



National Sustainable Agriculture Information Service
www.attra.ncat.org

SMALL RUMINANT RESOURCES

Following are many sources of information helpful to producers of small ruminants. Further resources may be available at your county extension office, through your state land grant university, or through your local library.

ATTRA PUBLICATIONS

The following publications are available from ATTRA. These publications are free of cost. Copies can be requested by calling 800-346-9140 or at our website: <http://www.attra.ncat.org>

I. Livestock

A1) Dairy Sheep

This publication offers additional information resources and includes a quick overview of production considerations.

A2) Sustainable Goat Production: Meat Goats

Offers information specific to meat goat production, and should be read after the companion publication, Goats: Sustainable Production Overview. This document discusses selection, breeds, marketing, feeding, profitability, and other topics. It includes sample budgets, case studies of farms in Montana and Missouri, and many further resources.

A3) Goats: Sustainable Production Overview

Discusses considerations of raising goats on pasture, including grazing, supplemental feeding, health concerns, reproduction, and management, as well as marketing and profitability.

A4) Dairy Goats: Sustainable Production

This publication is intended for those interested in starting a commercial goat dairy. It discusses the five major considerations to be addressed in planning for dairy goat production: labor, sales and marketing, processing, regulations, and budgeting and economics. It includes production information specific to dairy goats, including choosing breeds and selecting stock.

A5) Sustainable Sheep Production

This publication takes a look at breed selection, controlled grazing, pasture lambing, alternative health management, and innovative marketing of meat and wool products.

A6) Small Ruminant Sustainability Checklist

This checklist is designed to stimulate critical thinking when evaluating a farm that produces sheep or goats. The sustainability of a farm depends on many factors involving farm management, use of resources, and quality of life. The questions in the checklist are intended to stimulate awareness rather than to rate management practices. Use this guide to define areas in your farm management that might be improved, as well as to identify areas of strength.

II. Health

A7) Integrated Parasite Management for Livestock

With parasites developing resistance to all dewormers and more farmers producing livestock by "natural" methods, there is interest in looking for alternative ways to managing parasite problems. This publication offers a systems approach to assess and manage the soil, forages, and animals to decrease internal parasites and their effects.

A8) Predator Control for Sustainable & Organic Livestock Production

This publication focuses primarily on the control of coyotes and dogs, which are the main causes of livestock lost to predation, through management practices, such as fencing and secure areas, and the use of guard animals.

III. Forages

A9) **Assessing the Pasture Soil Resources**

How to take a soil sample and an easy way to assess soil biological activity and water infiltration. Assessment sheet included.

A10) **Matching Livestock and Forage Resources**

How to manage pastures and grazing animals to make more profitable use of the farm's resources.

A11) **Meeting the Nutritional Needs of Ruminants on Pasture**

Impact of grazing management on nutrition, supplemental feeding on high quality pasture, feed profiling, feed budgeting, matching livestock and forage resources for efficient pasture use.

A12) **Multispecies Grazing**

Brief overview of why multispecies grazing is beneficial, as well as considerations for management.

A13) **Paddock Design**

Basics of paddock design, considerations in fencing and water technology, enclosures.

A14) **Rotational Grazing**

How to manage pastures and grazing animals to make more profitable use of the farm's resources.

A15) **Sustainable Pasture Management**

Managing fertility and pests, grazing systems, conserved forages, maintaining productivity, additional resources.

Marketing

A16) **Alternative Meat Marketing**

Comprehensive introduction to producer marketing of meat products. Pitfalls, producing and packaging for quality and consistency, direct marketing options, value-added products, food safety and labeling, niche markets, resources.

A17) **Direct Marketing**

This publication on direct marketing alternatives—with emphasis on niche, specialty and value-added crops—features many farm case studies, as well as information on enterprise budgets and promotion/publicity. A new section discusses implications of Internet marketing and e-commerce for agriculture.

