P-ISSN 2322 - 0678 & E-ISSN 3048 - 9946
https://doi.org/10.56572/gjoee.2025.40.1.0008 Gujarat Journal of Extension Education Vol. 40 : Issue 1 : December - 2025

IMPACT ASSESSMENT OF DAESI PROGRAMME ON KNOWLEDGE LEVEL OF AGRI-INPUT DEALERS

Shalinee Mishra[1], Seema Naberia[2] and Kamini Bisht[3]

1 PG Scholar, Dept. of Extension Education, College of Agriculture, JNKVV, Jabalpur- 482004
2 Assistant Professor, Dept. of Extension Education, College of Agriculture, JNKVV Jabalpur-482004
3 Senior Scientist (Agril. Ext), ICAR-VPKAS, Almora-263601
Email: seemanaberia@gmail.com

ABSTRACT

Agri-input dealers play a vital role in the agricultural extension delivery system as the most accessible local source of agri-advisory services for farmers. However, most of them lack formal agricultural education and technical knowledge. To overcome this gap, the National Institute of Agricultural Extension Management (MANAGE) initiated the one-year Diploma in Agricultural Extension Services for Input Dealers (DAESI) Programme in 2003. The programme is designed to equip dealers with relevant scientific knowledge and enhance their competencies, thereby enabling them to function as para-extension professionals. The study entitled "Impact Assessment of the DAESI Programme on Knowledge Level of Agri-Input Dealers in Jabalpur District" was undertaken with a total sample of 156 respondents, including 78 DAESI-trained and 78 non-DAESI input dealers. An ex-post facto research design was employed and data were collected through a well-structured schedule based on the DAESI curriculum. The curriculum covered eleven components and knowledge levels were assessed using mean, standard deviation, correlation and z-test. The findings revealed that DAESI-trained dealers had significantly higher knowledge scores (mean = 123.85) compared to their non-DAESI counterparts (mean = 82.12). The z-test further confirmed a highly significant difference between the two groups, indicating the positive impact of the DAESI programme. Among DAESI-trained dealers, factors such as education, business experience, mass media utilization, extension contact, awareness of government policies, decision-making ability, risk orientation, confidence building, management orientation, and attitude towards the programme were positively and significantly associated with knowledge enhancement. In contrast, for non-DAESI dealers, only business experience and age showed significant influence. Overall, the study highlights that the DAESI programme is effective in upgrading the knowledge base of input dealers and strengthening their role as para-extension professionals, ultimately contributing to improved agricultural advisory services at the grassroots level.

Keywords: *DAESI programme, knowledge level, DAESI agri-input dealers, non-DAESI agri-input dealers.*

INTRODUCTION

Agriculture plays an extremely vital function in the life of an emerging economy like India. The share of Gross Value Added (GVA) of agriculture and allied sectors in total economy (current prices) was about 18.3% and growth of GVA of agriculture and allied sectors (at 2011-12 prices) was observed to be 3.3% (2nd Advance Estimates of National Income by Ministry of Statistics & Programme Implementation (MoSPI), 2022-23). Agriculture being the pivotal sector in the life of an emerging economy like India, the Government of India had endeavored to proactively incorporate private sector organizations, farmers' associations, NGOs, Cooperatives, agripreneurs and different offices in the non-legislative division, including rehearsing agri-input dealers, into the Extension Delivery Mechanism. However, despite these efforts, public extension in India still suffers from limited reach, inadequate manpower, and a crop-focused approach. Strengthening extension delivery remains essential for improving farmers' income and supporting overall agricultural growth (Nandi and Swamikannu 2019). Agri-input dealers are the main converging point for the larger portion of farmers, both for agro-advisory and credit facilities. Hence, being the closest to the farmers they are playing a huge role in reaching the farmers by performing dual role of providing agri-inputs as well as technological back-up to the farmers informally. Agri-input dealers are sellers of agricultural inputs that include seeds, fertilizer, crop protection chemicals, farm equipment and machines, veterinary products, and animal feeds and medium for rendering diverse information regarding cultivation activities, both about quantity and quality. Agri-input dealers are the potential localite sources of information having high credibility among the farmers, functioning as the connecting

bridge between researchers, extension functionaries, input agencies and farming community. The input dealers play an important role in several aspects of agricultural development at the grass-root level by dissemination of knowledge about new technologies and new recommendations (Kalasariya *et al.*, 2022).

