



# Impact of Protein Source on Pork Quality: A Comparative Study of Biorefined Grass-Clover Protein and Soy-Cake Protein for Organic Growing-Finishing Pigs



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## Aim:

Measure the effect of biorefined grass-clover protein or soy cake protein on meat percentage, and meat quality of organic slaughter pigs

## Design

- 270 organic Danbred DLY pigs (30-115 kg)
- Freshly harvested grass-clover, grass-clover silage, or grass-clover pulp silage.
- Biorefined grass-clover protein or soy cake protein
- Iso-energetic concentrates
- Identical lysine content.
- 13-14 weeks rearing period
- 2.420 MJ ME from concentrate
- Ad libitum access to roughage
- The Organic Platform at AU-Viborg, Denmark, in 2022-23

## Results:

- Soy -based concentrate increases cooking loss and results in rougher meat texture.
- Numerically higher iodine number and higher content of alpha-linolenic acid in meat from pigs fed biorefined grass-clover protein
- Biorefined grass protein increases meat percentage and unsaturated fat content in pork compared to soy-based concentrate.
- No differences were observed in:
  - Juiciness
  - Bite resistance
  - Chewing time
  - Tenderness



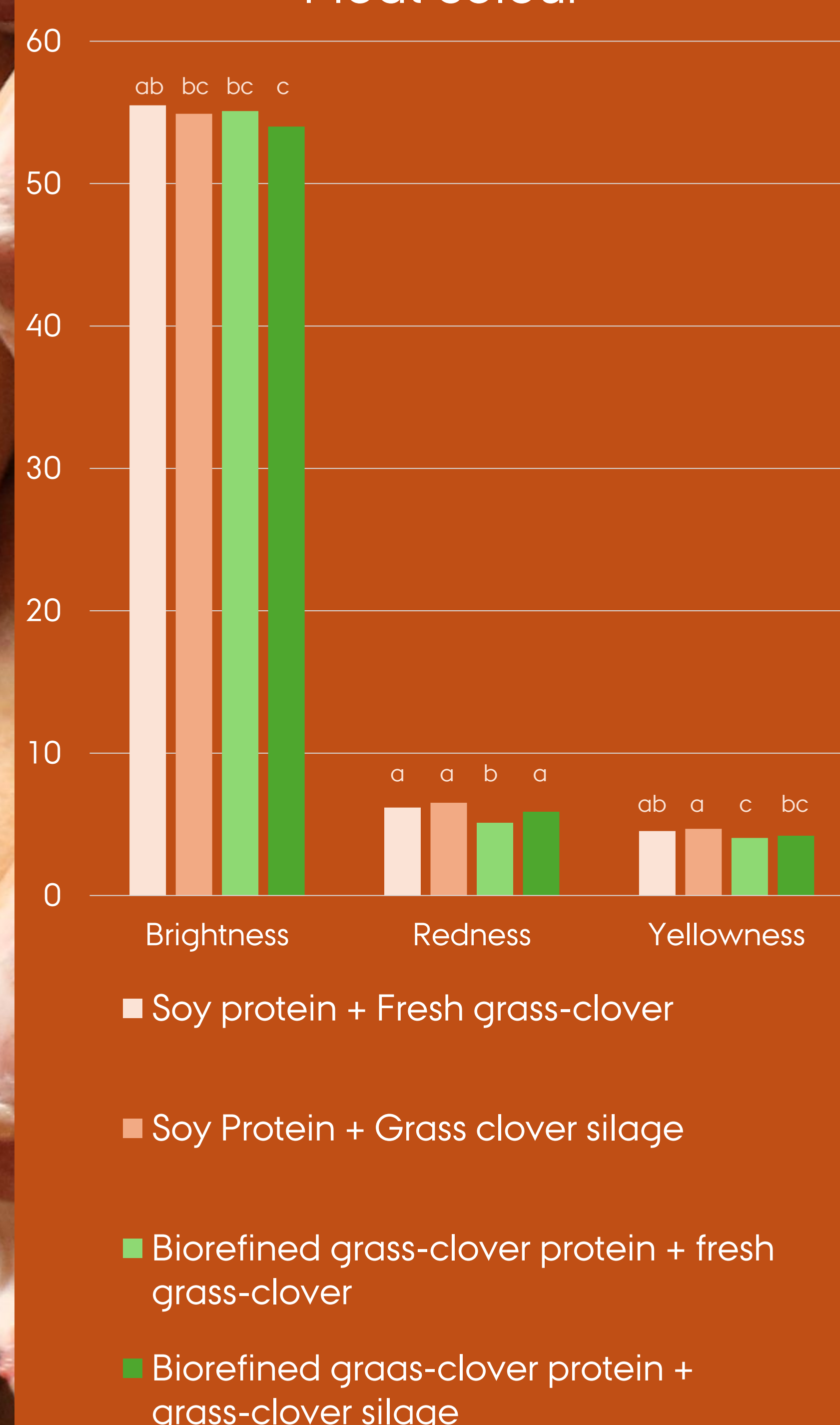
*“No differences were observed in meat pH, intramuscular fat, texture after six months of storage, acidity, harshness, meat flavour, metallic taste or bitterness between protein sources”*

*“Higher content of alpha-linolenic acid and lower vitamin E in meat from biorefined grass-clover protein-fed pigs compared to soy protein”*

Svineafgiftsfonden



## Meat colour



## Lean meat, %

