ERASMUS+ PROGRAMME

Project Number: 574010-EPP-1-2016-1-JO-EPPKA2-

CBHE-JP

FOODQA - Fostering Academia-Industry

Collaboration in Food Safety and Quality

Report on Training Needs of the Food Industry in

Jordan

August 13, 2017

TABLE OF CONTENT

1.   EXECUTIVE SUMMARY

This report constitutes an analysis of the WP2 of the "FOODQA - Fostering Academia-Industry Collaboration in Food Safety and Quality"; an Erasmus+ project, which aimed at identifying the needs of the food industries in Jordan from Food Safety Centers that will be established at each university. A comprehensive survey was prepared by P&B-Portugal, then it was revised by the Training, Technical, and Quality Committees. The survey focused on identifying the importance of different training workshops and courses to the Food Industry in Jordan. Moreover, the surveys aimed at identifying the mode of the training these companies prefer the most. The survey was prepared using Google Templates and the link was sent to the food companies in Jordan. Forty-one companies completed the survey.

These results were collected to identify the needed training for the food companies in Jordan. It was found that local food companies need training on IFS, HACCP, Quality management systems, pest control, and personal hygiene. On-site and e-training received high percentage by the participants.

2.   INTRODUCTION

Food safety and the protection of end consumer health is of increasing concern to the general public, non-governmental organisation, professional associations, international trading partners and trade organisation. The safety and confidence of consumers within the community and in the third countries are paramount importance. A food business operator is best place to devise a safe system for supplying food and ensuring that the food it supplies is safe, thus it should have primary legal responsibility for ensuring food safety. The introduction of preventive approaches such as the food safety management systems based on HACCP (Hazard Analysis and Critical Control Points) principles (ISO 22000:2005, IFS, BRC, Global Gap) are resulted in industry, and the food chain as a whole, taken greater responsibility for and control of food safety risks.

In Jordan Food safety is one of the top government priorities. Government has worked hard since decades to control and issue a set of legislations to guarantee the safety of food provided to citizens of Jordan. Ministry of health established the Jordan Food and Drug Administration in 2003. Jordan Food and Drug Administration (JFDA) worked as an independent public sector institution that is the sole national competent authority for ensuring food safety and quality. The Jordan Food and Drug Administration was established in order to address scientific and global developments in food & drug control in Jordan. In the first decade, JFDA has embraced its role as a national competent authority for food and drug control, and has become the national Jordanian umbrella agency empowered to develop and implement unified standards, and lead cooperation and development programs through bilateral agreements with many national, regional and international bodies. The JFDA is entitled to exercise all legal actions that are deemed necessary to achieve its goals through setting & implementing legislations, monitoring & surveillance, and raising the public awareness.

The FoodQA is an EU funded project through Erasmus+ Project, that concentrates on strengthening and enhancing the role of universities (academia) and industry in food sector. The creation of interface centres between the industry and academia is intended to support the HEI and structure the interfaces between Academia and Industry; making available to the food sector technical and scientific services that can contribute to the development of the industry and to strengthen its competitiveness in the direction of a future collaboration with the European Union in particularly in the area of food safety and quality. The successful implementation of this project depends mainly on training Jordanian staff and exposing them to the European experience in establishing and managing Food safety and food quality. Thus, the EU cooperation is crucial for the successful implementation of this project. Our EU partners in the academia, incubators, R&D, and private sectors have proven record of accomplishment in this field. Partners from the EU academia will provide their experience in implementing similar project in Jordan. Training will be conducted by EU partners in EU countries and in Jordan. The EU partners have complementary experiences in the field of food and food quality. Agricultural University of Athens (AUA) and University of Teramo (UniTE) are the EU partners

with the competencies in the area of food safety and food safety and quality management system, SPLIT and P&B and are the EU partner more actively involved with industry.

3.   METHODOLOGY

In order to identify the skills and competencies needed by the market, a comprehensive survey has been developed carefully. A Google Template was used. The link of the survey was sent to the target group, which was the food industry in Jordan. More than 40 companies completed the surveys.

4.   KEY RESULTS

Part one: The Questions regarding companies

Q1: What is your plant area?

This question is important to understand the area that the QA personnel needs to control and supervise. The answers represent the total area of the plant rather than the area of the clean zones inside the plants.

The responses were divided into 4 categories, Small: with area, less than 1000m^2, Medium; with area more than 1,000m^2 and less than 5,000m^2, Big; with area more than 5,000m^2 and less than 10,000, and Very big with area more than 10,000m^2.

The results indicate that about half of the participating companies have a medium area. The following figure shows the percentage of the responses of each category.
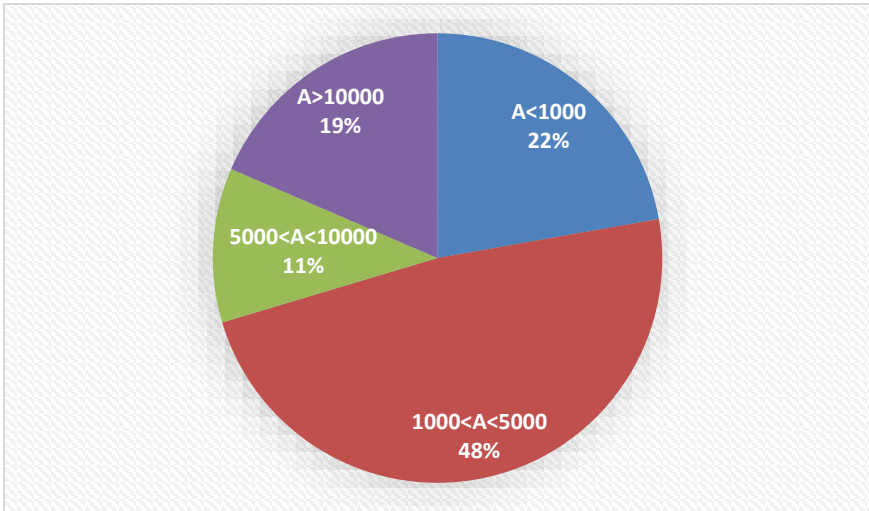
Q2: When was your company established?