A18) **Evaluating a Rural Enterprise**

This publication is for people who already live in rural areas and want to add new enterprises to their operations. Its sections guide the reader in evaluating resources, assessing finances, gathering information, and marketing. It also discusses choosing an "alternative" enterprise and offers further resources.

A19) **Holistic Management**

Introduction to holistic management. Holistic management is a decision-making framework that assists farmers and others in establishing a long-term goal, a detailed financial plan, a biological plan for the landscape, and a monitoring program to assess progress toward the goal. Holistic Management helps managers ask the right questions and guides them in setting priorities.

A20) **Keys to Success in Value-Added Agriculture**

This publication presents, largely in the words of fourteen farmers, important lessons they learned in adding value to farm products and marketing directly to consumers.

A21) **Marketing Strategies for Farmers and Ranchers (SAN publication)**

A22) **Overview: Adding Value to Farm Products**

This publication introduces the concept of value-added farm products, explains a few of the nuts and bolts for starting a food processing business, and provides resources for additional information.

A23) **Value-Added Dairy Options**

Considerations for those who want to increase profitability by bottling milk, making cheese or yogurt, or doing some other processing of their milk. This publication discusses regulations and organic milk certification and offers resources for further information. Request through 800-line since enclosures are available only with hard copy.

BOOKS

The following books offer useful information on a wide variety of production and marketing issues. These titles may be available through your local library, or may be requested through inter-library loan. Most of these books will be worthwhile purchases for individuals new to sheep or goat production. Previewing the books at a library is the best way to select the titles that will be most useful to you.

Used copies may be available through on-line services or through other booksellers. Many suppliers of sheep and goat equipment also offer books in their catalogs, and titles are available from the publishers as well.

I. Goats

B1) **Meat Goats: Their History, Management, and Diseases.**

Mitcham, Stephanie and Allison Mitcham. 2000. Crane Creek Publications, Sumner, IA. 264 p.

A well-written combination of the authors' personal experiences raising goats, veterinary knowledge (Stephanie Mitcham is a DVM), and a compilation of information from other experts in the field. Includes information about handling systems (hard to find elsewhere).

B2) **Natural Goat Care**

Coleby, Pat. 2001. Acres U.S.A, Austin, TX. 371 p.

Fascinating book; Australian author pays much attention to nutrition and to maintaining health organically. Call 1-800-355-5313.

B3) **Goat Medicine**

Smith, Mary, and David M. Sherman. 1994. Lippincott Williams & Wilkins. Baltimore, MD. 620 p.

This book is recommended as a useful gift for a veterinarian. Very scientific; some of the terminology will only be understood by a veterinarian. Chapter 1 (Fundamentals of Goat Practice) is very helpful to producers as well as veterinarians. Chapter 20 (Herd Health Management and Preventive Medicine) is also very useful to producers.

B4) **Goat Health Handbook: A Field Guide for Producers with Limited Veterinary Service**

Theford, T.R. 1983. Printed in collaboration with Agricultural Experimental Station, University of Arkansas. 123 p.

Available from:

International Winrock Publication Sales

P.O. Box 9363

Arlington, VA 22209-0363

B5) **Storey's Guide to Raising Dairy Goats**

(revised and updated; originally called "Raising Milk Goats the Modern Way")

Belanger, Jerry. 2001. Storey Books, Pownal, VT. 288 p.

Very good general book for producers of dairy goats.

B6) **Goats and Goatkeeping**

Thear, Katie. 1988. Merehurst Press, London. 176 p.

Very interesting book for goat producers, geared for the small farm. Covers milk, meat, and fiber. Practical and concise, very similar to The New Goat Handbook, but with added detail.

B7) **The New Goat Handbook**

Jaudas, Ulrich. 1989. Barrons Educational Series, Inc., Hauppauge, NY. 93 p.

A colorful book with many photographs and line drawings. Very interesting and informative.

