platform - you are the platform

- planning
- livestock considerations,
- budgeting
- record keeping
- time management
- marketing.



## Starting a commercial farm means opening your life to the public.

- Always conveying who you are
  - What do people think when they say "oh, yeah, So and So Farm is the one that



## "Marketing isn't advertising;

marketing is the product we make, the service we offer, the life we live....it involves weaving a story and weaving a tribe and weaving a network that means something."

-Seth Godin

## Planning your business boils down to:

Our farm \_\_\_(people and land)\_\_\_\_\_
raises/produces\*\_(product)\_\_\_\_
\_ in \_\_\_\_(this way / for this reason)\_\_\_\_
for
\_\_(customers)\_\_\_\_\_who\_\_\_\_

Does, bucks, lots of kids, goat meat, manure, farm landscape, pelts, youth education, internships, milk, cheese,



#### Seth Godin

"Being clear about what we are doing and why is the first step to doing it better."

http://sethgodin.typepad.com/



## Imagination...

...is the vehicle by where we increase knowledge.

Combine with

Observation and get

Creativity





Maggie and Abby have an Excellent Car Adventure!

## Sustainability

- Persistence of status quo? Stability?
- Resilience? Ability to Adapt?

External factors favoring sustainability:



Dr. Christi Peacock, SIDAI

- Environmental-Feed grown by farmer or produced locally. Economic - Strong markets for livestock and processed products.
- Social Well-enrolled farmer-member organizations for culture of mentoring; public awareness and support through cultural activities.
- Institutional Breadth of skilled support services for information, research and training.

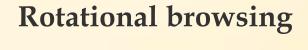
Your area

checkbox



## Land for foraging and hay

**Rotational** grazing







#### Land for other livestock

Horses follow 2 weeks after goats in most fields except those farthest from barn which horses enter first so that pastures do not over grow.





## How much land per dairy goat?

- Assuming kids raised inside
- 2-.3 acres per milking doe that grazes and hay for rest of year
- ~.14 acres per goat for just grazing
- 50 goats = 15 acres
- 100 goats = 30 acres

### \*consultants, advisors, mentors\*

Dairy goat farmer/mentor	Veterinarian
Feed company rep	Milk quality
Discussion listserve	Goat specialist
Financial advisor	Land management
Farm association	Agency of Ag contact
Milking equipment technician	
Magazines	Honest feedback counseler
Websites	
Livestock hauler	

<sup>\*</sup> Two people you need in your professional life: agonists and procrastinatrix; Seth Godin blog 1.17.13

## Transition from fun and food to fun and food and profit

- Means measuring.
- Measuring is not living.
- But measuring allows you to make choices that will make your life more enjoyable.
- Annual family household income

## 'Pre-nuptial' financial preparation

IRC 183; expenses can't exceed income from hobby

Publication 225 Farmers Tax Guide

You can elect to deduct up to \$5,000 of business start-up costs and \$5,000 of organizational costs paid or incurred after October 22, 2004. The \$5,000 deduction is reduced by the amount your total start-up or organizational costs exceed \$50,000. Any remaining costs must be amortized.

IRS 1040 Schedule F

File Edit View Window Help



Highlight Existing Fields

Please fill out the following form. You can save data typed into this form.

SCHEDULE (Form 1040)
Department of the Tr

reasury Internal Revenue Service (99)

#### **Profit or Loss From Farming**

► Attach to Form 1040, Form 1040NR, Form 1041, Form 1065, or Form 1065-B.

▶ Information about Schedule F and its separate instructions is at www.irs.gov/form1040.