The responses to this question were grouped into decades. The results show that most of the participating companies were established during the last two decades. This can be attributed to two reasons; the first is that many new companies were established in the last two decades as a response of the growing population and the second is that the new companies tend to have more interest in the QA systems. The following figure shows the grouped responses of the question.
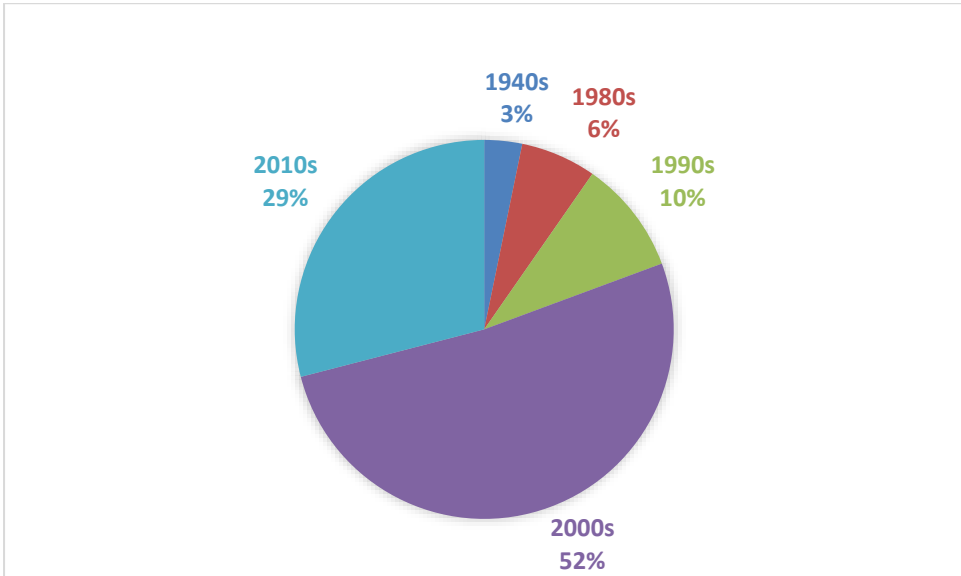
Q3: What is the type of your company?

The aim of this question is to understand how many of the companies surveyed are administrated independently or part of national or multinational groups.

The results indicate that most of the respondents are independent companies; the following figure shows the percentage of the responses;
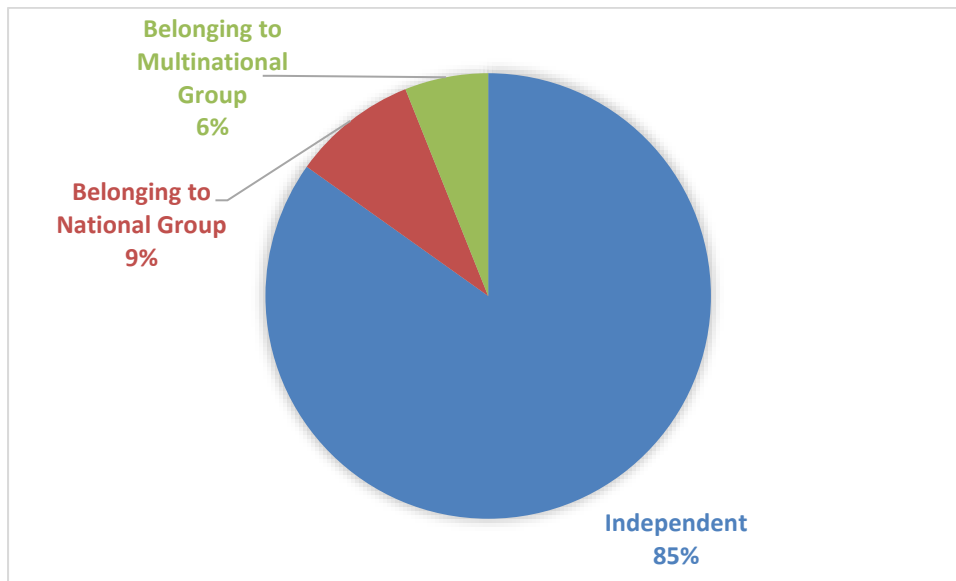
Q4: What are your sectors of activities?

