Full Length Article

PERFORMANCE EVALUATION OF FOOD BUSINESS INCUBATION CENTRE OF TAMIL NADU VETERINARY AND ANIMAL SCIENCES UNIVERSITY

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ABSTRACT

Food business incubation centre (FBIC) under the Tamil Nadu Veterinary and Animal Sciences University established during 2014 had facilitated the farmers, students and entrepreneurs in terms of training, consultancy, external project and incubation services. To evaluate the performance of the Food Business Incubation Centre on incubation services, data were collected for a period of 10 years from 2014-15 to 2023-24 and analyzed. The study also included the available data from the financial year 2018-19 to 2023-24 to assess the types of visitors and their purpose of visit to the incubation centre and the data were analyzed. It was concluded that majority of the incubatees utilized the FBIC for the incubation services in the area of dairy processing. Totally 14 members successfully graduated of which 50 % of them were female. The highest number of visits was recorded during the financial year 2022-2023 and the maximum of the visitor category was students from schools and colleges and only 9.7 % of the visitors were business aspirants out of the total visitors during the study period.

Keywords: Food business, Agribusiness, Incubatee, Incubation

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INTRODUCTION

Economy of our country is boasted due to the recent emergence of technology led business start-ups from technology business incubator support system with adequate mentoring programmes. These start-ups of small and medium enterprises are capable of generating jobs, utilizing suitable technology, and creating wealth for economies (Ogutu and Kihonge, 2016). In commensuration with this growing trend, Indian Council of Agricultural Research (ICAR) established a chain of Agribusiness Incubation (ABI) across the nation in order to encourage technology based biological businesses and knowledge driven economy. The market updates revealed that the food technology based industry has seen

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an overall Gross Merchandise Value GMV growth of close to 140 % in 2018, with order volumes increasing by a whopping 176 % (Kondapi, 2020).

In view of the food based economy, incubation centers related to food businesses offer a technological platform to the start-up companies to incubate their idea with suitable business ambience with the aim of bringing out marketable innovative products or services relevant to agriculture and allied sector. The most needed business services from technology business incubator are market assistance services, early stage business development services and physical infrastructural assistance (Kumar *et al*., 2021). In similar concepts, higher educational institutes has also established on-campus incubation centers sponsored by DST-SERB, NEST, state government or private in order to translate the laboratory findings into economic output. Some leading research institutes engage their scientific manpower and spare the research facilities along with venture capital policies to deepen the knowledge driven economy as part of their fund generation initiatives.

With this background, TANUVAS also harnesses and synergizes the innovative research mechanism and pluralistic innovative business support ecosystem by utilizing the efficient scientific manpower and vast resources. The constituent campus such as College of Food and Dairy Technology (CFDT) established its Food Business Incubation Centre to motivate more start-ups in the field of food and dairy processing whereas the campuses *viz*., Namakkal and Orathanadu established incubation centers to boost the start-ups in dairy processing. The self- funded centers facilitate technology commercialization, public-private partnership and hand holding of entrepreneurs. The people with start-up idea visit, receive consultancy and avail incubation services using the semi commercial pilot plant facilities. Hence, the paper aimed to study the utilization of services offered by Food Business Incubation Centre of Tamil Nadu Veterinary and Animal Sciences University, Chennai.

MATERIALS AND METHODS

The study was conducted at Food Business Incubation Centre (FBIC), one of the units of College of Food and Dairy Technology, TANUVAS located at 25 km north of Chennai on Thiruvallur Highway, Thiruvallur district of Tamil Nadu. The location of FBIC is very easy to access by the farmers and entrepreneurs. The centre started to render its services from 2014-15. The centre facilitates entrepreneurial services *viz*., visits, consultancy, training and incubation facilities to the public who are interested in food businesses. The centre admits membership on different categories (Table.1) and shares its pilot scale facilities such as liquid processing plant, dairy product plant, fruit and vegetable plant, chocolate plant, noodle plant, pulse processing plant and meat processing plant. To study the scope and extent of utilization of FBIC, CFDT, Koduveli on incubation services, data were collected for a period of 10 years from 2014-15 to 2023-24 and analyzed. The study included the available data from the financial year 2018-19 to 2023-24 to assess the types of visitors

and their purpose of visit to the incubation centre. Factors considered for entrepreneurial services were types of membership, types of businesses, visits, consultancy, training and incubation services. The data were analyzed with MS Excel (2017). The frequency distribution of the data was analyzed for each factor.

RESULTS AND DISCUSSION

Number of visits

The maximum visit was witnessed during the financial year of 2022-23 whereas no student visits were recorded during the financial year of 2021-22 due to covid-19 pandemic. The highest visit after the lockdown was witnessed due to the awareness of public on food businesses (Table 2). Handoyo *et al*. (2021) opined that the Covid-19 pandemic made the incubator service put on hold due to the Government's social restriction policy to deal with the Sars-CoV-2 spreading. Virtual incubator services become a new model for delivering incubator services during the Covid -19 pandemic due to traditional incubator services were impossible to be held.