Attachment Sequence No. 14

OMB No. 1545-0074

Name o	of proprietor			Social security number (SSN)
A Prir	ncipal crop or activity B	Enter code from Part IV	C Accounting method:  Cash Accrual	D Employer ID number (EIN), (see instr)
E Did	you "materially participate" in the operation of this	s business during 2012? If "No,"	see instructions for limit on pas	sive losses Yes No
F Did	you make any payments in 2012 that would require	re you to file Form(s) 1099 (see in	nstructions)	Yes No
G If "Y	es," did you or will you file required Forms 1099?		20 20 20 340 W 20 W 20 B	Yes No
Part	Farm Income - Cash Method. Com	plete Parts I and II (Accrual i	method. Complete Parts II a	nd III, and Part I, line 9.)
1a	Sales of livestock and other resale items (see ir	nstructions)	1a	
b	Cost or other basis of livestock or other items r	reported on line 1a . <del>←</del>	1b	
c	Subtract line 1b from line 1a		25: 12:	1c
2	Sales of livestock, produce, grains, and other p		5.00 #5555 # 505 5 # 5 # 5 # # #	2
3a	Cooperative distributions (Form(s) 1099-PATR)		3b Taxable amount	3b
4a	Agricultural program payments (see instructions)	. 4a	4b Taxable amount	4b
5a	Commodity Credit Corporation (CCC) loans re	ported under election		5a
b	CCC loans forfeited	SC I CONTRACTOR OF THE CONTRAC	5c Taxable amount	5c
6	Crop insurance proceeds and federal crop disa	aster payments (see instructions	5)	
a	Amount received in 2012	. 6a	6b Taxable amount	6b
С	If election to defer to 2013 is attached, check h	nere ▶ ☐ 6d	Amount deferred from 2011	6d
7	Custom hire (machine work) income			7
8	Other income (see instructions)			8
9	Gross income. Add amounts in the right column accrual method, enter the amount from Part III,	mn (lines 1c, 2, 3b, 4b, 5a, 5c, 6	6b, 6d, 7, and 8). If you use the	9







