

Agri Entrepreneur ENTERPRISE PROGRAM

CREATING AGRARIAN
PROSPERITY

Program Report

Syngenta Foundation India



Contents

- Executive Summary..... 2
- 1.0 Introduction 2
 - 1.1 Objective 2
 - 1.2 Maharashtra SRLM..... 3
 - 1.3 SFI AE Enterprise Program..... 4
- 2.0 Current Status..... 4
 - 2.1 AE Dashboard..... 4
 - 2.2. AE Service Portfolio 6
 - 2.3 AE Income..... 8
 - 2.3.1 AE Income Growth..... 8
 - 2.3.2 AE Income across Performance Groups10
- 3.0 Impact on Farmers.....12
- 4.0 Innovation and steps taken.....13
- 5.0 Case Study.....15

Executive Summary

1.0 Introduction

In a concerted effort to improve both; the economic conditions and quality of life for a marginalized farmer, Maharashtra State Rural Livelihood Mission and Syngenta Foundation India carried out their operations across Maharashtra State.

In October 2018, the two organisations collaborated to achieve their common goal of rural prosperity and agriculture development. *Krushisakhis* and *Pashu Sakhis*, who formed an integral part of the UMED cadre were provided a residential training to develop them as Agri-Entrepreneurs (AEs). The program has been executed across Yavatmal, Osmanabad, Wardha and Palgarh Districts.

Over 200 candidates were trained of which 170 are women entrepreneurs. With more than 60 Enterprises that have been set-up across the four districts in a month, we aim to increase farmer profitability and rural employment through this intervention.

Each AE will work as a service provider for 150 – 200 AEs, promoting new technology in both animal husbandry and farming. AE enterprises have been started across multiple service lines; dairy, poultry, processing units, collection centers for milk and agri- produce, horticulture nurseries, farm machinery rental services, veterinary services amongst others.

The report provided herein gives an overview of current status.

1.1 Objective

Small farmers in India are generally trapped in the vicious cycle of low productivity, high cost of credit and no market connectivity and as result, tend to be in subsistence farming mode. Standalone interventions in productivity enhancement or introducing high value crops without linking to markets is more detrimental as farmer would have incurred more on the cost of cultivation. Therefore, to increase the income of small farmers, integrated approach of increasing productivity, linking them to markets and also ensuring access to right inputs has to be adopted. Syngenta Foundation India has been following this approach since 2009 and has called it market-led-extension. Key to success of this initiative is developing and anchoring of local rural youth as agri-entrepreneurs, who provide all agriculture services to small farmers.

The main objective of this partnership is to increase the income of small farmers by introducing modern agriculture technologies and connecting farmers to markets.

Income of the small farmers can be increased by adopting combination of three possible approaches:- one to reduce the cost of cultivation; two, to connect farmers to markets and ensure higher price for their produces and three, to improve access to irrigation, thereby enabling farmers to take more than one crop in a year.

Aggregation of small farmers is the key to reducing the cost of inputs or to increase the bargaining power during the sale of agriculture produce. Use of information technologies will further boost the power of aggregation in taking swift and real time decisions. Therefore, this model will work on the two broad principles of aggregation of small farmers and use of ICTs to increase the income of small farmers.

To achieve the main objective of increasing small farmers' income by following various approaches based on broad principles of aggregation and ICT tools, a set of change agents has to ensure implementation of various activities. Change agents in this model are agriculture entrepreneurs (AEs) who provide all agriculture services to small and marginal farmers, thereby improving their productivity and connectivity to markets and ultimately fulfilling the objective of increasing farmers' income.

1.2 Maharashtra SRLM

The Swarnajayanti Gram Swarajgar Yojana, better known as the SGSY programme, was restructured into the National Rural Livelihoods Mission by the Government of India in 2010. This reconfiguration has been a result of recommendations from stakeholder consultations with state Governments, Community Based Organizations, Bankers and academicians among others. The programme also includes past experience and lessons from many livelihoods programmes that demonstrated the value in building self-managed institutions of the poor and their amalgamation for effective poverty reduction. Conceivably, the largest poverty reduction programme for women in the world, the National Rural Livelihoods Mission (NRLM) aims at reaching nearly 70 million rural households in 12 states of India that account for 85% of the rural poor households in the country.

The Maharashtra State Rural Livelihoods Mission (MSRLM) has been launched in Maharashtra in July 2011 as a registered organization under the aegis of the National Rural Livelihoods Mission (NRLM) – Aajeevika – endeavors to impact rural poverty through a range of comprehensive and strategic livelihoods interventions in a time bound manner. The Mission aims at eradication of rural poverty by building sustainable institutions of poor and ultimately leading them to sustainable livelihoods.

A dedicated and sensitive organisation which creates an empowering environment for poor and vulnerable households of rural Maharashtra through inclusive, democratic and self-managed

community institutions, access to entitlements and financial services and a portfolio of sustainable livelihoods, leading to a life of prosperity, dignity and security.

1.3 SFI AE Enterprise Program

With millions of small holder farmers, the biggest challenge is effective delivery of technologies and innovations. This is defined by many as ‘last mile delivery issue’ from the technology developers’ (companies) point of view or ‘first mile access’ from the technology adopters’ (farmers) point of view. Syngenta Foundation India has been working on an initiative called Agri-Entrepreneur (AE) Model since 2014 to solve this riddle of last mile delivery. Untapped potential of unemployed rural youth is put to use by identifying right youth, training and mentoring them for a period of two years. Agri-entrepreneurs engage 150-200 farmers in a cluster of 2-3 villages and act as a one-stop service provider for the agricultural needs of small and marginal farmers.