This question aims at identifying the food sectors the participating companies are involved in. The answers to this question can help in prioritizing the different workshops and training these companies need. The figure below summarizes the answers to this question.
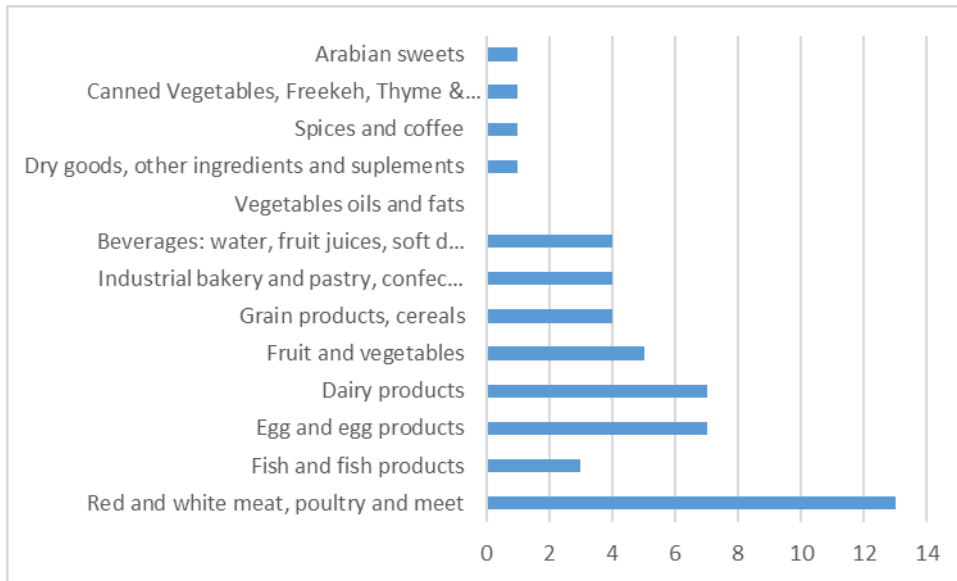
Q5: Where is your company is located; City and town?

This question explores the geographical distribution of the companies involved. The importance of this question is to ensure the geographical diversity of the research sample, in addition to determining the geographical location that will be worked upon in preparing the training materials. The results show that more than half of the companies are located within Amman Governate and Zarqa or the central central governorates and then the northern governorates and then the governorates of the south. The responses are shown in the following figure.
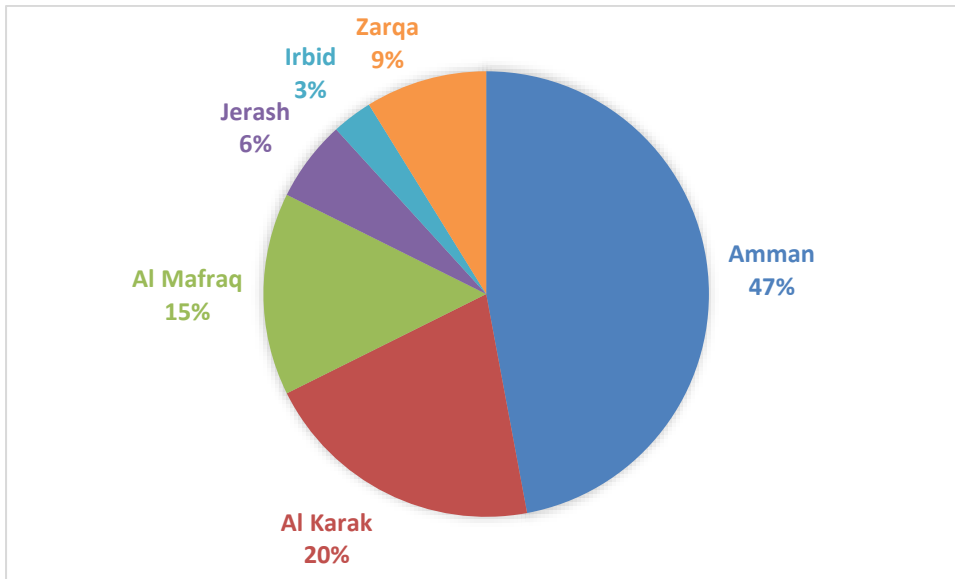
Q6: What is your company turnover in JD?

The results of this question correspond to the results of the first question. Companies can also be divided according to the size of their sales and hence the size of the work is assigned to the control teams and the quality control. The following figure reports the answers of the respondents. It is noted that 40% of respondents did not answer this question.
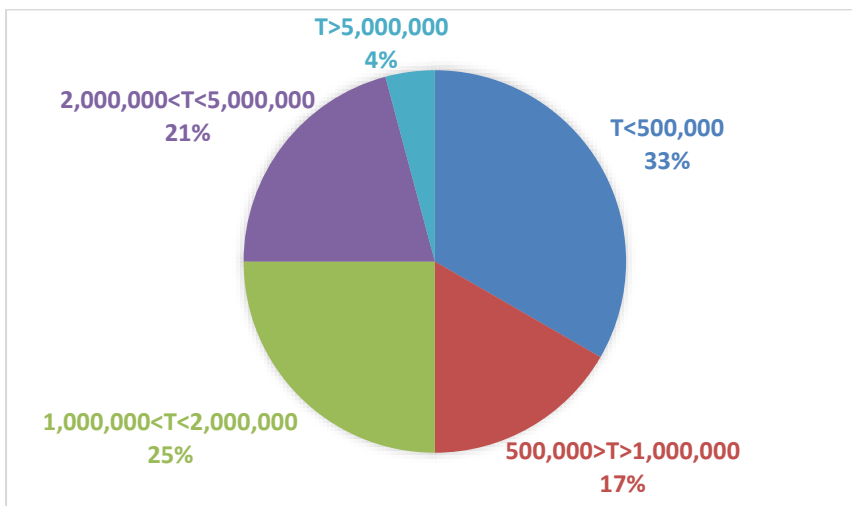
**Q6: What are your export regions?**