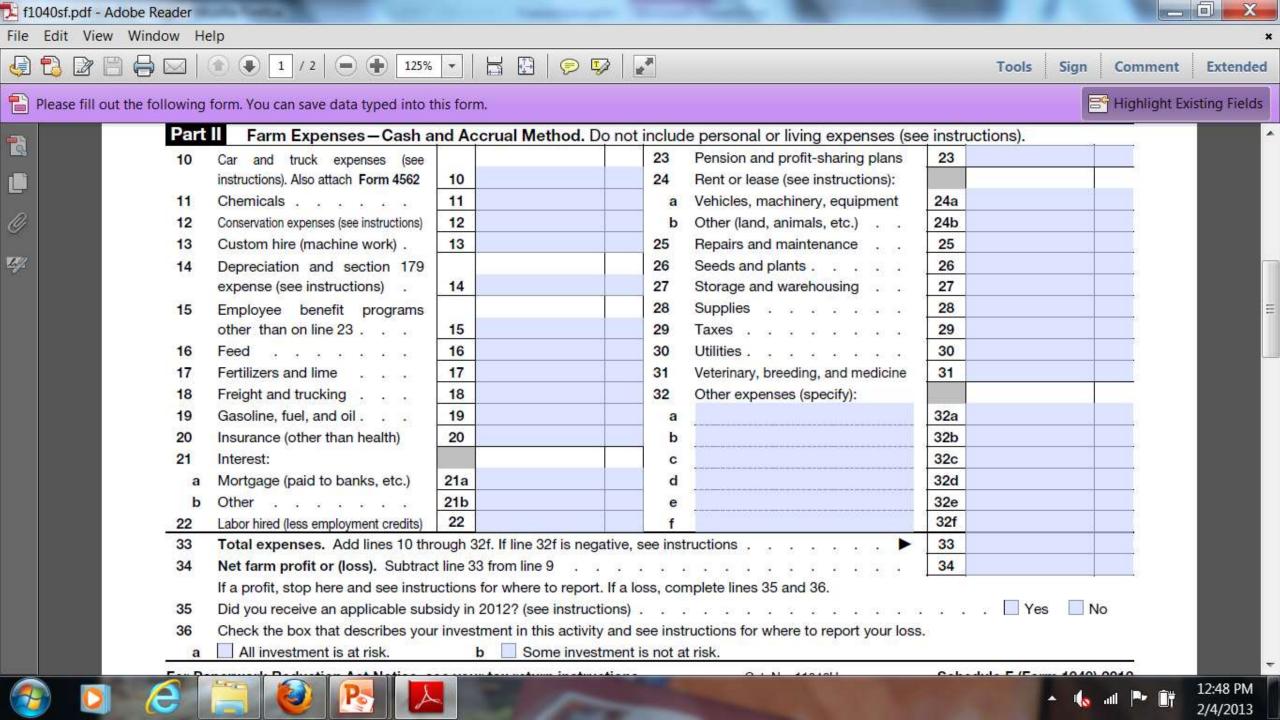














Expense and income records: Receipts and Invoices

Save by month

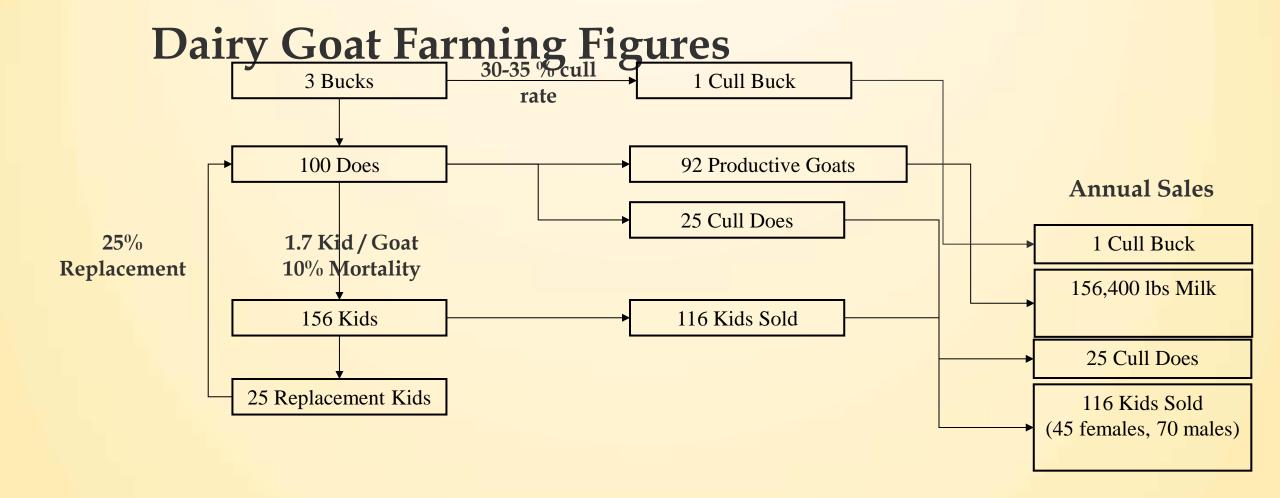


Or

Save by type







## Starting a herd: Buying kids versus adults

#### Raise own herd:

- Easier to find kids to raise and it gives you time to learn and prepare
- Can try to breed replacements at 1 year of age out of season

#### Buy adults:

- Adults have records and management system in place
- Milk sold can provide some income to offset expenses for start up

Feed Costs of Raising Kids (0-15months at first kidding)

Feed	Cost \$
Milk replacer-30 lbs@\$1.8-2.55	54-77
Or Goat Milk 258 lbs@.50	(129)
Or Cow milk 30 gal.@\$3	(90)
Grain 640 lbs@\$400/ton	128
Hay 1000 lbs @\$300/ton	150
Total minimum cost of feed	\$332-407
Add labor, meds, bedding, etc	

#### Raising Meat Kids: VCM Project Spring 2012

#### MODEL #1 courtesy of Laini Fondiller

Kids to 80# Liveweight @ 8 months (assumes larger breed saanen, alpine, etc.)