Over the last 5 years, Syngenta Foundation has developed entire an ecosystem around agri-entrepreneurship. It starts with selecting right rural youth, training them, mentoring them and helping them with access to credit, technologies and services for a two year period. Currently, there are 2058 AEs across 7 states and 5500 villages. By end of this financial year i.e. March 2020, this number is expected to touch 5000 AEs and impact at least 600,000 small farmers.

2.0 Current Status

2.1 AE Dashboard

As part of SFI’s AE program, rural youth is trained and mentors hand hold trained youth to start their enterprises. A total of 175 rural men and women were trained at a residential training conducted by SFI subject matter experts. Additionally, exposure visits and visits to KVKs were organized to better equip rural youth to start their enterprises. Yavatmal saw the highest numbers of AEs launching their enterprises. Total 10934 farmers were registered across all districts.

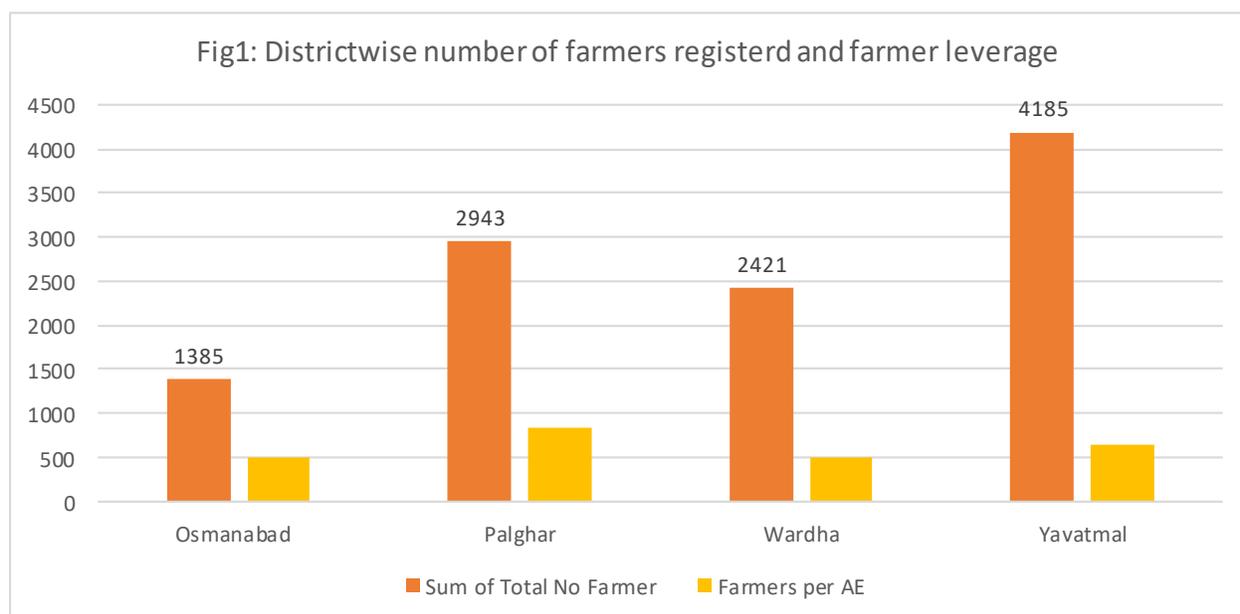
Districts	Number of AEs
Osmanabad	27
Palghar	35
Wardha	49
Yavatmal	64
Grand Total	175

