

# HON'BLE GOVERNOR'S SMART VILLAGE INITIATIVE

Phase-II – 2018-2021

Village : Vishma and Hanyla

G.P : Vishma

P.S : Sayra, Distt. Udaipur



MPUAT

A STEP FORWARD FOR SERVICE OF FARMERS

MPUAT declared as “Outstanding University” under Smart Village Initiative of Hon’ble Governor in 2020



**Maharana Pratap University of Agriculture and Technology  
Udaipur (Rajasthan)**

## **“HON’BLE GOVERNOR’S SMART VILLAGE INITIATIVE”**

### **MPUAT Initiatives and Accomplishments (2018-2021)**

- 1.** Under ‘**Utkristha Model**’ Maharana Pratap University of Agriculture and Technology was advised to select Tribal Sub Plan village and ensure skill training/livelihood opportunity activities through convergence with line departments and other NGO’s.
- 2.** In the second phase two villages viz. Vishma and Hanyla, Gram Panchayat Vishma, P.S Sayra, district- Udaipur were selected in July, 2018. The total population of **Vishma** and **Hanyla** villages is 1006 and 811 (2011 census). Total cultivated area is 161 and 85 ha with irrigated area 28 and 9 ha, respectively in Vishma and Hanyla village. Bench Mark Survey was made and simultaneously needs were assessed. Major constraint obtained was water – both for drinking as well as irrigation purpose. Further, subsistence agriculture, use of modern technology very less and unemployment leading to migration are few of other constraints in this area.
- 3.** Action Plan was developed by MPUAT by Smart Village Implementation Committee, discussed and got approved from Gram Sabha.
- 4.** To full-fill the objective of making the village self-reliant, MPUAT took lead and made concerted efforts in the direction of creating livelihood opportunities and economic empowerment through skill trainings and interventions of Integrated Farming System.
- 5.** The diverse activities attempted are employment generation through on and off farm skill trainings, livelihood opportunities through innovations, organic farming, critical agriculture input availability and CSR fund management for HELP i.e. health, education, livelihood and poverty reduction. A very well designed model of village incorporating convergence of different technologies, through articulating collaboration& cooperation & collective action for demonstration and capacity building was made.

## 6. Visit of University officials

For effective implementation of the Action Plan, during the period under report, 114 visits were made to adopted villages by 463 Scientists and other officials. They regularly visited the area and created awareness about new technologies through trainings, capacity development and demonstrations. Hon'ble Vice-Chancellor personally monitored the programme and made four visits for knowing effectiveness and inclusiveness of the activities in the field.



## 7. Convergence of Technologies

The MPUAT converged different appropriate technologies developed under various ICAR-All India Coordinated Research Projects, ICAR-National Extension Programme, RKVY and private funded projects of University. These technologies & devices were disseminated in Smart Villages through trainings and demonstrations.



## 8. Coordination and Cooperation

In the Smart Villages, besides implementations of MPUAT Action Plan, schemes and programmes of line departments of State Government, Public Sector organizations and NGO's were also converged. Through better Coordination and cooperation, programmes of Departments of Agriculture, Horticulture, Animal Husbandry, Forest, TAD, Medical &

Health, Rural Development, Watershed Development, AVVNL, RAJEEVIKA, ICDS and Education were dovetailed for development of villages. Foundations like – ICICI through its RSETI, India Infoline Foundation – Mumbai, Public Sector Organization i.e. Rajasthan State Mines and Minerals and NGO's viz. Foundation for Ecological Sustainability (FES) and Centre for Micro-finance (Tata Trust), Nehru Yuva Kendra and RAJUVAS, Bikaner were also involved in making the village Smart and Frontier in the area of Rural development & Agri. Field. Retired and serving scientists of the University also contributed generously for socio-economic development of villages.



## **9. Capacity Building and Human Resource Development**

The University's foremost priority was capacity development of villagers through awareness, knowledge and skill development so that they can be exposed to new technologies and there by their attitude is changed and socio-economic condition is improved.

Major emphasis were given on knowledge and skill development of farmers in crop production and protection technologies, integrated farming system, good agriculture practices, processing and value addition, diversification of crops mainly through fruits and vegetables, organic farming, resource conservation technologies, farm mechanization, women empowerment through drudgery reduction technologies, mushroom, value added products of locally available food material, counseling on health, hygiene, nutrition, breeding, feeding and management of livestock, SHG and FPO formation etc. The MPUAT Scientists organized 82 one day off campus training programmes



benefitting 4102 farmers and farm women. The complex, diversified risk prone farmers are now mentally better equipped for adoption of new technologies and change is very well visible.