#### **EXPENSE**

			COST PER KID				
			1: Goat milk	2: Goat Repla	3: Cow Milk	4: Cow Repla	cer
			\$46.40/cwt**		\$18.00/cwt		**3.2% pro, \$14.50/lb pro
			~\$4.08/gal	(\$3.15/gal)	~\$1.58/gal	(\$1.51/gal)	
day 1-14	1/4 gal milk/	day	14.28	11.03	5.53	5.29	
day 15-98*	1/2 gal milk/	day	171.36	132.3	66.36	63.42	*Wean @ 50# taped weight
Hay, 2nd cut	2#/day	\$4/40#	\$19.00	\$19.00	\$19.00	\$19.00	
			COST PER KID				
			a: Bulk(\$362	/ton,\$.18/lb]	b: Bagged(~:	\$540/ton,\$.2	7/lb)
Grain	day 35-70	1/2 #/day	\$3.15		\$4.73		
	day 71-224	1#/day	\$27.54		\$41.31		

TOTAL COST:

Weight 80# @ 8 months

Milk & Grain Type:				
1a	\$235.33			
1b	\$250.68			
2a	\$193.02			
2b	\$208.37			
3a	\$121.58			
3b	\$136.93			
4a	\$118.40			
4b	\$133.75			

Maintenance diet for additional time past 8 months (1# grain plus 2# hay/day) add:

\$0.20/day bul.	k grain	\$0.29/day bagged grain
1 month	\$6	8.7
3 months	\$18	26.1
5 months	\$30	43.5
8 months	\$48	69.6
10 months	\$60	87

Other costs: Bedding, deworm, vaccinations, medications (i.e.: coccidiostat), heat, hired labor, acidifier for milk, etc.

## 2006 ADGA Averages by Breed

Breed	lbs/lactation	BF	Protein	*ECM	
		%/lbs	%/lbs		
Alpine	<b>2383</b> (1130-4400)	3.3/77	2.9/68	2266	Alpine
LaMancha	<b>2141</b> (890-4420)	3.9/82	3.1/66	2237	LaMancha
Nig. Dwarf	<b>748</b> (300-1720)	6.5/47	3.9/29	1062	Nig. Dwarf
Nubian	<b>1825</b> (610-4030)	4.7/85	3.7/66	2173	Nubian
Oberhasli	<b>2301</b> (860-3910)	3.6/81	2.9/67	2284	Oberhasli
Saanen	<b>2607</b> (1080-5140)	3.2/83	2.9/75	2467	Saanen
Toggenburg	<b>2253</b> (880-4380)	3.2/70	2.7/67	2126	Toggenberg

<sup>\*</sup>Energy Corrected Milk

## Efficiency of Production by Breed

Exercise to rank goats by ability to produce by body weight

Breed	Size(lb.)	*ECM	ECM/BW
Alpine	(135-240) 160	2266	14 Alpine
LaMancha	(135-220) 150	2237	15 LaMancha
Nig. Dwarf	(60-75) 70	1062	15 Nig.Dwarf
Nubian	(135-240) 170	2173	13 Nubian
Oberhasli	(110-180) 140	2284	16 Oberhasli
Saanen	(145-240) 170	2467	14.5 Saanen
Toggenberg	(120-200) 160	2126	13 Toggenberg

<sup>\*</sup>Energy Corrected Milk

## **CAEV** Prevention

- Buy goats from farm with CAEV prevention program
- Kids are removed at birth and raised on heat treated, CAEV free, cow or milk replacer milk.
- Animals are ELIZA tested\* 1-2 times per year to maintain CAEV free status
- Separate positive from negative herds

