

“Evaluation of Agri Entrepreneurship Programme in Bihar”

Study Report



Centre for Agrarian Studies

NATIONAL INSTITUTE OF RURAL DEVELOPMENT AND PANCHAYATI RAJ

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Abbreviations

AE	Agri Entrepreneur
BRLPS	Bihar Rural Livelihoods Promotion Society locally known as JEEVIKA
VRP	village resource person
SEW	Skill Extension worker
SHG	Self Help group
AEM	Agri Entrepreneur Mentor
KVK	KrishiVignana Kendra
RARS	Regional Agriculture Research Station

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Authors

Executive Summary

The Study is taken up with an aim to assess the performance of AEs in the field and the extent to which the farmers are being benefitted through the services provided by AEs. The Agri-Entrepreneur assessment was done by a) an overall Review of all AEs present on ground b) Primary data collection and personal focused interviews with a sample set of AEs c) Sample of registered farmers and d) Case Studies and Focus Group Discussions. On the basis of sampling done with a matrix of 6 key variables and weightage given to each variable the sample AEs were categorised and selected as fast, medium and slow climbers to understand the differential impact of AE programme on these AEs.

More than 80 percent of the AEs trained were the Village Resource Persons (VRPs) and Special Extension Workers (SEWs) of JEEViKA . Since the VRPs are connected directly with SHGs, the AEs were seen easily accepted by the community and share a trusted relationship with the farmers. The main source of livelihood for the majority of the trained AEs (87%) was farming. This might be the reason for nearly 45% of the AEs seem to prefer opting for services such as Agri-Input and Nursery. Nearly 88 percent of them mentioned that they did not undergo any specialised training after the 45 days AE Induction Training. Those who have undergone specialised training were on maize marketing provided by Jeevika officials (24% out of 16 AEs) following by Banking services (19%). Spice money business was chosen by majority of AEs to kick start. Post AE training, the AEs are continuing their work as Jeevika VRPs and SEWs and 122 AEs mentioned that they continue to carry out responsibilities from Jeevika. Majority of the AEs (60%) have not received the seed money and this might be one of the constraints to AEs to start their business on time. Among the different enterprises, Agri Input is the most preferred business choice for AEs. In total 23 AEs opted agri input store alone as their primary business. Further, 84 AEs have opted for Agri-Input stores with a combination of Spice Money, Market Linkage and Nursery to maintain consistency in income through the year. Mentors are playing a critical role in suggesting the type of business. In total 106 AEs reported mentor involvement in enterprise decision making process. Majority of the AEs mentioned that they need to get on time seed money, to kick start their business. Around 57 percent of the AEs were not having access to the formal loans. Nearly 33% of the total AEs were not maintaining any books of records and 39% of AEs were maintaining one to two books. Major issue being faced by majority (43) of AEs was the need to get fertilizer and pesticide license.

The AEs who have been working as VRPs along with their own farming seem to have climbing the entrepreneurship ladder faster than others. Income from VRPs was the only

major source of income for slow climbers. Majority of slow climbers (42 percent) were engaged with only spice money business. Around 28 percent of the slow climbers have not decided regarding the enterprise they would be engaged in. Whereas, 60 percent of the fast climbers have diversified their activities with input business and spice money business. Some of the fast climbers have also initiated taking up the marketing and banking correspondence in addition to spice money business and Inputs business. One each among the selected AEs in fast and medium climber's category have started fertilisers shop. Surprisingly 71 percent of the slow climbers and none of the medium climbers did not incline to exit the AE programme. Whereas, 40 percent of AEs from fast climber category wanted to exit the programme given a chance. This has given a perspective that the fast climbers may be entrepreneurial but they may be looking for better opportunity and leave the programme, given a chance. Therefore, the mentors need to focus more on medium climbers followed by slow climbers by giving them the necessary support systems.