## 10. Livelihood Opportunities through Innovation

(A)The MPUAT Scientists organized 9 (2-10 days) on and off campus vocational training courses on Furniture making from Lantana shrubs, Mushroom production, Organic farming, Backyard poultry, Nutrition, Value addition and Processing of fruits and vegetables benefitting 238 youth, farmers and farm women during the year 2018-2021. These trainings have motivated farmers and farm women to adopt these interventions & organic farming. It is observed that backyard poultry is gaining popularity.



## **(B) Custard Apple Processing**

The ICICI-RSETI with technical support from MPUAT developed value chain of custard apple processing. Training programme on custard apple fruit plucking and processing were organized including first for Master trainers (15) and then for tribal women (500). The trained women are now fetching higher prices for plucking right stage fruits and getting Rs. 15/kg which earlier was only Rs. 5-7 /kg fruit.



(C) MPUAT and ICICI-RSETI motivated and promoted youth to form **Joyko-Agro Foods Pvt. Company** with two centers at Nandeshma and Jaswantgarh. The company processed 75 tonnes of custard apple fruit and produced 19 tonnes pulp last year. It is sold locally as well as to famous Ice-cream companies Dinsha of Nagpur and Shruti of Surat @ Rs. 170-180/kg. The Company purchased ripened custard apple @ Rs. 15/kg and paid Rs. 11.25 lakh to farmers and farmwomen associated with this avenue.

(D) In the adopted villages 60 farm women were trained (15 days) on **Dairy and Vermicompost** by ICICI-RSETI. They have established

vermicompost units and are now following scientific clean milk production practices and getting more returns.

(E)The ICICI-RSETI in adopted villages also organized long duration (41 days) off farm trainings on **Raj Mistri (32), Two wheelers repair (03), Cell phone repair and Ladies tailor (06)**. Out of these trained people 18 candidates in Raj Mistri, 02 in Two Wheeler repair and 01 Lady Tailor are currently either running their enterprise or are employed and are earning Rs. 10-15 thousand per month.



## 11. Seed Replacement lead to Increased Production and Income

In the operational area, technology demonstrations for crop productivity enhancement were taken on different crops, which is as follows:

Crop	Varieties	No.of farmers	Area (ha)	Av.yield (q/ha)	Yield enhancement
Maize	DMH-117, PEHM-2, Sweet corn S-75 Bio-9544,Pratap Makka-5, CP-55 CP-333, KMH-3712	269	53.8	32.75	25%
Wheat	Raj 4079, HD 2932	170	34.0	42.57	22%
Mustard	DRMR-1J-31	72	14.4	12.0	20%
Methi	RMT-305	20	4.0	10.5	Introduction

Seed replacement has substantially improved the productivity as well as income of farmers.





## **12. Vegetable Cultivation for Higher Income and Social Transformation**

MPUAT, NGO-CMF, FES, Horticulture Department of State Government promoted vegetable based interventions in the adopted villages. It is the only intervention which has significantly enhanced the income of families in shortest period and brought social transformation. Demonstrations on Palak All Green & P. Bharti(14), Carrot P. Rudhira-(02), Coriander – Green leaf (26), Tomato Dev(14), Cabbage (15), Cauliflower(15), Broccoli (15) Chillies (15), Cucurbits, Loki, Karala and Turai on Trellies system ( 20) were taken in small area of 400 to 750 sq. meter round the year. Farmer earned Rs. 35-50 thousand per unit by selling vegetables @ 15-30 per kg. For the first time farmers cultivated Broccoli and earned good amount.

Even during COVID period CMF facilitated selling 133 metric tonnes of vegetables worth Rs. 23 lakh from the area. For improving the nutrition of families, seeds of loki, turai, semfali were provided to 100 families. Consumption of vegetables at home also improved the health of villagers.





### 13. Fruit & Forest Plants

In the adopted villages after horticulture related trainings, farmers were provided with 500 mango plants (65 families) of varieties Dasheri and Amrapali, 1375 guava (118 families) of Allahabad Safeda and Lalit varieties, 2159 Papaya (150 families) of Red lady 786, Thai Ber 225 plants, 55 lime and 50 jack fruit plant were given. Besides, 300 local ber plants were also budded with improved varieties Sab, Gola and Umran. People have started harvesting Papaya. Besides consuming at home they are also selling in the market at the rate of Rs. 10-15/kg.

On community pasture land and on farmers field besides soil conservation practices 2400 forest species plants were also planted.







