



■ Is a 305-d lactation optimal?
Greg Penner and Tim Mutsvangwa

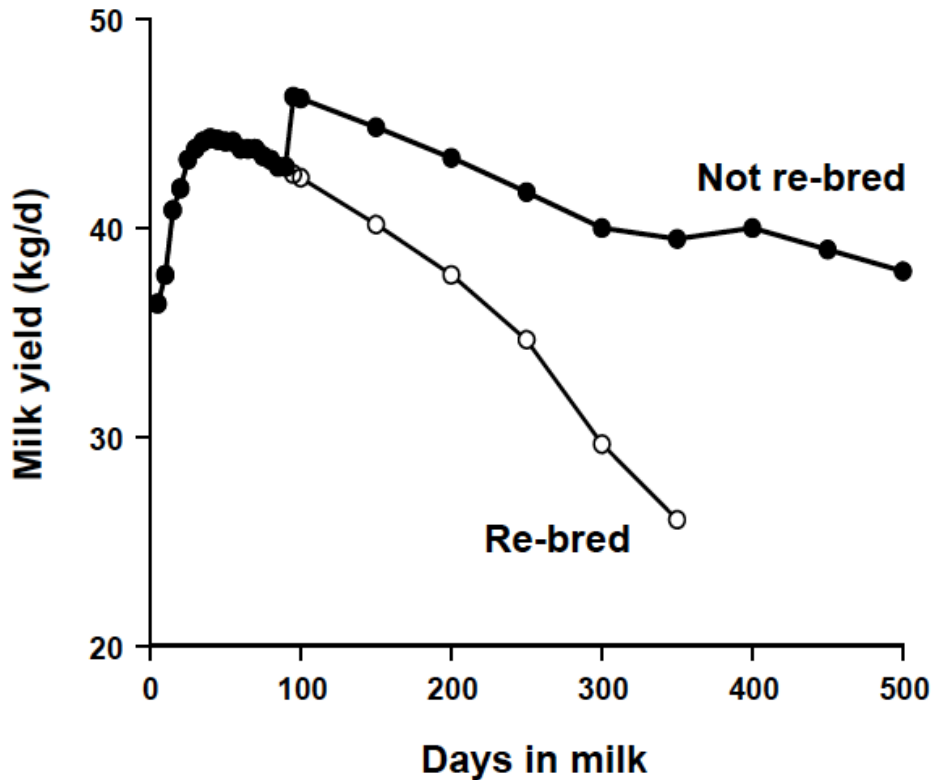
Concept

- 305-d lactation
 - Long-standing recommendation to optimize performance

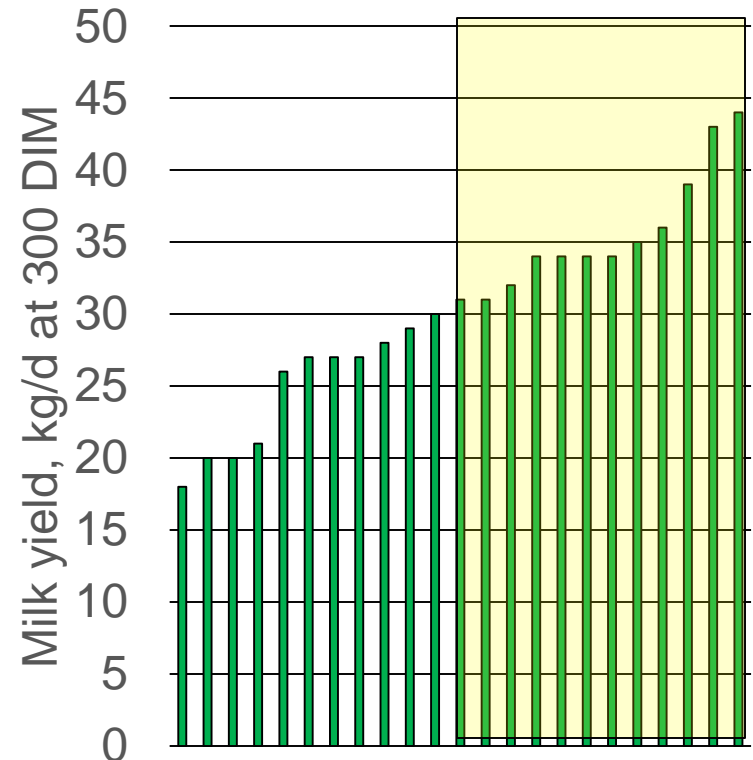
- Challenges
 - Annual calving events – transition period
 - Genetic selection – greater milk yield with persistent lactations
 - Drying off cows with substantial milk yield

- Question
 - Does a 305-d lactation still optimize performance and lifetime cow productivity/profitability?

