

References

Books

A complete guide to dairy design systems

Victorian Dairy Industry Authority, 1993.

This guide aims to assist farmers who may be considering building new dairy premises or changing their present system. Topics cover site selection, herringbone shed designs, rotary milking systems, yard design, yard washing systems, backing gates, effluent disposal, farm track design, milking machines and cleaning.

Cleaning and sanitising milking equipment (AS 1536 – 2000)

Standards Australia, 2000.

The standard sets out recommended cleaning and sanitising procedures for use in milking premises. Procedures are given for cleaning and sanitising items of dairy farm equipment, principally milking machines and refrigerated farm milk tanks.

Considerations in flooring

Curt A. Gooch

US Natural Resource, Agriculture and Engineering Service (NRAES 129), July 2001.

<http://www.ansci.cornell.edu/>

Follow links from dairy program. This paper discusses flooring systems relative to cow comfort and health, and presents recommendations when they are available for each specific area discussed. Areas include cast-in-place concrete floors, pre-cast concrete slatted floors and alternative flooring surfaces. The allowable slope of flooring surfaces in various areas is addressed.

Countdown Downunder: Technotes for mastitis control

Pauline Brightling [et al.]

Melbourne (Vic.): Dairy Research and Development Corporation, 2000.

These Technotes are an information resource for people who advise Australian dairy farmers on issues of udder health and milk quality. They are a companion volume to the Countdown Downunder Farm Guidelines. The Technotes provide the underpinning technical information to the Farm Guidelines that dairy advisers need to help farmers achieve profitable mastitis control. The Technotes document the rationale behind each Farm Guideline recommendation and its scientific context, and provide practical tips and key references for further reading.

Dairy freestall housing and equipment. 7th edition

William G. Bickert [et al.]

Ames, I.A.: MidWest Plan Service, 2000.

This book covers a full range of aspects of freestall dairy facilities, including facility and equipment planning. Discussions focus on total herd management by production groups, management by age groups and replacement animal housing. Chapter topics include: replacement animal housing areas; milking herd facilities; milking centers; special handling and treatment facilities; building environment; manure and wastewater management; feeding facilities; and utilities. Other new or expanded topics include water recommendations, milking line sizing, palpation rail construction, evaporative cooling and circulation fans. This edition also has expanded discussions of manure production values and the handling of sand-laden manure.

Dairy shed design

Tom McDonald

Warragul (Vic.): National Milk Harvesting Training Centre, 1993.

This book aims to equip farmers with the information they need to be able to design facilities to suit their current and future needs. It contains detailed information on different types of sheds, yards and track handling facilities and waste water re-use systems, as well as the milking plant and milk storage areas.

Dairy shed design pack

Jeff Andrews

Queensland Department of Primary Industries, 1995.

This design pack is a collection of articles, notes and designs from a variety of sources. It is a useful first reference point for information on a new or improved milking system.

Dairy Tech Notes

Victorian Dairy Industry Authority, 1998.

A series of short notes on a variety of topics, covering milk tests, farm track design, drains, mastitis, cleaning systems, milk cooling systems, dairy waste, refrigeration and milking shed design.

Dairy waste management

Andrew Crocos and Roger Wrigley

Warragul (Vic.): National Milk Harvesting Training Centre, 1993.

This book contains information on EPA guidelines, how to determine waste volumes and management options. Information is also provided on equipment, the construction and maintenance of waste water storage ponds and re-using land.

Designing a modern milking center: parlors, milking systems, management and economics: Proceedings from the Designing a Modern Milking Center National Conference, Rochester, New York, November 29 – December 1, 1995

Ithaca (NY): Natural Resource, Agriculture, and Engineering Service. Cooperative Extension, 1995.

These proceedings contain 32 papers that are divided into 6 sections: planning a new milking centre; milking centre design features; utilities; milking systems; milking centre wastewater; and parlor selection and operation.