#### 14. Backyard Poultry for Women Empowerment

This intervention of backyard poultry was very rapidly accepted by the tribal farmers. MPUAT developed Pratapdhan poultry for backyards was promoted. **One hundred fifty two units** (20 birds/unit) were established and families were provided with water and feeding trays. The CMF (NGO) has also joined hands with University in promoting backyard poultry in the area. They also made available 600 chicks to community @ 100% contribution. The CMF has facilitated in training for youth as entrepreneurs, and one of them has installed hatchery of raising 500 chicks. He has already sold 800 numbers 4- 6 week old chicks and 500 eggs of Kadaknath and Pratapdhan kept for hatching. Farmers are selling eggs at Rs. 20-25/egg and cocks - @ Rs. 600 to Rs. 1000 per bird and from each unit farmers are earning Rs. 10 to 12 thousand.





## 15. Organic Farming

In tribal area use of fertilizers and chemicals is very less and in fact their produce is almost organic by default. But efforts are being made for dissemination of scientific organic farming technologies and for that number of trainings programmes were organized at campus and in villages.

The Department of Agriculture, Government of Rajasthan adopted Hanyla village under Paramparagat Kheti programme and popularized organic farming by establishing Vermicompost units (30), Azolla units (10) and trained them in making locally bio-pesticides. Seventy Vermicompost units were also established in the adopted villages by ICICI-RSETI.

Efforts are being made for raising vegetables organically. For enhancing crop yields bio-fertilizers and bio-agents & pheromone traps and solar insect traps were promoted.

Since goats and backyard poultry is raised purely on locally available feed and fodder, efforts are being made for marketing Sirohi breed goat males, eggs and backyard poultry as purely organic. The NGO-CMF is making efforts in this regard through FPO formed in other cluster.





## 16. Breed Improvement in Goat

In the adopted villages, Sirohi breed goat which is a dual purpose breed and best adopted in the tribal area was promoted. Twenty two breeding bucks were provided and large number of progenies are available in the area. With improved breeding, feeding and management practices, significant gain in weight of bucks have been ensured. The CMF trained two Pashu Sakhi are working in the villages to ensure timely herbal treatment, vaccination and deworming of goats. It has resulted into decreased goat mortality and thereby better growth.



## 17. Mushroom Farming

For the first time University Scientists introduced Mushroom cultivation in the adopted villages. After training, 30 families were given 10 ready to grow fruit bags/family, pink and white oyster & milky mushroom. They could harvest 500 to 1000g/bag which was worth Rs. 150- 200/kg. The Home Scientist imparted training on nutrition aspects and various recipes prepared from Mushroom. Farm women appreciated the taste of mushroom and they consumed in houses only. Some ladies have come forward in adopting it as an enterprise.



## 18. Farm Mechanization

The farmers of the area were exposed to machineries like power tiller, mould board and chisel plough, tractor drawn post hole digger, solar operated whole plant maize dehusker cum sheller and battery operated Knapsack sprayer.

- Summer ploughing for conservation of rain water was demonstrated in 10 ha area using M. B. plough and Chisel plough. The MPUAT availed the opportunity of TAFE scheme of Fee Renting to Small and marginal farmers of farm operation in adopted villages. Thirty five families took advantage of scheme and summer ploughed of their 150 bighas of land free of cost.





- The MPUAT developed solar operated whole plant maize dehusker cum sheller and demonstrated at the village level and about 100 q maize was dehusked. This machine was very much appreciated and liked by farmers.



- In the adopted village, six solar insect trappers were given for reducing insect population. It was found very useful for fall army worm and other insects of kharif crops



- For promoting solar gadgets, 5 solar cooker, 5 solar house lights and 5 solar batteries were made available to needy tribal farmers where no electricity connection was available.



- After training, 14 biochar kilns and 14 briquetting machines were also made available to farmers. This technology is very useful in utilization of waste plant branches and efficient fuel for densifying & simultaneously cooking.



- For weeding operation, 10 hand wheel hoes were also made available and this implement has significantly reduced drudgery to farmers.



- For control of insect, pest, diseases and weeds, forty nine battery operated Knapsack sprayers were made available in villages. These spray machines have increased the efficiency of farmers by reducing drudgery.



- For safe storage of seed and grain, 35 (2 q capacity) steel bins were made available to beneficiaries.
- For clean milk production, 35 (10 litre capacity) milk cans were provided to women farmers having dairy animals.
- Ten improved bullock yoke were also given to tribal families.
- Under Horticulture scheme, the trained farmers and farm women were made available with 50 spade, 50 pick axe and 50 high density tagaris.

