

## **Reprint F&I : Furomega Bizidee 2004:**

### *Pro-active care of the sick in Belgium*

One of the most adequate ways to lower the cost of the health care substantially, is the sensitisation of the citizens through the national governments to consume healthy food. In this frame, PBS Worldwide presents the 'VitaPork<sup>TM</sup>' concept. This project will bring a patented and innovative product via Belvar in Veurne on the market. It is about pork meat with omega 3,6 fatty acids that cause, among other things, a lowering of the cholesterol of the consumer.

'VitaPork<sup>TM</sup>' is a functional food that supplies a substantial support (pro-active) to the health of the Belgian consumer. Because the meat contains an addition of omega 3,6 fatty acids, as a result of feeding the animals for five weeks with designer feed. The end product will be sold in the wholesale business (type F1, F2 and F3). In this way, the Belgian consumer will, for the first time, get a meat product in the supermarket that offers the, by the health board recommended, amounts of EPA (eicosapentaenoic acid) and DHP (docosahexaenoic acid).

But what does omega 3,6 actually mean? To guarantee a good health, a human being needs a certain amount of essential fatty acids in his food. These can be divided into three categories. First, there are the 'saturated fatty acids' that are especially present in dairy products and meat. A human being only needs a small amount of this type, too much is bad for the health. But the current foods, available in Belgium, contain too much saturated fat. A second category contains the 'unsaturated fatty acids' that can be found both in animal fat and in vegetable fat (a well-known source is olive oil). The replacement of saturated through unsaturated fats is recommended to improve the health. Finally, there are the 'polyunsaturated fatty acids' that, but for a few important exceptions, are being associated with vegetable oils. They are divided into two groups, depending on their exact structure: omega 6 and omega 3. The most occurring forms in food, namely linoleic acid (LA, C18:2 omega 6) and alfa-linoleic acid (ALA, C18:3 omega 3) are essential fatty acids that are of crucial importance in the food. Because of the fact that a human being cannot produce these acids himself, they are called essential fatty acids. Next to this, there also exists the long chain omega 3 fatty acids (LC-PUFA's): EPA and DHA that also cannot be produced by the body. With the help of desaturase and elongase enzymes, human beings can produce through linoleic acid arachidonic acid (AA) and through alfa-linoleic acid docosahexaenoic acid.

However, the problem is that current food contains proportionally too much omega-6 and too little omega-3 fatty acids. The human body can turn ALA in EPA and DHA, but the way in which this happens, is also used by omega-6 fatty acids. The large amounts of this last substance in food, will block this route, and this causes an increased risk on heart diseases and vascular diseases. Because it is exactly the long chain omega 3 fatty acids that plays a crucial role in reducing this disorder! They help to keep the blood pressure on the right level, diminish the risk of inflammation of the blood vessels, improve the balance between the HDL-cholesterol and the LDL-cholesterol in the body, reduce the tendency of the blood to form unwanted clot and protect against disturbances of the rhythm of the heart. The National Food Board in Belgium (Prof. H. Hendrickx – fifth congress Food and Health, Brussels, 15-16/11/02) gave some recommendations concerning omega-6 (4 to 8 % of the total energy) and omega-3 fatty acids (1,3 to 2 % of the total energy). The Dutch Health Board also subscribed to these important benefits and gave advice about the adequate taking of the long chain omega 3 fatty acids (EPA and DHA) of 0,2 grams a day. Numerous epidemiological facts and intervention studies show the importance of omega 3 fatty acids, especially (but not only) in the frame of reducing cardiovascular risk. The alfa-linoleic acid, the leader of the omega 3 series, comes in the first place, but also its most important derivatives, the eicosapentaenoic acid (C20:5 n-3 or EPA) and the docosahexaenoic acid (C22:6 n-3 or DHA) are in no way inferior in importance. Although the first is essential in the body for the formation of the other two, it is assumed that the degree of conversion amounts, in the best case, to only 10 %. Various bodies, like the American Heart Association (AHA) and the International Society for the Study of Fatty Acids and Lipids (ISSFAL), have already several

times pointed out the importance of omega-3 fatty acids. Next to this, we can also refer to the University Hospital in Ghent, the department of Orthomolecular research of the Leuven University, the Oxford University and the Wageningen University.

‘VitaPork™’ provides new opportunities for pig farmers, producers of feed, slaughterhouses, processors, retailers and consumers. It places the focus on the essential fatty acids EPA, (DHA) and omega 3 and reduces the cholesterol (LDL – low density triglyceriden), eases the symptoms of rheumatic arthritis, improves the quality of the skin, reduces the risk of the development of certain cancers (among others cancer of the prostate), has a positive effect on high blood pressure, has an encouraging effect on the brains and eyes, decreases the risk of depressions and has a synergetic effect on the treatment of manic depressive patients. Belvar in Veurne will set up a management system of the chain. The chain starts with the delivery of the concentrate, the producer of feed needs for the production of designer feed, that is required to feed VitaPorks during five weeks. It ends with pork meat that ends up by the consumer under the label of ‘VitaPork™’, or under a public label.

The Dutch JSR Europe BV, the mother company of Belvar, will deliver the concentrate for the production of designer feed (that is patented in more than eighty countries worldwide). It is willing to sell this product to producers of feed that want to use the label ‘VitaPork™’, or a public label.

The development of the market of functional food contains a shift from the current knowledge about diet and food. We evolve from the removal of the bad (salt, fat) to the addition of the good (calcium, fibres, anti-oxidants and botanical products). It is estimated that the current market of such products in Europe amounts to about 1,7 billion euro and that it will grow annually until 15 %. In the coming ten years, the ‘wellness’ industry will bring in at least *one* trillion euro and have an impact on all aspects of our lives. The health care will pro-actively anticipate on diseases by treating symptoms through functional food. In this way, the consumer will feel healthier, slow down the aging process, look better and in the first place prevent illnesses.

Nonetheless, there are only some initiatives launched today. In a lot of cases, it is about functional dairy products and the energy drinks. With ‘VitaPork™’, pork meat, a whole new phase is heralded. Belvar wants to achieve that, in the next five years, functional products make up 5 % of the total consumed pork meat in Europe through retail. To achieve this, it will launch in 2004 a pilot project in Belgium.

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