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## Role of Vamban KVK in improving the livelihood of the farmers of Pudukkottai district

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### Abstract

The Krishi Vigyan Kendra (KVK) in Vamban, Pudukkottai District, has been a pivotal force in improving the livelihoods of farmers in the region. Established in 2000 and affiliated with ICAR in 2004, the KVK covers various agricultural systems prevalent in the district. Through on-farm testing, frontline demonstrations, and need-based training, it disseminates location-specific agricultural technologies. The KVK has played a crucial role in enhancing crop varieties, promoting sustainable farming practices, and empowering both male and female farmers. While there is a balanced gender representation among farmers and farm women, there is room for improvement in increasing female participation in vocational training and extension activities. The KVK's commitment to addressing agricultural and environmental challenges through ongoing schemes underscores its significance in the region's agricultural development. Continuous monitoring and assessment of its programmes will ensure they remain responsive to the evolving needs of the local agricultural community.

**Keywords:** Krishi Vigyan Kendra, farmers, training, beneficiaries, extension activities

### Introduction

The Krishi Vigyan Kendra, Vamban, was initiated in the year 2000 under the National Agricultural Technology Project (NATP) in Pudukkottai District. It was subsequently established as an ICAR-affiliated KVK in 2004. The centre covers an area of 23.2 hectares, with 3.05 hectares allocated for buildings, 2.31 hectares for demonstration units, and the remaining 17.84 hectares dedicated to crop cultivation and agro-forestry. Situated in the Southern Zone of Tamil Nadu, the region is characterized by sandy clay loam soil. The agricultural systems prevalent in the district encompass irrigated agriculture, horticultural systems, rain-fed agriculture, horticulture, forestry systems, and livestock production <sup>[1]</sup>.

The agricultural landscape of Pudukkottai district in the year 2019-20, Kharif and Rabi seasons displayed a diverse range of crops with varying levels of productivity. It is shown in the Table 1. In the Kharif season, paddy dominated the cereals category, covering a vast area of 22,275 hectares and yielding an impressive production of 849,568 quintals, with a productivity rate of 38.14 quintals per hectare. Maize, another significant cereal crop, occupied 1,770 hectares and yielded 106,554 quintals, boasting a high productivity rate of 60.20 quintals per hectare. Among millets, Cumbu, ragi, and sorghum were cultivated over smaller areas but still contributed to the region's food security. In pulses, blackgram, redgram, and cowpea were grown, with blackgram being the dominant crop with an area of 820 hectares and a productivity rate of 8.77 quintals per hectare. Groundnut and gingelly were the primary oilseeds cultivated in the district during Kharif, while sugarcane and coconut were prominent cash crops. Banana was a major fruit crop with an area of 2,575 hectares and a high productivity rate of 300 quintals per hectare. The vegetable category included brinjal, dry chillies, and tapioca, with tapioca standing out with a productivity rate of 370 quintals per hectare.

**Table 1:** Area, Production and Productivity of major crops cultivated in the Pudukkottai district for the year 2019-20 during Kharif season <sup>[2]</sup>

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
<b>Cereals</b>				
1.	Paddy	22275	849568	38.14
	Maize	1770	106554	60.20
<b>Millets</b>				
2.	Cumbu	2	51.7	25.87
	Ragi	63	1138.4	18.07
	Sorghum	32	460.4	14.39
<b>Pulses</b>				
3.	Blackgram	820	7191	8.77
	Redgram	360	1987	5.52
	Cowpea	256	1889.2	7.38
<b>Oilseeds</b>				
4.	Groundnut	4222	8739	2.07
	Gingelly	350	1417	4.05
<b>Cash crops</b>				
5.	Sugarcane	1741	2182343	1253.50
	Coconut	9328	-	-
<b>Fruits</b>				
6.	Banana	2575	772500	300.00
	Mango	1031	49488	48.00
<b>Vegetables</b>				
7.	Brinjal	420	44520	106.00
	Onion	33	-	-
	Chillies (Dry)	431	1883.4	4.37
	Tapioca	800	296000	370.00
<b>Flower crops</b>				
8.	Jasmine	321	19260	60.00
<b>Plantation crops</b>				
9.	Cashewnut	5405	2702.50	0.50
	Grand Total	52235		

The Table 2 shows the Area, Production and Productivity of major crops cultivated in the Pudukkottai district for the year 2019-20 during Rabi season. During the Rabi season, paddy remained a major cereal crop, covering a significant area of 65,575 hectares, with a production of 2,066,268 quintals and a productivity rate of 31.51 quintals per hectare. The region also continued to cultivate millets, pulses, and oilseeds, with

blackgram being the dominant pulse crop. Sugarcane was a cash crop with substantial cultivation in the Rabi season as well. Overall, these statistics demonstrate the agricultural diversity and productivity of Pudukkottai district, with a strong focus on staples like paddy, millets, and pulses, along with cash crops and fruits that contribute significantly to the local economy and food security.

