Updated Opportunities of Dairy Tech, Services and Forage Market in China

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AUSTRADE’S DAIRY INITIATIVE IN CHINA

GREEN YANG
SENIOR TRADE ADVISOR
AUSTRALIA DAIRY INITIATIVE SECTOR LEADER
AUSTRADE MELBOURNE
AGENDA

- Austrade’s dairy initiative in China
- Market trends and opportunities in China for dairy farming products, and technologies, services and training
- Insight on the forage market in China’s dairy industry and CASHDairy
- 2017 Australian dairy mission to China
- Q&A
GREEN SPEAKERS

- Green Yang, Senior Trade Adviser, Austrade Melbourne
- Christina Goodman, Trade Commissioner, Austrade Chengdu
- Dr Zhang Zheng, GM of Nestle Dairy Farming Institute
- Dr Rungsyin Tung, Chief Scientist of CASHDairy（China Australia Service Hub for Dairy）
- Yuling Zhang, Senior Business Development Manager, Austrade Guangzhou
AUSTRADE’S DAIRY INITIATIVE IN CHINA

CHRISTINA GOODMAN, TRADE COMMISSIONER, AUSTRADE CHENGDU
AUSTRADE’S DAIRY INITIATIVE IN CHINA

- Dairy value chain trends in China
- Market opportunities for Australian business
- How Austrade can assist
MARKET TRENDS AND OPPORTUNITIES FOR DAIRY EST IN CHINA

DR ZHANG ZHENG
GM OF NESTLE DAIRY FARMING INSTITUTE
HARBIN, CHINA
A reversed engineered business model was developed to offer farmers a viable future in farming in China. We are offering a dairy farming career!

The Dairy Farming Institute (DFI) consists of:
- Training Center – Education
  - Local & international universities
  - Business partners
- Training Farms:
  - Small Farm: 200 – 400 milking cows model 200-400
  - Medium Farm: 600-1,200 milking cows model 600-1,200
  - Large farm: 3,600 milking cows model 3,600

Model provides:
- Proven investment model for proposed model farms
- Feed, technical, health, reproduction and environmental solutions
- Training farm staff, managers, experts & university students
- One stop solution for integrated dairy management & technical solutions
ACADEMIC PARTNERS

Role & Lead
- Provide trainers
- R&D Projects
- Animal Health Testing

Role & Lead
- Development of curriculum
- Training material
- Course quality
- Provide trainer
- Operation for the farm

University of Wisconsin

International Farming Comparison Network

North East Agriculture University

Role & Lead
- Farm Economics
- Farm Benchmarking
- World market development trends
NUTRITION PARTNERS

Role & Lead
- Animal Nutrition
- Feeding Rationing
- Forage Crop Production
- Alfalfa
- Corn
- Feed Testing
- Crop health and quality testing

Role & Lead
- Feeding
- Nutrition programs
- Green House Gas emission
- Biological available minerals
- Environmental impact of minerals
- Aflatoxin testing (37+)
- Feed Supplements

Land O Lakes GOLD Membership

Alltech GOLD Membership
Role & Lead
• Semen
• Reproduction
• Breeding
• IT solutions
• Hoof trimming

Role & Lead
• Establish the training curriculum and training materials
• Establishing SOP’s for the areas of milking
• Take lead in milking

Role & Lead
• Cow health monitoring
• Milking intelligence
• Herd Management
• Central data base
ANIMAL HEALTH PARTNERS

Role & Lead
- Production to 220 DCC
- Grouping strategies
- Heat Detection
- Hospital pen
- Medicine administration
- Culling strategies
- Diseases:
  - Mastitis
  - Pneumonia
  - Displaced Abomasum
  - Lame Cows
- Euthanizing cattle

Elanco Bronze Membership

Boehringer Ingelheim Silver Membership

Role & Lead
- Dry off to 30 days post calving
- Transition Cow Management
- Calving
- Monitoring Programs
FACILITY & EQUIPMENT PARTNERS

- **East Rock GOLD Membership**
- **Goke-Stoti Bronze Membership**
- **Forster Technik Bronze Membership**
- **Avery Weigh-Tronix Bronze Membership**

**Role & Lead**
- Farm design
- Cow comfort
- Heat stress management

- **Role & Lead**
  - Weighing & measuring system solutions
  - IT solutions
  - System calibration
  - Loss reduction via feeding & weighing accuracy

- **Role & Lead**
  - Animal feeding
  - Feed center management
  - Feeding machinery

**Role & Lead**
- Calf rearing
- Calf feeding
- Calf comfort
- Calf weight gain
- Calf management software
- Robotic calf feeding
Each business partner takes lead in the area of their respective core competence

Each Partner has to agree to cooperate with other partners who may have competencies and resources in those areas

Each partner has signed up to actively take lead or support in:

- SOP’s writing, review and support in implementation
- Solving on farm challenges
- Preparing training material & its execution including transfer of copyright to DFI
- Supporting our Nestle milk districts
AVERY DESIGNS NEW WEIGHING SYSTEM
DANCHING LEADS MANURE MANAGEMENT

- Fertilizer plan with liquid & solid manure
- Manure & mineral fertilizer plan
- Basal and top dressing with liquid & solid manure
2016 China Development Forum

Harbin Dairy Exhibition
• Golden Bee Corporate Social Responsibility – the “Golden Bee Leading Enterprise Award.”