Partaking an extensive network of about 3 lakhs of agri-input dealers in the country, being potential localite source of agro-advisory services to the farmers, majority of them fall behind in terms of possessing formal agricultural education. If, these agri-input dealers are moulded as para-extension professionals by providing necessary knowledge, they can professionalize and commercialize extension services and can in turn contribute to bring an exemplary shift in Indian agriculture.

With the object to overcome this greatest setback to the mechanism, the National Institute of Agriculture Extension Management (MANAGE) launched one year Diploma in Agricultural Extension Services for Input Dealers (DAESI) Programme in the year 2003 to provide relevant agricultural knowledge to the dealers to transfigure them into para-extension professionals and enable them to address the field level problems of farmers. The programme was self-financed with course fee of Rs. 20,000/- per applicant. Later, it is subsidized to the extent of Rs. 10,000/- per agri-input dealers out of the total fee. MANAGE is implementing the programme with the help of SAMETIs (State Agricultural Management and Extension Training Institute). SAMETIs are the state level Nodal Implementing agency which organize DAESI Programme through various Nodal Training Institutes (NTIs) such as Agricultural Colleges, KVKs, ATMA and NGOs etc., at district level with the help of resource persons drawn from the Universities, Research Organizations, Departments, and free lancers (Anonymous. 2014). As for the state of Madhya Pradesh is concerned, the programme was inaugurated in the year 2017-2018. So far, 175 batches and 6538 candidates successfully completed their diploma as on 30-06-2023 (MANAGE, 2023).

OBJECTIVE

To assess the extent of contribution of DAESI programme on the knowledge level of DAESI agri-input dealers and to mark the difference it brought in the knowledge levels of DAESI and non-DAESI agri-input dealers

METHODOLOGY

The study was guided by a positivist philosophy, adopting a deductive approach to test the assumption that the DAESI programme enhances the knowledge of agri-input dealers. A quantitative methodological choice was employed, using a survey strategy with a cross-sectional time horizon. The sample consisted of 156 agri-input dealers, including 78 DAESI-trained dealers purposively selected from two NTIs (AETC and KVK, Jabalpur) and 78 non-DAESI dealers identified from the DDA office list. Data were collected through a structured schedule based on the DAESI curriculum, which comprised 11 components and 55 questions in total. Knowledge scores were computed, categorized into low, medium, and high using mean and standard deviation, and analyzed using statistical techniques. A z-test was applied to assess mean differences between DAESI and non-DAESI groups, while correlation analysis was carried out to examine the relationship between selected independent variables and knowledge levels. The Impact assessment methodology was adopted as suggested by Vinaya et al. (2017).

RESULTS AND DISCUSSION

The impact of DAESI programme in the present study was operationalised as the change in the knowledge level of agri-input dealers in various components included in the curriculum of DAESI programme between the one who had undergone the DAESI Programme (i.e., DAESI agri-input dealers called experimental group) and one who had not taken up the course (i.e., non-DAESI agri-input dealers called the control group).

