



## frperc news item - 30-Aug-2007

### FRPERC provides bespoke training course for Zenú SA, Columbia

As part of its education and training activities, FRPERC produce bespoke packages for individual food companies and can deliver them anywhere in the world. Recently a two day workshop on the "Refrigeration and Thermal Processing of Meat and Meat Products" was put together for Industria de Alimentos Zenú S.A. in Columbia.

Zenú is the largest meat company in Columbia and also has factories producing chocolate and dairy products. In its meat factories it turns raw material in the form of boned out, frozen blocks into a wide range of high quality meat products. Steve James ran the two-day intensive workshop for 25 company engineers and technologists at the Centro de Investigación y Desarrollo Cárnico, the company's research centre in Medellin, Columbia. The two day presentation program comprised:

01 Introduction to course

02 Temperature and meat quality - Microbiology, Drip, texture and colour

03 Heat transfer - the basics - Heat flow within, from and into meat

04 Weight loss from meat and meat products - Drip, evaporation and economics

05 Temperature reduction processes - Primary chilling, freezing, tempering and secondary chilling

06 Temperature raising processes - Thawing, tempering and cooking

07 Temperature maintenance operations - The rest of the cold chain, storage, transport, retail and domestic

08 Modelling of meat refrigeration and heating/cooking operations - Simple and complex modelling techniques

09 Specifying refrigeration equipment - Imperative to know the current and future requirements

10 Optimisation of food refrigeration processes - Commissioning, monitoring and corrective actions

11 Alternative refrigeration systems - Faster, more environmentally friendly, more economic

At the end of each day discussions were held on the optimisation of specific processes within the company that could substantially improve productivity and improve the company's profitability.