- B8) **Goat Husbandry**
Mackenzie, David. 1967. Faber and Faber Ltd., London. 368 p.
An older book, can be found in libraries and from sellers of used books. British terminology, very good reading. A classic.
- B9) **Angora Goats the Northern Way**
Drummond, Susan Black. 1988. 2nd edition. Stony Lonesome Farm, 1451 Sisson Rd., Freeport, Michigan, 49325. 203 p.
- B10) **Raising Goats for Milk and Meat**
Sinn, Rosalee. 1995. Raising Goats for Milk and Meat: A Heifer Project International Training Course. Heifer Project International, Little Rock, AR. 140 p.
Written for persons with limited resources, this is a very practical book. Available through Caprine Supply (among other sources).
- B11) **The Meat Goats of Caston Creek**
Tomlinson, Sylvia. 1999. Redbud Publishing Co., Edmond, OK. 181 p.
Personal experiences of the author.
Redbud Publishing Co.
P.O. Box 4402
Victoria, TX 77903
361-572-8898
- B12) **Your Goats: A Kid's Guide to Raising and Showing**
Damerow, Gail. 1993. Storey Books, Pownal, VT. 172 p.
Gail Damerow writes very good books; this one is easy to understand and very informative. Not just for kids.

II. Sheep

- B13) **Storey's Guide to Raising Sheep**
Simmons, Paula, and Carol Ekarius. 2001. Storey Books, Pownal, VT. 390 p.
This book is a very useful resource, covering many aspects of raising and marketing sheep and their products. Enjoyable to read, helpful to beginners and to experienced producers.
- B14) **Turning Wool into a Cottage Industry**
Simmons, Paula. 1991. Storey Books, Pownal, VT. 188 p.
This book is a big help to those who want to use fiber.
- B15) **More Sheep, More Grass, More Money**
Schroedter, Peter. 1997. Ramshead Publishing Ltd. Moosehorn, Manitoba. p.112
Personal experiences of the author, emphasizing the need to make a profit with the sheep enterprise and giving examples of how to cut costs and increase profits. Emphasis on grazing management. Very practical.

III. Sheep and Goats

- B16) **Small- Scale Livestock Farming: A Grass Based Approach for Health, Sustainability, and Profit.**
Ekarius, Carol. 1999. Storey Books, Pownal, VT. 217 p.
Not specific to any species of livestock; contains farmer profiles and quite a bit of holistic planning and economic information. Very complete in treatment of rotational grazing.
- B17) **Sheep and Goat Medicine**
Pugh, D.G. 2002. W.B. Saunders Company, Philadelphia, PA. 468 p.
A great gift for a veterinarian. A wealth of information for producers and for veterinarians. Knowledge of veterinary terminology will be helpful in using this book.

- B18) **Building a Sustainable Business: A Guide to Developing a Business Plan for Farms and Rural Business**
DiGiacomo, Gigi, Robert King, and Dale Nordquist. 2003. Minnesota Institute for Sustainable Agriculture, Saint Paul, MN, and the Sustainable Agriculture Network, Beltsville, MD.

Business planning is an important part of owning and managing a farm. A business plan helps farmers demonstrate that they have fully researched their proposed enterprise; they know how to produce their product, how to sell what they produce, and how to manage financial risk. This comprehensive workbook will guide farmers through every step of the process in creating a business plan. Includes many examples from existing farms. This workbook is a bargain. Available for \$14.00 + \$3.95 S/H by calling 802-656-0484 or 800-909-6472. Publication can also be viewed at <<http://www.misa.umn.edu/publications/bizplan.html>>.

- B19) **A Veterinary Guide for Animal Owners**

Spaulding, C.E. 1976. Rodale Press, Inc., Emmaus, PA. 420 p.

Very readable and practical book, with chapters for cattle, horses, hogs, sheep, goats, dogs, and cats.

- B20) **Keeping Livestock Healthy**

Haynes, N. Bruce. 1992. Storey Books, Pownal VT. 322 p.

Covers cattle, horses, swine, sheep and goats. A good book to educate about diseases in general; emphasis on prevention. Most attention is given to large animals.

- B21) **...May Safely Graze: Protecting Livestock Against Predators**

Fytche, Eugene. 1998. Published by the author. 103 p.

