

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

ICROFS
Organic RDD

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