The markets of exports identify the needed quality systems, another important issue in this contest is that not having the right certificate may reduce the potential of the markets of

exports. Most of the companies surveyed export market are limited to the Middle East. The following figure reports the answers of the respondents.
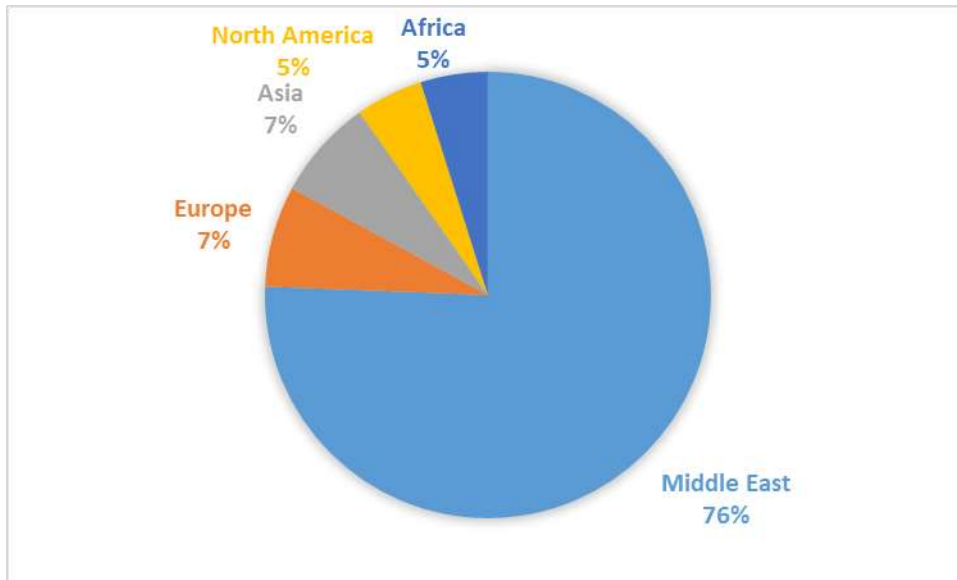

Q7: Who is your customer?

The type of customer also determines the needed quality system, this imposes special requirements on food producers, and failing to meet the customer requirements means that the customer is lost. The outcome of this question may determine the priorities of the companies regarding the quality system needed to be imposed. The following figure shows that majority of the companies surveyed do not sell their products to the finial customer directly rather than sell it directly to the customer.
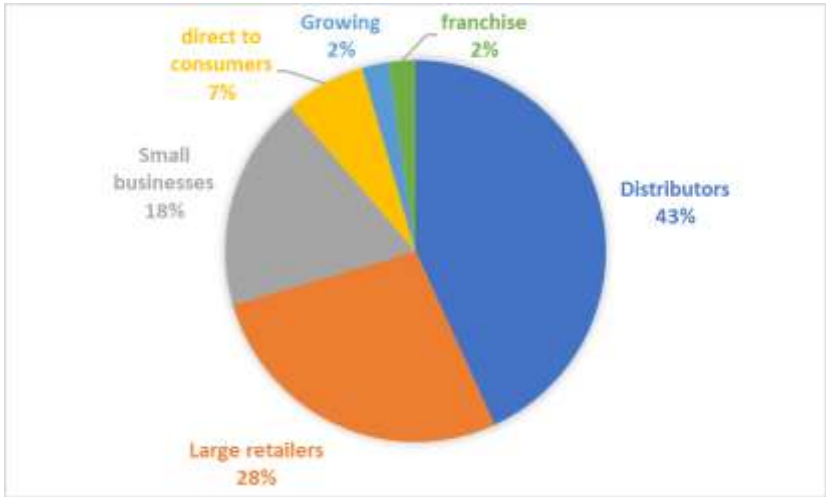
Q8: What are the certifications held by your company?

The following figure shows the percentage of the companies by its food quality certificates that are applied by the company, the result shows that 56% of the surveyed companies apply one or more quality system, about 20% of the companies apply more than one quality system. The most quality system applied is ISO9001 then ISO 22000 then HACCP.
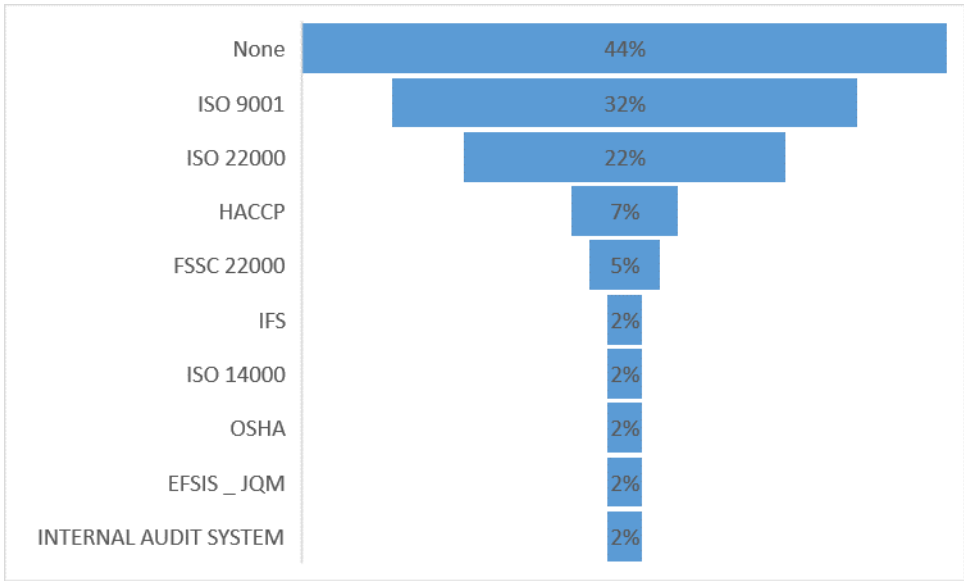

Q9: How much is the total number of workers in your company?

