A novel breeding program to improve Beef bulls for use ON Dairy cows (BonD)

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The future production is BxD calves

- The shift to crossbreed calves leads to significant changes
  - New breeding system
  - % beef x dairy inseminations in DK Sep. 2025
    - Holstein 34%
    - RDC 37%
    - Jersey 38%
- Breeding goal and breeding plan – important links
- BonD build on previous projects
- Four years project: 2024 → 2028
- Five work packs

VB Turbo – new bull with birth index

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Purpose of BonD

The goal is to produce high-quality veal with improved production economics and reduced climate impact.

This is achieved by maximizing the genetic progress per year through optimization of breeding goal and all parts of the breeding program

Breeding goal

Identify the animal traits that shall be improved

Include production, ethical and welfare aspects

Breeding plan

Identify the structure of the breeding system

Selection of animals

Use of technical solutions

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Work packs

WP1: Prospective production systems and consumer preferences

Objective: Predict future trends expected in the beef value chain within a timeframe of 10 years, regarding both production systems and consumer perception.

WP2: Genomic prediction models and genetic parameters

Objective: Estimate genetic parameters, and further develop methods for prediction of genetic merit of BonD animals.

WP3: Definition of breeding goals and their environmental footprint

Objective: Define BGs for different production systems and their expected environmental impacts

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Work packs

WP4: Optimization of breeding schemes

Objective: Design breeding schemes to optimize return on investment using stochastic simulations with the ADAM software.

WP5: Implementation in BonD breeding program

Objective: Developing a new breeding program for BonD beef breeds (e.g. Danish Blue, Charolais, Angus) at VG using tools and recommendations obtained in the different WPs.

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Large expected effects on sector level in Denmark

Reduction after teen years

- 2,500 tons CO_2-emission
  - 17,000 tons feed
  - 340 tons nitrogen
  - 40 tons phosphor
- 4,000 still born cross breeding calves

Economy effect

- Breeding progress →

2.65 mil. Euro over 3 years

- 50,000 more cross breeding calves → 3.67 mil. Euro
- Slaughterhouses + breeding companies → 1.73 mil. Euro

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