

Additive firms up muscle

Adding an amino acid will improve salmon meat quality.

Nofima

Scientists at Nofima Ingrediens in Norway have discovered a new component in fish feed that influences muscle firmness in salmon.

By adding the amino acid hydroxyproline to fish feed, it is possible to achieve a higher level of muscle firmness, which is an important quality criterion for farmed fish.

Increased muscle firmness gives better meat quality and product properties, which can lead to increased profitability for the aquaculture industry.

Salmon that received feed containing the hydroxyproline supplement, and were stored at a low temperature in the post-slaughter period, showed



FIRM: Adding an amino acid to salmon feed improves the quality of its flesh.

increased muscle firmness after 5.9 days and 15 days of storage. When compared with the control fish, the effect was greatest after nine days.

"These measurements are quite clear. This is sensational," said Senior Researcher Sissel

Albrektsen at Nofima Ingrediens.

The findings indicate it is possible to maintain a high level of firmness in the meat in the important period from when the fish is slaughtered until it reaches the market by feeding the fish hydroxyproline. This can have

major economic advantages for the aquaculture industry. These advantages are:

- Increased muscle firmness
- Stimulated collagen production
- Increased strength in the connective tissue

Petter Oftedal

- Better meat quality and product properties
- Better health and resistance to disease
- Enables increased use of plant feed raw materials
- Enables increased production and profitability

The Nofima scientists' findings open the opportunity for the use of hydroxyproline as a feed supplement also for animals and poultry, where optimal growth and health is an important criteria.

Hydroxyproline influences collagen production and can strengthen the function of connective tissue in tissues other than muscle, such as skin, shell, bowel and bones.

A stronger and more functional connective tissue can offer greater resistance to infections and wounds, as well as better bowel habits and bone development.

The scientists are hoping this discovery will generate interest among feed manufacturers and other industries.