Volume : 3 | Issue : 2 | February 2014 • ISSN No 2277 - 8179

Research Paper

Analysis of Responses of Food Processing Industres in Himachal Pradesh

Management

KEYWORDS : Food Industry, Raw Material, Processing, Management Problems

Aparna Maitra Pati	Scientist & Head, PPME, C.S.I.R.- I.H.B.T., Palampur, H.P.- 176061
Sukhjinder Singh	Sr. Technical Officer, BDMU, C.S.I.R.- IHBT, Palampur, H.P.- 176061
Doulat Ram	Project Assistant, C.S.I.R.- IHBT, Palampur, H.P.- 176061
Paramvir Singh Ahuja	Director, C.S.I.R.- I.H.B.T., Palampur, H.P.- 176061

ABSTRACT

Bestowed with rich plant diversity Himachal Pradesh has immense scope in the area of Food Processing Industry. The potential of MSMEs in food sector have not been tapped yet. A sample of 25 food industrial units from five districts of H.P. was selected for study to understand the problems regarding technology, management and research needs of these units for enhancing quality production of food products.

Introduction

The potential of food processing industry is immense. This has been aptly realized by Government of India and evident by establishment of an exclusive ministry, as Ministry of food processing industries in 1998. Since then a lot of thrust has been laid by the ministry on creation of appropriate ecosystem, modernization infrastructure, setting up of food parks and providing necessary financial support for growth of this sector. Role of food processing industry is becoming increasingly important to meet the challenge of feeding nutritionally enriched food to the growing young population of India (http://www.ficci.com/PressRelease/1363/Press-Release FICCI%20FOODWORLD-INDIA-2013.pdf). There is great scope for fruit and vegetable processing in India, as India is second largest producer of fruits & vegetables, after China. Although India is the second largest producer of vegetables and fruits, only 2.2 % of this are processed which is very less compared to countries like USA (65%), China (23%) and Philippines (78%). Unfortunately about 35% of farm produce wasted annually due to lack of storage and processing facilities (http://dchandra.geosyndicate.com/news/?p=215).

Food Industry in India falls under 'sunrise industry' category and has huge potential for upliftment of agricultural economy through creation of employment opportunities (13 million directly and 35 million indirectly) and export and domestic earnings (http://www.indiainbusiness.nic.in/industry-infrastructure/industrial-sectors/food-process.htm). Export by food processing industries (FPI) over the years is rising. The value generation through food industry is expected to touch $194 billion by 2015, whereas the export earnings are expected at $43 billion (http://articles.economictimes.indiatimes.com/2013-02-10/news/37020549_1_food parks-wastage-perishable-items). Expected to grow a rate of 13% and reach the size of 530-550 billion USD by 2020 it is one of the most favoured sectors for attracting Foreign Direct Investment (http://www.ficci.com/spdocument/20312/Feeding-a-Billion_Role-of-the-Food-Processing-Industry.pdf).

The present survey focuses to understand the need of food processing industry of Himacal Pradesh. Himachal Pradesh (H.P.) is situated in the Northern region of India. About 70% of the population depends on agriculture, horticulture and allied sectors for their livelihood. Allied to the farm and fruit produce of the state, the MSMEs mostly produces jams, jellies, juices, candies and pickles. In Himachal Pradesh there are total 167 registered Food processing industry (FPI), and 21,851 unregistered FPI units (source: mofpi.nic.in). Though the region is bestowed with natural resources but the potential of the state are yet to be tapped. The study highlights the status of infrastructure, human resource, processing, and IPS and marketing issues.

