

## E-learning for Dissemination of HACCP

### 1. Introduction

Changes in the environment surrounding food safety, especially global standardization is becoming inevitable and urgent. Ministry of Health, Labor and Welfare therefore revised the Food Sanitation Act in 2014, and according to the amendment, 'hygiene control standards using Codex HACCP' should be expanded to include small business, restaurants, meat and poultry processing plants. The ministry is already moving toward making application of HACCP mandatory in the near future.

### 2. Summary

When applying HACCP, the key is how to disseminate its basic knowledge. E-learning program is effective. Thus, we decided to establish e-learning system of three steps, (1) common course, (2) industry-classified course, (3) inspector's course.

### 3. Aims

In 2015 we developed a common course of HACCP basics as a primary step for trainers in food safety/hygiene to learn at the very beginning as follows. The goal is: (1) Course participants learn HACCP basics and how to implement plan-do-check-act (PDCA) cycle. (2) To achieve substantial results. (3) To minimize dropout rates and raise completion rates of the course.

### 4. Framework

- (1) As tools for creation of e-learning courses, we use character animated video/software with enhanced function of log data acquisition/management/analysis which are easier to standardize.
- (2) We added basic elements for continuous efforts after learning skills and knowledge of HACCP. The content includes procedures for implementing and reviewing hygiene control system based on HACCP, and for executing PACD, along with basic knowledge of HACCP presented by Codex. In addition to process management, it also includes quality control measures for raw materials which may have critical influence on food product safety.
- (3) For definite learning effectiveness, multiple-choice quizzes are given at the end of each chapter which are automatically graded, and each score is set to 90 or above to move on to the next chapter.

## 5. Conclusion

- (1) We developed a common course for learning basics of HACCP.
- (2) We need to improve the program consistently according to details of learners including their situation and requests to increase completion rates.
- (3) We need to explore and create content, course structure, course credit system designed to meet the needs and interests of experienced personnel under HACCP system, instructors, inspectors; in parallel with the development of industry-classified course (step 2) and inspector's course (step 3).
- (4) We need to consider how we adopt multiple learning programs combined with group training to enhance learning effects.

### Authors:

Furuya, Yoko, Japan Food Safety Verification Organization

Kawahara, Shunsuke, Japan Food Safety Verification Organization

Sato, Konichi, Japan Food Safety Verification Organization

Akaike, Hiroshi , Japan Food Safety Verification Organization

Kimura, Shigeru, Japan Food Safety Verification Organization

Inoue, Toshio, Japan Food Safety Verification Organization

Chazono, Akira, Japan Food Safety Verification Organization

Morita, Yukio, Tokyo Kasei University

Yamamoto, Shigeki, Tokai University