

# RESPONSIBLE AQUACULTURE IN THE NEW MILLENNIUM

Abstracts of contributions presented at the International Conference  
**AQUA 2000**

Nice, France, May 2-6, 2000

This meeting was jointly organized by the European Aquaculture Society (EAS)  
and the World Aquaculture Society (WAS)

Compiled by

Rosa Flos  
Leroy Creswell

Layout and processing

S. Vanroose , E. Titeca, L. Aspeslagh and H. Joncheere



EUROPEAN AQUACULTURE SOCIETY  
SPECIAL PUBLICATION NO. 28  
Oostende, Belgium  
March 2000

## A NEW SLAUGHTERING METHOD IN FISH FARMS TO IMPROVE FRESHNESS

R. Ginés<sup>1</sup>, F.J. Urbieta<sup>1</sup>, M. Marrero<sup>2</sup>, R. Caballero<sup>2</sup>, A. Argüello<sup>1</sup>, J.L. López<sup>1</sup>, M.J. Zamorano<sup>1</sup> and J.M. Afonso<sup>1</sup>.

<sup>1</sup>Departamento de Producción Animal, Universidad de Las Palmas de Gran Canaria, 35416 Arucas (Las Palmas), Spain. E-mail: gines@cicei.ulpgc.es

<sup>2</sup>ADSA, Castillo del Romeral, 35107 San Bartolomé de Tirajana (Las Palmas), Spain

The aim of this work was to compare the effect of slaughtering with conventional ice and liquid ice on flesh texture (puncture and compression) and external colour ( $L^*$ ,  $C^*$  and  $H^*$ ) in gilthead sea bream (*Sparus aurata*). The experiment was carried out at the facilities of ADSA fish farm (Canary Islands, Spain). 216 fish were sampled at random (96 from conventional ice and 120 from liquid ice) and cold stored for analysis at 2 and 7 days after slaughtering.

The instrumental analysis of texture was performed using an INSTRON 4465 Texturometer. Puncture test was defined as the maximum force in Newtons exerted to full penetration on a cylinder fillet measuring 5.3 cm in diameter x 1.2 in height. Compression test was defined as the force in Newtons exerted to deform a cylinder fillet measuring 2.6 cm in diameter x 1.2 in height at 30% of its height. External colour parameters were performed with a Minolta Chromameter CR-200.

Results in puncture and compression were higher with liquid ice than with conventional ice (Table I) at two and seven days after slaughtering. It was not found statistical differences in external colour.

Table I. Instrumental texture analysis for different slaughtering methods

		liquid ice	conventional ice
2 days	puncture	6.83±0.19 <sup>a</sup>	5.85±0.20 <sup>b</sup>
	compression	18.48±0.64 <sup>a</sup>	16.17±0.92 <sup>b</sup>
7 days	puncture	5.65±0.20 <sup>a</sup>	4.83±0.16 <sup>b</sup>
	compression	14.19±0.56 <sup>a</sup>	11.87±0.69 <sup>b</sup>

Means in a row with different letters are significantly different ( $P < .05$ )

In conclusion, for the same period of cold storage, the flesh of gilthead sea bream slaughtered with liquid ice showed better texture characteristics than fish slaughtered with conventional ice.