

BEST MANAGEMENT PRACTICES FOLLOWED BY AGRICULTURE INCUBATEES OF ANGRAU AGRIBUSINESS INCUBATOR IN TIRUPATI

ABSTRACT

The ANGRAU Agribusiness Incubator was purposively selected for the study conducted in the year 2023 because it has a specific focus on nurturing agri-startups that are working towards improving the farming communities in the state of Andhra Pradesh. Ten successful incubatees trained at the ANGRAU agribusiness incubator were purposively selected for the study, based on category, product, service, R&D and achievements. The findings demonstrated that best management practices such as practices such as 'offering innovative products/services', 'leveraging technology and automation', 'staying adaptable to changing market trends', 'prioritizing customer satisfaction', 'maintaining transparency and ethical practices' and 'implementing effective waste management and recycling' received the highest mean score of 3, ranking I. Following closely with a mean score of 2.9 and ranking II were strategies including 'vision and mission prepared', 'actively managing risks and developing contingency plans', 'consistently evaluate and improve product quality' and 'ensuring compliance with government laws and regulations. Practices like monitoring and evaluating financial performance', 'integrating sustainable practices in the supply chain', 'conducting feasibility surveys/market research', 'setting clear and measurable goals', 'giving employment to at least three persons', 'actively building a network of stakeholders and forming strategic partnerships', 'implementing effective marketing strategies', 'focusing on brand identity and positive image' and 'regularly optimizing operational costs' scored between 2.8 to 2.4, placing them in ranks between □ & □. However, practices concerning leveraging digital marketing strategies, having a detailed project report and income flow statement, developing a comprehensive business plan, seeking partnerships and collaborations for innovation, establishing relationships

with financial institutions for funding and creating assets for the agribusiness with profits ranked lower, indicating disagreement among agri-incubatees, with scores 2.3 to 1.9 placing them in ranks between □ and □. Perception of the incubatees towards best management practices inferred that nearly one-third (30.00%) of the agri-incubatees rated their best management practices as "low", while half of the incubatees(50.00%) considered them "moderate", and only one-fifth (20.00 %) of the agri-incubatees rated their practices as "high".

Keywords: ANGRAU Agribusiness Incubator, Agri-startups, Management practices, Success in agribusiness

INTRODUCTION

In the recent years, a surge in educated youth's interest in India's agricultural sector has been fueled by innovative ideas and a desire to modernize traditional practices with cutting-edge technologies and business models. Start-ups have emerged as crucial catalysts, bridging gaps in the agricultural value chain and delivering efficient products, technologies and services to both farmers and consumers. Agri-business incubators play a vital role in supporting these agri-tech start-ups by providing funding channels, enterprise development support and enhanced business opportunities. By fostering market connections, reducing wastage, establishing sustainable logistics systems and assisting agri-tech start-ups, incubators shape innovative ideas into viable business models, contributing significantly to rural economic development and ensuring food security. In India, the government, through initiatives such as the National Science and Technology Entrepreneurship Development Board (NSTEDB), actively promotes start-up growth, with a focus on recognizing the potential of innovations to bring about societal changes. The Agri-Innovations and Entrepreneurship Development (AIED) Cell, operating since 2019 at the Regional Agricultural Research Station (RARS), ANGRAU, Tirupati, is a project supported by the Rashtriya Krishi Vikas Yojana(RKVY). ANGRAU Agribusiness Incubator aimed to encourage innovation, entrepreneurship and business creation in agriculture through schemes such as SANKALP and SAMRIDDHI, creating a robust

agri-startup ecosystem in Andhra Pradesh and neighbouring states such as Telangana, Tamilnadu, etc. These programs provide opportunities for individuals in agri and allied sectors to work on innovative ideas, from development to commercialization, with support from industry experts, mentors, and funding institutions under one roof at the ANGRAU Agribusiness Incubator.

MATERIALS AND METHODS

The study was conducted in the year 2023. The study employed a descriptive research design to achieve its objectives. The ANGRAU Agribusiness incubator was purposively selected for the research study because it has a specific focus on nurturing agri-startups that are working towards improving the nutritional outcomes of farming communities in the state of Andhra Pradesh since 2019. Ten successful incubatees trained at ANGRAU - agribusiness incubator were purposively selected for the study, based on category, product, service, R&D and achievements.

