The food professional's dilemma: a healthy diet or a healthy profit?

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Abstract

The varying roles of food professionals are described and their involvement in the provision of food dietary guidelines and in the development of new food products is explained. The conflict that may be set up in these differing tasks can lead to a professional dilemma. An explanation of the dichotomy between sectors of the food professions indicates how the dilemma may occur and also how it might be resolved. A more integrated approach to the challenge of development of foods and diets for healthy living is suggested.

Keywords: dietary guidelines, new product development, conflict resolution

Introduction

Most professional food scientists are employed by the food industry and have their professional status ratified by their national institution. In the United Kingdom that is the Institute of Food Science and Technology (IFST) and in the United States it is the Institute of Food Technologists (IFT). All of these national institutions have codes of conduct and guidelines for ethical behaviour and most of these institutions are members of the International Union of Food Science and Technology (IUFoST). These member institutions or Adhering Bodies (ABs), as they are termed, share their technical expertise and compare professional standards. Most countries, recognizing the relationship between food and health, have developed national dietary guidelines aimed at improving their nation's health and preventing premature death. Food professionals are involved in the development of these guidelines. Despite every effort so far, most developed and many developing countries appear to be unable to prevent the growth of obesity and the spread of type 2 diabetes among their populations.

The global food industry has developed rapidly over the last century and mergers and acquisitions have produced large monopolies and, more recently, very large retail enterprises with great purchasing power and market influence. Their success has been fuelled by increasing sales and the consistent high profitability of processed foods, many high in fat, sugar and carbohydrates, inconsistent with or directly contrary to dietary guidelines. The development of many of the fast food and instant commodities presently available for purchase has been in the hands of food professionals.

The dilemma facing many food professionals in the industry is how to apply their skills and abilities in the development and marketing of products that may negate the very dietary guidelines they know can bring health and wellbeing to consumers, including themselves.

Training food professionals

In any consideration of this process there must be some agreement as to the definition of both 'profession' and 'food'. The New Shorter Oxford English Dictionary (1993) defines 'profession' as 'A vocation, a calling, especially one requiring advanced knowledge or training in some branch of learning or science, specifically law, theology or medicine; generally, any occupation as a means of earning a living' and a

'professional' as 'Engaged in a profession, especially one requiring advanced knowledge or training'. 'Food', from the same source, is defined as, 'Substance(s) (to be) taken into the body to maintain life and growth, nourishment; provisions, victuals.' These definitions are broad and it follows that the compass of food professionals will be great. However, in most instances a basis of scientific study at a university of three to five years duration, to degree standard or above is a minimum requirement for membership of most food related professions. Full professional status requires proof of experience in the area of professional competence, usually through approved internships, supervised employment and, in some cases, further examination of the candidates' professional, rather than academic, knowledge. Whilst this process is common for those entering the medical, dietetic, nutritional, food science and technological sectors, some areas, particularly in the hospitality related areas, may rely much less on academic rigor and much more on practical and artistic skills. Nonetheless, each related professional association will have its own rules of membership and related codes of professional conduct, whose failure to observe may result in expulsion from the profession and loss of employment. Many of these professions operate both nationally and globally, where for example the Institute of Food Science and Technology (IFST) from the United Kingdom, the Institute of Food Technologists (IFT) from the USA and the Australian Institute of Food Science and Technology (AIFST) register professional members from their respective countries but are, themselves, members of the International Union of Food Science and Technology (IUFoST), a global organisation. Recognition of professional status in one country may well give similar recognition in many others, where common standards of training and conduct apply.