This question shows how much the quality system is important in the company, if the number of workers is big then then the company should apply a system that assures the quality of their products. About half of the surveyed companies are big in terms of the number of worker.
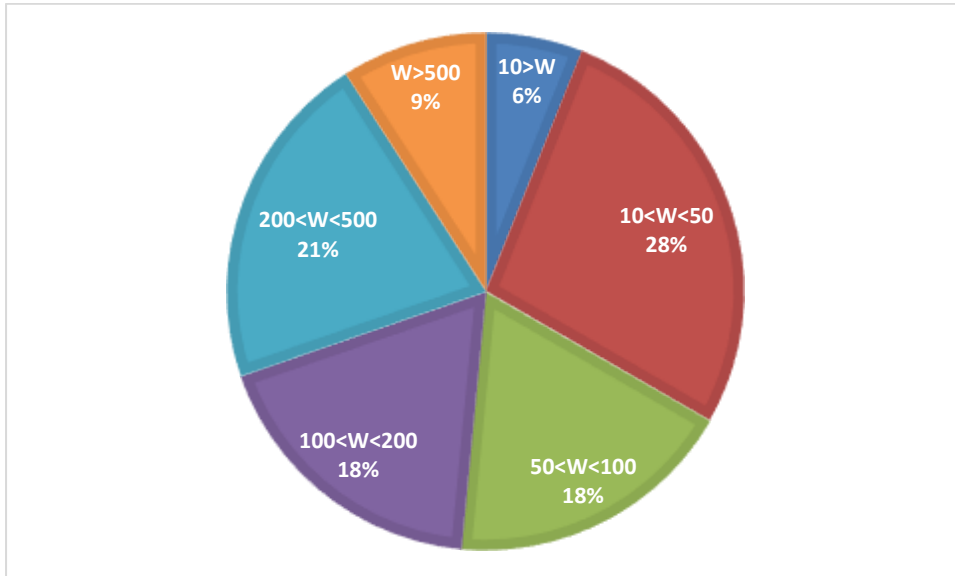

Q10: What is the number of the qualified staff who hold higher education degree?

This shows the total number of staff that should be involved either directly or indirectly in the quality system. The result shows that that 30% of surveyed companies have more than 30 and less than 50 qualified staff and 23% have more 15 and less than 30 staff.
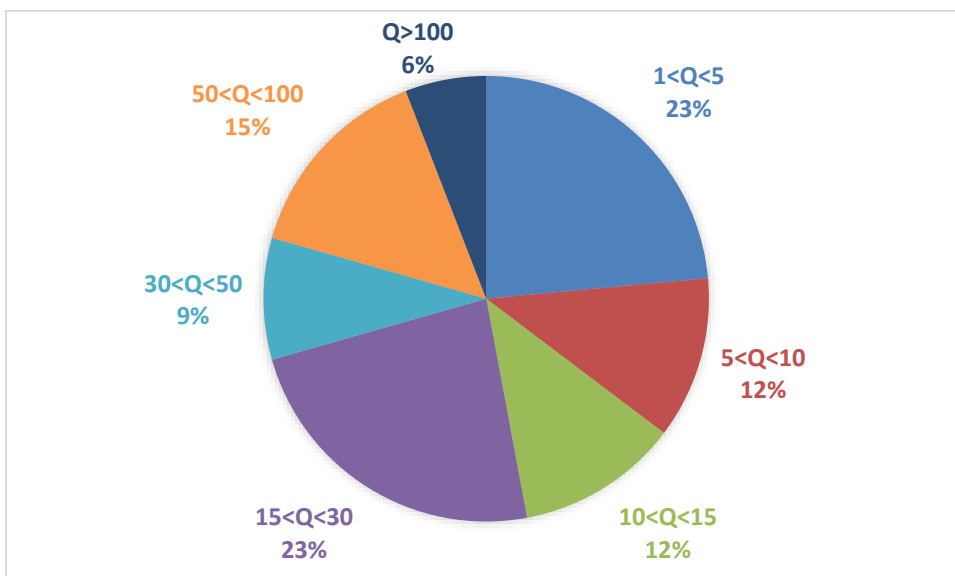
Q11: What is the number of the qualified staff in food industry?

The following figure shows the distribution of the companies by the number of the qualified staff in food industry, this show the number of the staff how are directly involved in the quality system application and supervision.
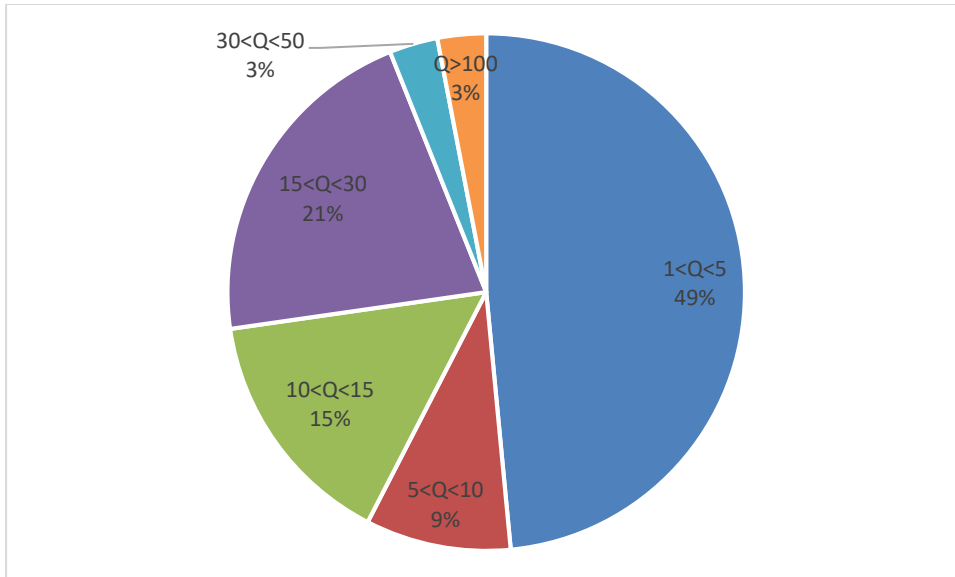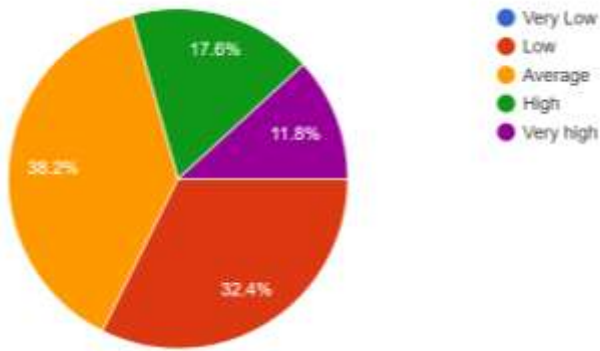