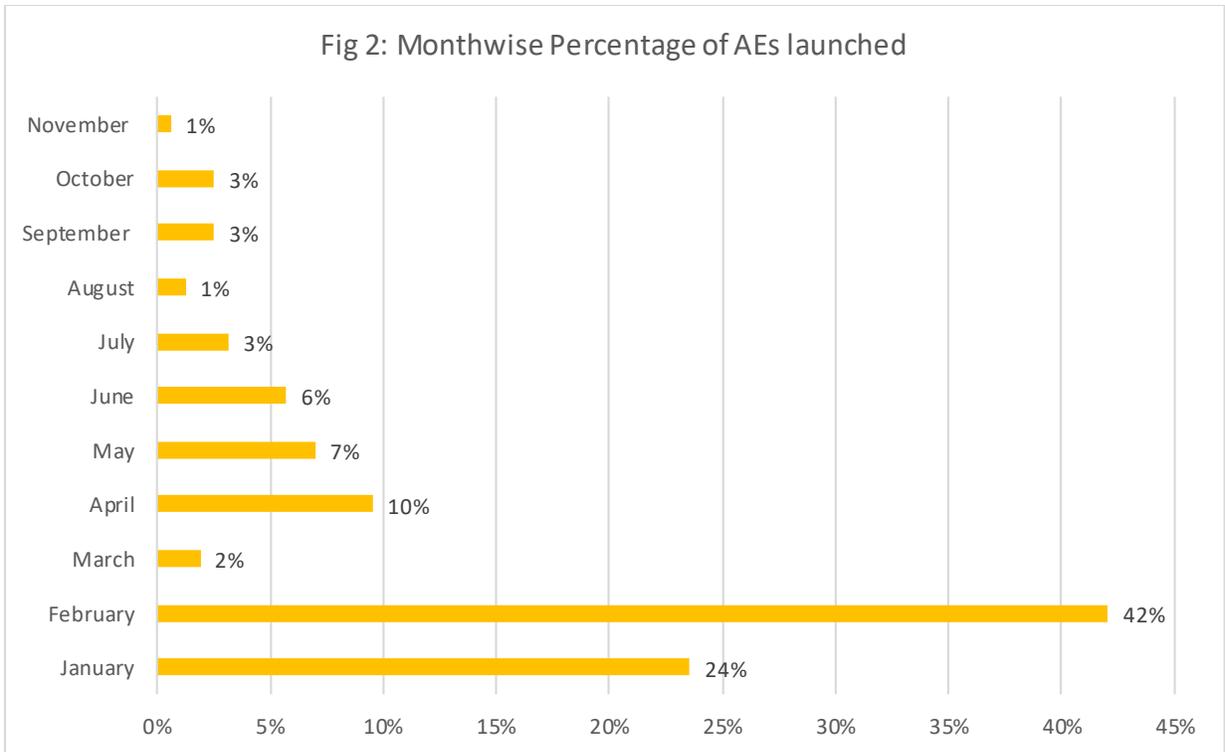
Table 1: Number of AEs across Districts

Districts	Sum of Total No Farmer	Number of AEs	Average Framers per AE	Total Acres	Acre per farmer
Osmanabad	1385	27	51	2941	2.12
Palghar	2943	35	84	1094	0.37
Wardha	2421	49	49	8095	3.34
Yavatmal	4185	64	65	9182	2.19

Table 2: Number of Farmers and Acreage covered across different districts

As per Fig 1, it can be seen that highest number of farmers per AE is seen in Palghar, however, it can also be seen that average landholding per farmer in Palghar is significantly lesser than other areas. Thus effectively, a larger number of farmers per AE will be required in Palghar to maintain a healthy business by AEs. Fig 2 gives a Performa of the launch of enterprises. While most enterprises were launched in February, the activities around launch have continued till even the slowest adopters were hand held for starting their enterprises.





2.2. AE Service Portfolio

AEs are required to provide services relevant to their local needs. Total 8 services are being provided in various combinations by AEs across districts.

With 95% of the AEs providing advisory services, a strong emphasis on technology transfer has been laid in the program. 80% of the AEs provide more than 2 revenue generating services.