Drafting facilities and drenching/veterinary races

Farmnote Dairy Premises (6), Dept. of Primary Industries, Water and Environment, Tasmania website (<http://www.dpiwe.tas.gov.au> – Food and Agriculture – Animal Industries and Welfare – Dairy – Dairy Farm Notes).

How to prevent farm track erosion

Tim Negus

Farmnote 26/1993, Department of Agriculture – Western Australia, 1993. (<http://www.agric.wa.gov.au/agency/pubns/farmnote/1993/f02693.htm>)

Machine milking and lactation

Bramley, A.J., Dodd, F.H., Mein, G.A. and Bramley, J.A. (editors)

Huntington (VT): Insight Books, 1992.

The contents cover the history and development of the machine milking, the anatomy and physiology of the udder, milking routines, the action of the cluster during milking, the design and operation of components, rubber and the milking machine, the basic mechanics and testing of milking systems, the design and performance of milking parlours, automation, mastitis, milk hygiene and milk cooling.

Managing dairy-shed wastes. Volume 1

Lee-Ann Monks and Roger Wrigley (editors)

Glen Iris (Vic.): Dairy Research and Development Corporation, 1993.

This volume is a resume of proceedings from a DRDC workshop that discusses future directions, emphasising practical solutions as part of overall farm planning.

Managing dairy-shed wastes. Volume 2

Roger Wrigley (editor)

Glen Iris (Vic.): Dairy Research and Development Corporation, 1994.

This volume takes a technical look at waste management options. It suggests the questions that should be asked and answered before a waste management system is designed and built. The pros and cons of various solutions for different types of terrain and climate are discussed. There are also ideas for making older systems more manageable and efficient.

Managing dairyfarm safety. Parts 1 & 2 – Safety checklist: identifying hazards to health and safety

Farmsafe Australia

Moree (NSW): Farmsafe Australia Inc., 1999.

This on-farm management tool aims to help the farmer record and assess current farm hazards. After the assessment, the farmer can then decide priorities for action.

Managing hot cows in Australia

Tom Davison [et al.]

Brisbane (Qld): Department of Primary Industries, 1996.

This book defines the extent of the effect of heat loads on dairy cows and determines some of the management strategies to alleviate the effects of high heat loads. Management strategies have been targeted to reduce cow distress and enable managers to increase profitability.

Milking center design: Proceedings from the National Milking Center Design Conference, Harrisburg, Pennsylvania November 17-19, 1992.

Ithaca (NY): Northeast Regional Agricultural Engineering Service Cooperative Extension, 1992.

These proceedings include 35 papers that cover all aspects of milking centre design and construction. The papers are divided into 8 sections. The 'Planning a Milking Center' section discusses economic and financial considerations, as well as putting together a planning team. Sections titled 'Parlor Efficiency' and 'Parlor Selection' provide information that will help decide the type of parlor that is right for a particular farm. The 'Keeping it Clean' section discusses regulations; water needs; cleaning requirements; and controlling, treating, and disposing milking center wastes. The proceedings is rounded out with sections titled 'Data Collection', 'Worker/Animal Safety and Comfort', 'Walls and Wiring', and 'Milking Systems'.

Milking systems and parlors: planning and managing for quality milk and profitability: a conference for producers and their advisors, Camp Hill, Pennsylvania, January 30-February 1, 2001.

Ithaca (NY): Natural Resource, Agriculture, and Engineering Service. Cooperative Extension, 2001.

These proceedings include 26 papers divided among 8 categories: profitability and quality milk; milking parlor efficiency; milking systems; testing and troubleshooting; using data to improve performance; managing milking; parlor features for worker and cow comfort; and milk cooling. The proceedings will be a valuable resource for producers and their advisors, milking managers, extension educators, service and supply industry representatives, milk plant field staff, veterinarians, sanitarians, engineers and dairy scientists.

