

Atlantic salmon (*Salmo salar*) protein hydrolysate in diets for weaning piglets – effect on growth performance, intestinal morphometry and microbiota composition - DTU Orbit (08/11/2017)

Atlantic salmon (*Salmo salar*) protein hydrolysate in diets for weaning piglets – effect on growth performance, intestinal morphometry and microbiota composition

Salmon protein hydrolysates (SPH) from two different rest raw materials were evaluated in diets for weaning piglets. Four experimental diets were included in the study: a diet based on plant protein with soy protein as the main protein source (Diet PP), a diet based on fishmeal in exchange for soy protein (Diet FM) and two diets in which different SPH replaced fishmeal in the FM diet. The experimental diets were fed to piglets from the day of weaning until 32 d postweaning. In addition to the record of performance data, an intestinal sampling for mucosal morphometry and microbiota 16S rRNA gene sequencing were performed at day 11 on a subset of the animals. The duodenal villi absorption area was significantly larger in piglets receiving Diets SPH compared with Diet PP ($p < 0.02$). A significant positive correlation between duodenal villi height and average daily gain during the first 11 d postweaning was detected. Only small differences in intestinal microbiota community and no differences in growth performance were detected between the experimental diets. To conclude, SPH seem to be an interesting novel protein source in weanling piglets.

General information

State: Published

Organisations: Center for BioProcess Engineering, National Veterinary Institute, Section for Bacteriology, Pathology and Parasitology, Norwegian University of Life Sciences

Authors: Opheim, M. (Ekstern), Strube, M. L. (Intern), Sterten, H. (Ekstern), Øverland, M. (Ekstern), Petter Kjos, N. (Ekstern)

Pages: 44-56

Publication date: 2016

Main Research Area: Technical/natural sciences

Publication information

Journal: Archives of Animal Nutrition

Volume: 70

Issue number: 1

ISSN (Print): 1745-039X

Ratings:

BFI (2017): BFI-level 1

Web of Science (2017): Indexed Yes

BFI (2016): BFI-level 1

Scopus rating (2016): SJR 0.588 SNIP 0.814 CiteScore 1.35

Web of Science (2016): Indexed yes

BFI (2015): BFI-level 1

Scopus rating (2015): SJR 0.747 SNIP 0.941 CiteScore 1.39

BFI (2014): BFI-level 1

Scopus rating (2014): SJR 0.596 SNIP 0.849 CiteScore 1.22

BFI (2013): BFI-level 1

Scopus rating (2013): SJR 0.474 SNIP 0.674 CiteScore 1.06

ISI indexed (2013): ISI indexed yes

BFI (2012): BFI-level 1

Scopus rating (2012): SJR 0.657 SNIP 0.77 CiteScore 1.04

ISI indexed (2012): ISI indexed yes

BFI (2011): BFI-level 1

Scopus rating (2011): SJR 0.536 SNIP 0.732 CiteScore 1.13

ISI indexed (2011): ISI indexed yes

BFI (2010): BFI-level 1

Scopus rating (2010): SJR 0.734 SNIP 0.901

Web of Science (2010): Indexed yes

BFI (2009): BFI-level 1

Scopus rating (2009): SJR 0.502 SNIP 0.616

BFI (2008): BFI-level 1

Scopus rating (2008): SJR 0.459 SNIP 0.823

Scopus rating (2007): SJR 0.765 SNIP 1.175

Scopus rating (2006): SJR 0.534 SNIP 0.656

Scopus rating (2005): SJR 0.399 SNIP 0.692

Scopus rating (2004): SJR 0.27 SNIP 0.414

Scopus rating (2003): SJR 0.25 SNIP 0.227

Scopus rating (2002): SJR 0.217 SNIP 0.3

Scopus rating (2001): SJR 0.19 SNIP 0.373

Scopus rating (2000): SJR 0.209 SNIP 0.243

Scopus rating (1999): SJR 0.209 SNIP 0.212

Original language: English

Growth effects, Fish waste, Hydrolysate, Intestinal microorganisms, Morphometrics, Piglets, Weaning

DOIs:

[10.1080/1745039X.2015.1117694](https://doi.org/10.1080/1745039X.2015.1117694)

Publication: Research - peer-review › Journal article – Annual report year: 2015