Table 1 : Distribution of DAESI and non-DAESI agri-input dealers according to the impact of DAESI programme
(n=156)

Sr. No.	Category	DAESI Agri-input dealers (n=78)		Non-DAESI Agri-input dealers (n=78)	
		Frequency	Percentage	Frequency	Percentage
1	**Low**	13	16.67	14	17.95
2	**Medium**	57	73.07	58	74.36
3	**High**	08	10.26	06	7.69

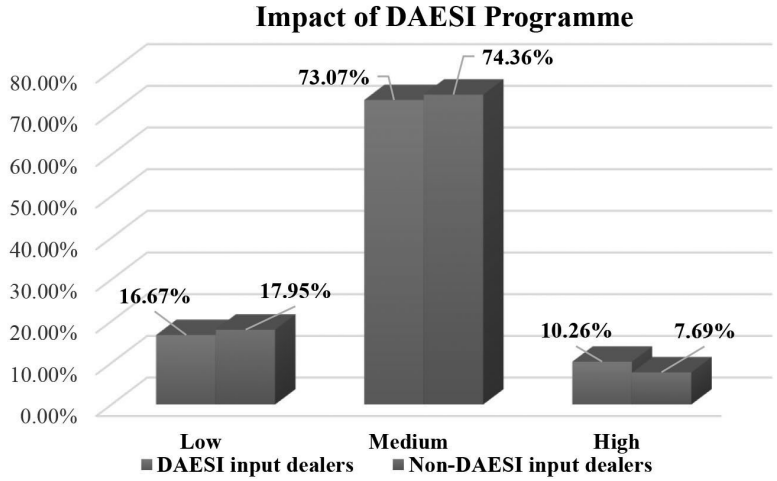

Fig. 1 : Distribution of DAESI and non-DAESI agri-input dealers according to Impact of DAESI programme

It can be observed form the Table.01, that majority of DAESI agri-input dealers (73.07%) had medium level of knowledge about the DAESI curriculum. It can also be noted that about 10.26 per cent had high and 16.67 per cent of DAESI agri-input dealers possessed low levels of knowledge meanwhile, only 7.69 per cent of non-DAESI agri-input dealers possessed high levels of knowledge. The possible rationale behind this can be avowed as that, DAESI agri-input dealers had undergone DAESI programme which helped them to boost their scientific knowledge about agriculture, also high level of education, mass media utilization and extension contact also added to their knowledge.

Findings obtained by Kumar *et. al* (2022) revealed that majority of DAESI beneficiaries (64.37%) belonged to medium level of knowledge whereas 26.25 per cent had high level of knowledge regarding the important aspects covered under DAESI programme. Madhulatha *et.al(2021)* also reported same kind of trend with majority (60.00%) of DAESI agri-input dealers falling under medium knowledge levels, 13.34 per cent and 26.67 per cent under low and high knowledge levels.

Balasubramani (2017) reported that majority of input dealers perceive that they have fully gained Knowledge and Skills on various aspects of agriculture, and gained confidence in technology dissemination, which are sufficient to give suitable advice to field level problems of farmers. A test to measure the knowledge of input dealers on different crop production technologies has been developed by Madhulatha *et.al (2022)*.

Whereas, majority of non-DAESI agri-input dealers (74.36%) fell into medium level of knowledge (with score category 74 to 91) about the DAESI curriculum. In addition, 7.69 per cent of non-DAESI agri-input dealers had high (with score category above 91) level of knowledge. Even if, they did not undergo any training but with their experience of years in agri-input business, they must have earned a lot of insight about agricultural practices and techniques which can be attributed to their possible contact with trained agri-input dealers, progressive farmers and extension agencies. However, only 17.95 per cent and 7.69 per cent of non-DAESI agri-input dealers possessed low and high levels of knowledge towards the DAESI curriculum respectively.

Training is essential to induce knowledge and skills of any agricultural input dealers about Transfer of Agriculture Technology. Patel et al (2020) reported that Use of A.V. aids, Training method and Classroom facilities were found most effective for Input dealers.

Although, it superficially seems that both non-DAESI and DAESI show same kind of distribution but statistical point of view for the range of score category should not be neglected before comparing the knowledge levels of DAESI and non-DAESI agri-input dealers.

