



AGRICULTURE YOUTH & FAMILIES HEALTH ECONOMY ENVIRONMENT ENERGY COMMUNITIES

## Raising Orphan Lambs and Kids

Dr. Susan Kerr  
WSU-Klickitat Co. Extension





**P. P. P. P. P. P. P.**

To minimize orphans:


Breeding   Feeding   Vaccinating   Facilities   Lambing

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**CAUSES OF "ORPHANING"**

- Death of dam
- Rejection by dam (behavior, interference, neonate's health, twins, etc.)
- Dam's health issues (e.g. no milk)
- Neonate health: hypoxia, prematurity, WMD...
- Special health situations (e.g. CAE)
- High lambing/kidding percentages
- May choose to bottle feed: friendly kids/lambs, sell milk, you are nuts and love bottle baby chores



**SOME CONCERNS WHEN RAISING ORPHANS**

- Starvation
- Hypothermia
- Scours
- Pneumonia
- Failure to thrive
- Meconium impaction
- Poor socialization






Photo from [www.sheepandgoat.com/news/Spring2007.html](http://www.sheepandgoat.com/news/Spring2007.html)




**IDENTIFYING/SELECTING BUMMERS/ORPHANS**

- Gaunt, hunched up twin or triplet any age
- Weak, recumbent neonate, esp.  $\leq 12$  hrs.
- Best outcome = early ID and fostering ( $\leq 6$  hrs.)



**GRAFTING**

- Try it—saves work!
- "Slime method"
- Pelt method
- Restraint method
- Things get easier when dam can detect her milk smell at baby's anus
- Tie feet of older grantees — struggle and cry like newborns



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**NEONATAL ORPHAN CARE**

As always,

- Clip
- Dip
- (Strip)
- Sip
- Keep warm and dry: > 35°F, >60°F, >75°F?



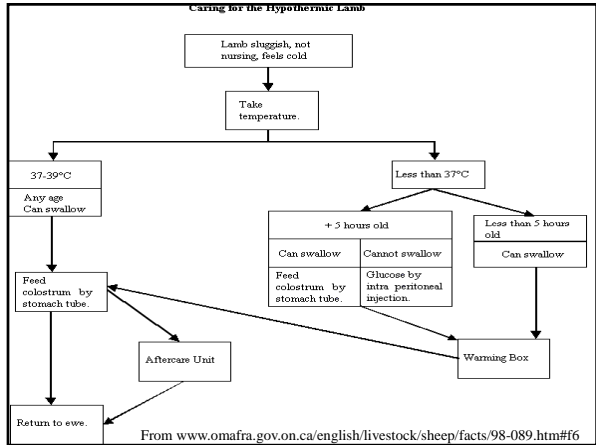
Hypothermia is a huge concern; only born with enough "brown fat" to maintain body temperature for 5 hours max

Photo from [www.ehow.com](http://www.ehow.com)

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**WARM VS. COLD VS. DEAD**

- If temp below 99°F, neonate poorly responsive and  $\leq 5$  hours old: dry, warm, tube feed
- If temp below 99°F, neonate poorly responsive and  $\geq 5$  hours old: give warm dextrose IP, warm, tube feed



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**INTRAPERITONEAL DEXTROSE FOR HYPOTHERMIC NEONATES**



- 20% warm dextrose solution at a rate of 10 mL/kg body weight
- Calculate amount needed and multiply by 0.4 to determine how much 50% solution to use. Example: 5 kg x 10 mL/kg = 50 mL of 20% solution needed. 50 mL x 0.4 = 20 mL of 50% solution. Draw this amount into syringe. Then draw up the difference (30 mL) in sterile water and warm to body temperature.
- Inject into abdominal cavity 1" below and 1" off the midline, pointing needle toward pelvis using 60 cc syringe and 20 gauge needle

Photo from [www.ukvet.co.uk/ukvet/articles/Sheep\\_hypothermic%20lamb.pdf](http://www.ukvet.co.uk/ukvet/articles/Sheep_hypothermic%20lamb.pdf)

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**WARMING METHODS FOR CHILLED NEONATES**

- Warm towels
- Warm bath
- Warming box
  - Forced hot air
  - Elevate baby
  - Monitor
  - Remove when mouth warm (temp  $\geq 99^\circ\text{F}$ )




Photo from [www.shearwell.co.uk](http://www.shearwell.co.uk)

