dairymark.com

Dairy permeates - a strategic review of opportunities and applications

Report #3 in Dairymark.com's 'Target business opportunities' series of publications

September 2007

Dairymark.com
A division of Shainwright Consulting and Research Group Pty Ltd
PO Box 3274
Norwood, SA 5067
AUSTRALIA

Email: info@dairymark.com

SHAINWRIGHT
CONSULTING & RESEARCH GROUP PTY LTD

dairymark.com

Dairy permeates – a strategic review of opportunities and applications

A new report on dairy permeates reveals that not only is dairy permeate volume growing, but that conventional wisdom on disposal and utilization must be overcome if a more complete use and exploitation of this resource is to be addressed. The very fundamental of this is to develop a new recognition of dairy permeates as a rich source of carbohydrate – such carbohydrate can, in its own right, provide current growth and yet further emerging strategic value-added commercial opportunities for the dairy industry.

The report is the third is a series of publications produced by Dairymark.com entitled 'Target business opportunities'. It provides a solid overview of the nature and characteristics of dairy permeate utilisation arising from two key features:

- Developments in technology that are providing new and more commercial options for dairy permeate handling and processing
- Growing demand for a range of non-traditional value-added products in a wide sphere of industry sectors, including: food, feed, pharmaceutical, medical, cosmeceutical and technical

"There are two fundamental issues constraining ready disposal or use of dairy permeate", says Dairymark.com, publisher of the report, adding, *"The high BOD of permeate along with increasingly stringent environmental regulations means that discarding the material in waterways is no longer an option for most companies. And building on this, the hygroscopic nature of the material has meant that traditional dairy industry drying practices are difficult for downstream processing of permeate"*.

The report discusses issues such as:

- New technology that allows the drying of highly hygroscopic dairy permeate
- Decalcification as a means of improving the quality of both lactose and permeate for further processing, with marketable milk calcium arising as a co-product
- Improvements in the processing of lactose derivatives that opens up new market opportunities. Examples that are discussed in some detail include:
    - Developments in the supply of lactulose anhydrate, as a more convenient material than its conventional concentrated syrup alternative
    - Fermentation practices and enzymatic oxidation providing high yield lactobionic acid for more mainstream market applications
- Commercial applications for mother liquor arising from lactose manufacture
- Established growth markets for a range of lactose derivatives, including lactulose and lactitol
- Growing interest in ethanol produced from whey permeate – not only for use as a fuel blend, but also in terms of commercial production for ultra-high purity spirits and lower purity industrial solvents

The report contains approximately 145 pages, and can be purchased for €uros 7,710 (Australian subscribers A$13,570 including GST). For further information, contact:

Dairymark.com
A division of Shainwright Consulting and Research Group Pty Ltd
PO Box 3274
Norwood, SA 5067
AUSTRALIA

Telephone/Facsimile: +61-8-8339 8185
Email: info@dairymark.com

Scope and objectives of the report

The report considers strategic business opportunities for dairy industry participants in terms of opportunities and applications for dairy permeate. Opportunities are considered from two quite distinct though inter-related perspectives – each of which recognizes dairy permeate as a rich source of dairy carbohydrate rather than a more orthodox view on permeate as a waste stream that is proving problematic in disposal terms. The focus is on:

- The adoption of novel technology that provides a competitive edge in dairy permeate processing and utilization
- The development of commercial products that are aimed at both established growth markets and yet further emerging market opportunities

The report recognizes that the dairy permeate issue is a mounting concern for dairy processors – and particularly those that are producing WPC/WPI and MPC (which are themselves growth opportunities that in turn create increasing volumes of dairy permeates).

Real-life company examples are given discussing how some of the world's leading dairy companies are dealing with the dairy permeate issue. Dairy companies that are discussed include:

- Valio
- Fromageries Bel
- Murray Goulburn Co-operative
- Dairy Farmers of America
- Fonterra Co-operative Group
- Muller
- Carbery Group
- Morinaga Milk
- Kraft Foods

In addition, practical examples are discussed on the experiences of equipment suppliers, research organizations, and companies allied to the dairy industry (Illovo Sugar, Purac, Danisco, and Solvay Pharmaceuticals).

Pricing & timing:

The report is available to subscribers in hard copy format, dispatched by courier on receipt of payment.

- Orders will be priced at €uros 7,710 (Australian subscribers A$13,570 including GST)
- Report available September 2007

Report Content: Table of contents

Report Content: List of Tables

Report Content: List of Figures

Dairymark.com's credentials

Dairymark.com is a division of Shainwright Consulting & Research Group Pty Ltd, and is a specialist dairy industry intelligence and consulting organization. The company has completed a number of strategic, market and business development dairy research assignments for Australian and international clients. Recent examples include:

- Bangladesh dairy market study
- An overview of global dairy supply and demand
- A longitudinal dairy pricing study
- A strategic review of dairy industry patent activity
- A strategic review of dairy R&D activity
- A strategic review of trends in whey permeate utilization
- A study of the Australasian dairy industry
- Strategic research identifying trends and opportunities in Asian feed markets for dairy ingredients

In addition the company has published multi-client reports, including:

- Milk ingredients – a strategic review of opportunities and applications in the oral care industry
- Dairy carbohydrates – a strategic review of opportunities and applications

Contact details are advised as follows:

Dairymark.com
A division of Shainwright Consulting and Research Group Pty Ltd
PO Box 3274
Norwood, SA 5067
AUSTRALIA

Email: info@dairymark.com

Telephone/Facsimile: +61-8-8339 8185

LIABILITY

Whilst every effort has been made to ensure that the information contained in this report is accurate and the opinions expressed are sound, Shainwright Consulting & Research Group Pty Ltd cannot be made liable for any errors, omissions or incorrect information or for any loss or consequential losses arising as a result of decisions taken based on the contents of this report.