Part 2: TRAINING NEEDS ASSESSMENT

This part shows the self-assessment by the stockholders of their training needs and priorities.

Q12: Perception of the level of qualification of the general workers per subject.

Most of the companies surveyed stated that the Perception of training genral worker are avarage or belw; 30% stated that it is high or very high.

Q13: Perception of the level of qualification of the qualified technical staff per subject.

This question is related to the previous one and it shows that about 2/3 of the surveyed companies think that the level of qualification of the qualified technical staff are on average or below.
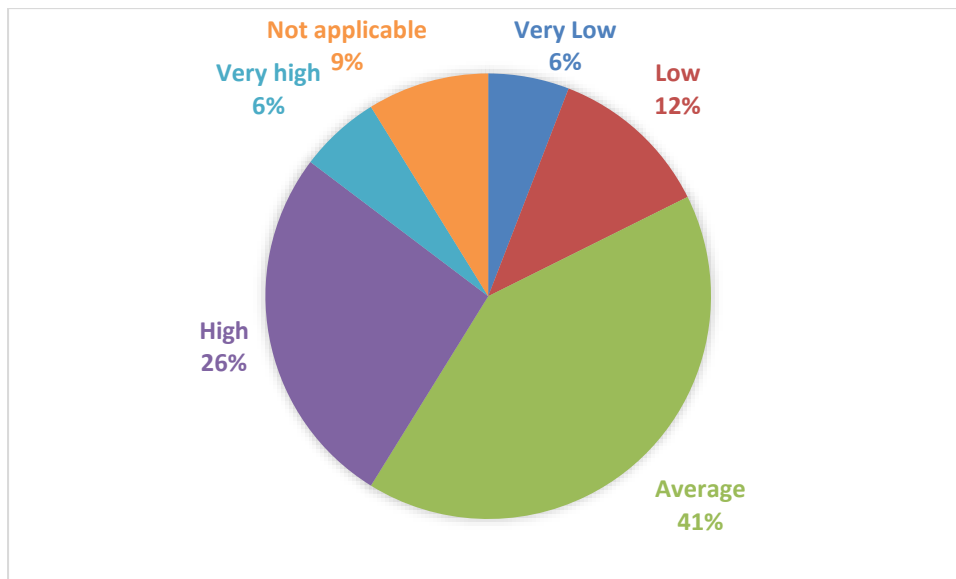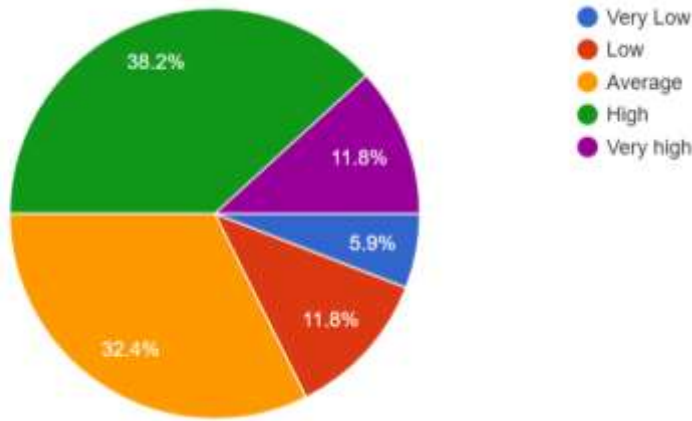

**Q14: What are the training needs of general worker per subject?**

Half of the servayed companies stated that there is high or very high need for training of the the genral worker by subject, and about one therd of them stated that it is of average importance.
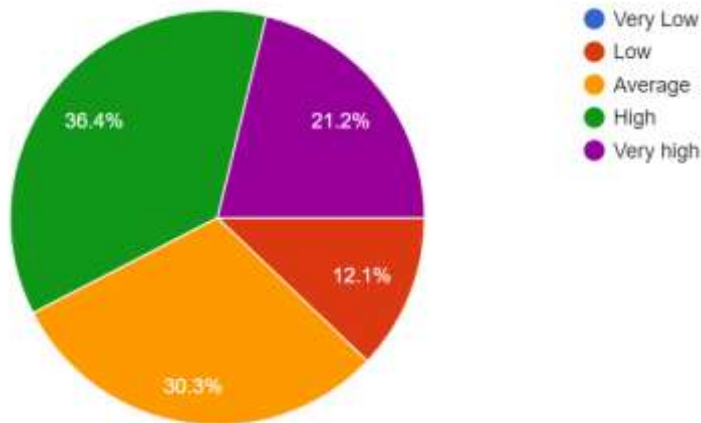

Q15: What are the training needs of qualified technical staff per subject?

