



Setting It Up: Sheep Infrastructure



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Publisher
Alberta Lamb Producers

This publication has been made possible by funding from the Alberta Livestock and Meat Agency.

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1. Farm Planning

Introduction

The first three documents in the resource binder provide guidelines for the care and handling of sheep, an overview of the sheep production cycle, and recommended space requirements for sheep and lambs.

- 1.1** Recommended Code of Practice for the Care and Handling of Farm Animals – Sheep
- 1.2** Lambing Facilities Overview
- 1.3** Sheep Housing, Plan

Business Considerations

Business considerations of running a sheep operation are addressed in two Alberta Lamb Producers courses and in a business module. These include: Business 101 – Making Money from Sheep, Business 201 – Making More Money from Sheep, and The Business of Sheep module. The two documents included in the resource binder are therefore designed only to offer producers some basic information about how productivity, feed, and labour affect profitability which will assist them in making infrastructure choices.

- 1.4** Cost of Production Fact Sheet
- 1.5** Better Returns by Labour Cost Savings

General Planning

The documents in this section provide general planning and farm design information. This includes information on site selection, farm layout, soil type, topography, wind, and so on.

- 1.6** Alberta Sheep Facilities
- 1.7** Sheep Farmstead Planning
- 1.8** Farm Resources, Facilities and Equipment
- 1.9** Odour Control for Livestock Facilities, Plan
- 1.10** Farmstead Planning
- 1.11** Planning Farm Shelterbelts

Regulations (Setting Up)

This section includes some of the regulations that may affect your operation as you set up. Alberta Rural Development offers assistance through the Confinement Feeding Operations Extension Program to help you with the rules concerning site and permit requirements, understanding the application process and how to meet regulatory requirements. Please note regula-

tory information about water, manure, and dead-stock are located in the water, manure and dead-stock sections of this binder.

- 1.13** Confined Feeding Operations (CFO) Extension Services
- 1.14** 2008 Reference Guide – AOPA
- 1.15** Municipalities and the AOPA
- 1.16** Standards and Administration Regulation, AOPA
- 1.17** Agricultural Operations, Part 2 Matters Regulation
- 1.18** Do I Need a Building Permit?

2. Information Management

Animal Data Management

The articles in this section include some of the reasons to monitor animal information, as well some guidelines on the tools you can use. Computerized management systems are recommended for all but very small flocks. RFID management and traceability systems can offer producers many benefits and are worth considering for flocks with more than 150 – 200 ewes, depending on management goals.

- 2.1** Better Returns from Monitoring Ewe Performance
- 2.2** Producing Profits with RFID
- 2.3** Shopping for a Tag Reader
- 2.4** Top Performers
- 2.5** RFID Tagging Videos
- 2.6** Barn Record
- 2.7** Individual Ewe Record

Financial Data Management Tools

Farms often produce many different products and/or have many 'enterprises'. Sheep farms, for example, can also grow forages, grains, and other animals may be raised on them. The only way to evaluate whether or not these enterprises are profitable is to track farm finances by enterprise. This FAQ sheet offers some guidelines for choosing software that will work for your operation.

- 2.8** Farm Accounting Software FAQ

3. Buildings and Penning

Structures

The structures section offers a few examples and guidelines of what you can build. According to feedback from builders and building materials suppliers, the most common permanent structures being built in Alberta are pole sheds. This is due to materials cost, labour cost, and the ability to insulate and heat these buildings. Tarp buildings are also popular as they can be moved. Paying attention to snow-load and wind is especially important when you are considering tarp buildings. Lego-block and concrete foundations and truss style arches help make tarp buildings an option for producers in higher wind and/or snow-load regions.

- 3.1** Slotted Floor Sheep Barn, Plan
- 3.1b** Slotted Floor Sheep Barn, Plan Detail
- 3.2** Open-end Pole Sheep Barn, Plan
- 3.3** Expandable Lambing Unit, Plan
- 3.4** Plastic and Fabric Covered Arch-frame Buildings
- 3.5** Whiteline Shelters and Tarp Buildings
- 3.6** Pole Building – Building Cost Examples
- 3.7** Hay Storage – Planning and Design Guidelines

Lambs

This section offers examples of a claiming pen and adoption crates, plus options for raising orphan lambs. All sheep farms will have a certain number of orphan lambs. Modern milk replacers and feeding systems available today make raising orphan lambs both efficient and economically viable. In fact, producers who are good at dealing with orphan lambs often claim they out-perform ewe-raised lambs. Recommended equipment includes bottles to get lambs started on the first day, and then either buckets and/or automatic milk-replacer systems. Count on half of a large bag of milk replacer per orphan lamb.

- 3.8** Portable Claiming Pen, Plan
- 3.9** Lamb Adoption System Examples
- 3.10** Artificial Rearing of Lambs
- 3.11** How Lamb Feeder Technology Contributes to Sustainability
- 3.12** Automatic Lamb Feeder – Eco brochure

Other Building Considerations

3.13 Rodent and Bird Control in Farm Buildings, Plan

3.14 PEI Lambs Thrive on Slatted Floors

4. Utilities

The utilities section includes documents to help you select and design appropriate systems for ventilation, heating and lighting.