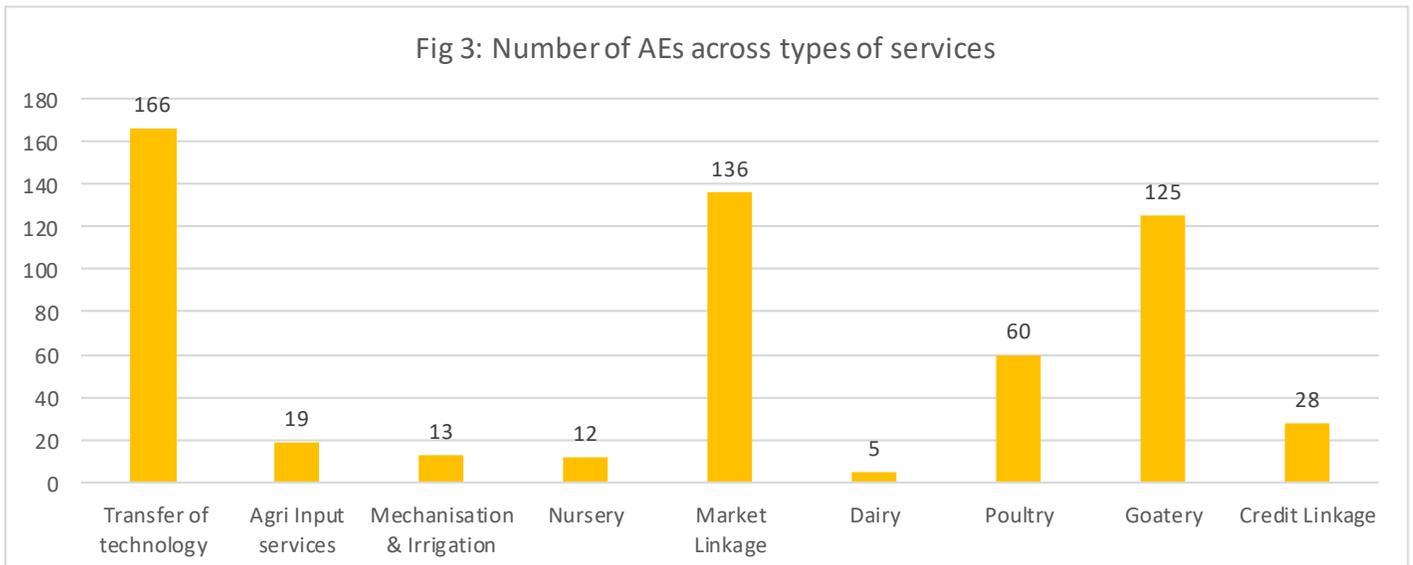
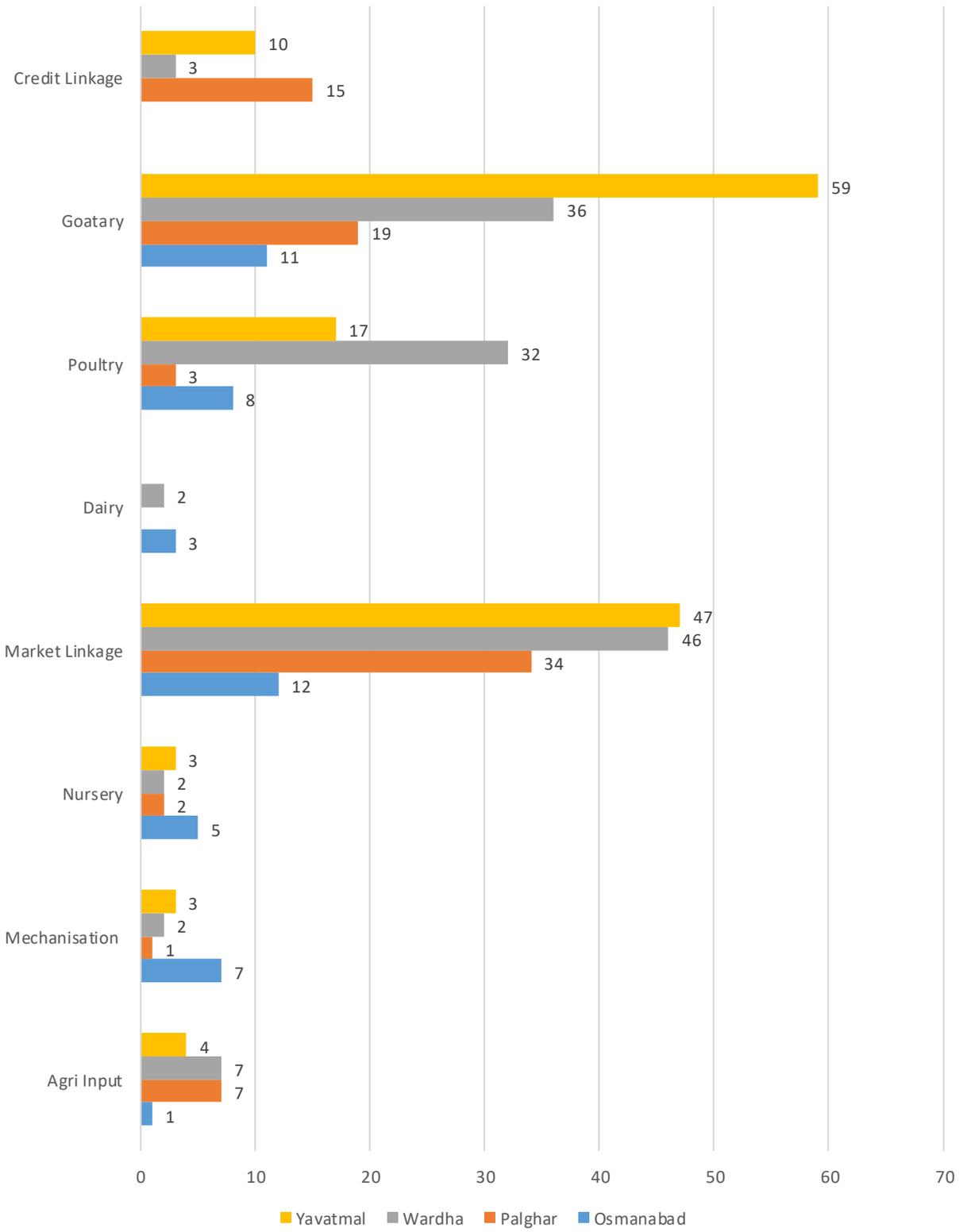