The answers show that there is a higher need for the training of qualified staff rather than the general worker (results from Q14), this is because general workers can be trained by their team leaders and supervisors, so, focusing on leaders and higher staff levels training would be more efficient.
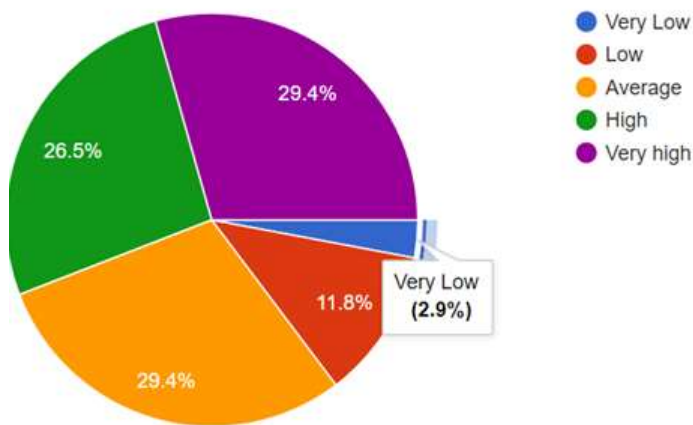
Q16: Importance of the subjects in the training of the general workers:

This question shows that the general workers training should not be general and there are some subjects that is more important than the others. More than half of the respondents agrees with this.

Q17: What are the important subjects for the training of the qualified technical staff?

The results of this question represent the priorities and relative importance of the different subjects as Identified by the surveyed companies. The companies stated that all of the subject have above average importance; which shows that the subjects identified by the FoodQA Project are relevant and accurate.

The following figure shows the average importance of the subjects on a scale of 1 to 5 estimated from the next figure, it shows that the basic subjects like pest control and hygiene have the highest priorities. Then the hazard analysis related subjects.

average Importance

- Food safety management systems - IFS...
- Food safety management systems - ISO...
- Quality management tools (Flow charts,...
- Quality Management Systems – ISO 9001
- Hazard analysis / HACCP
- Food safety hazards
- Cleaning and disinfection
- Personnel hygiene
- Hand hygiene
- Principles of hygienic design of food...
- Pest Control

3.3 3.4 3.5 3.6 3.7 3.8 3.9 4.0 4.1 4.2 4.3

- Quality management tools (Flow charts,...
- Quality Management Systems – ISO 9001
- Pest Control
- Cleaning and disinfection
- Principles of hygienic design of food...
- Personnel hygiene
- Hand hygiene
- Food safety management systems - IFS...
- Food safety management systems - ISO...
- Hazard analysis / HACCP
- Food safety hazards

0 2 4 6 8 10 12 14 16

■ Very High ■ High ■ Average ■ Low ■ Very Low
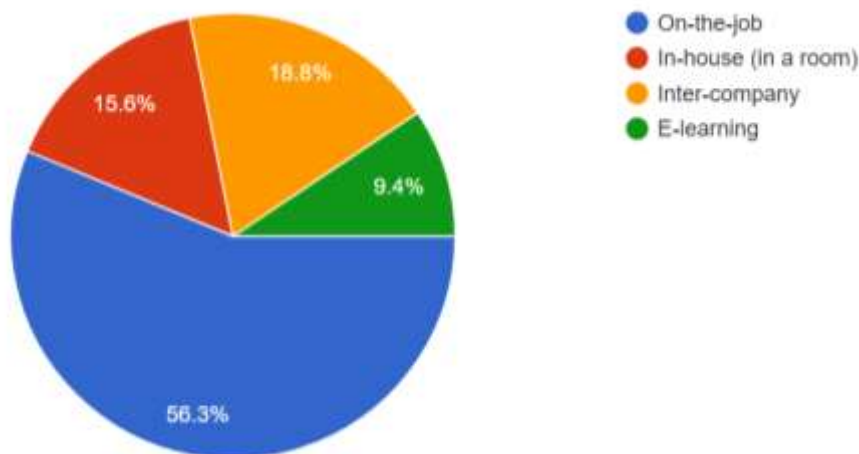
Q18: What type of training do you think is more recommendable to the general workers in the following subjects?