Development of dietary guidelines

All governments have concerns for the health of their populations, not only as a matter of general wellbeing, but also as a means of improving productivity and reducing the costs of medical care and welfare payments. As part of the strategy for ensuring good health many governments develop health policies. Such policies often emanate from surveys of consumers and their use of food. In the UK the National Diet and Nutrition Survey (NDNS) was established as a joint venture between the Ministry of Agriculture, Fisheries and Food (MAFF) and the Department of Health (DH) in 1992, the role of MAFF devolving to the Food Standards Agency (FSA) in 2000. The surveys are used 'to develop nutrition policy at both national and local levels and to contribute to the evidence base for Government advice on healthy eating.' In addition the surveys '. . . are designed to provide detailed information on the current dietary behaviour, nutritional status and oral health of adults in Great Britain.' From the results of the surveys an Advisory Committee develops the national dietary guidelines. A similar approach is used by the United States government, placing the task in the hands of the Department of Health and Human Services (HHS) and the Department of Agriculture (USDA). It is important to note the requirements for membership of the US Dietary Guidelines Advisory Committee (Federal Register, 2008). Committee members should be '. . . knowledgeable of current scientific research in human nutrition and be respected and published experts in their fields. Familiar with the purpose, communication and application of Dietary Guidelines and have demonstrated interest in the public's health and wellbeing through their research and/or educational endeavours. Expertise in, but not limited to: Cardiovascular disease, cancer, paediatrics, gerontology, epidemiology, general medicine, overweight and obesity, physical activity, public health, nutrition biochemistry and physiology, nutrient bioavailability, nutrition education, and food safety and technology.' The paucity of representation of food science and technology or other elements of food services should be noted against the dominant presence of medical and nutritional specialists. In examining the profiles of the members of the Dietary Guidelines Working Committee, Australia (National Health and Medical Research Council, 2008), no member had any qualifications in food science, technology or service and no experience in any part of the food industry. A similar pattern emerges for the United Kingdom committee. These food professionals concentrate on the whole diet outcomes as reflected in the populations' health.

Development of 'new' food products

A food retailing organisation is required to attempt to increase profits continually. To achieve this there has to be a gain in market share and/or and increase in margins. The first scenario requires the development of 'new' products and the second requires increases in efficiency or lower commodity costs to the manufacturer. Such pressure can result in the demise of farming enterprises and the failure of processing companies.

In developing new products it must be realised that for the food market >95% of all new products fail. However, for those that succeed there is great market share to be gained, so the risk is considered worthwhile. New products can emerge from different sources, some from the discovery of novel ingredients or processes that match a perceived need. The majority come from identification of opportunities by the marketing departments of either the retail organisations or their suppliers. Frequently the food technologist is requested to formulate a product to a market design niche either on intrinsic quality or on cost, sometimes both. When there may be a related health claim for dietary advantage, particularly of a weight-loss nature, nutritionists may be involved. In most cases there is not much attention, if any, paid to the product's role in a healthy diet. This is not true for weight-loss meals, but this represents a small part of the industry's product range. Whilst 'low fat', 'reduced sugar', 'low salt', 'no artificial colours', 'low cholesterol' are all labels that attract the eye of the consumer, it requires much attention to the small print on the label to ascertain how this particular product will affect the diet as a whole. A label of 'low fat' on apples is always correct but of little value unless a diet is very rich in apples at the expense of high fat components.

The development of 'new' food products lies in the hands of food scientists, technologists, chefs and food service professionals, influenced greatly by the marketing exercises of the employing organisation. There is some evidence of the use of the healthy eating concept to promote some whole meal ideas (Condrasky *et al.*, 2008) but generally the focus is on a product, not a diet.

Professional divergence

In considering the roles of food professionals in the development of dietary guidelines and of new food products it can be seen that there is a divergence of both the roles and the perspectives of two separated groups. In the dietary guidelines task those professionals involved are drawn from the medical, dietetic, nutrition and health sector of the continuum. In spite of all their work with dietary advice, the increase in illnesses such as obesity, cardiovascular disease, late onset diabetes, stroke and hypertension continue and even seem to accelerate in parallel with increasing affluence. Thus guidelines, however well designed, without implementation of appropriate strategies, yield no favourable results.

By comparison, the tasks of product development, which is the development end of food processing and service, the professionals are drawn from the food science, technology, engineering and hospitality sector of the same continuum. As such any dilemma may be more apparent than real as few professionals from one sector cross over to work in the other. The effects of individual food items or even meals is chronic rather than acute (unless allergies are at work) and all are guilty of over-indulgence at some time. The event only becomes a health problem when it becomes a habit. This issue was reported some time ago in relation to fast-food and the diet (McGill, 1989).