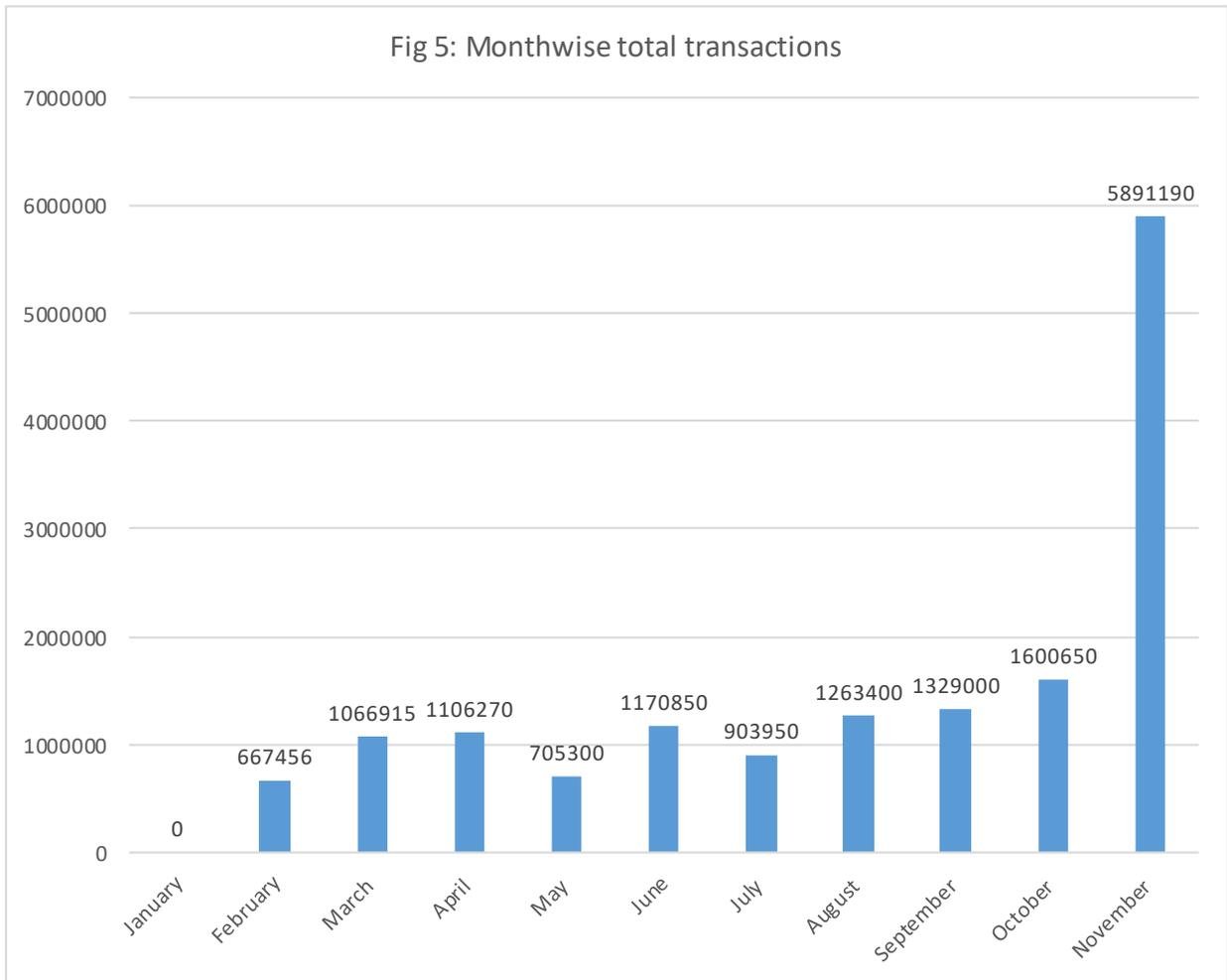
Fig 4: District Wise Services being provided by AEs



2.3 AE Income

2.3.1 AE Income Growth

Total transactions have steadily grown month over month. With new AEs getting added to the pool of AEs, some of these transactions do represent the additional enterprises, however a larger increase comes from the strengthening businesses of existing AEs.



Poultry, Marketing, Dairy, Goatary and Veterinary Services provide a consistent stream of income for all AEs across the year.

Month	Marketing	Dairy	Machinery	Fertilizers	Goatary	Nursery	Other	Pesticides	Poultry	Seeds
January	0	0	0	0	0	0	0	0	0	0
February	0	78855	0	0	0	4600	345901	6000	231000	1100
March	84170	140000	18300	0	86645	24600	387920	80980	233800	10500
April	227990	149900	64000	0	97250	3800	338770	15740	208820	0
May	378590	27000	35000	0	371600	0	239650	16000	210800	145780
June	57610	119800	18400	1800	197870	37500	254450	2000	222120	257000
July	77630	115070	14000	42000	173050	46500	353650	11700	54550	18500
August	104650	111800	27000	28000	207500	47800	609100	74500	54050	0
September	94000	114500	12000	11000	213000	48900	693100	50700	81300	10600
October	376750	109000	0	22000	266800	48500	678500	37400	83800	2000
November	4403400	134740	21000	15000	268550	100800	590900	48000	299400	25100
Grand Total	5804790	1100665	209700	119800	1882265	363000	4491941	343020	1679640	470580

Table 3: Month-wise revenue earned across different services by AEs

Services	Average income per AE	Median
Collective Marketing INR	42682.27	94000
Dairy	220133	114500
Farm Equipment	16130.38	18300
Fertilizers	6305.47	1800
Goatary	15058.4	197870
Nursery	30250	37500
Pesticides	18053.68	16000
Poultry	27994	208820
Seeds	24767.05	10500

Table 4: Service-wise average and median annual income earned per AE

2.3.2 AE Income across Performance Groups

Top Business Performers

Top AE business performance is being assessed based on total transactions, a further deep dive is then considered in the type of services, the combination of services that are provided along with the farmer registrations and the maturity of business of the entrepreneurs.

Total 22 AEs (12% of total AEs) are seen to have carried out a business of over 1, 00,000 across all districts.

Districts	Number of AEs	Total Farmer	Farmer to AE
Osmanabad	3	175	58
Palghar	6	870	145
Wardha	5	355	71
Yavatmal	8	611	76
Grand Total	22		

Table 5: District wise presence of top performers, farmer registration and farmers per AE

All AEs in this group of performers had launched their enterprises before April, 2019. Thus ascertaining some business growth over other AEs. 72% of AEs in this bracket provide more than 3 services and more than 2 revenue based services. The most remunerative service combination was seen to be: Input Linkage, Market Linkage and Machinery Services along with Regular Advisory forming a very critical element assisting in driving revenue for other services.

District	Agri Inputs	Machinery Services	Nursery	Market Linkage	Dairy	Poultry	Goatary	Credit Linkage
Osmanabad		1		2	1	2	1	
Palghar	3			6			2	2
Wardha	4	1	2	4				3
Yavatmal	3	2		7		1	5	3
Total	10	4	2	19	1	3	8	8

Table 6: District wise services selected by AEs

Slow Adopters

Slow adopters of AE businesses, have been termed on the basis of total transactions and longer time to market. For all slow adopters, transaction value has been less than 50,000. While most of their businesses were launched after April, it is important to note that the time to market for these AEs and missing critical periods of business launch have likely aided in business volumes being low. However, distinctly a different set of services is also being provided by the Slow adopters as compared with Top performers. Hence, it can be adjudged that the selected services are less remunerative as compared with the ones selected by top performers.