\*Washington State University, Washington Animal Disease Diagnostic Laboratory

www.vetmed.wsu.edu/depts\_waddl/caefaq.aspx



## Caprine Arthritis Encephalitis Virus

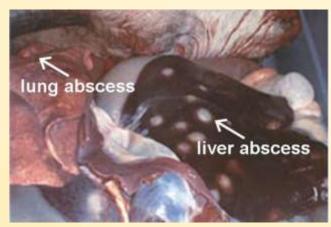
Transmitted through milk, saliva, body fluids

Similar to HIV with a waiting period before exhibiting symptoms

Symptoms include "hard bag" which is udder scar tissue; swollen leg joints

Death or culling at an earlier age





## Caseous Lymphadenitis

Spread by pus in burst abscess with Corynebacterium pseudotuberculosis

Vaccinate if animal has not been exposed before; can cause severe reactions in infected animals

Quarantine new animals for 60 days

Ann Lichtenwalner, DVM Animal Health Lab, Maine, SARE grant to test for and create a decision tree for CL

www.sare.org, reports



### Internal parasites

Anthelmintic misuse and resistance to drugs: you are importing worms resistant to drugs based on the previous management of the goats you buy

Interview goat owner about deworming frequency and dewormers

The most susceptible

are kids under 6 months

goats during kidding and in early lactation or when there is high energy demand

## Record keeping - if you can't measure it, you can't change it.

- Milk production: Able to select animals because milk production and components in milk have a 30-40% heritability. Milking speed is 65% heritable.
- SCC is heritable only in that bad udder conformation is heritable
- Growth rate of kids
- Health vaccinations, procedures, body weights, body condition scores, deworming, reasons for culling.
- Pedigree records birth date, dam and sire, siblings, multiple birth number.

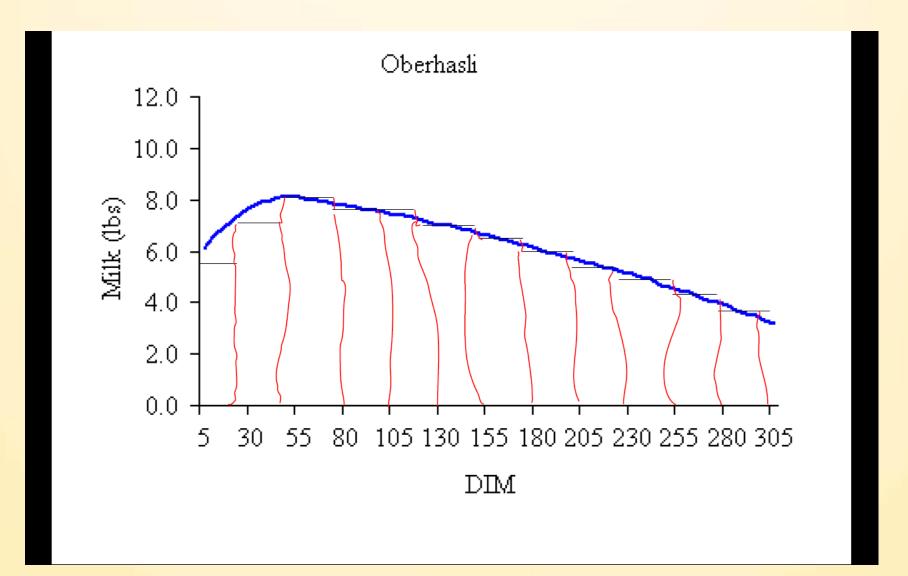


#### Milk Production Records - Income

- DairyOne/DHIA offers owner testing
  - Hot sheets-somatic cell count
  - PCDART program
- Milk yield formulation



Smart Software for the Smart Dairyman! 800-642-5808



### Average Milk Yield for lactation

- (Month1 + Month2)/2 X days between for each month of lactation
- Eg.