• 2015 Best CSR Practices - Foreign Invested Enterprises in China.

• “Outstanding Contribution Award” at Development of Foreign Enterprises Submit in China.

• The Supreme S&T Progress Award 2016 - China Dairy Industry Association Conference
INSIGHT ON THE FORAGE MARKET IN CHINA’S DAIRY INDUSTRY

RUNGSYIN TUNG, PHD
CHIEF SCIENTIST OF CASHDAIRY
OUTLINE

- Briefings of China’s dairying industry
- Main forage used in dairy ration
- Imported hays in China
- Further biz opportunities for Aussie exporters
- Introducing CASHDairy services
- Th Chinese hay delegation to Australia
BRIEFINGS OF CHINA’S DAIRY INDUSTRY

- Inventory of dairy cattle: ca. 8 million heads
- Dense dairying pocket: mainly in the north
- Confined dairying style: 90% free-stale, 10% tie-stale
- Herd size: 200~10,000 heads/single site
- Mega group: 40,000~200,000 heads/group
- Milk yield: 20~35kg/hd/d
- Milk price: 3.8 RMB/kg (about A$0.73), profitable
- Major dairy products:
  - UHT milk
  - Fermented milk, flavoured
  - Milk powder, infant milk powder
Dense dairying pockets & CASHDairy office location
MAIN FORAGE USED IN DAIRY RATION

- **Alfalfa:**
  - Hay: domestic & imported (mainly from U.S.)
  - Silage: locally
- **Corn silage:** locally
- **Grass:**
  - Sheep grass hay: domestic from the north
  - Napier grass: fresh-cut in the south
  - Oaten hay: domestic & imported (mainly Australia)
IMPORTED HAY IN CHINA

- Alfalfa hay
  - Import quantity: 1,200,000 mt in 2015
  - In big bale: 450 kg/bale
  - Double compressed
  - In container: 25mt/ctr
  - CIF price: 300~350 USD/mt
  - Price delivered at farm: 2500~3200 RMB/mt (about A$480-A$615)
  - RFV≥150%
  - Supplying countries: U.S., Spain
  - Competitiveness to domestic product: quality & milk yield
  - Usage: 2~6 kg/hd/d in a typical lactation ration; fed to calf
Oaten hay

- Import quantity: 100,000 mt in 2015
- In small bale: 37 kg/bale
- Double compressed
- In container: 25 mt/ctr
- CIF price: 320~370 USD/mt
- Price delivered at farm: 2700~3400 RMB/mt (about A$519-A$653)
- Supplying country: Australia
- Competitiveness to domestic product: quality & DMI
- Usage: 1~3 kg/hd/d in a typical lactation ration; fed to dry cow
- Key issue: high palatability; WSC content; low protein
**IMPORTED OATEN HAY IN CHINA**

### Imported Oaten Hay in China

<table>
<thead>
<tr>
<th>Year</th>
<th>Total Value at Destination Ports, USD</th>
<th>Tonnage, Metric Tons</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>$10,000,000</td>
<td>12,700</td>
</tr>
<tr>
<td>2012</td>
<td>$15,000,000</td>
<td>17,500</td>
</tr>
<tr>
<td>2013</td>
<td>$20,000,000</td>
<td>42,810</td>
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<tr>
<td>2014</td>
<td>$25,000,000</td>
<td>120,950</td>
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<tr>
<td>2015</td>
<td>$30,000,000</td>
<td>151,500</td>
</tr>
<tr>
<td></td>
<td><strong>$52,800,000</strong></td>
<td><strong>170,000</strong></td>
</tr>
</tbody>
</table>

C&F price, USD/mt:
- 2011: $374
- 2012: $339
- 2013: $349
- 2014: $201
- 2015: $202
### A Typical Lactation Ration in TMR

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>kg/hd/d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa hay</td>
<td>4</td>
</tr>
<tr>
<td>Oaten hay</td>
<td>2</td>
</tr>
<tr>
<td>Corn silage</td>
<td>20</td>
</tr>
<tr>
<td>Concentrate</td>
<td>10</td>
</tr>
<tr>
<td>Cotton seed</td>
<td>2</td>
</tr>
<tr>
<td>Beet pulp pellet</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>39</strong></td>
</tr>
</tbody>
</table>