Districts	Number of AEs	Sum of Farmers	Farmer to AE
Osmanabad	17	839	49
Palghar	25	1438	58
Wardha	26	1181	45
Yavatmal	27	1614	60
Grand Total	95	5072	

Table 7: District wise presence of slow adopters, farmer registration and farmers per AE

Over 54% of the slow adopters started their business after March 2019, however, it is important to note that 35% started their business by February. Farmer to AE ratio remains significantly lesser than Top Performers. Close to 60% provided less than 2 revenue services. 44% of AEs providing two or more services provided Goatery along with Market Linkage with 30% of them also providing financial services

Types of Services	Number of AEs
Knowledge & Transfer of technology	89
Agri Input services	6
Mechanisation & Irrigation	6
Nursery	5
Market Linkage	65
Dairy	1
Poultry	36
Goatery	68
Credit Linkage	18

Table 8: Services provided by Slow Adopters

3.0 Impact on Farmers

It is not due to the lack of technologies or innovations that the agriculture sector has not progressed, the challenge lies in effective delivery of technology to the smallholders. This is defined by many as 'last mile delivery issue' from the technology developers' (companies) point of view or 'first mile access' from the technology adopters' (farmers) point of view.

Thus the aim of the AE initiative has been to improve agriculture development in rural areas, with improving farmer practices thus impacting their income.

A baseline of over 200 farmers was created across Palgarh, Wardha and Yavatmal in January. The aim was to understand the increase in farmer income over time with the maturity of the AE initiative.

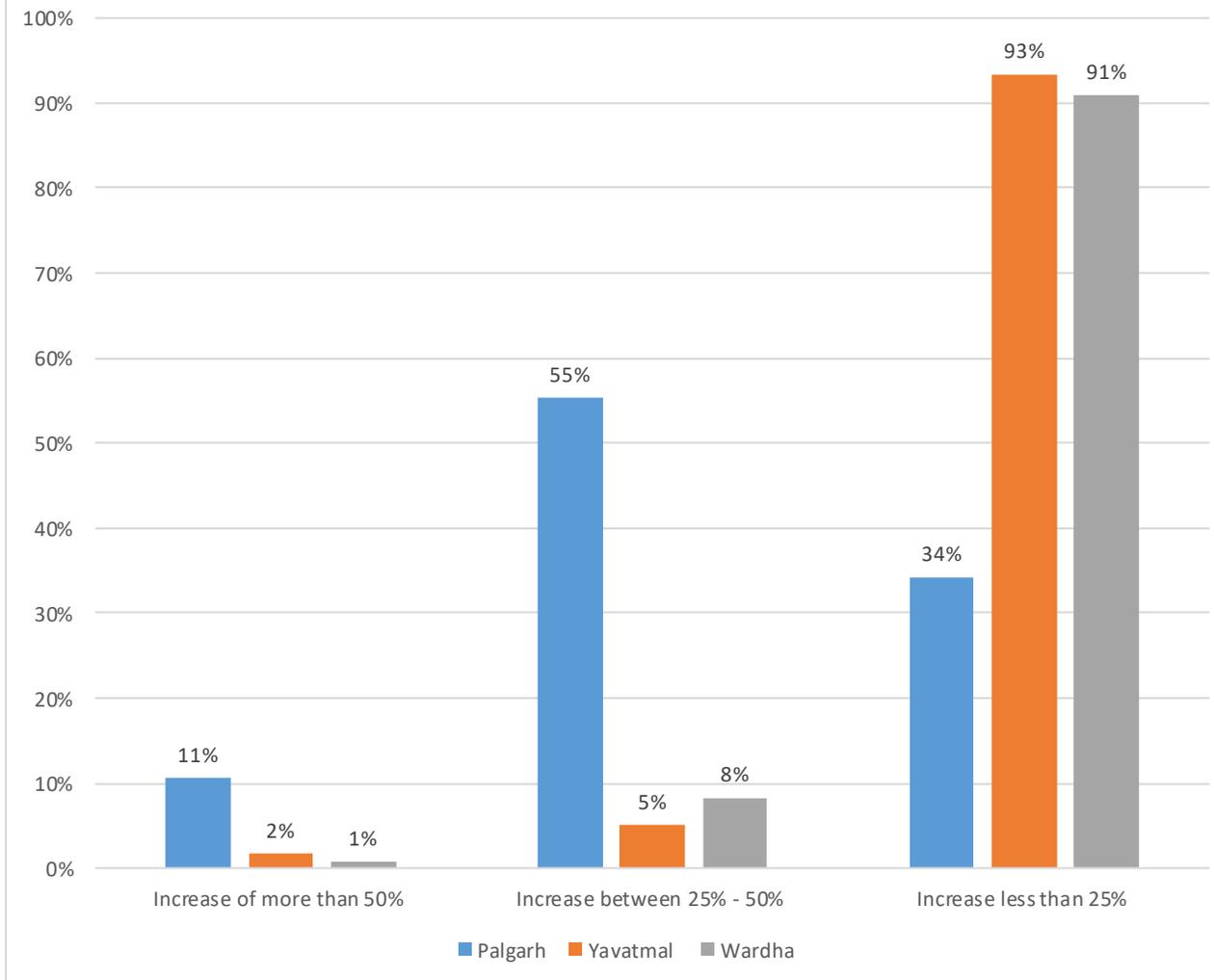
Districts	Average Farmer Income (After)	Average Farmer Income (Before)
Palgarh	32321.95	24609.75
Wardha	125479.67	98430.43
Yavatmal	136934.42	123688.52
Grand Total	111609.77	91582.949