May 15: 8 lbs milk plus

#### June 15: 10 lbs

Total 18 lbs/2 X 30 days

- 9lbs avg. X 30 days = 270 lbs milk/month 1
- (10 lbs milk + 12 lbs)/2 X 30 days
  - 11 lbs avg. X 30 days = 330 lbs milk/ month 2

#### BAR GRAPH FOR INDIVIDUAL GOAT

## Average daily production: need daily production divided by number of goats milked into tank

	# goats AM	# goats PM	Avg. # goats into tank	Bulk tank Ibs	Milk removed
Jan 1					
Jan 4					
Jan 7					

### 2006 average annual goat milk production on 6 farms in Vermont

- 1650 lbs/year
- Grain intake cost of \$0.10 (+/-.01) per lb of milk
- Mostly grass based in summer
- Fed 2 to 5.5 lbs grain per day
- 9 month lactation
- 6.1 lbs/day avg.

## Avg. sheep milk production



Lbs/day/ewe averages

## Production per ewe, grass based

- 30 day wean, 120 day machine milked
- Starting with low milk genetics flock after 5 years and 3 years on DHIA testing

year	lbs of cheese	# of sheep	cheese/ewe
2004	1000	26	38
2005	1200	31	39
2006	2200	46	48
2007	2300	36	64

Selected ewes based on milk analysis of protein and yield of milk to predict lbs. of cheese per ewe

# Largest costs of a goat dairy

#### Labor

- Kidding
- Cleaning
- Milking
- Feeding

Feed

**Energy** 

#### Breeding for improvement

Ease of kidding

Udder conformation

Longevity/disease resistance

Ability to graze/browse



Culling - your choice, not by disease or early death

# Birthing checks take up a lot of time

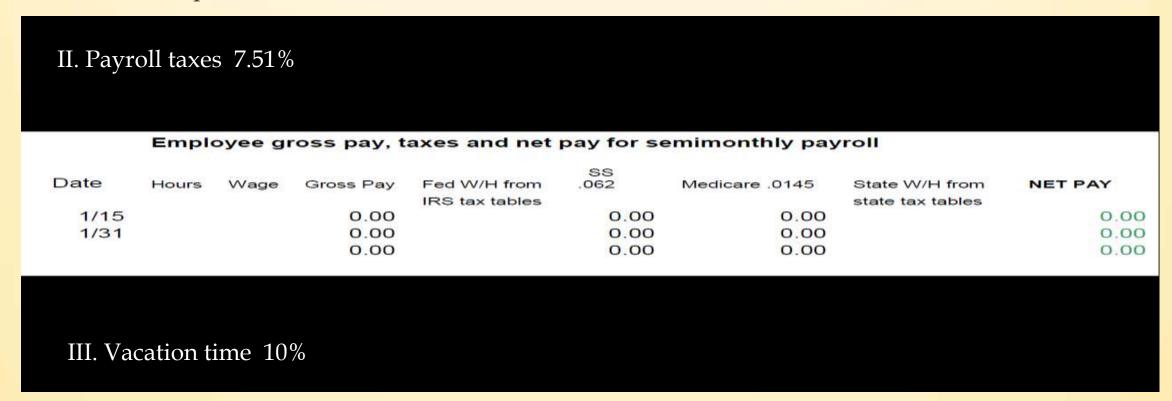
- Dr. tatiana Stanton, Cornell University goat specialist, has a SARE project on Low input lambing and kidding.
- 1. Time of year affected labor about 4 times as much labor in winter birthing than during spring/summer kidding. However reproductive performance of females is better with winter birthing. Young weaned was 183% in for winter births vs. 163% for spring births.
- 2. Increased time spent checking dam during labor did not mean a decrease offspring mortality rates. Being at the birth did not change outcome.
- 3. Apply basic prevention practices, increase animal nutrition, work on observational skills and plan for next year.