- **DMI** = 22.9 kg/hd/d
- **CP** = 17.1%
- **NEI** = 1.6 Mcal/kg
- **Milk yield** = 35 kg/hd/d
- **Milk fat** = 3.8%
- **Milk protein** = 3.2%
FURTHER BIZ OPPORTUNITIES FOR AUSTRALIAN EXPORTERS

➢ Existing to expanding
  ✓ Cattle (70% of imported dairy cattle)
  ✓ Dairy food products
  ✓ Oaten hay
  ✓ Cotton seed

➢ New
  ✓ Alfalfa hay
  ✓ Agriculture products
  ✓ Dairying technologies: technical training/services
  ✓ Collaboration with Chinese investors to grow more acres in Australia to export
INTRODUCING CASHDAIRY SERVICES

- CASHDairy = China Australia Service Hub for dairy
- A service platform bridging dairy industries between China and Australia by providing integrated business services and information sharing
CASHDAIRY MISSION

- Marketing platform
- Virtual training platform
- Speedy business matching

- Link to Austrade information platform 链接澳贸委信息平台
- HAONIU Classroom 好牛课堂
- Introducing and bridging for commercial entities 企业推介
- Pool of products for dairy industry 产品库
- Business consulting and service 业务咨询和服务
- Animal husbandry investment 畜牧投资
- Network promotion 网络推广
CASHDAIRY NETWORKING

- Direct access to dairy farms with 1 million heads through hay sales and technical services
- Strategically partnering with “the Strongest Farm Union” (最强牧场联盟)
  - A big WeChat group with 5822 attendees registered
  - No commercial ads, non-profit
  - Dairying associated workers, managers, owners
  - Dairying Q&A
  - Technical seminars every Sunday evening 20:00 ~ 21:30 through Wechat on mobile phone
THE CHINESE HAY DELEGATION TO VISIT AUSTRALIA

- A group of about 30 attendees in early March 2017
- Led by the China Hay Association
- Attendees including hay officers, hay growers, hay importers, dairymen
- A learning trip to learn about Australian hay production and the entire industry to expand mutual trading and investment to ensure hay supply in quality & quantity
- CASHDairy organizes the services of need
IN CONCLUSION

- The growing dairying industry in China needs your presence catching the ride.
- Do it now or never.
- CASHDairy can be of your choice.
- See you in Australia in March 2017.
Thank you.

Rungsyin Tung, PhD
Chief Technical Manager
CASHDairy
2017 AUSTRALIAN DAIRY MISSION TO CHINA

YULING ZHANG
SBDM, AUSTRADE GUANGZHOU
PROPOSED MISSION PROGRAM

- Participate in the Australian National Pavilion in 2017 China (Nanjing) Dairy Expo going to be held in Nanjing city, Jiangsu Province on 16-18 June, 2017
- Attend the Australian Dairy Workshop organised during the China Dairy Expo
- Site visits (tbc)
  - Nanjing Agriculture University
  - Weigang Dairy Co. Ltd in Nanjing
  - Modern Farming (Group) Co. Ltd in Anhui
  - Nestle Dairy Farming Institute, and dairy industry in Harbin
  - Organising demo class in Nestle Dairy Farming Institute
## ITINERARY – 2017 DAIRY MISSION TO CHINA

<table>
<thead>
<tr>
<th>Date</th>
<th>Programs</th>
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| **Thursday 15 June** | • Arrive in Nanjing, Jiangsu Province  
                      • Set-up for the 2017 China (Nanjing) Dairy Expo                      |
| **Fri-Sunday 16-18 June** | • Exhibition at 2017 China (Nanjing) Dairy Expo  
                          • Australia China Dairy Forum  
                          • Networking Function                                                                 |
| **Monday 19 June**  | • Site visits – Nanjing and Anhui  (tbc)  
                          o Nanjing Agriculture University  
                          o Weigang Dairy Co., Ltd in Nanjing  
                          o Farm Modern Farming in Anhui                       |
| **Tue-Thur 20-22 June** | • Site visits – Harbin  (tbc)  
                          o Nestle Dairy Farming Institute  
                          o Wandashan Dairy Group  
                          o Feihe Dairy Co., Ltd                      |
BENEFITS OF PARTICIPATION

- Stand out as part of the Australian National Pavilion and be part of the strong team of Australia dairy consortium to pursue opportunities from local governments and industry leaders;
- Increase awareness of your company in the market and promote your business strategy;
- Develop an up-to-date, in-depth understanding of the dynamic and fast growing dairy industry in China;
- Establish new partnerships, strengthen existing ones and demonstrate your support of local customers.
- Develop business opportunities with China’s major dairy farmers, manufacturers, distributors, government officials and researchers at the pavilion, dairy forum, site visits and networking functions
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