Best Management Practices followed by agri-incubatees of ANGRAU-Agribusiness incubator (ABI) was analyzed using through a three-point rating scale. 'Agree' statement was rated with a three score (3), 'Can't say' statement was rated with two score (2) and 'Disagree' statement was rated with one score (1), respectively. An interview schedule was developed consisting of twenty- seven statements. Each statement was rated on three-point continuum *i.e.* agree, can't say and disagree with scores of 3, 2 and 1, respectively. The maximum and minimum score of each agri-incubatees were 81 and 0, respectively. The scores obtained for each identified parameter were summated and the respective means were estimated and are arranged in descending order as per the mean values obtained and ranked.

Primary data was gathered through a structured interview schedule from the incubatees, ensuring cooperation and response accuracy. Descriptive statistics were then computed for the primary data and the results were analysed.

RESULTS AND DISCUSSION

Best Management Practices followed by agri-incubatees of ANGRAU Agribusiness incubator

From the Table 1, The practices with the highest mean score and ranking of □ included ‘offering innovative products/services’, ‘leveraging technology and automation’, ‘staying adaptable to changing market trends’, ‘prioritizing customer satisfaction’, ‘maintaining transparency and ethical practices’ and ‘implementing effective waste management and recycling’. These practices received agreement from the participants, indicating their recognition of the importance of these strategies in best management practices.

The practices with a mean score and ranking of □ were ‘vision and mission prepared’, ‘actively managing risks and developing contingency plans’, ‘consistently evaluate and improve product quality’ and ‘ensuring compliance with government laws and regulations. While these practices were also generally agreed upon, they received slightly lower scores when compared to the top-ranked practices.

Following closely with ranking between □ & □ observed best practices were ‘monitoring and evaluating financial performance’, ‘integrating sustainable practices in the supply chain’, ‘conducting feasibility surveys/market research’, ‘setting clear and measurable goals’, ‘giving employment to at least three persons’, ‘actively building a network of stakeholders and forming strategic partnerships’, ‘implementing effective marketing strategies’, ‘focusing on brand identity and positive image’ and ‘regularly optimizing operational costs’. These practices were still positively regarded by the participants but had a neutral perception.

The remaining practices, rankings of □ and □, received relatively disagreement from the agri-incubatees. These practices included leveraging digital marketing strategies, having a detailed project report and income flow statement, developing a comprehensive business plan, seeking partnerships and collaborations for innovation, establishing relationships with financial institutions for funding and creating assets for the agribusiness with profits.

Overall, these results suggested that agri-incubatees have generally embraced and implemented a range of best management practices, particularly in areas related to innovation,

technology adoption, customer satisfaction, and sustainability. However, there are still opportunities for improvement in areas such as linkages, digital marketing, detailed project planning, and partnerships with financial institutions. By focusing on enhancing these practices, agribusinesses can further optimize their operations and position themselves for continued growth and success in the industry.

ANGRAU agri-incubator initially mentored these start-ups to have a business plan for three years and break even (if not profits) in the first year. The start-ups already have launched themselves in the agri markets and it is high time to prepare a comprehensive business plan for their start-ups for the next 3 years. Also, digital marketing is cost effective and a free of cost social media page on Facebook or Instagram can help them to reach wider consumers across India and give visibility to their business. All the start-ups can link a cell phone number to WhatsApp business account and can increase their consumer base. A WhatsApp business account can be made free of cost and an automated greeting message can be inserted to acquire new consumers. Furthermore, partnerships with financial institutions can help them to upscale their business and obtain loans with low interest. The start-ups were suggested these strategies during personal interview by the researcher and they agreed that they will focus on the drawbacks and plan to expand their business, including above strategies.

Overall perception of the agri-incubatees on best management practices

The data presented in Table 2 shows Perception of the incubatees towards best management practices concluded that nearly one-third (30.00%) of the agri-incubatees rated their best management practices as "low" while 50.00 percent considered them "moderate", and only 20.00 percent of the respondents regarded their practices as "high".

To provide additional information about the dataset, the mean is calculated ($\bar{x} = 73.40$) and the standard deviation is ($\sigma = 5.08$). The mean plus one standard deviation is 78.48, while the mean minus one standard deviation is 68.32. These values indicated the range within which most of

the data points fall and the majority of the respondents (70.00%) fell under 'moderate and high' perception.

As for the best management practices, the majority of the agri-incubatees rated them as moderate, with smaller proportions considering them low or high. It is interesting to note that 100 percent of the agri-incubatees employed at least three persons to initiate and stabilize their startup. Eventhough, only nearly one-third of the respondents created assets, broke even or obtained minimum profit could also be viewed as a best management practice. A total of 70.00 percent of the respondents had marketing strategies and were trying to include free digital marketing strategies, such as "Youtube", "Facebook page" and "Instagram page" in the near future. Every new business should have a vision and mission and 90.00 percent of the respondents had a written vision and mission. None of the agri-incubatees said that they are not adaptable to changing marketing trends which is a positive attitude for their business growth.