Purpose of visits

It was observed from Table 2 that the students (81.6 %) were the major visitor of the centre during the study period followed by the business aspirants (9.7 %). The higher percentage of students' visit than the business aspirants due to the mandate of the educational institutions to facilitate exposure visit. The third rank (5.8 %) was recorded against the visitors who came for training purpose followed by industry persons (2.0 %) whereas the fifth rank was recorded for the visitors (0.8 %) for paid consultancy. According to Hernandez-Gantes *et al*. (1996), consulting services was ranked third, while education and training gained the least significant attention which might be due to the reason that once entrepreneurs realize the intricacy of leading a business, the importance and need for consulting, training and education opportunities increase significantly.

According to Campbell (1989) business incubators also provided opportunities to integrate education and training, focusing on entrepreneurship, business, management, new skills needed at work, and training of small company employees involved in business incubation or community. It was observed from Table 2 that the last rank was for the visitors of government officials, policy makers and invited guests.

Number of incubatees

Over the course of the study, 66 members in total were enrolled as incubatees (Table 3).Among them, majority of members were male (80.30 %) and the rest female (19.70 %). The least number of farmers and women self -help group members (7.57%) availed the incubation facilities. The frequency distribution of members based on gender is given in Table 4. It was revealed that women entrepreneurs and farmers had least availed the incubation services. Pandey and Solanki (2013) opined that nearly 40 % of populations were unaware about resources and services provided at Farm Universities. The poor

attendance of women self-help group members was reported by Nichols (2021) who said that the reason might be poor basic literacy, social exclusion and work burdens, and thus more efforts could be taken to work with other community members (e.g. men or mothers-in-law) to negotiate labor roles and make time for women to attend. Pandey and Solanki (2013) also stated that only few women farmers were aware or utilizing Agricultural Technology Information Centre (ATIC) in their state. The same was substantiated by Arul Prakash and Divisha (2023) who stated that less than 40 % of the farm women visited ATIC, Kattupakkam during the study period.

Farmers, women and shelf help group members should be given awareness through social media and method demonstration in the villages. These actions may be helpful to the farmers and shelf help group members to motivate them to get on-board in to the incubation facilities. It was also observed that a maximum entry of beneficiaries (83.33 %) were from category B of new start-ups on micro and medium enterprises during the study period. Results in terms of economic contributions and the employment rate indicated that majority of enterprises incubated in ABIs came under the micro and small category as per MSME categorization (Ashwini *et al*., 2020).

It was found from Table 3 that there were no records of category D in the incumbents of Food Business Incubation Centre whereas the established Indian companies (9.1 %) under category C availed Research and Development (R&D) services at the Food Business Incubation Centre during the period of study. The incubation centre at its inception admitted 5 incubatees and gradually increased to 12 during the year of 2018-19. The hike in the admission of incubatees during 2018-19 was observed due to the strenuous induction training programme organized by I-STED project which was an externally funded project sponsored by DST. The highest admission of incubatees at the incubation centre during 2023-24 was found to be 15 due to the wide publicity about the incubation programme in the social media.

Purpose of membership

The maximum population of members availed incubation services pertaining to dairy processing whereas cereal/pulse processing recorded second rank and fruit and vegetable processing recorded the third rank (Table 5). The spice-processing unit recorded fourth rank and the least rank was noted against meat processing. The reason for more number of tenants choosing dairy processing is due to the availability of the state of the art infrastructure facility and the technical expertise at the incubation centre pertaining to dairy processing. In addition, Thiruvallur district is known for its dairy farming and the affluence of raw milk across the year. According to the DAHD Annual Report 2022-23, the cattle population in Thiruvallur is 0.282 and nearby district Kancheepuram accounted for 0.428 in million (20th Livestock Census 2019). The similar results were confirmed by the Veterinary Incubation Foundation that

almost 25 % of the incubatees were interested in doing research in feed and feed supplements (Soundararajan and Vadivel, 2024).

Graduation of members

The total number of graduates who were successful from the Food Business Incubation Centre is given in Table 6. There were totally 14 members successfully graduated and 50% of the graduates were female. Moreover, Ashwini *et al*. (2020) stated that the entrepreneurs who completed the business incubation program had greater success in their business irrespective of the business size and all the enterprises studied irrespective of size had adequate access to government funds, licenses and quality control services, mostly facilitated through the ABIs, which indicated its follow up and continued support. The critical role ABIs play in facilitating innovation, income generation and dynamism in the agricultural economy through micro and small enterprises.

It was observed that graduate members were mostly interested in dairy processing and post graduate members were interested in cereal and pulse processing (Table 7).

Support availed by members

The majority of the incumbents (70%) utilised the product development services followed by infrastructure (20%) and consultancy (7%). Members of the Food Business Incubation Centre received infrastructure support through appropriate supervision (Table 8). Soundararajan and Vadivel (2024) observed out of 23 products developed, 71.43% were milk and milk products followed by 62% diagnostic kits and 40 % of dairy based testing kits, 25% of IOT and waste management, 23% of feed and feed supplements.