Methodology

The study on problems of food processing units in H.P. is based on primary data. Primary data was collected using a pre-tested structured questionnaire. Data was recorded after personally interviewing top management. The questionnaire was structured to include information on kind of infrastructure, Accreditations, range of products, Infrastructure, Human resource, Raw material used, processing, Product certification, R&D, IPR, Waste management, Packaging, Transportation, business needs, competition and constraints

Data collected was analyzed using simple analytical methods. Respondents (food processing units) for primary data collection were selected purposively on the basis of the concentration of food processing units. As per the information available from Ministry of Food Processing (mofpi.nic.in), in Himachal Pradesh there are total 167 registered FPI units, and 21,851 unregistered FPI units. In our study we included both registered and non-registered food industries. As most of the industries are concentrated in five districts of H.P. i.e. Kullu, Chamba, Solan, Kangra and Shimla, these districts were selected for the study. Hence a sample size of 25 industries was selected for data collection.

Infrastructure

Majority of the industries have indigenous machinery (Fig.1) and expressed that setting up of unit and their maintenance is not a major problem. Those who have imported machineries expressed that cost of import, repairs and maintenance are high. Industry is well aware of the market demand and realizes the need of upgradation (Fig. 2) and mechanization (Fig. 3) to increase quality production. However, most of them feel that investing at such scale for complete automization of processes may not bring adequate returns due to strong competition and limited marketing area. It appears that initially establishing food processing industry in H.P. is not a major problem but challenge lies in scaling up production for greater market share through automization.

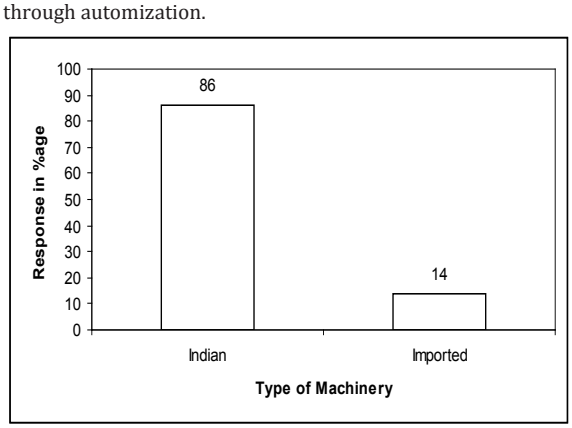

Fig.1

Volume : 3 | Issue : 2 | February 2014 • ISSN No 2277 - 8179

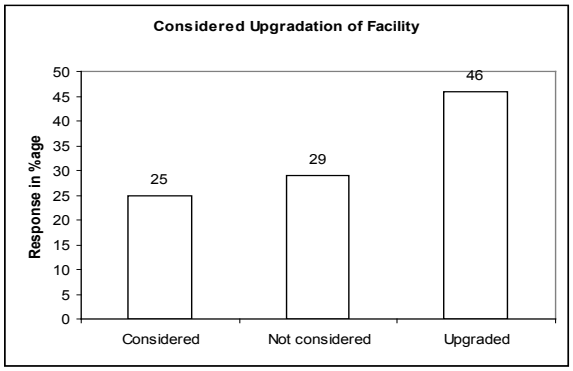

Fig. 2

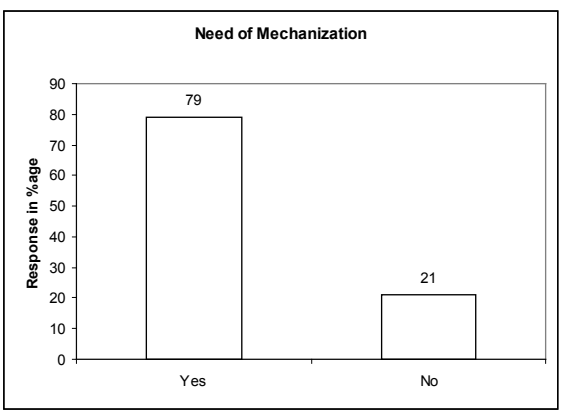

Fig. 3

Human resource

In general 89% responded that there is no problem of human resource, as they are able to hire required unskilled and skilled persons. Though they mentioned that getting technically competent manpower is not a problem (Fig. 4), but through personal discussions it was found that most of them do not have professional food technologists. Most of the industries (61%) trained staff on job at their premises (Fig .5) and only a few sent their staff for specialized trainings. It emerged that Human resource is a critical issue and there is lack of technically qualified person in the region as a result people are groomed in the processing technology after recruitment. It appears that in coming times technically competent manpower can contribute substantially in modernizing and changing the scenario of food processing industry of the region.