Milk production potential



Knight, 2006



Current at Rayner

Metabolic problems at peak lactation

Increased mastitis, lameness

Failure to rebreed

Extreme risk period

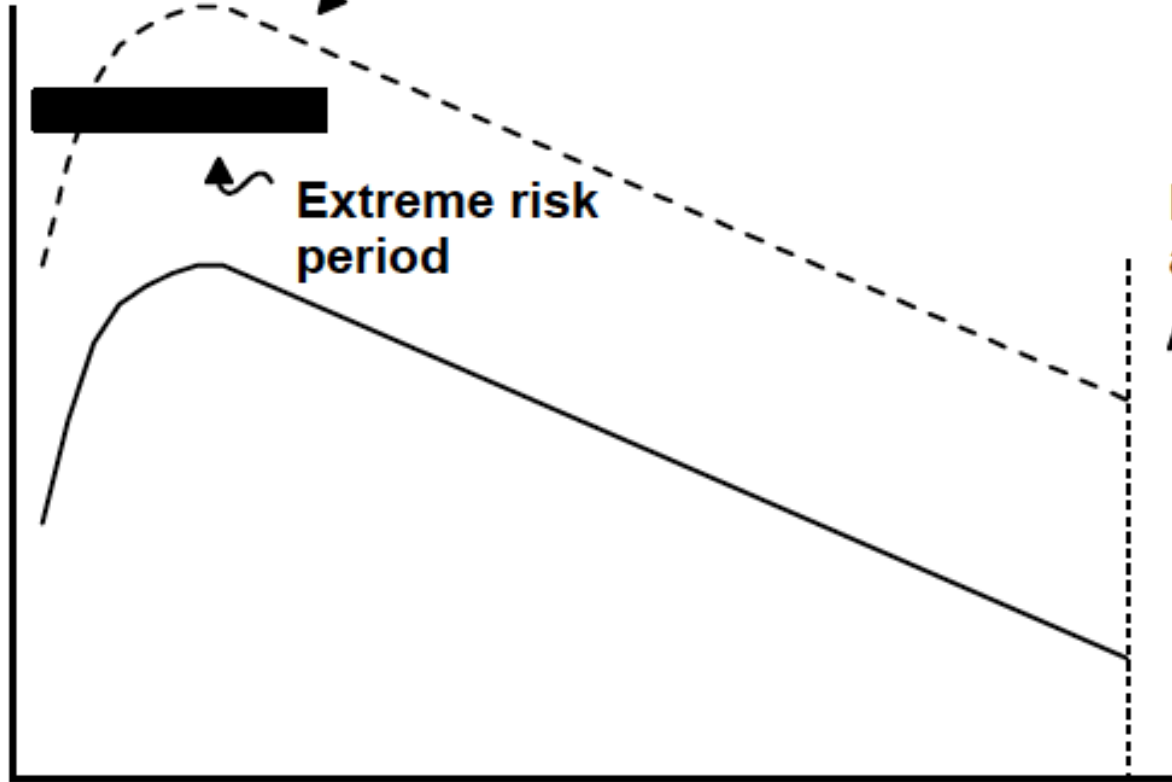
High yield at drying-off

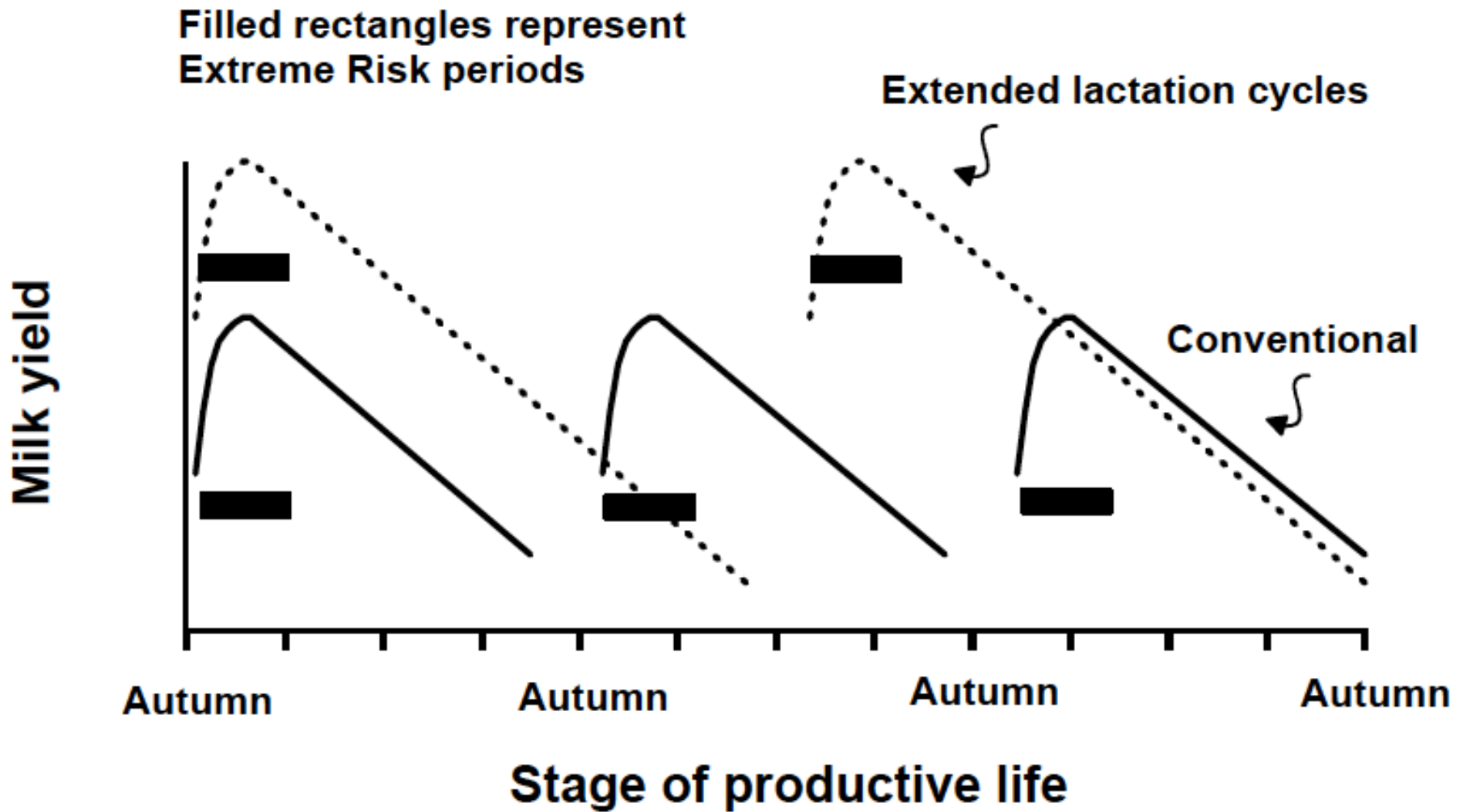
Milk yield

Calving

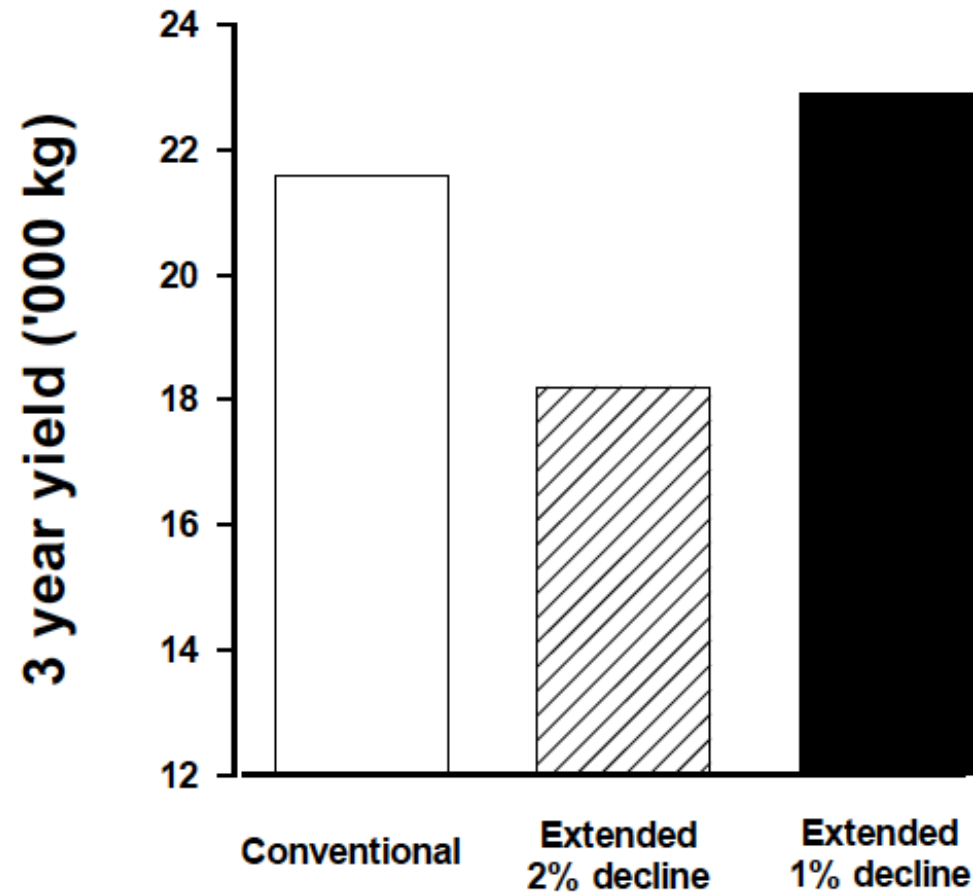
Drying-off

Stage of lactation





Impact of extending lactation



Should all cows be exposed to extended lactations?

- Decision must be made early
- Previous milk yield is highly correlated to the current milk yield (Lehmann et al., 2017)
- 45-d cumulative milk yield is a good predictor
- Increasing milking frequency may increase peak milk yield and persistence
 - Parlour
 - AMS

Experimental Approach

- Randomly assign cows to 1 of 2 breeding protocols
 1. Standard to target 305 d
 2. Extended to target 450 d
- Multiple lactations to evaluate carry-over effects
- Record
 - Reproduction
 - Treatment records
 - Milk and milk component yield – corrected for annual milk yield
 - Economic analysis

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