

FLAKE-ICE ADDS VALUE TO NEPTUNUS FISH

NEPTUNUS MARINES CULTURES SA, built up by Nicholas Stavropoulos, is said to be one of the most successful new fish farms in the Aegean. Its expanding operation has benefited from the use of a new Geneglace S3 orbital silo fed by an F200 flake-ice machine.

The fish are killed with the shock-freeze method using flake-ice produced by Geneglace equipment the moment they are caught in the cages. The bream and sea bass come ashore in flake-ice and are immediately sorted and re-packed in fresh flake-ice dispensed from the Geneglace silo S3 for despatch by road to Patras, where 70 percent of the output goes directly to Italian customers. The ice is drawn off into 1 tonne bins approximately 1km along the bay at the main producing unit, and taken out by barge. The fish have normally been starved for the previous 48 hours and hoisted out of the cages into the flake-ice bins in batches of 300kg.

The freeze-shock method bleeds the fish and helps ensure that the flesh remains supple and firm, with the minimum blood content. The heat exchange function of the sub-cooled flake-ice (-5 or -6° Celsius) rapidly brings the fish down to a core temperature of 0° or 1° from ambient seawater with a temperature of 10° or 11° in winter and as high as 24° to 27° in the hot Aegean summer. (The temperature for optimum fish growth is 23° or 24° Celsius.)

Ashore at the packing factory, the fish is checked and sorted, weighed into boxes and covered with flake-ice discharged

direct from the Geneglace silo (see picture). The fish is maintained within the polystyrene boxes at 0° Celsius for the next 48 to 72 hours en-route to retail display.

A regular supply of ice is essential, and as Nicholas Stavropoulos says, "We rely very much on the flake-ice, and have found the Geneglace ice maker very reliable. The addition of the silo means we can draw off ice exactly when we need it".

The long task of icing has become easy, fast and very clean, as the ice is dispensed automatically out of the silo into each fish box that passes-by on the belt. The use of flake-ice not only maintains the temperature, but also provides fish of the best quality appearance with clear eyes and smooth, shiny skin all the way to the market.

The farm and production unit at Vourlias-Argolidos are at the end of a long, undeveloped track. Upon arrival, one would not expect to find such modern packing equipment in this remote place. Prior to the Geneglace installation, Neptunus had to rely on buying in ice, which was basically crushed block-ice, at a cost of around Dr17,000 per tonne.

However, quality is the watchword at Neptunus - the fish are produced to high quality rather than to a price, and the company says it is well on its way to achieving ISO 9002 3 accreditation.

Neptunus works under strict European Community regulations and has a Greek government permit that relates to the overall production per annum.

Contact Refrigeration Engineering Co Ltd, PO Box 12-072, Penrose. See www.realcold.co.nz or email tech@realcold.co.nz



New Zealand's largest Refrigeration Wholesaler

Providing for the Fishing Industry

- Geneglace Flake Ice Machines – on board and land based models
- Blast Freezers
- On Board Refrigeration Units
- All Commercial and Industrial Refrigeration

REALCOLD



Refrigeration Engineering Co. Ltd.

0800 11 66 90 tech@realcold.co.nz