

New protein sources to enhance sustainability and develop new products

Moderator: Erik Fog

Senior advisor, SEGES Organic Innovation
erf@seges.dk

Biofach Congress, 15-02-2019

SEGES



Proteins and sustainability

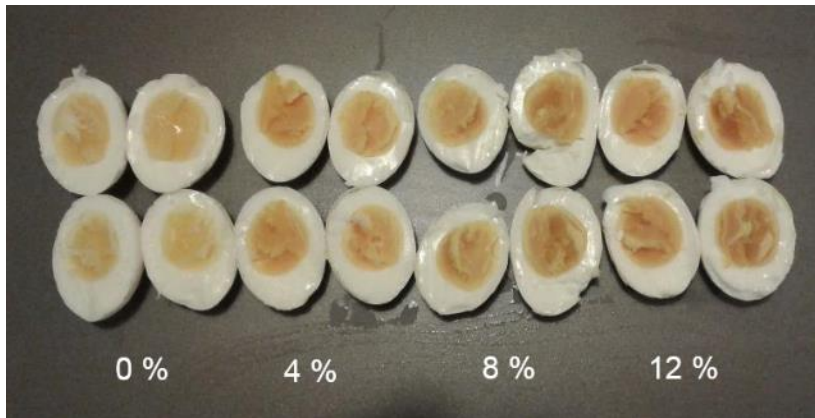
- Organic protein is still scarce – EU exemption on conventional protein prolonged to 2020.
- Growing demand for proteins as organic pig and poultry production is growing.
- Growing demand for high quality proteins for vegetarian products.
- Legumes are important for organic rotations – nitrogen and crop yield.
- Legumes improve sustainability by nitrogen fixation and carbon sequestration.
- But grain legumes are restricted by plant pathogens and by content of ANF and low content of methionine.
- Big quantities of organic soya are imported to the organic animal production in Europe.
- General EU Protein Strategy – promoting an environmental sound way to more self-sufficiency in plant proteins.

New proteins

- Important to add new protein sources to the organic supply chain.
- **Grass protein** has properties close to soy protein (even more methionine).
- Grass clover crops are important for the sustainability of organic plant production.
- **Starfish protein** meal a new environmental sound protein source.
- Protect and promote mussel colonies that clean the sea water.
- **Insect protein** – high productivity on residual sources with low environmental impact.
- Prospects for the use of new proteins in organic feed and food.

The development of organic grass protein

- Research and development projects in Denmark are developing the production of grass protein for organic feed and food.
- Fresh grass clover is pressed and the proteins from the juice are extracted.
- 1 ha of grass clover can deliver protein concentrate with 0,7- 1 ton of crude protein.
- The grass protein has a good amino acid composition with high levels of methionine - very suitable as feed for pigs and poultry.
- Feeding trials with laying hens and with pigs demonstrate high feed intake and productivity.



SEGES