CONCLUSION

It was concluded that majority of the incubatees utilized the Food Business Incubation Centre, CFDT, Chennai for the incubation services in the area of dairy processing. Equal percentage of women graduated successfully from the incubation centre. Farmers and Self Help Group members had not much utilized the incubation services during the study period. Hence, there is a need to create more awareness among the farm women, women entrepreneurs about the available services of FBIC to enrich their knowledge and support their livelihood. The highest number of visits was recorded during the financial year 2022-2023 after Covid-19 lockdown period and the maximum of the visitor category was students from schools and colleges. It was noted that only 9.7 % of the visitors were business aspirants out of the total visitors during the study period. It is concluded that more eye breaking sessions on food business opportunities have to be conducted among college and general public through monthly training programmes. This induction programme will be useful to admit more farmer, SHG beneficiaries and business aspirants in the food business incubation centre.

Table 1. Membership category in the food business incubation centre

S.No.	Category	Description	Membership fee (Rs.)	Annual Renewal fee (Rs.)
1	A	Farmers and Self Help Group Members	10,000	5,000
2	B	Individual Entrepreneurs, start ups	30,000	15,000
3	C	Firms, Private Companies operating in India	50,000	25,000
4	D	Multinational companies	1,00,000	50,000

Table 2. Details of visitors and purpose in the Food Business Incubation Centre

No.	Financial year	Types of visitors						Total
		Students	Industry persons	Business aspirants	Government officials	Training	Paid Consultancy	
1.	2018-19	193	4	12	-	-	-	209
2.	2019-20	587	10	26	7	118	-	748
3.	2020-21	113	20	84	3	38	11	269
4.	2021-22	-	16	122	13	47	12	210
5.	2022-23	2128	12	112	2	15	11	2280
6.	2023-24	495	2	60	-	35	01	593
Total		3516	64	416	25	253	35	4309
Percentage		81.6	1.5	9.7	0.6	5.8	0.8	100
Rank		I	IV	II	VI	III	V	

Table 3. Frequency distribution of members based on time period

S.No.	Financial year	No. of beneficiaries based on categories				Total no. of beneficiaries	Women beneficiaries
		A	B	C	D		
1.	2014-2015	1	4	-	-	5	1
2.	2015-2016	-	4	-	-	4	-
3.	2016-2017	-	3	1	-	4	-
4.	2017-2018	2	4	-	-	6	3
5.	2018-2019	1	9	2	-	12	1
6.	2019-2020	-	4	-	-	4	1
7.	2020-2021	-	5	-	-	5	-

8.	2021-2022	-	5	-	-	5	-
9.	2022-2023	-	4	1	-	5	3
10.	2023-2024	1	13	2	-	16	4
Grand Total		**5**	**55**	**6**	**0**	**66**	**13**

Table 4. Frequency distribution of members based on gender

S.No.	Category	Male	Female	Total
1.	A	3	2	5
2.	B	48	8	56
3.	C	4	1	5
4.	D	-	-	-
Total		55	11	66

Table 5. Frequency distribution of members based on various categories of food processing

S.No.	Type of businesses	No. of beneficiaries	Percentage	Rank
1.	Dairy Processing	47	71	I
2.	Cereal/Pulse Processing	12	18	II
3.	Fruit and Vegetable Processing	3	5	III
4.	Spice Processing	3	5	IV
5.	Meat Processing	1	1	V
Total		66	100	

Table 6. Graduation details of members in the Food Business Incubation Centre

S.No.	Financial year	Total no. of graduates	Women graduates
1.	2014-2015	Incubation period maximum of 3 years.	
2.	2015-2016		
3.	2016-2017		
4.	2017-2018	02	01
5.	2018-2019	02	-
6.	2019-2020	01	01
7.	2020-2021	02	02
8.	2021-2022	01	01
9.	2022-2023	03	01
10.	2023-2024	03	01
Grand Total		**14**	**7**

Table 7. Frequency distribution of members based on Education

S.No.	Education	Dairy processing	Cereal/ pulse processing	Fruit and vegetable processing	Spice processing	Meat processing
1.	Illiterate	-	-	-	-	-
2.	Primary	1	1	-	-	-
3.	Diploma	5	-	-	-	-
4.	HSC	-	-	-	1	-
5.	UG	40	8	2	1	1
6.	PG	1	3	1	1	-
Total		47	12	3	3	1

Table 8. Support availed by members from FBIC

S. No.	Way of support	Dairy processing	Cereal/ pulse processing	Fruit and vegetable processing	Spice processing	Meat processing	Total	Percentage
1.	Product development	32	10	2	1	1	46	70
2.	Credit guidance	2	-	-	-	-	2	3
3.	Infrastructure	9	2	1	1	-	13	20
4.	Consultancy	4	-	-	1	-	5	7
Total		47	12	3	3	1	66	100

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