Notes on construction of a farm track

Factsheet L, Lameness information (In press)
www.westvicdairy.com.au/lameness

Occupational health and safety road show

Department of Natural Resources and Environment, Gippsland Region and Holmesglen Institute of TAFE, 2001.

Notes from a course that provides an overview of occupational health and safety. Includes health and safety legislation, workplace inspection skills, incidence reporting, and investigation and meeting skills.

Proceedings of the First North American Conference on Robotic Milking, Toronto, Canada, March 2002.

Wageningen (The Netherlands): Wageningen Academic Publishers, 2000.
This publication contains 77 research papers presented at the first North American Robotic Milking conference. Authors present their latest results on Robotic Milking including papers on Robotic Milking and the Dairy Industry, Housing Facilities and Milking Equipment Function, Management and Animal Husbandry, Health and Mastitis, Milk Quality, Labour, Economics and Animal Welfare.

Working smarter not harder: benchmarking your labour use in the milk harvesting process

Johnston, M. and Klindworth, D.

Ellinbank (Vic.): Agriculture Victoria, 2000.

Where this all began. This manual presents a series of exercises that allows the farmer to benchmark their milk harvesting process. It contains advice on improving certain aspects of milk harvesting.

Journal articles

Behaviour of dairy heifers during adaptation to milking

Bremner K.J. (1997). In: Proceedings of the New Zealand Society of Animal Production, 57: p. 105

Effects of prior handling on behaviour of heifers at milking was studied in 42 Friesian heifers (reared by suckler cows) and 36 monozygotic twins ('calfeteria'-reared). Behaviour at various stages of milking was observed during the first 14 milkings.

Effects of cognitive behavioural intervention on the attitude and behavior of stockpersons and the behavior and productivity of commercial dairy cows

Hemsworth, P.H., Coleman, G.J., Barnett, J.L., Borg, S. and Dowling, S. (2002). Journal of Animal Science, 80: 68–78.

Two experiments, one involving 29 commercial farms and the other involving 94 commercial farms, were conducted to examine the effects of a training program targeting a number of attitudinal and behavioral variables in stockpersons.

Relationships between human-animal interactions and productivity of commercial dairy cows

Hemsworth, P., Coleman, G.J., Barnett, J.L. and Borg, S. (2000). *Journal of Animal Science*, 78: 2821–2831.

This study examined the relationships between a number of stockperson and cow variables at 66 commercial dairy farms in Victoria, Australia, over a 2-year period (1995-1997). Variables such as the attitudes and behaviour of stockpeople toward their cows and the behavioural response to humans and the productivity of cows were studied over one lactation. There were consistent and significant correlations between some of these stockperson and cow variables.

Videos

Dairy shed design for a better lifestyle

Rural Training Council of Australia. Dairy Training Committee.

The video has sections on improving lifestyle, designing an efficient milking system, yards and backing gates, pits and platforms, bail structures, design in relation to milking machine installation, rotary dairies and dairying towards 2000.

Dairy shed waste management

Agriculture Victoria, 1995.

Planning a rotary: VDIA Production

Victorian Dairy Industry Authority, 1997.

Topics include types of rotaries, shed construction, automation and yard design.

Organisations

Animal Welfare Centre, Victorian Institute of Animal Science

Sneydes Rd, Werribee, Victoria 3030 – 03 9742 0444

Countdown Downunder

6/84 William St, Melbourne, Victoria 3000 – www.countdown.org.au

National Milk Harvesting Centre

RMB 2460, Hazeldean Rd, Ellinbank, Victoria 3821 – www.milkharvesting.au.com

Target 10 – Natural Resources & Environment

RMB 2460, Hazeldean Rd, Ellinbank, Victoria 3821 – www.target10.com.au

Temple Grandin

Colorado State University, Fort Collins, Colorado, 80523 USA – www.grandin.com

WestVic Dairy

RMB 6200, Glenormiston College, Terang, Victoria 3264 — www.westvicdairy.com.au