Table 2 : Impact of DAESI programme (n=156)

Sr. No.	Category	Mean	Variance	Z-value
1	**DAESI Agri-input dealers**	123.85	163.07	23.684**
2	**Non-DAESI Agri-input dealers**	82.12	79.09	

Table. 02 shows the mean value distribution of knowledge of DAESI and non-DAESI agri-input dealers about the DAESI curriculum which is found to be 123.85 and 82.12 respectively. Whereas, the variance for DAESI and non-DAESI agri-input dealers was found to be 163.07 and 79.09 respectively. The calculated 'Z' value of 23.684, which is way greater than the tabulated value at 0.01% level of probability, points to a highly significant difference in knowledge i.e., the DAESI agri-input dealers had more knowledge and insight on the different components of agriculture and agricultural practices as compared to non-DAESI agri-input dealers. The findings were in accordance with the results obtained by Srinivas (2013); Jally (2018); Jaiswal (2022); Meena et al. (2024); Jadav et al. (2024); Saikia et al. (2024); Patel et al. (2023).

Relationship between independent variables and impact of DAESI programme on agri-input dealers

Table 3 : Coefficient of correlation of independent variables with the knowledge of agri-input dealers on different components included in the curriculum of DAESI programme (n=156)

Sr. No.	Independent Variables	Correlation Coefficient "r"	
		DAESI input dealers (n=78)	Non-DAESI input dealers (n=78)
X_1	**Age**	0.077_{NS}	0.255*
X_2	**Education**	0.276*	0.201_{NS}
X_3	**Business experience**	0.267*	0.314**
X_4	**Annual income**	-0.134_{NS}	0.208_{NS}
X_5	**Mass media utilization**	0.281*	0.023_{NS}
X_6	**Extension contact**	0.379**	-0.018_{NS}
X_7	**Awareness about government policies**	0.230*	0.036_{NS}
X_8	**Decision making**	0.219*	0.061_{NS}
X_9	**Risk orientation**	0.282*	0.053_{NS}
X_{10}	**Confidence building**	0.418**	0.034_{NS}
X_{11}	**Management orientation**	0.346**	0.048_{NS}
X_{12}	**Attitude towards DAESI programme**	0.246*	-

** Significant at 0.01% level of probability * Significant at 0.05% level of probability NS = non-significant

The observations from the Table.03 reveals the calculated coefficient of correlation between education and business experience portrays positive and significant relation with the knowledge level of DAESI agri-input dealers at 5 per cent level while in case of non-DAESI agri-input dealers, education held non-significant and business experience with positive and significant relation at 1 per cent level of probability. It can be because of the reason that the education is one of the very crucial factors for the enhancement of knowledge and because majority of the respondents were highly qualified and educated, it led them to have greater knowledge and understanding about the agricultural and scientific technologies as per DAESI programme. Having prior business experience in a particular field or area of work, knowledge gained with the time invested in the activity increases. Hence, positive and significant correlation. Mass media utilization and awareness about government policies impacts the knowledge in a positive direction. Greater utilization of mass media sources contributes to greater exposure to knowledge and that in turn leading to greater awareness about government policies. Therefore, the positive and significant correlation at 5 per cent level of probability was attained by the two variables. Positive and significant correlation of decision making, risk orientation and attitude towards DAESI programme with the knowledge level of agri-input dealers about the DAESI programme can be attributed to variables like higher educational background, business experience, mass media utilization, extension contact and greater awareness about the government policies. Which in turn lead them to undertake higher and feasible risks and better decisions. Attitude towards DAESI programme of agri-input dealers bore positive and significant correlation at 5 per cent level with the knowledge levels because favourable and better attitude towards any activity leads to greater enthusiasm and learning possibilities and that in turn resulting to the enhanced knowledge of DAESI agri-input dealers. Regular and greater contact with extension personnel and agencies lead to upgradation of existing knowledge henceforth widening the learning prospects and gathering knowledge for the DAESI agri-input dealers and it is evidently shown by the positive and significant correlation between extension contact and knowledge level of agri-

input dealers at 1 per cent level of probability. Confidence building and management orientation are in turn linked with education, business experience, mass media utilization, extension contact and awareness about government policies. Which leads all to acquiring more and greater knowledge and hence the correlation of confidence building and management orientation with the knowledge level of agri-input dealers was found to be positively significant at 1 per cent level of probability. Madhu Latha *et.al* (2021) propounded similar kinds of findings where, education, awareness about government policies, risk orientation, mass media exposure and extension contact had positive and significant correlation at 1per cent and business experience at 5 per cent level of probability with the knowledge of agri-input dealers.

