News
INRAE VetAgro Sup
UMR Herbivores
Edition 2020
Team Breeding practices, animal robustness and product quality (Peraq)

HIGHLIGHT

Collective scientific expertise 'The quality of animal-derived food according to animal production and food processing conditions'

The aim of this collective scientific expertise was to characterize the quality of animal-derived foods according to animal production and food processing conditions. Twenty scientists from complementary disciplines (animal, food, human health and economic and social sciences) analyzed the quality of these foods produced and consumed in Europe, whether they are standard or have a quality sign, on the basis of 3500 international publications. Quality has been considered in its various dimensions, by jointly characterizing organoleptic, nutritional, sanitary, technological, commercial, use and image quality attributes. The group of scientific experts identified the role of the factors influencing the quality of animal-derived foods, at the various stages of their elaboration, from production to consumption. The framework of joint analysis of the different dimensions of quality made it possible to point out the factors inducing synergies or antagonisms between different dimensions of quality. This expertise identified research needs and main options for public action.

The consumption of animal-derived foods is questioned as its effects on human health, its impacts on the environment, as well as in terms of ethics towards animals. Following a collective scientific expertise on the environnemental, economic and social impacts and services of european livestock farming systems (Dumont, Dupraz et al., 2016), the French ministry of Agriculture and Food and the french agency FranceAgriMer requested an additional scientific expertise relating to the quality of animal-derived foods. The objective was to characterize the quality of these foods according to animal production and food processing conditions.

This collective scientific expertise was conducted by twenty experts (40% of whom were external to INRAE).

It was co-piloted par S. Prache (INRAE Phase) et V. Santé-Lhoutellier (INRAE Transform) and coordinated by C. Donnars (INRAE DEPE), and involved 6 scientists from the Phase Department.

Twenty scientists in animal, food, human health and economic and social sciences carried out a critical analysis of the scientific literature on the quality of animal-derived foods produced and consumed in Europe, whether they are standard or have a quality sign, based on 3500 international publications, with the support of two librarians. This collective scientific expertise was coordinated by the Unit for Collective Scientific Assessment, Foresight and Advanced Studies at INRAE. Food quality was approached in its various dimensions, jointly characterizing organoleptic, nutritional, sanitary, technological, commercial, use and image quality attributes. Consumer behaviour, effects on human health, and the possibilities of

authenticating the origin and the animal production and food processing conditions were also considered. This expertise pointed out the various factors influencing the quality of animal-derived foods, at the different stages of their elaboration, from production to consumption. It highlighted the possible antagonisms and synergies between the different dimensions of quality and between the different stages of food elaboration.
It analyzed and compared the specific commitments of foods having an official quality sign (organic, PDO, PGI, STG, Label Rouge). Finally, the experts analyzed the methods used for controlling food quality and they suggested possible avenues for food quality improvement. The results of this expertise were presented during a symposium organized on May 29, 2020, in a webinar form, in which more than 500 persons participated.

Perspectives to be built (Unit for Collective Scientific Assessment, Foresight and Advanced Studies and MétaProgramme Systèmes Alimentaires et Santé at SANBA INRAE)

Learn more:

Prache S., Santé-Lhoutellier V. (scientifics pilots), Adamiec C., Astruc T., Baeza-Campone E., Bouillot PE., Clinquart A., Feidt C., Fourat E., Gautron J., Guillier L., Kesse-Guyot E., Lebret B., Lefevre F., Martin B., Mirade PS., Pierre F., Rémond D., Sans P., Souchon I., Girard A., Le Perchec S., Raulet M., Donnars C. 2020. Qualité des aliments d'origine animale selon les conditions de production et de transformation. Synthèse de l'expertise scientifique collective, INRAE (France), 111 pages.

The synthesis and the full reports are freely available on the INRAE website at the following address : https://www.inrae.fr/actualites/qualite-aliments-dorigine-animale-conditions-production-transformation

The recording of the webinar and the materials are available at : https://www.inrae.fr/actualites/qualite-aliments-dorigine-animale-conditions-production-transformation

Bibliographical references:

Dumont B. (coord), Dupraz P. (coord.) et al., 2016. Rôles, impacts et services issus des élevages en Europe. Synthèse de l'expertise scientifique collective, INRA (France), 133 pages.

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