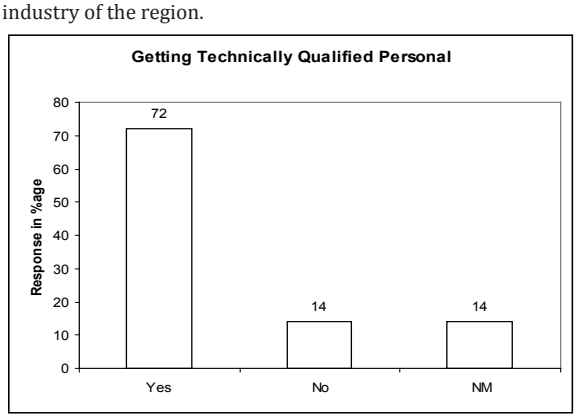

Fig. 4

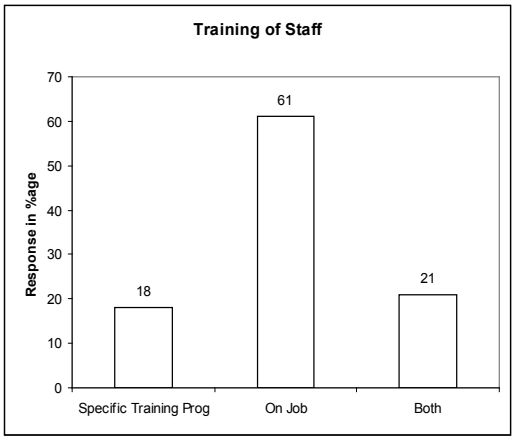

Fig. 5

Raw material

Most of the industries procured their raw materials both from growers as well as from local market. However, on discussion it emerged that fruits were largely taken from the farmers and vegetables were procured from the markets (Fig. 6). Majority of the industries faced shortage of raw materials (Fig. 7). These shortages were mostly due to gap between demand and production. Also, absence of organized market for large scale procurement is a major limitation (Fig. 8). Further, the industries faced problems in getting good quality raw material as they depended on the market and had little scope to select the good quality material (Fig. 9). It was noticed that practice of contract farming is very less. Majority of the industries expressed that quality of raw material deteriorates during transportation due to short shelf life of fruits and vegetables and rough road conditions (Fig. 10) and this adversely effects their production. Most of the industries used physical methods like colour, texture, aroma size, etc. for examining the raw material quality but did not have or utilize analytical facilities to support the same (Fig. 11).