It can be inferred that knowledge level of DAESI agri-input dealers is not much dependent on the increase of age of DAESI agri-input dealers (i.e., non-significant but positive) and the probable reason can be that there is no minimum or maximum age criteria involved with the DAESI programme. Annual income was found to be negative and non-significantly correlated with the knowledge levels of agri-input dealers.

In case of non-DAESI agri-input dealers, out of eleven independent variables, only one variable i.e., Business experience was found to be positively correlated with significance at 1 per cent level of probability. One variable was carrying positive and significant correlation at 5 per cent level of probability viz., Age. Seven variables namely, Education, Annual Income, Mass media utilization, Awareness about government policies, Decision making, Risk orientation and Confidence building carried positive and two variables to be explicit, Education and Extension contact bore negative correlation with the knowledge of input dealers on different components included in the curriculum of DAESI programme, however, none of them were found to be significant.

The observations from the Table. 03 reveals that out of twelve independent variables, seven viz., Education, Business experience, Mass media utilization, Awareness about government policies, Decision making, Risk orientation and Attitude towards DAESI programme were positive and significantly correlated at 5 per cent level of probability. While, three variables i.e., Extension contact, Confidence building and Management orientation had positive and significant correlation at 1 per cent level of probability. Annual income had negative and Age bore positive but non-significant correlation with the knowledge of agri-input dealers on different components included in the curriculum of DAESI programme. The study is in line with the findings of Jally (2018), Mamatha (2018) and Handa (2021) and Banerjee (2021).

CONCLUSION

The impact assessment of DAESI programme on knowledge levels of agri-input dealers disclosed that there is an inconsistency between the knowledge levels of DAESI and Non-DAESI agri-input dealers regarding DAESI curriculum. It is evident that DAESI agri-input dealers had a greater edge over non-DAESI agri-input dealers because they had undergone through the DAESI diploma programme. Further, it should be noted that the study thrown some light on the relationship between the socio-personal, economic, communication and psychological determinants with that of knowledge levels of agri-input dealers. The research revealed that DAESI programme helped the agri-input dealers in improving their knowledge and expanding their horizons of learning about agriculture and scientific technologies, thereby transforming them into para-professional experts.

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my guide, institution, agri-input dealers in Jabalpur district and all the individuals for their contribution and support to made this research possible.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

REFERENCES

Anonymous (2014). Guidelines for Operationalization of Diploma in Agricultural Services for Input Dealers (DAESI) Program. Department of Agriculture and Cooperation, Ministry of Agriculture, Government of India. Retrieved from https://shorturl.at/QiKDQ

Balasubramani, N. (2017). Impact of DAESI Programme on Trained Input Dealers: A Perception Study. *J. Agric. Ext. Manag.* 18(2).

Banerjee, A., Rampal, V.K. and Ray, P. (2022). Knowledge Level of DAESI and Non-DAESI Dealers for Paddy and Wheat Cultivation in Punjab. *Indian J. Ext. Edu.* 58(3): 42-45. https://epubs.icar.org.in/index.php/IJEE/article/view/125085

Handa, T. (2021). A study on Impact of Diploma in Agricultural Extension Services for Input Dealers (DAESI) on knowledge and skill development in Chhattisgarh Plains. M.Sc. (Agri.) Thesis (Unpub.), IGKV, Raipur, Chhattisgarh, India.

Handa, T., Khan, M.A. and Awasthi, H.K. (2021). Communicational Behaviour of Agri-Input Dealers and its Role in Knowledge and Skill Development. *Pharma Innov*. J. SP-10(8): 901-904.