# Labor recording sheet

Dates	Task	Time	Animals	Notes
March 15-25	Feeding milk	45 minutes twice a day for 1.5 hrs	50 kids	5 sick kids –next year more pens
March 16	Ear tagging	15 minutes	10 kids	Need better tagger
March 1, 10, 20, 30	Clean out bedding all pens	2 hrs each time		By hand
March 1-31	Milking does	2.5 hours, twice a day for 5 hours	100	Double 4

#### **Hired Labor costs\***

I. Workers compensation insurance 8%



\*Taken from The Organic Farmer's Business Handbook, Richard Wiswall

## Cleaning

- Bedded pack vs. routine bedding removal
- Bedded is less work and cost daily but
  - can build up and interfere with feeding mangers
  - More flies
- Routine bedding removal is more work and more costly but
  - Keeps goats clean; less mites, lice and flies
  - Easier than digging out pack





# Feed allocation recording sheet

Jan. Date:	2 <sup>nd</sup> cut hay	1 <sup>st</sup> cut	1 <sup>st</sup> cut round bale	Dairy pellet 16%	18% kid starter	minerals	No. of animals	Animal type
	\$4/bale	\$3/bale	\$40/bale	\$350/to n	\$400/ton	\$20/50 1b bag		
1	3		1	300			100	milkers
	3			5			10	2-6 months
		.5				.5 lb	1	horse



### **Feeding – middle ground for size limits**

Grain bin for minimum required delivery



Bagged feed to supplement Possible to mix your own feed

- alfalfa pellets
- beet pulp
- corn
- sprouted fodder



# Time management investment! Size of Parlors: 1.5 hrs/milking

Style	People; claws	Does per hr	Herd size
Platform -12, 4 cans	1; 4-6	50-90	Up to 100
Tunnel, Dbl 6 Tunnel, Dbl 8	1; 6-12 1; 8-16	80-130 150-180	Up to 250
Herringbone 12 Herringbone 16	1;6-12 1;8-16	100-140 130-220	Up to 500