Available from:

Eugene Fytche

R.R. #1,

Almonte, Ontario. KOA 1AO.

This book explores how to identify and quantify the predator problem, and includes information on many methods to control the problem, including guard animals, fencing, and management.

- B22) **The Complete Herbal Handbook for Farm and Stable**

Bairacli Levy, Juliette de. 1984. Faber and Faber, Boston, MA. 383 p.

Very interesting book, offering a different perspective on prevention of disease and production of healthy animals without using conventional medicine.

- B23) **The Dairy Practices Council Small Ruminant Guidelines**

Guidelines for the Dairy Industry Relating to Sanitation and Milk Quality for Small Ruminant Operations. The Dairy Practices Council, 51 East Front Street, Suite 2, Keyport, NJ 07735. Telephone 732-264-2643. <<http://www.dairypc.org>>. Set: \$70.00.

A set of 17 Guidelines relating to small ruminants; each may also be purchased separately. Very good technical information for commercial producers of dairy sheep and goats.

- B24) **Sheep Housing and Equipment Handbook**

Hirning, Harvey J., Tim C. Faller, Karl J. Hoppe, Dan J. Nudell, and Gary E. Ricketts. 1994. MidWest Plan Service, Ames, IA. 90 p.

Web Sites

I. General

- W1) **USDA**

www.usda.gov

- W2) **NRCS**

www.nrcs.usda.gov

- W3) **ATTRA—National Sustainable Agriculture Information Service**

www.attra.ncat.org



- W4) **Maryland Small Ruminant Page**
www.sheepandgoat.com
- W5) **Oklahoma State University**
www.ansi.okstate.edu
- W6) **Forage Information System, Oregon State University**
<http://forages.orst.edu/>
- W7) **Farm Financial Standards Council Guidelines**
www.ffsc.org/html/guidelin.htm
- W8) **Measuring and Analyzing Farm Financial Performance, Purdue Extension**
www.agecon.purdue.edu/extension/programs/fbm21/Ec712entry.htm
- W9) **A PRIMER for Selecting New Enterprises for Your Farm, University of Kentucky Extension**
www.uky.edu/Ag/AgEcon/pubs/ext_aec/ext2000-13.pdf

II. Goats

- W10) **Cyber Goats**
www.cybergoat.com
- W11) **Goat Connection**
www.goatconnection.com
- W12) **Langston University-E (Kika) de la Garza American Institute for Goat Research**
www2.luresext.edu/goats/index.htm
- W13) **Fort Valley State University**
Georgia Goat Center Publications- www.ag.fsvu.edu/html/publications/GoatCenter/Publications.htm
Dairy Goat- www.aginfo.fvsu.edu/publicat/commoditysheets/fvsu005.htm
Meat Goat- www.aginfo.fvsu.edu/publicat/commoditysheets/fvsu006.htm
- W14) **North Carolina State University – Extension Animal Husbandry (see Meat Goat)**
www.cals.ncsu.edu/an_sci/extension/animal/eahmain.html
- W15) **Florida A & M – Goat Program**
www.famu.edu/acad/colleges/cesta/goat_program.html
- W16) **The University of Maryland’s National Goat Handbook**
www.inform.umd.edu/EdRes/Topic/AgrEnv/ndd/goat
- W17) **University of California Cooperate Extension**
www.vetmed.ucdavis.edu/vetext/INF-GO_CarePrax2000.pdf
- W18) **Empire State Meat Goat Producers Association**
www.esmgpa.org/index.cfm
- W19) **Meat Goat Home Study Course, Penn State Extension**
<http://bedford.extension.psu.edu/agriculture/goat/Goat%20Lessons.htm>
- W20) **Meat Goat Program, Virginia State University**
www.vsu.edu/ext/smallruminantprogram/meatgoat/index.htm
- W21) **Boer and meat goat information**
www.boergoats.com/