Table 9: Average income of farmers before and after the AE program
(Registered Farmers of AEs with enterprises starting until February)

Palgarh saw the highest average income increase, with farmers earning 31% on an average more than they did before the AE intervention in their area. This is primarily due to better practices adopted in vegetable production and better price received from market linkage through AEs after product aggregation. Wardha farmers reported an average income increase of 27% while farmers from Yavatmal reported a modest average 11% increase in income.

In Yavatmal, 1 farmer reported a 10% drop in income, while 43% farmers reported a less than 10% income increase. 22% farmers from Wardha reported no change in income, 1 reported a 6% drop in income while 30% reported a less than 10% income increase. 55% of farmers in Palgarh reported a income increase in the range of 25% - 50% while more than 10% reported a more than 50% increase in income from Palgarh district.

Figure 6: Range of Farmer Income Increase across districts



4.0 Innovation and steps taken

Category	Activity	Palghar	Osmanabad	Yavatmal	Wardha	Total
Agri AE	Input shop inaguration	2	2	1	5	10
	License of Seed	1	0	1	7	9
	Polyhouse Seedling	180000	25000	165000	200000	570000
	Contract Farming (Farmer)	180	0	0	0	180
	Drip Irrigation Acre	12	0	0	0	12
	Arya Collateral (quintal)	0	0	1062	170	1232

Category	Activity	Palghar	Osmanabad	Yavatmal	Wardha	Total
	Demo Plot	11	6	10	6	33
	Mechanisation	1	5	2	2	10
	S-9 culture / Compost unit	0	2	0	0	2
	Processing Unit	2	2	0	0	4
	Onion Seed Production	0		0	0	0
	Company Linkages	9	2	4	10	25
Credit Linkages	Spice Money	0	2	10	5	17
	SHG Vivo Linkages	5	2	7	11	25
	Bankers meeting	26	12	15	41	94
	ESAF Linkages	0		1	1	2
	Bank proposal submission	13	2	2	14	31
Goat AE	Goat AE Inaguration	22	18	48	35	123
	Fodder nursery	6		9	4	19
	Azolla Unit	10	3	10	6	29
	Govt. Convergence	4	3	2	3	12
	Goat Nursery	8	3	2	7	20
	Milk Collection center	0	1	0	3	4
	Hydroponic Unit.	2	0	0	0	2
	Layer Farming	8	5	5	13	31
	Vaccination Camp	27	8	62	71	168
Input Linkages	Rakesh Pharma Linkage	20		2	28	50
	Animal food Linkages	10		0	1	11
	Indian Herbs	0		1	1	2
	Samrudh Unik	0		0	10	10
Market Linkages	Veg Linkages	3	2	0	2	7
	Vermicompost Linkages	9	3	8	4	24
	Goat Manures Linkages	14	2	0	13	29
	Papad Linkages	12		0		12

CHANGE IS HAPPENING AND MAHARASHTRA AEs ARE LEADING THE WAY



Change is Happening and Maharashtra AEs are Leading The Way

Now more than ever, the agri-entrepreneurs (AEs) in Maharashtra's Osmanabad, Yavatmal, Palgarh, and Wardha districts are demonstrating the power of UMED and SFI's participatory and collective action.

Rather than waiting for the system to change, the AEs are actively shaping the structures around them and empowering themselves. From quality seedlings being made available at doorsteps in Palgarh to several successful bank credit linkages in Yavatmal, the change is visible to the AEs and the farmers participating in the program.

Palgarh District:

Starting with Palgarh district on the west coast, the AEs boast of numerous success stories ranging from the aforementioned seedling availability to the installation of an efficacious hydroponic unit. Before the seedlings were readily accessible, farmers travelled close to 100 kilometers to cities like Nasik and Pune to purchase expensive seedlings. This grueling process often led to farmers buying seeds instead of seedlings. Seeing low yields and improper growth, the seeds proved to be an inefficient option.



However, with the development of a local nursery, low cost and high-quality seedlings were made available for delivery to the farmers, thereby making the process more accessible and affordable than before.

Almost 240 farmers benefitted from this initiative. With a simple investment of INR 60,000 (~842 USD), farmers in the Palgarh region now have increased revenues and low-cost alternatives to previously unviable and expensive methods. The development of these local nurseries helped build a self-sustained system of income generation.



In addition to bettering one aspect of the farmers' livelihoods, AEs soon found another reason to rejoice with the introduction of a hydroponic fodder unit in Palgarh. Hydroponics is an internationally popular way of growing plants without soil, but with a controlled environment for the roots. The technique dates back to the middle of the 18th century. This new installation helped provide fodder for goats even through the summer, which gave the farmers an additional source of income. Before the introduction of hydroponics in Palgarh, the situation was particularly dire: the long dry spells rendered the required green fodder unavailable, thus impacting the health of the livestock. . Now, fresh feed is available from March to September in a region where cattle traditionally only got dry rice fodder then. This has the potential to improve livestock health and weight considerably, and reduce the heavy cattle losses faced by many owners. The introduction of hydroponics has also improved other crops such as maize.