The ethical stance

Lest it be considered that the explanation of divergence amongst food professionals salves any conscience, there must be some consideration of the effect of Codes of Professional Conduct of the various

professional bodies and any impacts they might have on the behaviour of consenting professionals. In the case of one example, the IFST's Code of Professional Conduct (IFST, 2005), which in total occupies 36 pages of text, a significant requirement is for the professional member 'to take legitimate steps through proper channels to ensure (or assist in ensuring) the wholesomeness of any food with which he or she is concerned'. If the definition of 'wholesome' is accepted as 'conducive to general wellbeing; beneficial, safe; promoting physical health, and formerly also, curative and medicinal', then the requirement on the professional is significant with regard to health. Further examination shows that the guidelines of the Code deal specifically with Nutrition Value. 'The total diet of any consumer should be such as to provide and adequate balance and amount of known nutrition requirements. Each consumer's choice of a number of foods, and of quantities of each, however, represents one of the virtually infinite number of permutations and combinations. Such choice by the consumer is entirely outside the control of the food scientist or technologist concerned with a particular food or group of foods. With certain exceptions, discussed below, therefore, it is not normally possible to specify that an individual food must have particular nutrition characteristics. The exceptions are as follows:

- Foods for which legislation specifies minimum nutrition standards.
- Foods for which nutrition claims are made.
- Foods which are generally recognised as being valuable sources of specific nutrients.
- Novel food products which may significantly replace foods of nutrition significance.
- Food products intended for particular nutrition purposes.

How then is the food professional engaged in product development or even manufacture, able to continue to work and keep within the Code of Conduct? Another element of the Code states that the Professional should behave so as 'to respect any confidence gained in his or her professional capacity.' Some comfort must be taken from within the detail and the reminder that 'no one food is a diet' and 'no diet is all of health'.

A solution by integration

An experience from the IUFoST conference held in Seoul, South Korea in 2001, may give some direction to a solution of the apparent dilemma. One of the keynote speakers at a plenary session was the then President of the Chinese Peoples' Republic Medical Association. His inclusion seemed to be more for political than scientific reasons as this was a food conference. Although he had to speak through an interpreter, he recognised with some amusement, our irritation at his apparently inappropriate inclusion in the programme. He observed that in our history, no medical practitioner had been included as a speaker, yet in his country, no medical doctor would consider the treatment of a patient before first examining their diet and then would begin any treatment required through dietary manipulation in the first instance.

A way must be found and strategies deployed to bring a closer integration of the work of food professionals in the development of effective dietary help to improve the health of all people. There are signs of a more co-ordinated approach to improving health through good diet and the right foods in the recent discussion paper from the UK government (The Strategy Unit, 2008).

References

The Strategy Unit, U.K. Government Cabinet Office (2008). Food: an analysis of the issues. Revision A 29 January 2008. http://www.cabinetoffice.gov.uk/upload/assets/www.cabinetoffice.gov.uk/strategy/food/foodanalysis.pdf. Accessed 6 March 2008.

Condrasky, M., Warmin, D., Wall-Bassett, B. and Hegler, M. (2008). Building the Case for Healthy Menus. Food Technology 62: 47-59.

Federal Register (2008). US Dietary Guidelines Advisory Committee 68: 26280.

Institute of Food Science and Technology (IFST) (2005). Code of Professional Conduct. http://www.ifst.org 36pp. Accessed on 31 March 2009.

McGill, A.E.J. (1989). Nutritional Value of Fast Food. In: Bush, P.B., Clarke, I.R., Kort, M.J. and Smith, M.F. Proceedings of the National Food and Nutrition Conference. Technikon Natal Printers, Durban South Africa. ISBN 0-958-3062-1-4, 175pp.

National Health and Medical Research Council (NHMRC) (2008). Membership list, Working Committee, 2008-2010. http://www.nhmrc.gov.au/your_health/healthy/nutrition/committee.htm#mem. Accessed 31 March 2009.

Brown, L. (ed.) (1993). New Shorter Oxford English Dictionary. Oxford University Press, Oxford, United Kingdom. ISBN 0-19-861134-X. 3801 pp.