With very good no., of AEs positioned in the villages, there is very good scope for employing innovative service delivery architecture. . Group based Credit can be organized for farmers during the procurement of their agri produce. Special trainings on organic method of cultivation can be imparted which will be helpful for turning into organic production. An important contributing factor for the growth of the program could be to facilitate convergence with other local Line Departments that are working with the same objective. Road blocks in obtaining licenses and credit is seen to be a significant deterrent for AE's business operations. State Level support for facilitating quick turn around on credit and licenses is required. Seed money should be made as an upfront payment to help AEs launch their services quickly. While AV equipment is available, it is seen to be non-functional and suffers from technical snags, hence this rough edge needs to be smoothed. It is also important that a standard methodology should be in place to identify the non-performing AEs and phase them out, so that the resources deployed in monitoring them are saved.

The respective line departments of the state government, JEEViKA point person and AE's should work in close coordination for the success of this programme. The mentors should facilitate strong convergence of AE's with support structures like ATMA, RARS, KVK and Agricultural Universities. Further, the induction training program imparted to the AE's should be followed up by a regular refresher programs, updating the skills of AE's from time to time. The mentors and state coordinator should develop robust performance tracking mechanism to monitor the work of AEs. The study also made a critical recommendation, finding out the optimum scale at which AE model can be financially sustainable. As per the primary field data collection and secondary data assessment, it was seen that the model is by and large well within the reach of its objective and has scope for scaling up , provided , right type of

support systems are in place at every stage of AEs transformation till they reach the status of fast climbers.

In summary, success of AE programme lies in developing robust methodology for the selection of VRPs. Though Mentors are very much committed, they still they need to explore other options of services. In all the studied districts there are good no., of service providers like ATMA, RARS, KVK, Agriculture Line Departments and even corporate bodies, and it makes win-win proposition if these services are effectively leveraged.

Chapter I

Introduction

Agribusiness landscape in India is undergoing significant changes with changing consumer preferences and rising incomes, rearranging the household food basket. Organized retail market with 30 percent annual growth rate is doubling its share every three years. While Agriculture GDP is weighted in favour of high value produce (HVP), this segment with its nature of labour intensiveness, quick returns and higher involvement of women, is increasingly driven by small and marginal farmers. However, fragmented agriculture value chain, large number of intermediaries and post-harvest losses are some of the constraints in enhancing the income of the farmers. Moreover, these constraints are coupled with low literacy levels of the farmers and the limited reach of public extension system to only 5.7 percent of the farmers. Some out of the box approaches are needed as a win-win for the farmers and the rural unemployed youth who will be serving them.

There are several models attempted in the country to outreach the last mile agrarian community to address their bottom line problems like input supplies, extension services and market solutions. The two widely acclaimed such models are

- a. Collective centric approach
- b. Entrepreneur centric approach

The AE model is Entrepreneur Centric approach, expected to be a revenue model on paid services basis for the AE and should serve the twin objectives of providing effective services to the farmers and sustain the costs of the AE.

AE programme is a flagship initiative of SFI, in which a cadre of rural youth are developed as agri entrepreneurs who work with a minimum of 150-200 farmers in a cluster of 4- 5 villages and act as one stop resource support provider for the agriculture needs of small farmers. They bring together services such as credit and market linkage, access to high quality input and crop advisory for a group of farmers. An AE has to be mandatorily from one of those 4-5 villages in the cluster. AEs derive their revenue by providing the above services to farmers on paid service concept. To become an AE, candidates have to undergo a highly-selective process. The AE training programme is a fully residential programme spread across 45 days with a judicious mix of functional knowledge related to local crops, basic aspects of Agri business management and also on soft skills. During the training, the participants will be assessed through four midterm tests each carrying a weightage of 80 marks and 4 surprise tests each carrying a weightage of 20 marks. Another 20 marks were given for their attitude, field visits etc. Once the AEs are graduated and placed in their

respective fields they should collect the information of about 150 to 200 farmers in their area as per the formats given to them and will start providing services to these farmers.

After establishing good relationship with the farmers, the AEs are provided with a specialised kit consisting of 10 tablets, one wireless router plus and other accessories. This digital equipment is carried in a customized backpack designed for ease of mobility. The Digital Platform serves as a tool for providing personalized digital extension services to farmer. Based on principles of micro-learning, the content was created in-house by SFI and was validated by agriculture experts of NIRDPR. Currently, the content for advisory is available in 5 local languages. Pop-up quizzes at the end of each advisory video, help receive feedback from farmers and also work as a tool to assess their learning. Post training, constant feedback on performance and handholding of AEs for certain period of time, are also institutionalized in the field, with selected AE mentors.