## 19. Water Management

- Two plastic line ponds (roof top water harvesting) of size 3m x3m x3m were developed in adopted villages.



- Three existing Nadis in the village were desilted during summer using MNREGA labour.
- The CMF established one 5 Hp solar water community pump. It is irrigating 4.5 acre of land and benefiting 8 farmers. They can now grow vegetables round the year. Farmers have been motivated for vegetable and papaya cultivation.
- CMF has promoted drip irrigation in vegetable crops and for that 100 litre plastic drums have been provided and kept at higher place for gravity flow of water through drip lines.



## 20. Camps & Celebration of Special Days

- For making the villagers aware about National programmes and schemes, the Directorate of Students Welfare through constituent colleges organized 08 National Service Scheme (NSS) camps in adopted villages with participation of 330 students. They made farmers aware about environment, health, hygiene, nutrition, cleanliness, water conservation, child and girls' education, election and COVID-19 protocol etc.



- In the adopted villages, University Scientists celebrated International Women day, Women in Agriculture day, World Food day and created awareness among villagers.
- Two medical and health camps were also organized in which 360 children, pregnant mothers and persons suffering from various ailments were treated.



- Four Animal treatment & vaccination camps were organized in which 1300 animals were treated and vaccinated for AT & FMD diseases.



## 21. CSR Fund Management

- The University mustered CSR fund of Rs. 8.83 lakh from Rajasthan State Mines and Minerals Ltd, Udaipur for providing furniture (500 stools, small tables for students, 13 tables and 23 chairs for teachers) to Sr. Secondary School, Vishma and Govt. Upper Middle School, Hanyla.



- With the support from India Infoline Foundation, Mumbai, 06 Oxygen concentrators costing Rs. 50,000 each and 05 covid-19 kits were made available for MPUAT hospital and villagers.



- For promoting digital learning in Schools of adopted villages the MPUAT arranged 60 (30+30) Android Tablets from India Infoline Foundation, Mumbai and were made available to Government Senior Secondary School, Madar and Government Upper Primary School, Hanyla.





- The MPUAT donated its serviceable furniture – 50 wooden tables and 50 iron chairs after repair and colour to Government Sr. Secondary School Chhali.



- The University Scientists donated one laptop, one desk computer, one photocopier cum scanner, two jajams, seven ceiling fans and 10 tree guards to schools of adopted villages.



- Alaknayan Sanstha donated 5 solar insect trappers to farmers of Hanyla village. They also organized one health camp in the adopted village.
- During COVID period, 20 liter sanitizer and 450 masks were made available to villagers.

## 22. Projects.

- MPUAT submitted two proposals worth Rs. 58.48 lakh to District Mineral Foundation Trust, Udaipur for repair and maintenance and construction of three new rooms in the Govt. Schools Vishma and Hanyla
- University submitted project proposal on ‘Construction of Sub-Surface Dyke on Baravali Nala in Hanyla village at the cost of Rs. 12.68 lakh to Zila Parishad, Udaipur and the same has been sanctioned.

## 23. Formation of SHG's

- In the adopted villages, CMF and RAJEEVIKA has made Self Help Groups of 250 members through Community Resource Person (CRP) deployment. Total 20 such Self Help Groups were formed in Hanyla and Vishma villages. All Self Help Groups were co-opted by RAJEEVIKA and two active Village Organizations (VO) formed. Village Organizations have collected Rs. 2.7 lakhs, Fourteen SHG's have been given Rs. 1.0 lakh/group for undertaking income generating activities.

## 24. Award

The College of Technology and Engineering, Maharana Pratap University of Agriculture and Technology, Udaipur received the AICTE – SAGY Initiative Award–2018 winner Institute. The CTAE participated in the AICTE-SAGY Initiative Awards – 2018 held on 21<sup>st</sup> January, 2019 at All India Council for Technical Education (AICTE), New Delhi. The project of the Institute titled



Development of Integrated Farming System has secured first position by presenting an innovative solution/prototype under the theme of “Developed Village - Developed Nation”. The award was for excellent work done in “Chhali Gram Panchayat” – MPUAT Smart Village for doubling the income of farmers. The AICTAE team visited Chhali Gram Panchayat on 9<sup>th</sup> January, 2019 and evaluated the work done especially on Livelihood and water harvesting. Hon’ble Vice-President of India provided the award to the College Dean Dr. Ajay Sharma & Scientist Er. Manjeet Singh.

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