Jadav, N. B., Parmar, S. J. and Chhodvadia, H. C. (2024) Assessment of knowledge of agro-input dealers gained through certificate course on insecticide management. *Gujarat Journal of Extension Education*, 37(2):143-147. https://doi.org/10.56572/gjoee.2024.37.2.0024.

Jaiswal, A. (2022). Impact of Diploma in Agricultural Extension Services for Input Dealers (DAESI) programme in disadvantaged districts of Madhya Pradesh. Ph.D. (Agri.) Thesis (Unpub.), JNKVV, Jabalpur, Madhya Pradesh, India.

Jally, C. (2018). Study on impact of the Diploma in Agricultural Extension Services for Input Dealers (DAESI) in Odisha. M.Sc. (Agri.) Thesis (Unpub.), IGKV, Raipur, Chhattisgarh, India.

Kalasariya, N., Patel, J.K. and Patel, Y. (2022). Knowledge level of trained input dealers about the different modules of training. *Gujarat Journal of Extension Education*, 34(2): 70-74.

Kumar, R., Verma, R.K., Jhajharia, A.K. and Kumar, R. (2022). Knowledge level of respondents regarding important aspects covered under DAESI Programme in Rajasthan. *Indian J. Ext. Edu.* 58(3): 170-174.

Madhulatha, C., Kadian, K.S. and Patil, C. (2022). A test to measure the knowledge of input dealers on crop production technologies. *Gujarat Journal of Extension Education*, 33(1): 155-162. https://doi.org/10.56572/gjoee.2022.33.1.0031

Madhulatha, C., Kadian, K.S., Meena, B.S. and Behera, J. (2021). Impact of DAESI program on knowledge levels of input dealers in Andhra Pradesh, India. *Indian J. Ext. Edu.* 57(2): 82-86. DOI: 10.5958/2454-552X.2021.00062.1

Meena, S. K., Badhala, B. S. and Asiwal, B. L. (2024) Knowledge of agri input dealers regarding improved tomato production technology. *Gujarat Journal of Extension Education*, 38(1):106-110. https://doi.org/10.56572/gjoee.2024.38.1.0018.

Mishra Shalinee (2023). Impact Assessment of DAESI Programme on Knowledge Level of Agri-Input Dealers in Jabalpur District. M.Sc. (Agri.) Thesis (Unpub.), Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (M.P.)

Nandi, R. and Swamikannu, N. (2019). Agriculture Extension System in India: A Meta-analysis. *Agric. Sci. Res. J.* 10(3): 473-479.

National Institute of Agricultural Extension Management (MANAGE). (2023). Details of the DAESI Programs under Progress. Retrieved from https://www.manage.gov.in/daesi/ongoing.pdf

Patel, Dhruv, Thorat, G. N. and Patel, J. K. (2023) A scale to measure the attitude of agro-input dealers towards their occupation. *Gujarat Journal of Extension Education*, 36(1):1-4. https://doi.org/10.56572/gjoee.2023.36.1.0001.

Patel, M.R., Khadayata, K.G. and Patel, P.C. (2020). Effectiveness of training programme for agri-input dealers. *Gujarat Journal of Extension Education*, 31(1): 148-151.

Saikia, Pallavi, Das, Pallabi and Deka, Pallabi (2024) Training need assessment of agri-input dealers. *Gujarat Journal of Extension Education*, 37(2):163-169. https://doi.org/10.56572/gjoee.2024.37.2.0028.

Srinivas, E. (2013). A critical analysis on effectiveness of Diploma in Agricultural Extension Services for Input Dealers (DAESI) programme in Andhra Pradesh. Ph.D. (Agri.) Thesis (Unpub.), Acharya N.G. Ranga Agricultural University, Hyderabad.

Vinaya Kumar H. M., Shivamurthy M., and Lunagaria M.M. (2017). Impact of rainfall variability and trend on rice yield in Coastal Karnataka. *Journal of Agrometeorology*. 19 (3): 286-287

Received : August 2025 : Accepted : October 2025