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**COLOSTRUM = LIFE**

- Source of nutrition (calories from fat and lactose, protein, vitamins, water), laxative, *antibodies*
- Failure of Passive Transfer increases likelihood of illness and death
- Neonate's gut is non-selective at birth, initially lets antibodies cross intact. Becomes increasingly more selective with every passing hour
- Target 1: minimum of 10% BW in colostrum in 24 hours.  
Target 2: 3 oz. per pound of body weight div. into 3-4 meals
- After 48 hours: serum Ig level of 1200 mg/dl protective
- Colostrum with specific gravity  $\geq 1.029$  is good quality
- Tube feeding = essential skill; can you do it?

**PASTEURIZATION AND HEAT TREATMENT**

Heat treatment of colostrum: Heat and hold at 135°F for one hour; stir

Pasteurization of milk: Heat to 165°F; stir

**FEEDING POST-COLOSTRUM**

- Milk vs. milk replacer?
- Bottle vs. Lam-Bar vs. bucket?
- Warm vs. cold?
- Feed about 3 oz. per pound of body weight daily divided into several feedings. Small frequent feedings are safer than fewer, larger meals.
- Increase amount fed with increasing body weight
- Quality milk replacer has animal-origin fat source and milk protein source; ≥30% fat, ≥22% protein (lambs); 20% fat, 26% protein (kids)
- Creep feed, hay, water: start within first week; keep clean and fresh



**MILK CONSUMPTION**

- Weeks 0-2: 1+ quart/day
- Week 2-3: 1.5 quarts/day
- Week 3-4: ~2 quarts/day

**AVERAGE MILK COMPOSITION**

100 g.	Sheep	Goat	Cow	Human	Porpoise
Total Solids %	19.3	13	12	12.5	59
Protein %	6	3.6	3.3	1	11.2
Fat %	7	4.1	3.3	4.4	46
Lactose %	5.4	4.5	4.7	6.9	1.3
Ash %	0.96	0.82	0.72	0.20	0.57
Calcium mg	193	134	119	32	
Phosphorus mg	158	111	93	14	
Vit. A µg	83	44	52	58	
Vit. D µg	0.18	0.11	0.03	0.04	
Vit. C µg	5	1	1	4	
B-vitamins	First	Third	Second	Fourth	

**KEEP 'EM ALIVE**

- Cleanliness and sanitation paramount
- Sanitize equipment
- Ventilation, not drafts
- Supplemental heat: coats, heating lamp. Prevent mobbing/crushing
- Use good quality milk replacer



**CONCERNS: SCOURS AND PNEUMONIA**

- Prevention!
- Keep pen and feeding equipment clean
  - Ensure adequate colostrum intake
  - Do not overcrowd
  - Feed smaller, more frequent meals vs. few large meals
  - Do not mix ages in pens
  - Fresh air, no drafts
  - Move groups into new, clean pens; clean and rest previous pens
  - Make changes gradually
  - Provide supplemental heat to prevent chilling

### SCOURS TREATMENT

- Isolate
- Keep warm
- Replace milk feedings with electrolyte feedings
- Do not hold off milk for more than 24 hours
- Do not give oral antibiotics
- Give probiotics
- If severe, may need SQ or IV fluids
- Re-introduce milk in small feedings at least 4 hours after electrolytes
- If persists or widespread, consider diagnostic work-up

### CONTINUED CARE

- Selenium supplementation
- Vaccinations
- Coccidia prevention/treatment
- No urea in diet until rumen fully functional (3 months)
- 18-20% CP supplement to 40#, then 12-14%
- Weaning

### WEANING

*Must be eating solid feed well and be gaining weight well before weaning*

Timing: Depends!

- At around 20# if feeding milk replacer? (\$)
- After feeding 20-25# of milk replacer?
- At 3-6-8 weeks? 3-6 months?

Method: Abrupt seems best

### "THE HUSBAND'S EYE"

Signs all is well:

- Lamb/kid stretches after rising, then runs to nurse
- Group not huddled in corner or always under heat lamp
- No excessive bleating or baaing
- Obvious urination and defecation
- Belly looks full, not gaunt or bloated
- Mouth is pink, warm, moist
- Back not hunched up
- Contented sleep
- Kid/lamb bright, alert, responsive, active, playful
- "Happy attacks"



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