CONCLUSIONS

The study underscored the pivotal role of best management practices in the success of agri incubatees. Overall, these results suggested that agri-incubatees have generally embraced and implemented a range of best management practices, particularly in areas related to innovation, technology adoption, customer satisfaction, and sustainability. However, there are still opportunities for improvement in areas such as linkages, digital marketing, detailed project planning, and partnerships with financial institutions. By focusing on enhancing these practices, agribusinesses can further optimize their operations and position themselves for continued growth and success in the industry. Overall, perception of the agri-incubatees on best management practices nearly one-third (30.00%) of the agri-incubatees rated their best management practices as "low", while 50.00 percent considered them "moderate", and only 20.00 percent of the respondents regarded their practices as "high". As for the best management practices, the majority of the agri-incubatees rated them as moderate, with smaller proportions considering them low or high.

REFERENCES

Akiwatkar, K. 2016. Understanding structure of business incubators, start-ups and government policies (fostering entrepreneurship culture) in Indian context. Proceedings of the

- International Conference on Developing Indian Economy as an Engine for Job Creation: Role of Make in India, Start-up India and Skill India. pp.189-200.
- Arlotto, J., Sahut, J.M and Teulon, F. 2011. What is the performance of Incubators? The point of view of coached entrepreneurs. *International Journal of Business*. 16(4): 341- 352.
- Babu, S, C., Manvatkar, R and Kolavalli, S. 2015. Strengthening capacity for agribusiness development and management in Sub-Saharan Africa. *African Journal of Management [E-journal]* ISSN 2332-2373.
- Dee, N., Gill, D., Lacher, R., Livesey, F and Minshall, T. 2012. A review of research on the role and effectiveness of business incubation for high-growth start-ups. Institute for Manufacturing. 1: 1-45.
- Gabarret, I., Jaouen, A., Nakara, W.A and Vedel, B. 2014. Why are Small Public Incubators lagging behind? Learning from disability in the selection practices of a French incubator. *International Journal on Entrepreneurship and Small Business*. 23(4): 456-477.
- <https://www.angraurabitpt.org/>
- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=1909213>
- ICAR. 2020. Agricultureisnowabigbusiness. *IndianFarming*. 70(01):1-2.
- ICAR-NAARM. 2020.TBI:a-IDEA.a-IDEAIncubationprogram.<https://aidea.naarm.org.in/>.
- ICRISAT. 2020.Agri-BusinessIncubationprogram. <http://www.aipicrisat.org/agri-business-incubation-abi-program>.
- Lose, T and Tengeh, R.K. 2015. The sustainability and challenges of business incubators in the Western Cape Province, South Africa. *Sustainability*.7: 14344- 14357.
- MANAGE. 2020. Centre for Innovation and Agripreneurship. <http://cia.manage.gov.in/>.
- NASSCOM. 2016.Indian startup ecosystem maturing.Retrieved from the website(<https://www.nasscom.in/knowledge-center/publications/indian-start-ecosystem-maturing-2016>) on 15.5.2024.
- Njau, J.M., Mwenda, L.K.M and Wachira, A.W. 2019. Effect of access to networks support

- provided by business incubators on technology based new venture creation in Kenya. *International Journal of Entrepreneurship and Project Management*. 4(1): 33-50.
- Rathore, R.S and Agrawal, R. 2021. Performance indicators for technology business incubators in Indian higher educational institutes. *Management Research Review*. 44(11):1499-1520.
- Sharma, K.K., Karuppanchetty, S.M and Aravazh, S. 2017a. Developing entrepreneursthrough an agribusiness incubator at ICRISAT. *Innovative activity profile I*. 5: 421-422.
- Tengeh, R.K and Choto, P. 2015. The relevance and challenges of business incubators that support survivalist entrepreneurs. *Investment Management and financial innovations*. 12(2): 150-161.
- Thiongo, M.N and Baba, S. 2019. Assessment of incubators capacity building on agribusiness in Sudan. *Journal of Agricultural Science and Practice*. 4(6) :170- 178. ISSN: 2536-7072.
- Tietz, G., Anholon, R., Ordonez, R.E.C and Quelhas, O.L. 2015. Business incubators in Brazil: Main gaps to be explored by academic researchers. *Journal of Technology Management and Innovation*. 10(4): 18-27.
- Tola, A and Contini, M.V. 2015. From the diffusion of innovation totech parks,business incubators as a Model of economic development: The case of “SardegnaRicerche”.*Procedia-SocialandBehaviouralSciences*.176:494-503.