4.1 Fan Ventilation: Principles and Rates, Plan

4.2 Ventilation of Sheep Structures

4.3 Sizing Openings for Naturally Ventilated Barns, Plan

4.4 Troubleshooting Livestock and Poultry Ventilation Problems, Plan

4.5 Ventilating and Heating Small Livestock Rooms, Plan

4.6 Heaters Buyer's Guide

4.7 Hot Water Heating, Plan

4.8 Lighting for Sheep Facilities

5. Feed and Water

Based on cost of production work carried out during the Alberta Lamb Traceability Project between 2009 and 2011, feed is the highest single cost for sheep operations at 42% of total costs, and labour is second at 24%. Since feeding accounts for a high percentage of labour costs, selecting the right feeding equipment and system for your operation will be one of the more important decisions you make. This section of the Resource Binder offers some guidelines and options for feeding and watering, plus information about Alberta's water regulatory system.

Feeding

5.1 Feeding Systems for Sheep

5.2 A TRM Mixer For Every Beef Farm?

5.3 Total Mixed Rations for the Ewe Flock

5.4 Design, Selection and Use of TMR Mixers

5.5 Bunker Silo Sizing and Management

5.6 How to Handle Seepage from Farm Silos

- 5.7** Harvesting and Storing Large Bale Haylage
- 5.8** Efficiently Feeding Beef Cows Round Bales
- 5.9** Selecting a Round-bale Feeder for Use during Horse Feeding
- 5.10** Hay Storage Cost Comparison
- 5.11** Walk Through Hay and Grain Sheep Feeder, Plan
- 5.12** 3 in 1 Feeders, 14 Things to Know about Using Grain Feeders
- 5.13** Sheep Salt and Mineral Feeder, Plan
- 5.14** Portable Mineral Box, Plan
- 5.15** SheepBytes Ration Balancer

Watering

- 5.16** The ABCs of Livestock Watering Systems
- 5.17** Alberta's Water Priority System
- 5.18** Alberta Water Act FAQ
- 5.19** Water Act Licenses FAQ

6. Handling

Due to the difficulty in finding labour, as well as the high cost of labour if you can find it, having a good handling system is very important for most sheep operations. The handling section of this resource binder looks at equipment and system options for sheep, plus information about shearing and transportation.

Handling

- 6.1** Labour Efficiencies of Handling Facilities
- 6.2** Improving Sheep Handling for Better Returns
- 6.3** Better Returns from Effective Sheep Handling
- 6.4** Use Sheep Behaviour to Your Advantage
- 6.5** Using Stockdogs For Low Stress Livestock Handling
- 6.6** Planning Your Sheep Handling Facility
- 6.7** Sheep Corral Unit, Plan
- 6.8** Working Chute, Plan

- 6.9** Sheep Corral Fencing and Gates, Plan
- 6.10** Circular Sheep Yard Design and Construction
- 6.11** Top Performers (RFID Sorting Equipment and Systems)
- 6.12** VeeEzy Conveyor
- 6.13** Selecting a Sheep Handler
- 6.14** Guide to Footrot in Sheep

Shearing

- 6.15** Shearing Your Sheep
- 6.16** Shearing Facilities, Plan
- 6.17** Shearing Floor and Fleece-sorting Table, Plan
- 6.18** Shearing Shed Design – Sheep Storage and Movement
- 6.19** Shearing Shed Design – The Board

Transportation and Other

- 6.20** Avoiding Heat and Cold Stress in Transported Sheep
- 6.21** Livestock Trucking Guide
- 6.22** Web Links and Resources for Sheep Infrastructure

7. Fencing

Most sheep operations use a combination of feeding and grazing in their overall feeding strategy. The fencing information section looks at various options to keep sheep in corrals and pastures while keeping predators out, plus some information on windbreak fencing.

- 7.1** Fencing in Alberta
- 7.2** Page Wire Fencing, Plan
- 7.3** Fencing Options in Predator Control
- 7.4** Guardian Animals for Alberta
- 7.5** Protecting Livestock from Predation with Electric Fences
- 7.6** Frequently Asked Questions about Electric Fencing
- 7.7** Windbreak Fences, Plan
- 7.8** Portable Windbreak Fences

8. Manure

Managing manure is a requirement for all livestock producers in Alberta. This section of the binder contains information about how to manage livestock manure, including regulatory information, spreading regulations, setbacks and composting. Please note that Alberta Rural Development offers assistance through the Confinement Feeding Operations Extension Program to help you with the rules, the site and permit requirements, understanding the application process and how to meet regulatory requirements.

- 8.1** Managing Livestock Manure
- 8.2** Agriculture Operations Practices Act – Environmental Standards for Alberta’s Livestock Industry
- 8.3** Manure Spreading Regulations
- 8.4** Minimum Setbacks for Manure Application
- 8.5** Manure Composting Manual

9. Deadstock Management

It is a simple fact of production that whenever you raise livestock you have to address deadstock. This section of the resource binder offers guidelines for disposing of dead animals, including regulatory information and common disposal techniques used by sheep producers. Please note that the Disposal Vessels for On-Farm Deadstock guide is an Ontario publication. Disposal vessels are only permitted in Alberta if they follow Alberta regulations; specifically, this means the vessel must not be above-ground.

- 9.1** Livestock Mortality Management (Disposal)
- 9.2** Livestock Mortality Burial Techniques
- 9.3** Disposal Vessels for On-Farm Deadstock
- 9.4** Composting Dead Sheep and Lambs

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