III. Sheep

- W22) **National Sheep Improvement Program**
www.nsip.org
- W23) **American Sheep Industry Association**
www.sheepusa.org
- W24) **Sheep Extension Program, Farm Flock Sheep Production Handbook, Montana State Univ.**
http://animalrangeextension.montana.edu/Sheep/sheep_pub.htm
- W25) **Sheep Resources, Virginia Polytechnic Institute & State University Extension**
www.ext.vt.edu/resources
- W26) **Sheep Information - Cornell University STAR System**
www.ansci.cornell.edu
- W27) **Sheep Publications, University of Nebraska**
www.ianr.unl.edu/pubs/sheep
- W28) **Sheepnet, University of Illinois**
<http://sheepnet.outreach.uiuc.edu/>

IV. Sheep and Goats

- W29) **Association of Small Ruminant Practitioners**
<http://aasrp.org>
- W30) **Electronic Zoo/Net Vet Veterinary Resources, AVMA Network, Small Ruminants**
<http://netvet.wustl.edu/smrum.htm>
- W31) **Sheep and Goat Extension and Research, Texas A&M University**
<http://sheepandgoats.tamu.edu>
- W32) **Northeast Sheep and Goat Marketing Program, Cornell University**
www.sheepgoatmarketing.org/sgm/index.html
- W33) **Clinton County Sheep and Goats, Cornell Cooperative Extension**
www.cce.cornell.edu/clinton/ag/ag-production.html
- W34) **Virginia Livestock Marketing Services**
www.vdacs.state.va.us/livestock/index.html
- W35) **Animal Agriculture Alliance**
www.soundagscience.org/
- W36) **National Institute for Animal Agriculture**
www.animalagriculture.org/
- W37) **Livestock for Landscapes**
www.livestockforlandscapes.com
- W38) **BEHAVE- Behavioral Education for Human Animal Vegetation and Ecosystem Management**
www.behave.net

W39) **National Scrapie Education Initiative**

www.animalagriculture.org/scrapie

W40) **FAMACHA Information**

www.vet.utk.edu/departments/LACS/pdf/FAMACHA.pdf

W41) **Pipestone Vet**

www.pipevet.com

CD-ROMs

Multi-Species Grazing and Leafy Spurge

TEAM Leafy Spurge. 2002.

USDA-ARS Northern Plains

Agriculture Research Laboratory

1500 North Central Avenue

Sidney, MT 59270

406-433-2020

www.team.ars.usda.gov

This CD provides a variety of useful information about using grazing as an effective, affordable, and sustainable leafy spurge management tool. It contains economic reports, posters, photos, a PowerPoint presentation, extensive bibliography, and more. A great resource.

GOATS! For Firesafe Homes in Wildland Areas

Kathy Voth

6850 West County Road 24

Loveland, CO 80538

www.livestockforlandscapes.com

This CD/Handbook is designed to provide fire managers, communities, and livestock owners information on using goats to reduce fire danger. It includes expected results, and the "hows" of managing animals, choosing treatment sites, developing contracts for services, estimating costs, and starting projects. This is a great CD with some excellent videos.

Magazines

Goat Rancher

Terry Hankins, editor and publisher

731 Sandy Branch Road

Sarah, MS 38665

888-562-9529

www.goatrancher.com

Sheep! Magazine

W11564 Hwy. 64

Withee, WI 54498

www.sheepmagazine.com

The Shepherd

5696 Johnston

New Washington, OH 44854-9736

419-492-2364

\$25.00 per year. (12 issues)

Meat Goat Monthly

Ranch Publishing

P.O. Box 2678,

San Angelo, TX 76902

915-655-4434

www.ranchmagazine.com/mgn.html

\$25 per year. (12 issues)

The Goat Magazine

9250 New Salem Road

Pleasantville, OH 43148-9764

740-468-3000

866-221-GOAT (4628) (toll free)

www.goatmagazine.com

The Stockman Grass Farmer

P.O. Box 2300
 Ridgeland, MS 39158-2300
 601-853-1861
 \$32.00 per year. (12 issues)

