DelPro™ Herd Management and Automation for stanchion barns
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Tied Up Dairy Farmers
Tied Up Dairy Farmers
Snap Shot India

- Production 2005: 92 billion Kgs
  Expected growth rate: 4% / year
- Milk provenience
  - Buffalo Milk 57%
  - Cow Milk 43%
- Bovine composition
  - Buffalos: 95 Million
  - Cattle: 190 Million
- Farm structure
  - 50% of the farms 1 – 2 animals
  - Processed milk 15%
Tied Up Dairy Farmers
Snap Shot China

- Production 2006: 22 - 30 million
  Expected growth rate: 9.5% / year
- Cattle: 7 - 10 Million
- Milk yield/cow ~ 2'800 kg
  Expected growth rate: 3.8% / year
- Farm structure
  - 82% of the farms < 100 animals (House holds)
  - 14% of the farms 100 - 1000 animals (Large scale private farms)
  - 4% of the farms > 1000 animals (state owned or large farms)

Note: figures depend very much on the sources
Tied Up Dairy Farmers
Snap Shot Canada / USA

Canada
• Milk production ~ 7'5 billion kgs
• Dairy Cows 1'060'000
• Average Milk yield/cow ~ 9'422 kgs

• Farm structure
  • Stanchion Barns (~ 100 cows / farm) 9400 farms

USA
• Farm structure
  • USA (Wisconsin) 11’000 farms
The Tied Up Customer Segment
Snap Shot Western Europe

- Stanchion Barns Customer base
  - Sweden (~ 45 cows / farm) ~ 5'000 farms
  - Norway (~ 12 cows / farm) ~ 12'700 farms
  - Finland (~ 18 cows / farm) ~ 12'900 farms
  - Switzerland (~ 20 cows / farm) ~ 24'400 farms
  - Other countries
    France, Germany, Italy, Spain ~ 60'000 farms
The Tied Up Customer Segment

Russia

- Dairy Cows 10’000’000
- Average milk yield per cow 3’200 kgs

Farm structure

- Plot Farms (~ 2’500’000 farms)
  (< 30 cows / farms)
- Family farms (~ 9000 farms)
  (31 – 100 cows / farm)
- Small – medium size industrial farms (~12’000 farms)
  (101 – 1000 cows / farm)
- Stanchion Barns (~13’000 Barns)
  (200 cows / farm)
- Big Industrial farms (~ 2600 farms)
  (1001+ cows / farm)
Tied Up Dairy Farmers
The market trend and farmer needs

- Decreasing / increasing milk prices
- Increasing costs of production (Energy, feed, water, labor etc.)
- Improve herd productivity and efficiency
- Milk quality
- Traceability
- Animal welfare (local legislations)
- Lack of qualified labor Forces
- Life Style

Profitability / Cost Control
Economies of scale
Milk Recording

Quality assurance
Herd Management
Cow Care concepts
Transition to LH, HD

Automation / ergonomics

Milking automation Tied Up 2007

MU100
- Pulsation

MU210
- Duovac milking
- Low flow indication

MU350
- Duovac milking
- Milk yield indication
- Automatic take-off

MU450-486
- New concept!
DelPro™ for Tied Up dairy farmers

Build in competences for better control & profitability

DelPro™, an integrated system solution for Tied Up barns

- New Milking Unit
  - ICAR approved
  - Milk Meter
  - Low line milking characteristics
  - Wireless system connection - Blue tooth
- System Controller
  - “the Communication centre”
- Feed Wagon, system integrated
- DelPro PC based Herd Management software
DeLaval DelPro™ Milking unit
New compact design

DeLaval DelPro™ Milking unit
Unique Fat Sampler

Save time and improve hygiene
- Continuous sampling during milking
- Accurate and relative sampling
- Bottle volume samples
- Cleaning of milk channels & tubes during circulation process
- Quick attachment
- New bayonet connection
DeLaval DelPro™ Milking unit
Automatic cluster removal

Improved milking performance
  • Easier work
  • Shorter milking and working routines
  • Greater cow throughput
Management control (added value in DelPro)
  • Password assessable
  • Flexible settings
  • Monitoring and manage performance
  • Managing costs
Improved udder health
  • Pre take-off indicator
  • Optimum take-off

DeLaval DelPro™ Milking unit
Wireless Data Communication
DeLaval DelPro™ Milking unit
Wireless Data Communication

DeLaval DelPro Software
(New Herd Management Software)

System Controller
(New Communication Centre)

Feed Wagons
(as of 2009)

Wire data communication
Wireless data communication

New DelPro Milking Units

Improving milking performance:
• Assisted cow identification
• Cow alarms, don’t milk, dump milk
• Assists implementation of safe working routines
• Automatic milk yield data transfer

Improving feeding performance:
• Automated feeding processes
• Improved feeding accuracy
• Optimizing feeding costs
DeLaval DelPro™ Milking unit
Milk flow controlled milking vacuum stability

MU350

MU480 / 486
Stable milking vacuums in the cluster even at high milk flows

Low level vacuum stability

- Improves milking performance
  - Faster / shorter milking
  - Reducing slippage
  - Improved cleaning performance
- Improves teat health and milk quality
  - Optimum milking vacuum
  - Optimum liner movement
  - Quality milk production
Milking plant regulated vacuum 55 kPa

The milking and pulsations vacuums are further regulated in the MU by using a modified regulator block and the shut off valve.

The optimum milking vacuum setting is 40 kPa for both extraction and pulsation.

CIP (cleaning in place) is improved by regulating at 55 kPa.

DeLaval DelPro™ Milking unit

ICAR approved milk meter

Accurate milk yield data
- Feed ration calculation
- Health status monitoring

ICAR approved test milking

Milk flow control data
- Duovac control
- Automatic cluster removal
- Milking vacuum stability
**DeLaval Feed Wagons, system integrated**

Proper feeding – correct ratio

- System connection of concentrate and roughage/TMR feed wagons
- Feed wagons communicate wireless like the milking units
- Automatic ration adjustment in relation to milk data
- Changes of ration. New cows or deleted cows info. are sent to the wagon when its changed in DelPro Herd Management software
- All data is stored locally in the wagon
- "Unlimited" number of wagons in the system
- After feeding the dispensed amount are reported to DelPro DDM

**DeLaval DelPro™ Milking unit**

System integration with feeding

Improved feeding performance:
- Automated feeding processes
- Improved feeding accuracy
- Optimized feeding costs
- Feed storage and inventory

Improved herd health:
- Feeding adapted to milk yield
- Low milk yield alarms
- Auto ration calculation
- Feed tables

Increased milk production:
- Optimum feeding

* WRT = Working Routine Times
Thank you!