

## **Blue Prints for tropical dairy farming: Increasing domestic milk production in developing countries**

John Moran, Profitable Dairy Systems, Kyabram Victoria, Australia, Mar2017

This recently published manual covers a wide range of topics primarily related to ensuring the sustainability of dairy production systems in tropical developing countries. This book is written for all the stakeholders in dairy production systems in the tropics, with an emphasis on South and East Asian countries. However they are equally relevant to tropical dairy industries in Africa and Central America. In addition, it provides guidelines for the Best Management Practices (BMP) of large scale, more intensive dairy systems. While small holders are the major suppliers of milk in the tropics, numerous larger farms are becoming established throughout the tropics to satisfy the increasing local demands for fresh milk. Both types of farmers and their advisers will gain much from this manual and improve the productivity, welfare and milk quality from their dairy herds. Policy makers and senior management should also benefit from reading selected chapters.

All tropical countries have pro-active programs to increase local supplies of milk, which require increasing numbers of well-trained workers to service their dairy industries. Consequently, educators from agricultural schools, universities and technical colleges need to keep abreast of the latest technical developments and applications in dairy farming. This book also aims to serve this purpose. John has written this book in collaboration with Dr Philip Chamberlain, an Australian veterinarian with over 20 years' experience in tropical dairy farming working in many Asian and Pacific countries.

### **Accessing each chapter for free**

Each chapter has been written as a “stand alone” document, which can be individually downloaded from the Internet. For this reason, there may be some degree of repetition between chapters but this has been kept to a minimum.

Each chapter of this manual can be downloaded for free via John's website

[www.profitabledairysystems.com.au](http://www.profitabledairysystems.com.au)

then going to the CSIRO webpage and following the instructions.

The whole book can also be purchased from CSIRO Publications at

<http://www.publish.csiro.au/book/7640>

**Blue Prints for tropical dairy farming** is the sixth manual written by John Moran specifically on tropical dairy farming. His other five books are:

- 2005 Tropical dairy farming – Feeding management for small holder dairy farmers in the humid tropics
- 2009 Business management for tropical dairy farmers
- 2012 Managing high grade dairy cows in the tropics
- 2012 Rearing young stock on tropical dairy farms in Asia
- 2015 Cow talk – Understanding dairy cow behaviour to improve their welfare on Asian farms (with co-author Rebecca Doyle)

Like John's 5 books on tropical dairy farming, this book has been published by CSIRO Publications through a grant from The Crawford Fund.

The key target audiences for this book are:

- Farmers and stockpeople who want to improve the productive performance of their dairy herds
- Farm advisers who can assist farmers to achieve this aim
- Educators, usually at a technical level, who develop training programs for farmers.
- Educators, usually at a university level, who train dairy advisers in the basics of dairy production technology.
- Other stakeholders in tropical dairy production, such as local agribusiness, policy makers and research scientists.

It is not easy to write a book about tropical dairy farming in which every fact is relevant to every reader. What is of most importance to the actual farmer may not be the most crucial fact for the educator of technical or university level students or the dairy adviser who chooses to read the entire manual. Furthermore, tropical dairy small holdings take many forms ranging from very small farms with less than 5 milking cows who are all hand milked, to larger operations with say 30 milking cows that are milked using “bucket milkers”; these could be all owned by the one farmer or constitute a colony farm with many farmers owning small herds. Although grazing the milking herd is a rare feature on most tropical farms, the larger ones, with adequate land may be able to graze their dry cows or yearling heifers. Herd dynamics in a grazing situation can be very different to those in the confines of a shed, particularly one based on tie stalls. In future years, farmers may expand and be able to incorporate a milking parlour with fixed in line milking equipment. In fact most sustainable and profitable dairy farms grow in the medium to long term, so for today’s farmer with 10 cows or less who may become tomorrow’s farmer with 20 to 30 cows, their knowledge of and practices to optimise cow performance will need to be updated. This book, although not aiming to be “all things to all people” has been written for a very diverse audience, so there will be technical aspects that are less relevant to the readers.

This book is not a copy of John’s previous manuals as it gets down to the “grass roots” of tropical dairy farming such as selecting the most appropriate location for developing new farms, both large and small. In addition, the book discusses the latest innovation in tropic dairy farming, namely large scale intensive dairy feedlotting. For this to be sustainable, this requires many often quite subtle adaptations of existing temperate intensive dairy production technology to ensure year round supplies of quality milk, a necessary criteria for milk processing to value add the raw product. All countries in Asia have dairy developmental programs to increase their domestic supplies of raw milk hence to become less dependent on imports. Unfortunately, these countries are also littered with failed examples of dairy development, of both smallholders and larger operations. Only through many years of trial and error have some of the successful large scale dairy farms in tropical Asia been able to have positive cash flows. This book provides the guidelines to reduce these lengthy transition periods.

In addition to providing guidelines on how to ensure new dairy regions of small holders and large farms become and remain profitable, this book discusses such issues as risk in establishing new farms and the relevance of “new technology” to tropical dairy farming. In recent years, Dr Moran has prepared several dairy extension packages specifically for tropical small holder farmers. Two of these, namely “The Golden Rules of tropical dairy farming” and “The Dairy Smallholder Innovative Program” are fully described in this book.