Viewing the potential of AE program in reaching the small and marginal farmers across the country and keeping the larger objective of achieving development of agriculture and improvement of incomes of small and marginal farmers, National Institute of Rural Development and Panchayat Raj (NIRDPR) joined hands with SFI to strengthen the program with concurrent monitoring and evaluation and providing feed back to the funding agencies, as well.

Around 200 AEs were trained by SFI sponsored by both Jeevika and SFI @ 100 AEs each. Out of them the number of trainees passed out with certification were 165 and the number of AEs placed in the field were 157 and the number of farmers registered were 21,357 as on October 31st, 2018 (Jeevika .kuza.1 Dash Board). In addition to training, SFI is also providing mentoring and handholding support to AEs with a honorarium of Rs.4000/ per month for five months and seed money of Rs.30, 000/ to start their business. Some of the AEs have started doing business transactions with the farmers. It is therefore pertinent at this juncture, to understand the performance of AEs in the field, in order to translate the learnings back, for fine tuning the implementation of the program. The Study is taken up with an aim to assess the performance of AEs in the field and the extent to which the farmers are being benefitted through services provided by AEs.

Objectives,

The specific objectives of study are to

- Examine the process of AE incubation in the field
- Assess the implementation of AE initiative in creating additional value for farmers and
- Suggest appropriate measures and recommendations for scalability and replication of AE model

Chapter II

Methodology

This chapter elucidates the whole study process and design. The sub-chapters presented under the following headings i) Description of the study area, ii) Study approach (source and nature of data used) iii) Research design overview and data collection methods iv) method of analysis to realize the objectives of the study v) Limitations of the study.

2.1 Study Area:

Bihar state is situated in the eastern part of the country surrounded by Uttar Pradesh in the west, West Bengal to its east, Jharkhand to its south, and Nepal to its north. Its total geographical area is 9.4 million Ha and it is divided into three agro-climatic zones namely, northwest alluvial, northeast alluvial and south Bihar alluvial plains. The population of Bihar accounts at 115.2 million (2016), and is the third most populous state after UP and Maharashtra, accounting for about 8.8% of the India's population. Further, the state has a very high population density of 1,218 per sq km as compared to the national average of 396 per sq km, increasing the pressure on land and compounding the problem of rural poverty. Bihar is largely a rural economy, around 88.5 per cent of the population lives in rural areas as compared to the national average of 68.8 per cent. Further, around 74 per cent of the workforce is reliant on the agriculture sector for a livelihood. Around 72 per cent of the total agricultural workforce consists of agricultural labourers, while only 28 per cent are cultivators (Census 2011)¹ as compared to the national average of 55 per cent and 45 per cent respectively. The rural population in Bihar is not completely dependent on agriculture but earns a part of their income as wage labourers, migrant labourers and small entrepreneurs. The composition of agricultural income in the state is such that 48.2 per cent is contributed by cultivation, 37.2 per cent by wages, 7.8 per cent by farming of animals and 6.7 per cent by farm business (NSS 70th Round)².

The soil type in the northwest region is mainly loam and sandy loam; the northeast region has loam and clay loam and the south zone has sandy loam, loam, clay and clay loam (Department of Agriculture, Bihar)³. The state lies in the tropical and sub-tropical region and its average rainfall is around 1,028 mm during the monsoon season. Around 85 per cent of the total rainfall (normal 1,198 mm) in the state is received between June and September. However, there is wide variation in rainfall across agro-climatic zones. The topography of Bihar is described as fertile alluvial plain lying wholly in the Gangetic Valley. The state is

¹http://www.censusindia.gov.in/2011census/PCA/PCA_Highlights/pca_highlights_file/India/4Executive_Summary.pdf