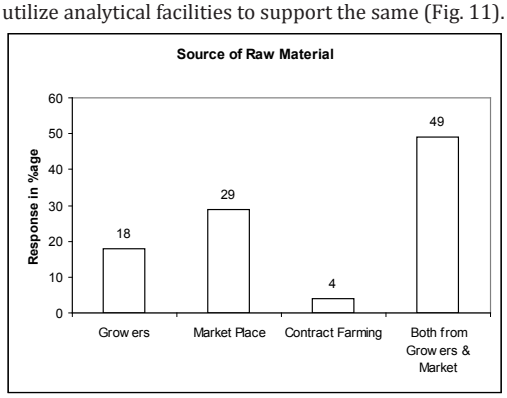

Fig. 6

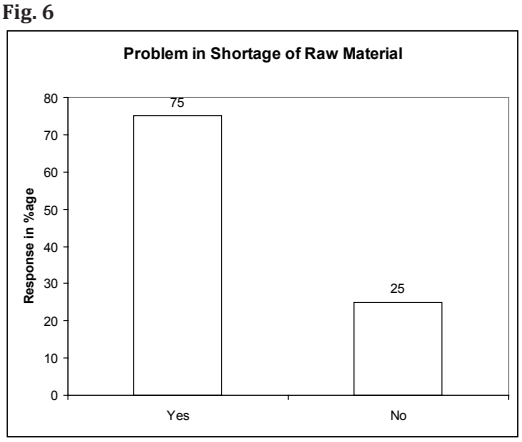

Fig. 7

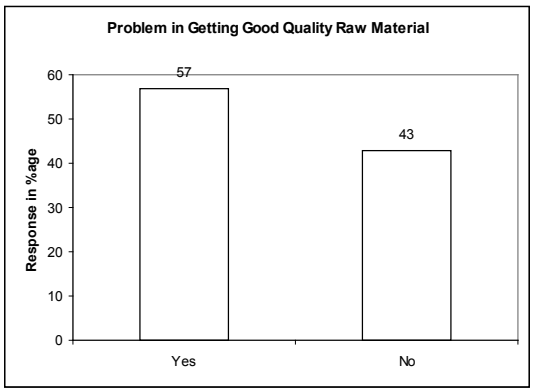

Fig. 8

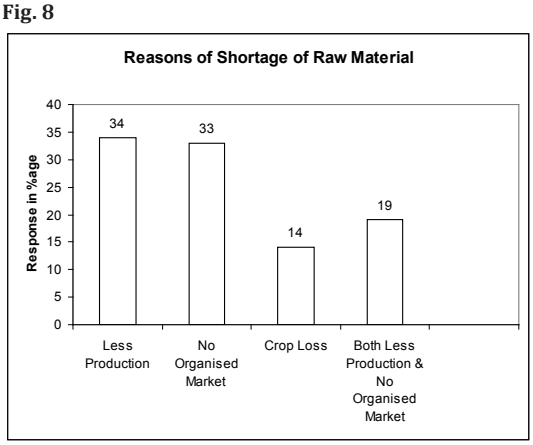

Fig. 9

Fig.10

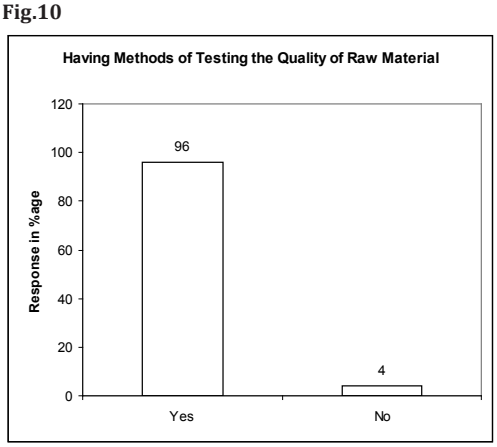

Fig.11

Processing

Most (96%) of the industry had plants running through out the year and 71% of them were fully utilizing their processing capacity. Most of the industries do not have tie-up with R&D organization. Only a few firms were in contact with CFTRI, NEERI and HIMCU. Most of the process improvements were done by the firms as a result of in-house efforts. There appeared to be a wide gap between research institutes and industry. The industry was not aware of the innovations made by research institutes and felt that many a times research institutes fail to understand their need. Most of the firms were updating information about processing technology and new innovations through formal and informal meetings. Selected firms hired consultants for specific products (Fig. 12). Majority of the firms did not focus on product diversification and they mostly focused on traditional products like juices, jams, pickles, papad etc.

