

TEACHING OF HYGIENE AND FOOD SAFETY IN SMALL AND MEDIUM SIZE MEAT INDUSTRIES.

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Background

The opening of the markets, as a part of globalisation strategies, constitutes a situation of direct and immediate commercial benefit for those companies that can compete, without restrictions, towards customers that has endless possibilities of selection. Nevertheless, the facts show that not all industries enjoy in the same way market liberation advantages. On the contrary, large companies and multinationals are the ones that take out the most of this mechanism, in contrast with smaller and medium size manufacturers who lacks a complete and developed managerial structure.

Within a demanding and open market, costs reduction and production efficiency are goals that have to be achieved in the short term, notwithstanding the size and particular situation of each business, but without neglecting the basic principle of quality: customer's satisfaction.

During years, small and medium size businesses (PyMES) have built, in Argentina, a solid base for the national economy, and particularly, food and agricultural industries have done so in the Litoral Region. In our region (Province of Santa Fe) among the difficulties that PyMES of that sector undergo, it can be mentioned: small possibilities of personnel training, small or any professional participation in production processes, economic limitations to hire said personnel, investment in technologies that hardly cover their necessities, and generally, without prior training to justify their incorporation, absence of quality management programme, inappropriate quality control services, and small relation with scientific and technological centres.

During the second half of the Twentieth Century, the technological development of food industry has been, in quality and quantity, of such a magnitude that surpasses what had been done before, both in food design and in its sanitary aspects. This has changed the conditions in which production, distribution and consumption of food develop, making them cheaper, of better industrial quality and more consistent in its composition.

This process of transformation has reached Argentinean meat industry in general. Big companies have face this transformation process training their human resources and improving their technology. On the contrary, small and medium size businesses of this sector need specific support for human and technological conversion.

At the same time, in the food and agriculture chain of Argentina, although traditional structure of industries that slaughter and manufacture meat still remains, slaughterhouses tend to disappear leaving that place to supermarkets, that have incorporated processes of industrialisation (quarter, butchering, cuts preparation and products).

All these changes together with the arising of food transmitted diseases (ETA) make it necessary that personnel, that handle food in general and those who manipulate meat and meat products in particular, have a specific training on hygiene and food safety, development and adoption of good manufacture practices and continuous quality improvement by means of self-control systems.

Through personnel training, a responsible attitude towards consumer's health will be developed in them when handling meat and meat products, resulting in their identification as professionals of the food and agriculture chain, feeling responsible that the food they manipulate is harmless

Objective.

Personnel training of small and medium size business that manipulates meat of meat sector in hygiene and food safety, in such a way that each of them can manage quality and assure the innocuousness of the products they manufacture and handle.

Methods

With the purpose of understanding the proposed aim and within the activities stated in the project "Food protection and quality management as a tool of development for regional food agriculture Pyme and consumers' education" theoretical and practical training courses were developed for food manipulators of small and medium size meat industries, belonging both to proper industrial sector (slaughter and processing) and commercial sector (supermarkets). This project, duly evaluated by professionals not belonging to the Universidad Nacional del Litoral, was granted financial aid from Secretaría de Extensión Universitaria, (Secretary of Extramural Studies) Ministerio de Trabajo de la Nacion and FONTAR Programme.

The theoretical part of each course was directed to groups of twenty-five people and practices were carried out at the proper working sector in groups of two or three people. The extension of the course was of 90 hours total. The syllabus included the following main points: introduction (definitions and glossary), food biochemistry, food microbiology, food toxicology, food transmitted diseases.

good manufacturing practices, standard operative procedures of sanitation, quality systems, etc. This syllabus was developed in an academic level to be understood by people whose basic instruction was dissimilar and that, in many cases, had incomplete studies (primary and secondary level). For class development, the teachers prepared specific support resources (transparencies, slides, and educational videos) that facilitated technical knowledge assimilation. On the other hand, each trainee was given a manual that gathered all the information taught in class and that was used as support of topic study.

Learning level achieved was evaluated individually, by written term exams at the ending of each topic.

Results and discussions

During the years 1998 and 1999 six courses were carried out. Three aimed at industry personnel, and three at supermarket personnel. In the first three, 75 employees that worked in production tasks in the area of slaughtering, butchering and meat product manufacturing were trained, (raw, dry-cured and cooked meat products) and, in the other three, training was given to 55 employees that worked in the areas of manufacturing and handling of meat products in butcher's, delicatessen, cooked food and fish areas of supermarkets.

In all training courses emphasis was given to the development of practical activities that let trainees assimilate concepts given during theoretical classes. All practical classes were carried out at the working place of each employee, this helped to achieve a direct association of concepts with their daily tasks. To facilitate this teaching activities, the teachers co-ordinated with the employee in charge of the different sectors to make them give their personal experience and get them involved in the training. This methodology, in which university teachers form a tight bon with personnel in charge of the industry, makes it possible to continue the teaching process in time and, on the other hand, it stimulates the development of the teaching activity on the part of enterprise managers.

The 130 employees were granted a certificate that states their participation in the course, which from their personal viewpoint, meant an important acknowledgement of their effort.

Conclusions.

The training in the area of Hygiene and Food Safety, of food handlers in general, and particularly, of those workers that handle meat and meat products contributes directly to food harmlessness assurance process. Furthermore, it is an essential tool for enterprises to attain quality management systems and to respond to consumer's current necessities.

Food handlers are food and agriculture chain professionals that have direct responsibilities on consumer's health and welfare. For this reason, their training must be another requirement to fulfil in their work performance.

This types of project let the enterprises approach University facilitating the technological transference process and direct personnel training at different levels. The Secretary of Extramural Studies of said University plays and important role in achieving these activities.

Pertinent literature.

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