Small Farm Today

3903 W. Ridge Trail Road
 Clark, MO 65243-9525
 800-633-2535 (toll-free)
www.smallfarmtoday.com
 \$21.00 per year. (6 issues)

Spin Off

Interweave Press
 201 E. Fourth Street
 Loveland, CO 80537-5655
www.interweave.com
 \$24.00 per year. (4 issues)

Dairy Goat Journal

W11564 Hwy 64
 Withee, WI 54498
 \$21.00 per year or \$35.00 for two years. (bi-monthly)

Ranch and Rural Living

P.O. Box 2678
 San Angelo, TX 76902
 915-655-4434
 \$25.00 per year. (12 issues)

Countryside & Small Stock Journal

W11564 Hwy 64
 Withee, WI 54489
 800-551-5691
www.countrysidemag.com
 \$18.00 per year.

United Caprine News

P.O. Box 328
 Crowley, TX 76036
 817-297-3411
www.unitedcaprinenews.com
 \$22.50 per year.

Organizations

Dairy Sheep Association of North America (DSANA)

Contact: Carol Delaney
 c/o University of Vermont
 270 Main St.
 200B Terrill Hall
 Burlington, VT 05406
 Caroldelaney@uvm.edu
www.dsana.org

American Dairy Goat Association

209 West Main Street
 P.O. Box 865
 Spindale, NC 28160
 828-286-3801
www.adga.org/

American Meat Goat Association

www.meatgoats.com
 Marvin Shurley
 P.O. Box 1321
 Sonora, TX 76950
 915-387-6100
marvin@sonoratx.net

International Goat Association

HPI/IGA
 1015 Louisiana Street
 Little Rock, AR 72202
 501-907-2649
www.iga-goatworld.org

American Sheep Industry Association

6911 S. Yosemite St.
 Englewood, CO 80112-1414
 303-771-3500
www.sheepusa.org



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Suppliers

Caprine Supply

P.O. Box Y
3301 W. 83rd Street
DeSoto, KS 66018
913-585-1191
800-646-7736 (toll-free)
<http://www.caprinesupply.com>

Hoegger Supply Company

160 Providence Road
Fayetteville, GA 30215
800-221-4628 (toll-free)
www.hoeggergoatsupply.com

Sydell

46935 SD Hwy. 50
Burbank, SD 57010-9605
605-624-4538
800-842-1369 (toll-free)
www.sydell.com

Hamby Dairy Supply

2402 SW Water Street
Maysville, MO 64469-9102
800-306-8937 (toll-free)
www.hambydairysource.com

Billy Goat Gruff

P.O. Box 10
Dunnville, KY 42528
www.billygoatgruff.net

NASCO

901 Janesville Avenue
P.O. Box 901
Fort Atkinson, WI 53538-0901
800-558-9595 (toll-free)
www.nascofa.com

Jeffers Livestock Supply

P.O. Box 100
Dothan, AL 36302
800-JEFFERS or 800-533-3377 (toll free)
334-793-6257
334-793-5179 FAX
customerservice@jefferspet.com

Premier

800-282-6631 (toll-free)
www.premier1supplies.com

Pipestone Vet

P.O. Box 188
1300 Hwy 75 S.
Pipestone, MN 56164
800-658-2523 (toll-free)
www.pipevet.com

Ketchum Manufacturing Inc.

396 Berkley Avenue
Ottawa, Canada
613-722-3451
613-722-5612 FAX
www.ketchum.ca

Gallagher Animal Management Systems

Gallagher Power Fence, Inc.
130 W. 23rd Ave.
P.O. Box 7506
North Kansas City, MO 64116
800-531-5908 (toll-free)
816-421-2005
816-421-2009 FAX
www.gallagherams.com

Publishers

Storey Books

Available at your bookstore, farm store, or directly from Storey Publishing, Schoolhouse Road, Pownal, VT 05261, or by calling 800-441-5700 or visit the Web site, <www.storey.com>.

Barron's Books

May be ordered from your favorite bookstore or visiting the Web site <www.barronseduc.com> or by calling 800-645-3476.

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