**Table 2:** Area, Production and Productivity of major crops cultivated in the Pudukkottai district for the year 2019-20 during Rabi season <sup>[2]</sup>

S. No	Crop	Area (ha)	Production (Qtl)	Productivity (Qtl /ha)
<b>Cereals</b>				
1.	Paddy	65575	2066268	31.51
	Maize	866	52133	60.20
<b>Millets</b>				
2.	Cumbu	24	620.88	25.87
	Ragi	5	90.35	18.07
	Sorghum	42	604.38	14.39
<b>Pulses</b>				
3.	Blackgram	2901	25441.77	8.77
	Redgram	77	425.04	5.52
	Cowpea	238	1756.44	7.38
<b>Oilseeds</b>				
4.	Groundnut	6367	19865	3.12
	Gingelly	1262	5111	4.05
<b>Cash crops</b>				
5.	Sugarcane	223	1333724	1253.5

#### Mandates of Vamban KVK

The overall mandate of the KVK is to develop and disseminate location specific technological modules at district level through Technology Assessment, Refinement and Demonstration and to act as Knowledge and Resource Centre for agriculture and its allied activities. The specific activities to carry out this mandate are:

- Conducting on-farm testing to identify the location specific agricultural technologies under various farming systems
- Organizing frontline demonstrations to establish its production potential of various crops and enterprises on the farmers' fields.

- Organizing need based training for farmers to update their knowledge and skills in modern agricultural technologies and training of extension personnel to orient them in the frontier areas of technology development
- Creating awareness about improved technologies to larger masses through appropriate extension programmes.
- Production and supply of good quality seeds, planting materials, vermicompost and various bio-products to the farming community.
- To work as resource and knowledge centre of agricultural technology for supporting initiatives of public, private and voluntary sector for improving the agricultural economy of the district <sup>[3]</sup>.

**Organizational Setup of Vamban KVK**

The Vamban Krishi Vigyan Kendra (KVK) is organized with a dedicated team of 16 staff members, each serving a specific role to support its mission and functions. At the helm of the organization is the Programme Coordinator, responsible for overall program management and coordination. The KVK also boasts a team of six Subject Matter Specialists, each specializing in various agricultural domains, to provide expert guidance and knowledge dissemination to farmers. Technical and computer support is facilitated by the Programme Assistant (Technical) and Programme Assistant (Computer), respectively. Additionally, there is a Farm Manager overseeing agricultural operations, an Assistant for administrative tasks, a Junior Assistant cum Typist for clerical work, and skilled drivers to manage the transportation needs of the center. Completing the team are two Office Assistants who play a crucial role in the smooth functioning of the KVK. Together, this team works in harmony to promote agricultural education, research, and extension services in the Vamban region <sup>[4]</sup>.

**Activities of Vamban KVK**

During the year 2023-24, the Vamban Krishi Vigyan Kendra (KVK) in Pudukkottai District is being actively engaged in a wide array of on-farm trials and front-line demonstrations aimed at improving agricultural practices and promoting sustainable farming techniques. These initiatives encompassed the assessment of various crop varieties, including paddy, cowpea, groundnut, black gram, barnyard millet, lab-lab hybrid, and others, with a focus on enhancing yield, resistance to diseases, and productivity. Furthermore, the KVK is conducting front-line demonstrations to showcase the benefits of specific crop varieties like paddy, cowpea, maize, sesame, coriander, and more, encouraging their adoption among farmers. In addition to trials and demonstrations, the KVK is providing valuable training sessions on diverse agricultural topics, such as foliar nutrient application, advanced seed production techniques, value addition in millets, and beekeeping. They are also producing and distributing high-quality seeds, seedlings, fodder cuttings, Vermicompost, Azolla, and other inputs to support local farmers. Furthermore, the KVK is involved in ongoing schemes, including the Scheduled Caste Sub Plan (SCSP), Cluster Front Line Demonstrations for pulses, the District AgroMet Unit, Swachhta Action Plan, and JAI Shakti Abhiyan, showcasing its commitment to addressing various agricultural and environmental challenges <sup>[1]</sup>.