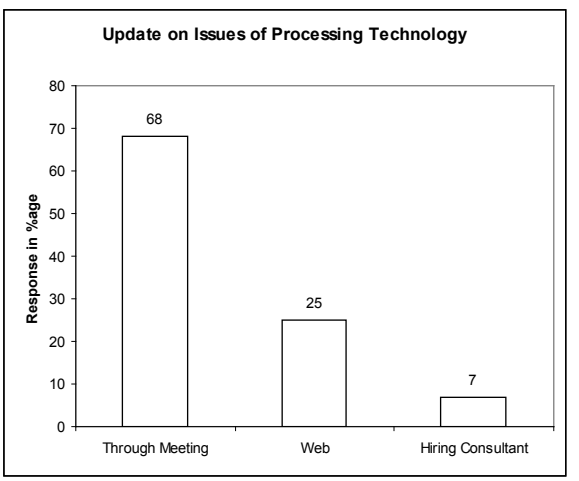

Fig.12

Product

Most of the industries (78%) felt that they were getting desired value of their products (Fig. 13). Majority of the industries carried out analytical and microbial testing of their products through their own linkages and only few (particularly Govt. industries) had their own analytical labs. Centralized facility for analytical testing of manufactured products was identified as one of the major need at cluster level. About 25% of the respondents faced problem in getting their product quality analyzed.

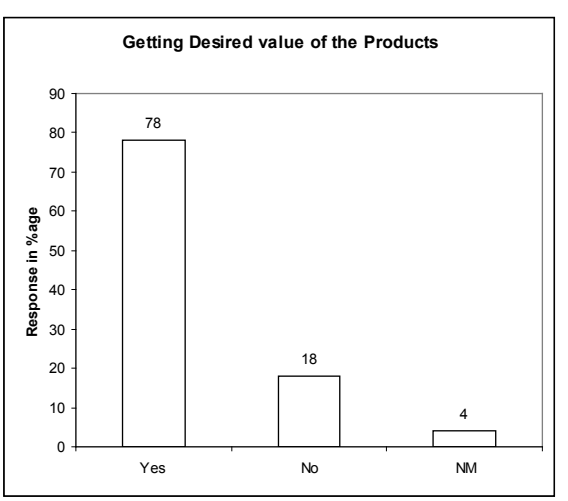

Fig. 13

Waste management

Most of the industries were conscious of their waste management and were following proper disposal norms. Few selected

Volume : 3 | Issue : 2 | February 2014 • ISSN No 2277 - 8179

industries were converting their waste into manures and feed for animals. However, not much attention was paid towards value addition.

Packaging and transportation

Most of the industries expressed that packaging was not a problem. It was expressed that though transportation network is satisfactory for marketing their finished products, but bad conditions of roads and congestion often hampers the initial supply chain at raw material level which deteriorates by the time it reached the processing plant.

R&D and IPR

Strikingly, most of the industries did not have any IPR (Fig. 14). Also, the opinion was divided on their plan of seeking IPRs in future (Fig. 15). Though most of the industries were producing several products but it was interesting to note that they neither had their own IPRs nor they took any technology through outsourcing (Fig. 16). Through personal discussions it was felt that awareness in the area of IPR is generally less among the local industries. Though most of the industries felt that IPR was an important issue for competition and sustainability but they not very sure of methodology of patent filling and were also apprehensive about the cost. Varied views were put forth with respect to research focus (Fig. 17). The industries felt that research is required in the following areas:

- Natural preservation
- Natural colours
- Development of value added food products from local resources
- Value addition form industrial waste/by-products

