

L.22.- Fat Processing

J.T. van der Veen

EFPRA, Boulevard Baudouin 18 (Bte 4), B-1000 Bruxelles, devries@skypro.be
Ten Kate, PO box 16, NL-9580 AA Musselkanaal, jtdveen@tenkate.nl

Lipids are of vital importance. Without lipids there is no life, we can't think, and we experience no sense. The main categories of lipids are fats. Besides a sustainable source of energy, fats have many biological functions, such as storage of fat-soluble vitamins, supply of essential fatty acids and protection of organs. Fatty acids are essential as part of the synthesis of polar lipids for lipid bilayers and intracellular messengers. In spite of all these positive biological functions, animal fats have a negative reputation regarding obesity and increasing "bad" LDL-cholesterol. However so far there is no conclusive proof that a high consumption of animal fat is the cause. Even the contribution of saturated fats with regard to coronary heart disease has led to extensive scientific disagreement. Putting into perspective a recent meta-analysis reported that the consumption of trans-fatty acids has a 7.3 more adverse effect compared to saturated fats. For food safety aspects in the context of prion diseases we should question ourselves continuously on the current risk for humans; do we still have to fear BSE?

In a balanced diet animal fat is a valuable source of concentrated energy and (essential) fatty acids needed for growth and development. For hundreds of years animal fats are used for cooking. Lard is applied in bread making to assist the leavening process and to soften the crumb. The soft consistency and crystalline character makes lard the most suitable shortening for pastry contributing to colour, flakiness, flavour and tenderness. For feed manufacturers the fatty acid profile and melting point of animal fats are important features for feed production as well as for producing tendered and tasteful meat. Along with nutritional aspects and digestibility, feed producers prefer animal fat on account of the positive crystallisation characteristics for calfmilk replacers and the formation of firm feed pellets with a high feed performance. Better economics are also relevant.

The business of fat processors is historically determined by the processing of slaughter by-products exclusively from approved animals fit for human consumption. Edible fat processing is traditionally associated with species-specific processing, high-grade animal fats and mild processing conditions which are essential to supply specific markets for food and feed. Therefore the commercial specifications of animal fats derived by fat processors are traditionally much stricter than the legal specifications. The animal proteins produced are wet frozen or dried for the use in foodstuffs or as an ingredient for petfood. The quality and food safety system applied in the fat processing industry is aimed at integrated chain control and based on the food safety principles of HACCP. Accordingly the used raw materials are subject to the same food safety inspections and monitoring program which is compulsory for meat. Finally and essential for slaughterhouses is that fat processors are in the position to pay for raw materials, therefore creating an added value for the animal chain.

Keywords

Fat processing, animal fat, animal protein, slaughter by-products