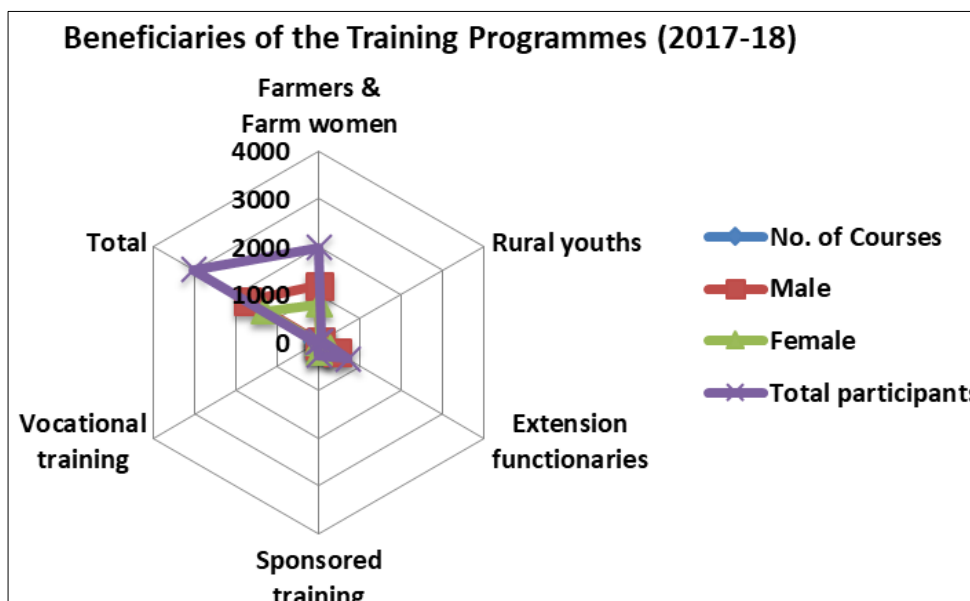
**Materials and Methods**

The data obtained from the Annual Reports (2017-2020) of Vamban KVK, Pudukkotai was used as the secondary data for the study.

**Statistics 1**

**Table 3:** Training Programmes and their beneficiaries of the year 2017-18 <sup>[5]</sup>

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	51	1191	793	1984
Rural youths	2	25	25	50
Extension functionaries	17	434	259	693
Sponsored Training	5	63	212	275
Vocational Training	1	7	23	30
Total	76	1720	1312	3032

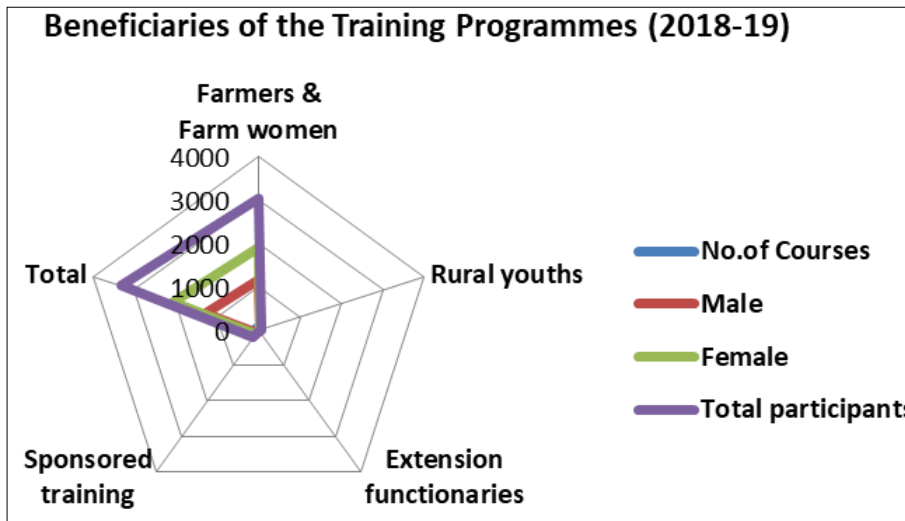


**Fig 1:** Beneficiaries of the Training Programmes (2017-18)

Statistics 2

**Table 4:** Training Programmes and their beneficiaries of the year 2018-19 [6]

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	77	1154	1889	3043
Rural youths	2	30	34	64
Extension functionaries	1	19	8	27
Sponsored Training	2	78	122	200
Total	82	1281	2053	3334