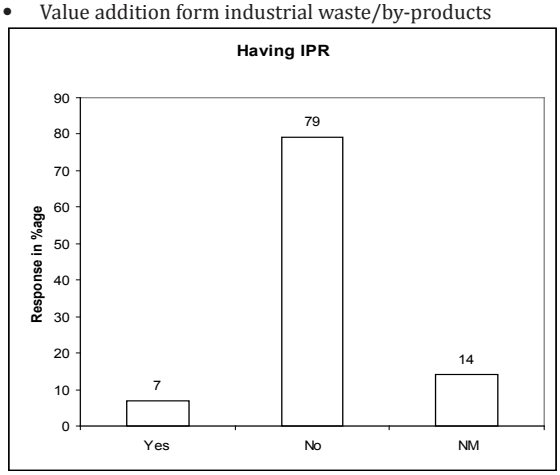

Fig. 14

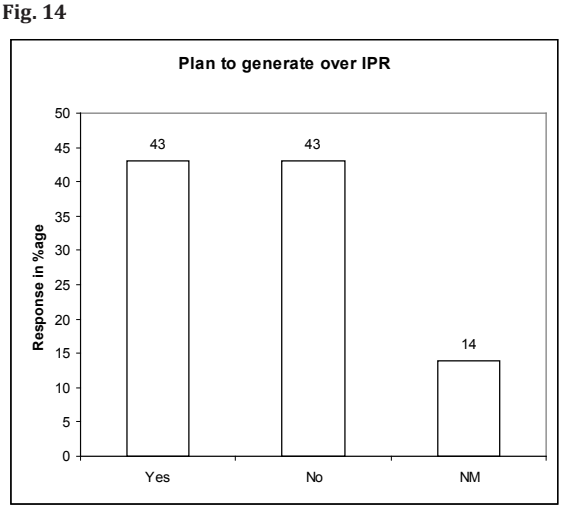

Fig. 15

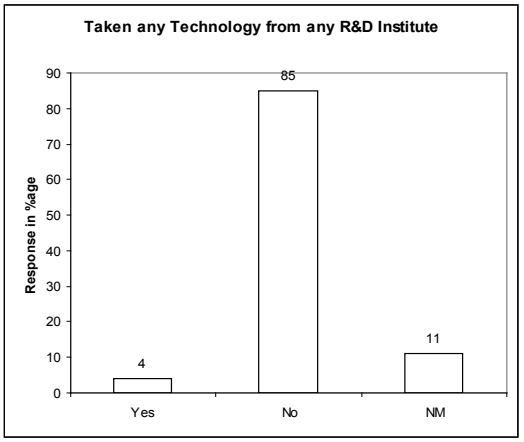

Fig. 16

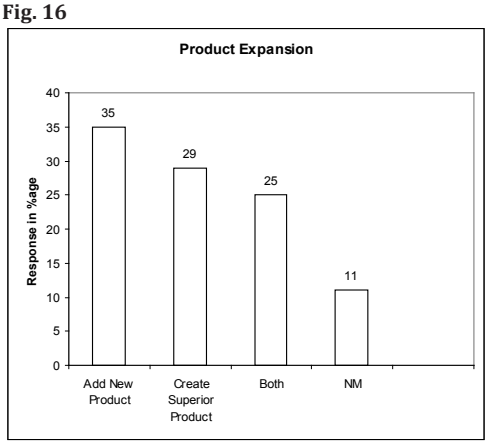

Fig. 17

Business and competition

Majority of the industries felt that competition is high in the food industry (Fig. 18). To increase the market share most of the industries opted to venture into new market and some preferred to intensify the marketing in the existing domain for better sale (Fig. 19). It was observed that to anticipate their business need and expand market, majority of the companies still do not avail services from any professional firm through outsourcing and rather prepare their business plan based on their own notion/estimate through market survey and customer need (Fig. 20). On personal discussion, several industries expressed that customer most of the times prefer low cost products and does not pay much attention to the quality as a result companies selling low quality products at a cheaper price enjoy greater market share than the companies with higher price but superior product quality. It was expressed that there should be strict regulation to prevent marketing of low grade food products.