The innovative, low cost, structure suitable for the local needs has helped AEs receive some low hanging fruits and start their revenue generation with a small investment of INR 25,000 (360 USD). Sunita Doke who previously worked in a self-help group and supplied a village with agricultural and animal services. She produces an average of ten kilos of fodder from each tray every eight days. The price is a very reasonable five rupees per kilo, or about INR 15-20 daily per animal. This local fodder is considerably cheaper and more easily accessible than in urban markets.

- **Priti Mukane, Anita Jadhav, Asmita Khadam, and Mayuri Shelar**

Further merit was added to Palghar AE efforts with the establishing of a *vegetable collection center*.

AEs Priti Mukane, Anita Jadhav, Asmita Khadam, and Mayuri Shelar initiated contract farming

with their associated farmers and assured them high revenues for crop like okra and chili, for which they earned INR 21 (~0.29 USD) and INR 29 (~0.49 USD) per kilogram respectively. The women even provided free commodities such as seeds and pesticides to the farmers. Each of the AEs earned upwards of INR 100,000 (~1,403 USD) from this venture, with Priti Mukane alone earning as much as INR 500,000 (~7,019 USD).



Wardha District:

Similarly, moving east, positive changes made in the AE program helped the farmers and AEs of Wardha district experience new possibilities and opened the door to newer opportunities. With the opening of a *milk collection center* and the involvement of 200 farmers, AEs were able to provide supplementary services such as feed supply and herbal medicine supply in addition to milk collection. The center generated a monthly income of INR 1,80,000 (~2520 USD). To supplement the milk production and further increase revenue, a fodder nursery was installed, thus, access to fodder was made easier for farmers.



- **Yogita Madavi**

Layer farming was another successful venture carried out by AE Yogita Madavi in the Wardha district. Madavi explained and demonstrated the benefits of layer farming to her associated farmers, who invested time and effort in commercial egg production began generating higher revenues. This low cost model of polutry farming became quite popoular in Wardha because of its simple structure and easy setup method, and 10 other AEs followed suit shortly after.



Six agri-entrepreneurs connected with 500 farmers for input services and farmer demands were met efficiently. Furthermore, with the development of 4 polyhouses in the Wardha district, an analogous growth of vegetable seedlings was witnessed alongside piqued interests in vegetable cluster development as well.



Osmanabad District:

- **Pushpa Thorat and Bhagashri Mule**

Women AEs Pushpa Thorat and Bhagashri Mule led the way for crop protection by providing spraying services for over 160 associated farmers under a unique program called ISAFE which was launched jointly by Syngenta India Ltd and SFI. Their efforts reduced the amount invested in crop protection, while still providing successful pest removal from crops.



- **Puja Nikam**

Soybean harvesting, another initiative led by a woman AE Puja Nikam, saved farmers labor, time, and close to INR 3000 (~42 USD) per acre. Farmers who initially earned INR 4,500 (~63 USD) annually from soybean harvesting, with Nikam's efforts saw a 50% increase in their revenue, which increased to INR 6,800 (~95 USD) annually with the saving they were able to make with soybean harvesting.



- **Rani Somase**

Rani Somase added further merit to women AE's efforts by investing INR 5,000 (~70 USD) into setting up a processing unit for the production of chilly and turmeric powder. In addition to being a convenience for her associated farmers, who could buy spices used every day locally, Somase give further incentive to them by purchasing raw material for processing directly from the farmers. Farmers began to earn an additional revenue of INR 7250 (~101 USD) monthly by selling about 50 kilograms of turmeric and chilies back to Somase.



- **Sarika Patil**

Keeping with the entrepreneurial spirit, Sarika Patil began providing irrigation services to her farmer. 80 farmers gained access to drip irrigation and sprinkler maintenance services owing to Patil's efforts. Similar to Wardha, Birudev Kanade of Osmanabad invested in a *milk collection center* and feeding services which helped his farmers earn an additional INR 6000 (~84 USD) monthly.

- **Bhagashri Mule**

AE Bhagashri Mule, in addition to successfully providing pesticide spraying services to her farmers, also bettered their lives by explaining government convergence schemes to them. Through her efforts alone, 25 farmers applied for the Navinpurn scheme, 50 farmers applied for the Marathawada Package Yojana, and 27 filed for crop insurance.

Yavatmal District:

- **Komal Belkhede, Prabhakar Karmankar, and Badalsingh Rathod**

Last but not least, AEs at the Yavatmal district produced significant amounts of revenue from countless new ventures. Komal Belkhede, Prabhakar Karmankar, and Badalsingh Rathod invested in a seedling nursery and garnered a total revenue of INR 1,85,000 (~2588 USD) with the involvement of 100 farmers.



Several AEs helped facilitate loans for their farmers through ESAF Bank. By acting as last-mile agents, the AEs helped resolve a major problem area for farmers.



- **Badalsingh Rathod**

Badalsingh Rathod even set up a poultry farm with 1600 birds which helped him garner a revenue of INR 1,87,000 (~2616 USD) with every batch. From fodder nurseries and Soybean Linkages to demo plots and seedling nurseries, Yavatmal AEs put in their all and produced excellent results that improved the lives of the farmers and the AEs alike.



Change in the agriculture is here to stay and Maharashtra AEs are leading the way. These are just some stories of successful agri-entrepreneurs- a network of 243 working in harmony to address agricultural and local issues of Maharashtra's smallholders.