Most of the companies wanted their general worker to be trained in house and about 56% of them wanted their general workers to be trained on the job. Only 9% wanted E-learning for their general worker
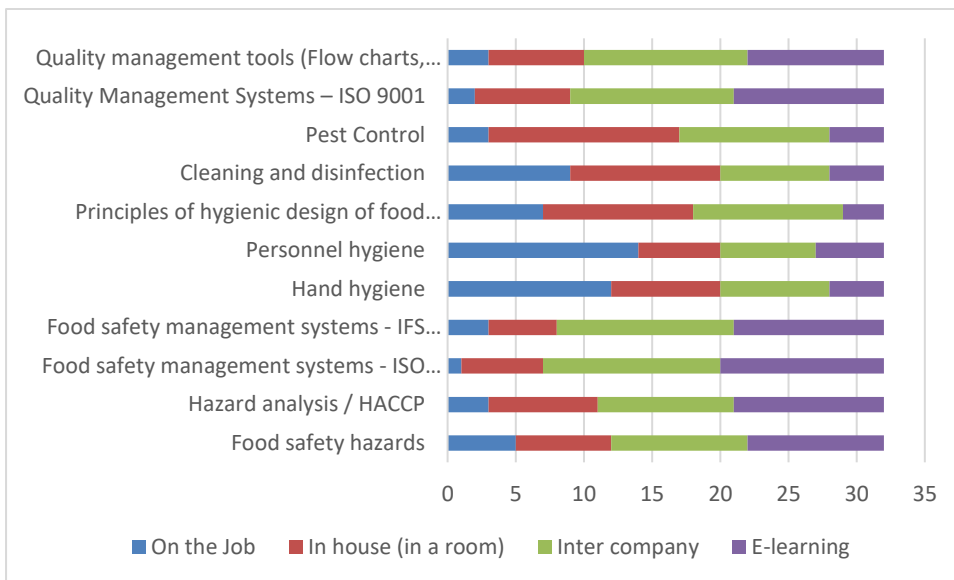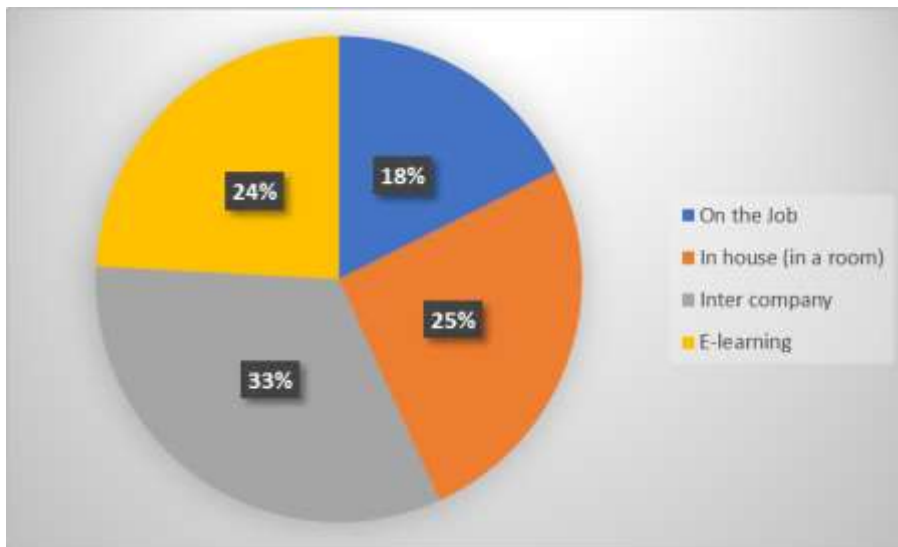

Q19: What type of training do you think is more suitable to the qualified technical staff in the following subjects?
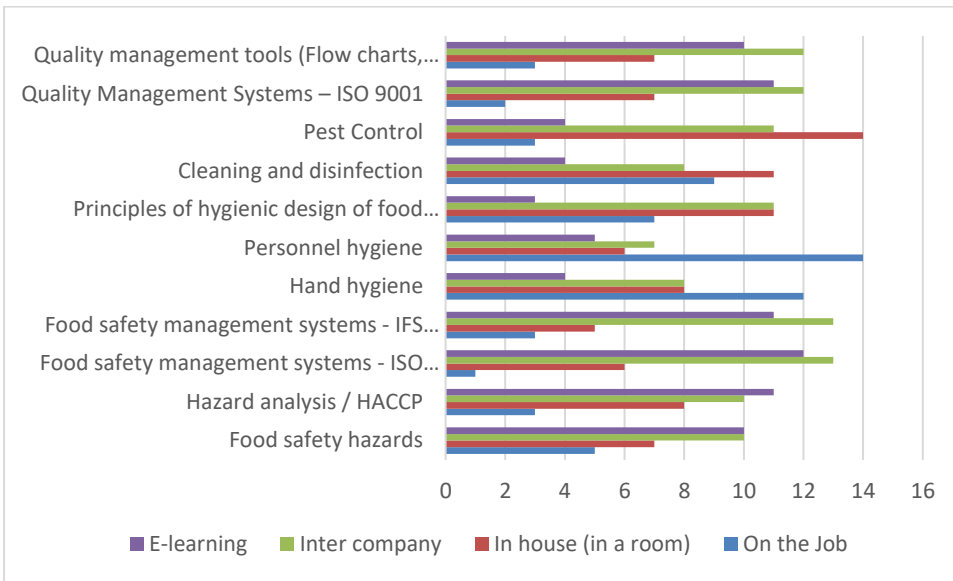
The following figure shows the accumulative percentage of the answers. There is no definite venue for all the subject, rather than each subject has its suitable venue. For example, the respondents wanted their personnel to be trained on the hygiene related subjects on the Job, while the administrative and more complicated subjects they chose Intra-company or E-learning.

The accumulated result shows that although Intra-company training is the most preferred type, E-learning have high acceptance among respondents.

The chart shows training methods (E-learning, Inter company, In house (in a room), On the Job) across the following topics:

- Quality management tools (Flow charts,…)
- Quality Management Systems – ISO 9001
- Pest Control
- Cleaning and disinfection
- Principles of hygienic design of food…
- Personnel hygiene
- Hand hygiene
- Food safety management systems - IFS…
- Food safety management systems - ISO…
- Hazard analysis / HACCP
- Food safety hazards

Legend:
- E-learning
- Inter company
- In house (in a room)
- On the Job

5. CONCLUSIONS

The surveys conducted over +40 food companies in Jordan focused on identifying the importance of different training workshops and courses to the Food Industry in Jordan. Moreover, the surveys aimed at identifying the mode of the training these companies prefer the most. The survey was prepared using Google Templates and the link was sent to the food companies in Jordan. Forty-one companies completed the survey.

These results were collected to identify the needed training for the food companies in Jordan. It was found that local food companies need training on IFS, HACCP, Quality management systems, pest control, and personal hygiene. On-site and e-training received high percentage by the participants.