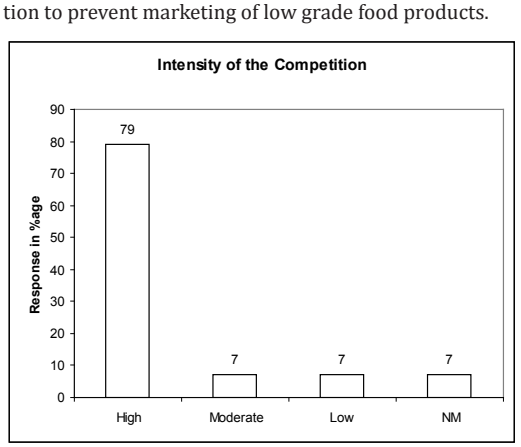

Fig. 18

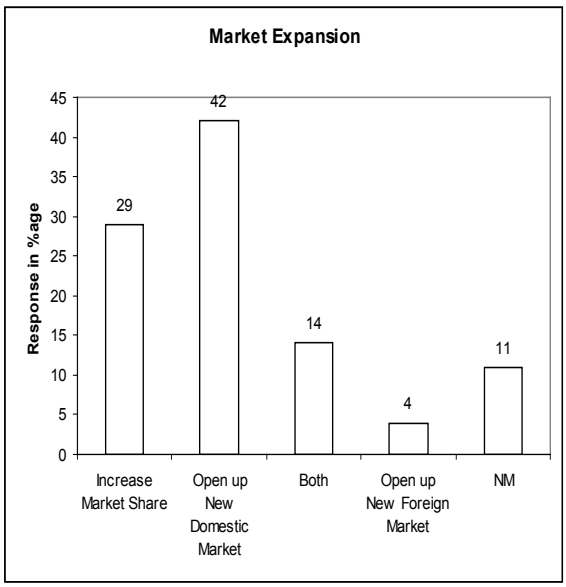

Fig. 19

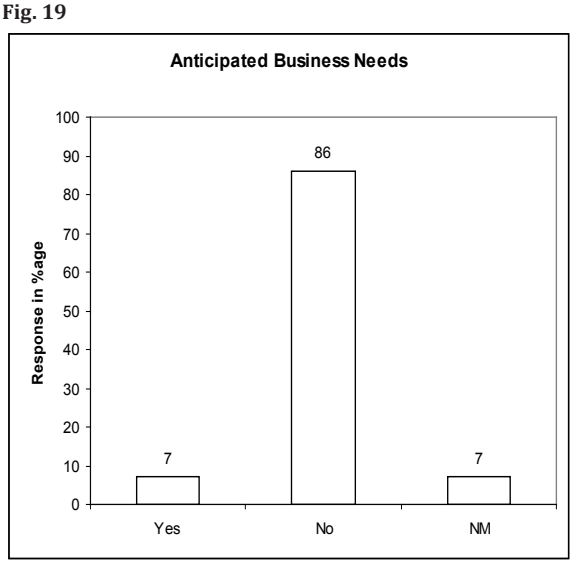

Fig. 20

Conclusion: The analysis of survey indicates that indigenous machinery is easily available in the region for establishment of food processing industry in Himachal Pradesh; hence setting up of processing units is not a problem. Since cost of imported machinery is high most of the existing industries have medium production scale and have not ventured into process automization. Though required manpower is available but technically qualified food technologists can help in brining innovations and product diversification which is presently lacking. Due to limited product range and restricted sale area there is stiff business competition. Also, awareness about IPRs are low. Setting up of organized fruits and vegetable markets to meet the large raw material demand of the industry is a critical need of the region. Also, establishment of centralized analytical testing facility in each cluster emerged as a major need of the industry. Food industry is conscious of quality and felt that strict food regulation should be implemented such that spurious products do not reach the consumers at low price at the cost of health.

Acknowledgement:
The authors thank the Technology Management Division of Department of Scientific & Industrial Research, Government of India for providing financial support and CSIR for infrastructure facilities. Authors express heartfelt thanks to food industry owners / managers for responding to the questionnaire. Thanks are also due to Mr. Vikas Rana for helping in data entry and maintenance of database.

Note:
The views expressed in the article are those of the authors and not of the Department of Scientific & Industrial Research, under whose support a Diagnostic Study to assess technology and management needs of Food Industry was carried out.

REFERENCE

• http://mofpi.nic.in/ | • http://www.ficci.com/PressRelease/1363/Press-ReleasFICCI%20FOODWORLD-INDIA-2013.pdf | • http://www.indiainbusiness.nic.in/industry-infrastructure/industrial-sectors/food-process.htm | • http://articles.economictimes.indiatimes.com/2013-0210/news/37020549_1_food-parks-wastage-perishable-items | • http://dchandra.geosyndicate.com/news/?p=215 | • http://www.ficci.com/spdocument/20312/Feeding-a-Billion_Role-of-the-Food-Processing-Industry.pdf |