#### Herringbone, no grain

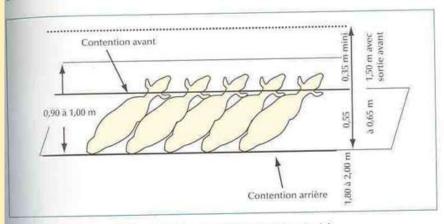


Schéma 5 : Position des chèvres en salle de traite épi



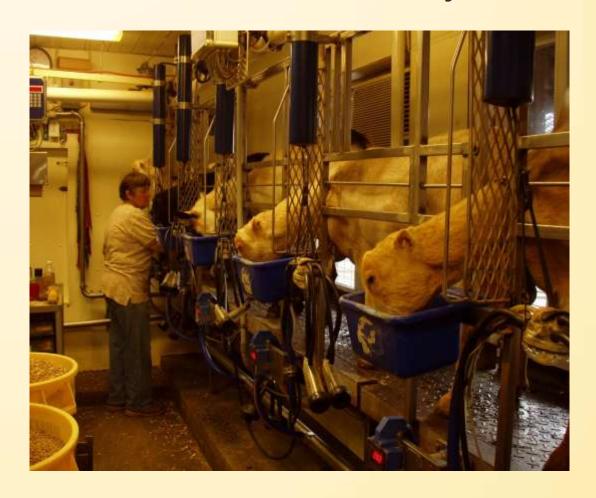
#### Rapid exit, no grain



#### Platform, high line



#### **Tunnel or sideways**



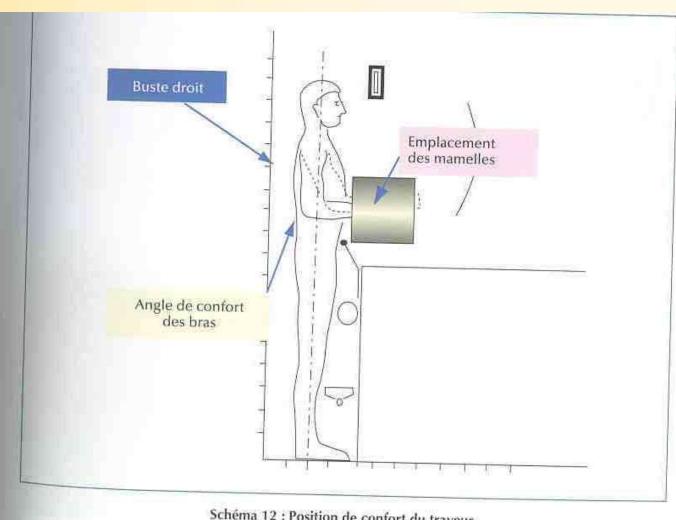


Schéma 12 : Position de confort du trayeur



Installations de traite pour les chèvres. 2006 Institut de l'Élevage

# Platform height recommendations

Farm worker height	Goat platform height
<5'5"	3'
5'5"-5'9"	3'2"
5'9"-6'1"	3'3"
>6'1"	3'5"

Installations de traite pour les chèvres. 2006 Institut de l'Élevage

# **Progress Indicators**

Income/hr milking time	2013	2014
Lbs milk/cheese doe		
Expense/Income per doe		
Breakeven lbs/doe/day		
Average days in milk		
Lbs of milk per acre farmed		
Yield of cheese/lb of milk		
Hours/day working		

**Other Progress Indicators** 

	2013	2014
Average age of does		
# does 10 years of age		
% does culled, unplanned		
Incidence of mastitis, cases/mo/# does		
Soil fertility, pH		
Days on pasture/browse		
% feed purchased/grown		

# To sell or to process milk?

Know your cost of producing milk

- Bulk Fluid Milk: ONE CUSTOMER
- Bottled Milk and Fermented Products: Pasteurizer, whole milk sold
- Raw Milk VT
  - Tier 1: ≤ 50 quarts/day from farm, any bottle
  - Tier 2: 50 to 160 quarts/day, may deliver, testing requirements

# **Small Cheese Facility**

Cheese: 1 lb cheese/ 5 lbs milk so 20,000 lbs cheese/yr = 100,000 milk thus Goats: 1700 lbs avg milk production/year means 60 goats milked

15,000 to 40,000 lbs of cheese allows for direct marketing

70,000 to 100,000 lbs of cheese requires mainly wholesale marketing

Cheese facility for less than 100 goats

-20' X 30'

-8' X10' packing area

-1-2 walk in coolers

-office space 8' X 10'

RESOURCE: The Farmstead Creamery Advisor. 2010 Gianaclis Caldwell

#### **Weakest Link**

Labor and Cost

Feeding? Cleaning? Milking? Kidding?

Market

Conversion to marketable product

Production of raw material



# **Getting Out!**

- Use Progress Indicators to inform you of business health and if you are attaining your goals
- Do you want to sell property when you are done? Your records will help you sell it as a business.
- Do you want to retire or change business? Think of how you can use the facilities for something else. Incorporate diverse businesses on your farm to spread income and risk
- Farm Transfer and Estate Planning

# The art of noticing and then creating. - Seth Godin quotes

- "Connection Economy" the things you pay for now are connections...
- You don't own attention or trust or shelf space. You don't even own tomorrow's plans. It's all for rent...the moment you start treating the rental like a right, it disappears.
- ...you're not going to make it as a worker bee –
  you're going to make it as someone who is figuring
  out what to do next.

# Check in with yourself: Can you start a goat dairy and keep your imagination going? Can you hold onto your original clear images and goals?



Thank you for your attention.



# Carol Delaney Small ruminant consultant

www.caroldelaneyconsulting.com 802-229-2096 cdhornofplenty@gmail.com

#### International sources of information

Centre de Référence d'Agriculture et Agroalimentaire du Québec

www.craaq.qc.ca

**International Goat Association** 

http://www.iga-goatworld.com/

La Chèvre

http://www.la-chevre.fr/public/index.php