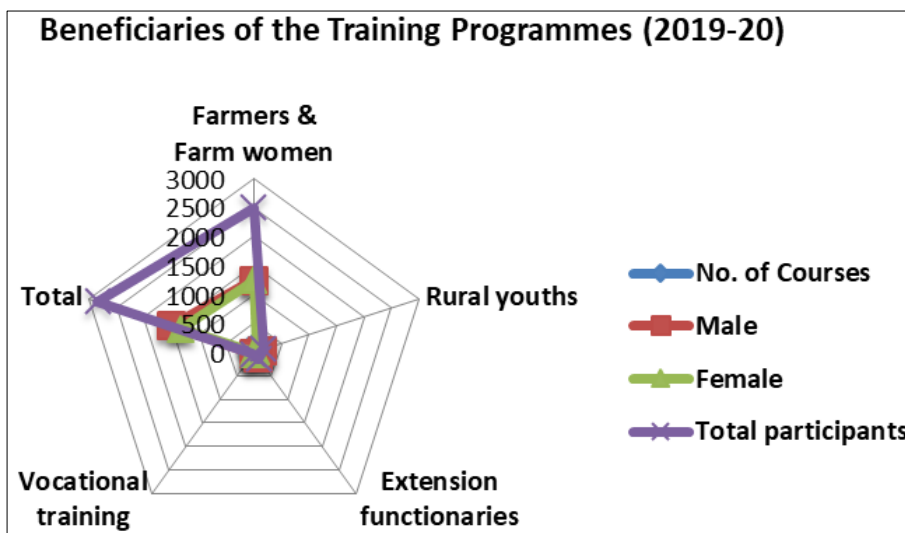


**Fig 2:** Beneficiaries of the Training Programmes (2018-19)

Statistics 3

**Table 5:** Training Programmes and their beneficiaries of the year 2019-20 Report [2]

Clientele	No. of Courses	Male	Female	Total participants
Farmers & farm women	79	1256	1245	2501
Rural youths	5	130	41	171
Extension functionaries	4	94	38	132
Vocational Training	1	20	8	28
Total	89	1500	1332	2832



**Fig 3:** Beneficiaries of the Training Programmes (2019-20)

Results

Results 1

The provided Table 3 presents data on various training courses conducted by the institution, categorized by clientele and the gender distribution of participants. This data offers

valuable insights into the participation of different groups in these training programs.

**Farmers & Farm Women**

The Indian Council of Agricultural Research's planned initiative, Krishi Vigyan Kendra (KVK), plays a crucial role

in women's empowerment through its organized programs. These programs are essential for enhancing women's knowledge and the adoption of technology to improve crop production, food security, livelihoods, and more. KVK places a strong focus on empowering women by facilitating the formation and operation of Self-Help Groups (SHGs) and offering entrepreneurial training. This training aids in the development of qualities like self-confidence, a positive attitude, motivation, economic independence, effective decision-making, leadership skills, and improved social mobility [7]. This category constitutes a significant portion of participants, with a total of 2,501 individuals attending 79 courses. Notably, there is a balanced gender distribution, with 1,256 males and 1,245 females participating. This equal representation of both genders underscores the inclusive nature of these programs and the active involvement of both men and women in agricultural and farming activities.

### **Rural Youths**

The primary purpose of KVKs was initially to offer vocational training to rural youth, equipping them for self-employment opportunities [8]. The data shows that 171 individuals participated in 5 courses designed for rural youths. The gender distribution in this category reveals a larger number of males (130) than females (41) attending. While it's encouraging to see youths engaging in these programs, efforts could be made to encourage more young women to participate, promoting gender equity in rural development and agriculture-related initiatives.

### **Extension Functionaries**

KVKs are introducing diverse technological solutions tailored to meet the requirements of rural community [9]. In this category, 132 individuals participated in 4 courses aimed at extension functionaries. The data indicates a gender imbalance, with 94 males and 38 females attending. This suggests a need for targeted strategies to increase the participation of women in extension-related training and outreach activities.

### **Vocational Training**

Most of the participants also believed that the training provided by KVKs had improved the social status of farmers [8]. A single vocational training course attracted 28 participants. While the number of courses is limited, there is a gender imbalance, with 20 males and 8 females attending. Efforts could be made to promote vocational training opportunities for both genders equally, ensuring that women have access to these skill-building programs.

### **Results 2**

The provided Table 4 presents data on the courses conducted by the institution, categorized by different clienteles and their gender distribution. This data sheds light on the participation of various groups in these training programs.

