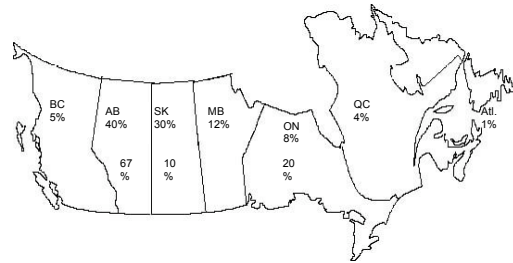


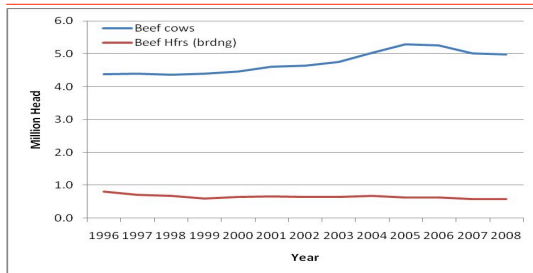
Canada: An Overview

- 5,000,000 beef cows, centred in AB, SK, MB
- 3,600,000 feeders centred in AB
- 83,000 farms (down 8% in 5 years)
- 52 average age of operators (up from 49)
- Producer education and internet access is rising
- 61 Average herd size (up from 52)

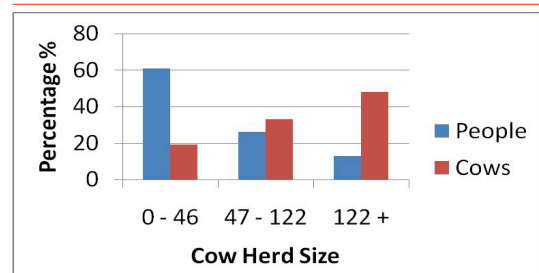
Canada: An Overview



Canada: An Overview



Canada: An Overview



Canada: An Overview

- 20 feedlots in AB control 46% of capacity
- 9 feedlots in SK control 59% of capacity
- 2 processors in AB control 90% of capacity
- We export over 50% of production (cattle and beef)
 - Over 80% to US

Canada: The Last 5 Years

- Mandatory National RFID (2001)
- BSE
- Loss of Export Markets
- SRM Removal
- Canadian Dollar (\$0.65 to \$1.00)
- Feed Costs
- Weather

Cowboy Joe – The Old World

- Joe is a nice guy
- To sell Joe a bull I need
 - 1 good bull with a known pedigree
 - To be nice to Joe and his kids

Cowboy Joe – The New World

- 35 years old, married, 2 kids (6 and 3) from a ranching family
- College degree
- Worked off farm for 5 years with an animal nutrition company before coming home to ranch
- Peer network
- 600 SM/AN cows
- Keeps about 100 heifers each year and sells replacements

Cowboy Joe – The New World

- Keeps a bull inventory of 20+ and swaps them out at 20%/year (4-5 bulls per year)
- Average Price of SM / AN bulls from 2008 Sales reports - \$3000
- NPV – $4 * \$3000 * 30 \text{ years} = \$360,000$
- Retains ownership (occasionally sells direct)

Cowboy Joe – The New World

- Joe has a network of 4 or 5 like minded peers (Facebook friends) with which he compares notes and has a loose working arrangement
- Knows his costs
- Will adopt technologies that meet cost/benefit analysis (eg: Artificial Insemination, Embryo Transplant)

Cowboy Joe – The New World

- 10 minutes per calf to tag at birth
- 6 calves per hour
- 600 calves = 100 hours - \$15000 at \$15/hr
- Tag, DNA sample and sire verify at weaning
 - 600 calves @ \$20 = \$12000
- May run an extended panel

Cowboy Joe – Data

- DNA
- Fertility
- Weights
- Feeding
- Health
- Carcass / Ultrasound
- Financial

Cowboy Joe – Information

- Sire confirmed calves (known pedigree) and over time a pedigreed cowherd.
- DNA based sorting for feedlot management
- Fertility evaluation
- Weights – easily collected and automated using RFID technology
- Genetic Evaluation – EPP vs. EPD
 - Individual selection index
- Your customer probably has more information than you on your genetics

Cowboy Joe

- To sell Joe a breeding program you need
 - More than 1 bull and more than 1 breed
 - Data on traits that matter to Joe
 - Guaranteed product
 - Better cattle and/or selection tools than Joe can produce himself or get through his peer network
 - Information system (collaborative)
 - Value advantage
 - To be nice to Joe and his kids

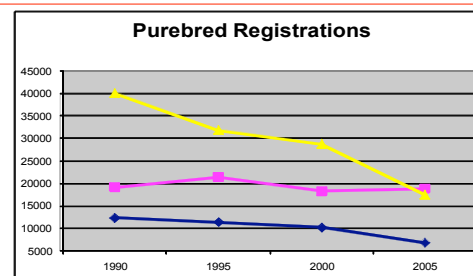
Cowboy Joe – The Take Home

- You need to collaborate with your customer

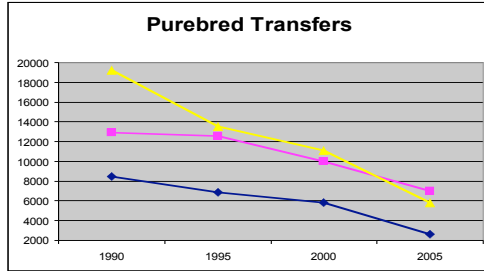
Fundamental Changes

- Larger commercial cow herds/control in fewer hands
- Multiple sire pastures
- Reduced labour
- AI use increased
- Terminal/maternal programs
- Retained ownership/feedlot relationships
- Individual ID of all calves

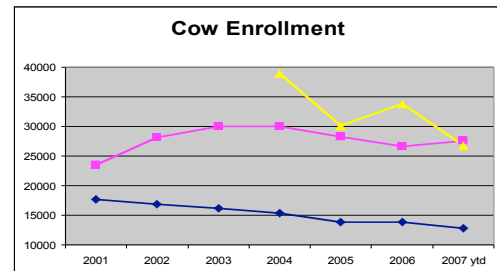
Purebred Response



Purebred Response



Purebred Response



Purebred Response

- Technology adoption low
 - Ultrasound and carcass uptake
- Membership segregation
 - Performance / non-performance herds
- Increased purebred herd size
- Increased number of breeds, hybrids and composites
- Move from Purebred to Seedstock

Where To

- Not all negative (opportunities!!!)
- Integration by commercial producers
 - cooperative marketing
 - retained ownership
 - value based/grids
- Ability of commercial producers to get meaningful feedback is creating a new situation

Where To

- Demand Pull vs Technology Push
- Seedstock suppliers forging alliances with commercial herds/feedlots/packers
- Technology changing
 - Mandatory identification/RFID
 - DNA/Genomics
- Individual Animal will be King!!!

Commercial Focus

- Genomic sire verification is a key
- Management and herd evaluation knowledge
- Feedlot management by individual merits
- Useful packer information (e.g. tenderness)
- Information overload!!!
- Opportunities to use information to create

Genetic Potential

- Bulls into herds parentage verified
- Calves in commercial herd sire verified
- Direct link to seedstock herds and breed association databases
- Potential links to feedlot and packer data
- Enhanced genetic evaluations
 - commercial herd data (feedlot and packer?)
 - Genomic enhanced EPDs

Closing Comments

- Pedigree and performance linked at seedstock and commercial level
- Herd and management knowledge (value to commercial industry)
- Alliances on an individual level
- Enhanced genetic evaluations
- Create knowledge out of information to drive value