Table 1. Best Management Practices followed by Agri-Incubatees of ANGRAU Agribusiness Incubator in Tirupati**(n=10)**

S. No.	Best management Practices	Agree		Can't Say		Disagree		Total score	Mean	Rank
		f	S	f	S	f	S			
1	I offer innovative product/ service to the customers and constantly have a look on the USPs of my product/ service	10	30	0	0	0	0	30	3	□
2	I leverage technology and automation to enhance efficiency in my agribusiness	10	30	0	0	0	0	30	3	□
3	I stay adaptable to changing market trends and evolving consumer preferences.	10	30	0	0	0	0	30	3	□
4	I prioritize consumer satisfaction by consistently delivering high-quality products or services	10	30	0	0	0	0	30	3	□
5	I maintain transparency and ethical practices in all aspects of my agribusiness	10	30	0	0	0	0	30	3	□
6	I implement effective waste management and recycling practices in my agribusiness	10	30	0	0	0	0	30	3	□
7	I have a vision and mission prepared for my start-up	9	27	1	2	0	0	29	2.9	□
8	I actively manage risks and develop contingency plans to mitigate potential challenges	9	27	1	2	0	0	29	2.9	□
9	I consistently evaluate and improve the quality of my products or services	9	27	1	2	0	0	29	2.9	□
10	I ensure compliance with Govt. laws and regulations in my agribusiness operations	9	27	1	2	0	0	29	2.9	□

Contd..

Table 1contd...

11	I monitor and evaluate my financial performance to ensure profitability and sustainability	8	24	2	4	0	0	28	2.8	<input type="checkbox"/>
12	I integrate sustainable practices throughout my agribusiness supply chain	8	24	2	4	0	0	28	2.8	<input type="checkbox"/>
13	I have done feasibility survey/market research before planning my agribusiness	8	24	1	2	1	1	27	2.7	<input type="checkbox"/>
14	I set clear and measurable goals to drive growth and success of my agribusiness.	7	21	3	6	0	0	27	2.7	<input type="checkbox"/>
15	I gave employment for at least three persons	8	24	1	2	1	1	27	2.7	<input type="checkbox"/>
16	I actively build a network of relevant stakeholders and form strategic partnerships.	7	21	3	6	0	0	27	2.7	<input type="checkbox"/>
17	I implement effective marketing strategies to promote my agribusiness.	7	21	3	6	0	0	27	2.7	<input type="checkbox"/>
18	I focus on building a strong brand identity and positive brand image.	7	21	3	6	0	0	27	2.7	<input type="checkbox"/>
19	I regularly assess and optimize operational costs to maximize profitability.	8	24	1	2	1	1	27	2.7	<input type="checkbox"/>
20	I have well established forward linkages such as collection centres at farm gate/ processing centres/ refrigerated transport/ retail stores, etc to buy my product.	6	18	4	8	0	0	26	2.6	<input type="checkbox"/>
21	I have well established backward linkages such as direct raw material procurement, availability of chemicals, technology backstopping, etc	5	15	5	10	0	0	25	2.5	<input type="checkbox"/>

Contd..

Table 1 contd...

22	I will try to leverage digital marketing strategies to build a strong online presence.	7	21	1	2	2	2	25	2.5	<input type="checkbox"/>
23	I have Detailed Project Report (DPR) of my agri business along with the income flow statement for next 3 years	5	15	4	8	1	1	24	2.4	<input type="checkbox"/>
24	I have developed a comprehensive business plan / model outlines my strategies for first 3 years	5	15	4	8	1	1	24	2.4	<input type="checkbox"/>
25	I actively seek partnerships and collaborations to foster innovation in my agribusiness.	4	12	4	8	2	2	22	2.2	<input type="checkbox"/>
26	I am trying to establish network with financial institutions to access funding options.	5	15	2	4	3	3	22	2.2	<input type="checkbox"/>
27	I created assets for my agri-business with the profit	3	9	3	6	4	4	19	1.9	<input type="checkbox"/>

n=No.of respondents; f= frequency; S = Score

Table 2. Perceptionoftheagri-incubateesonbest management practices (n=10)

S.No.	Parameter	Frequency	Percentage
1	Low (< 68.32)	3	30.00
2	Moderate (68.33 to 78.47)	5	50.00
3	High (> 78.48)	2	20.00
Total		10	100.00
Mean = 73.40		Standard Deviation = 5.08	

UNDER PEER REVIEW