### **Farmers & Farm Women**

This category constitutes the majority of participants, with a total of 3,043 individuals attending 77 courses. Notably, there is a substantial participation of both males (1,154) and females (1,889). This reflects a strong interest and engagement of both genders in agriculture and farming activities, highlighting the inclusive nature of these programs.

### **Rural Youths**

The data indicates that 64 individuals participated in 2 courses designed for rural youths. While the number of courses is limited, it's encouraging to see a balanced gender distribution with 30 males and 34 females attending. This demonstrates the institution's efforts to engage young people from both genders in rural development and agriculture-related initiatives.

### **Extension Functionaries**

This category includes individuals involved in disseminating agricultural knowledge and practices. Although only one course was conducted, 27 extension functionaries participated. The data reveals a gender imbalance, with 19 males and 8 females attending. This may suggest the need for targeted efforts to encourage more women to participate in extension-related training.

### **Sponsored Training**

Two courses were offered in sponsored training, attracting a total of 200 participants. Interestingly, there is a notable gender difference, with 78 males and 122 females attending. This suggests that specific sponsorship programs or initiatives may have been designed to empower women in agriculture, contributing to the higher female participation.

### **Results 3**

The provided Table 5 presents data on various training courses conducted by the institution, categorized by clientele and the gender distribution of participants. This data offers valuable insights into the participation of different groups in these training programs.

### **Farmers & Farm Women**

This category constitutes a significant portion of participants, with a total of 2,501 individuals attending 79 courses. Notably, there is a balanced gender distribution, with 1,256 males and 1,245 females participating. This equal representation of both genders underscores the inclusive nature of these programs and the active involvement of both men and women in agricultural and farming activities.

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The data shows that 171 individuals participated in 5 courses designed for rural youths. The gender distribution in this category reveals a larger number of males (130) than females (41) attending. While it's encouraging to see youths engaging in these programs, efforts could be made to encourage more young women to participate, promoting gender equity in rural development and agriculture-related initiatives.

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A single vocational training course attracted 28 participants. While the number of courses is limited, there is a gender imbalance, with 20 males and 8 females attending. Efforts could be made to promote vocational training opportunities

for both genders equally, ensuring that women have access to these skill-building programs.

### Discussion

In summary, the institution's training programs have attracted a diverse group of participants, including farmers, rural youths, extension functionaries, and those seeking vocational training. The data shows a commendable effort to promote gender equality in agriculture, with a balanced gender representation among farmers and farm women. However, there are areas for improvement, particularly in encouraging more women to participate in vocational training and increasing the involvement of women in extension-related activities. It is essential to continue monitoring and assessing the impact of these training programs to ensure they effectively meet the needs of their clientele. Collecting feedback from participants and conducting further analysis can provide valuable insights for refining and expanding these programs to enhance agricultural knowledge and practices in the region.

### Conclusion

In conclusion, the Krishi Vigyan Kendra (KVK) in Vamban, Pudukkottai District, has been actively engaged in a wide range of agricultural activities and training programs aimed at improving farming practices, enhancing agricultural productivity, and promoting sustainable agriculture in the region. The KVK's efforts have extended to various clienteles, including farmers, rural youths, extension functionaries, and those seeking vocational training. One notable aspect of the KVK's initiatives is its commitment to promoting gender equality in agriculture. The data presented in the results section clearly demonstrates a balanced gender representation among farmers and farm women participating in training programs. This reflects the KVK's dedication to inclusivity and the active involvement of both men and women in agricultural and farming activities.

However, there are areas for improvement, particularly in encouraging greater participation of women in vocational training and extension-related activities. Efforts to promote vocational training opportunities for both genders equally can contribute to skill-building and empowerment among women in the agricultural sector. Additionally, strategies to increase the involvement of women in extension services are essential for addressing the specific needs and concerns of female farmers. The institution's ongoing schemes, such as the Scheduled Caste Sub Plan (SCSP), Cluster Front Line Demonstrations, and others, highlight its commitment to addressing various agricultural and environmental challenges in the region. In the future, it is crucial for the KVK to continue monitoring and assessing the impact of its training programs, collecting feedback from participants, and conducting further analysis. These efforts will help refine and expand the programs to ensure they effectively meet the evolving needs of the local agricultural community. Overall, the Krishi Vigyan Kendra in Vamban plays a vital role in advancing agricultural education, research, and extension services in Pudukkottai District, contributing to the sustainable development of agriculture in the region.

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