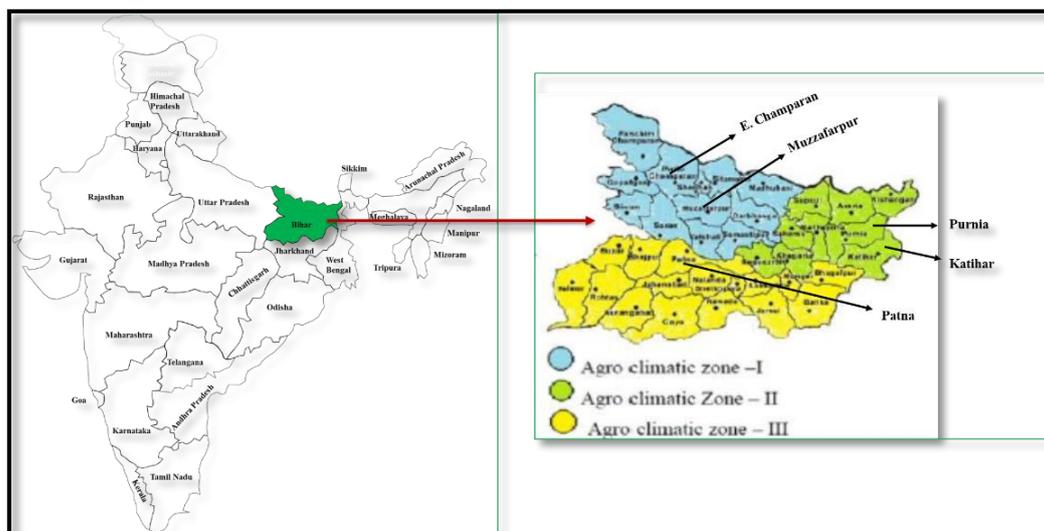
²http://mospi.nic.in/sites/default/files/national_data_bank/ndb-rpts-70.htm

³<http://krishi.bih.nic.in/introduction.htm>

richly endowed with water resources, both ground and surface water. Bihar predominantly cultivates cereals. It devotes around 79 per cent of its gross cropped area (TE 2014-15) for cereal production. In Bihar, rice and wheat dominate the agricultural sector, contributing around 70 per cent of GCA.

The following districts and villages were covered under the study, from which the AEs are trained

Figure 2.1: Location of the study area on the map of Bihar, India



Source: Wikilinks⁴

District	Blocks
Patna	Masaurhi and Phulwari
Muzaffarpur	Kurhani, Paroo, Saraiya
E Champaram	Areraj and Paharpur
Purnea	Banmankhi, Dhamdaha and Mohnia Chakra
Katihar	Korha, Manihari and Sameli

2.2 Study Approach:

The study was designed to understand the interaction of the following four stakeholders and the incumbent benefits arising thereafter:

1. **Agri-Entrepreneurs** :Detailed interviews of AEs have been taken to understand the problems

⁴<https://www.mapsofindia.com/maps/bihar/>

2. **Associated Farmers:** individual surveys and FGDs with farmers about how this program has impacted them direction-wise. Non-income parameters have been taken for consideration as this program is in infancy
3. **Jeevika Stakeholders:** personal interviews with officials to understand from their perspective and how this program has made extension services efficient.
4. **SFI Team Members:** personal interviews to understand from their perspective and how this program has made extension services efficient.

This enabled the development of a 360 degree perspective towards the program execution, benefits, strengths and challenges of the program.

The present study is based on the integration of quantitative and qualitative research methods. For quantitative data, prescribed structured questionnaires were designed and used for drawing profiles of clientele farmers and AEs. For qualitative data, focus group discussion (FGDs) with user groups was applied. Mixed method has become increasingly common in recent years. It conveys a sense of accuracy of the research and provides direction to others about what researchers expect to do or have done. To that extent, the analysis of mixed-methods research can be helpful to researchers in clarifying the nature of their intentions or of their achievements (Tashakkori & Teddlie, 2010). In the present research semi-structured interview was conducted to obtain both qualitative and quantitative data. We used the quantitative data to validate the qualitative data.

A Workshop was conducted in Bihar wherein all the 165 AEs who were trained so far were invited to get a first-hand information on the nature of work they were doing pre and post AE training, the quality of AE training and the support systems they were getting post AE training so that they could transform themselves from a VRP /SEW into an AE. A total of 131 AEs out of 165 have attended the workshop. A sample of 15 AEs was collected from 131 AEs based on purposive random sampling technique. The process of selection of sample AEs was given Table 1 and 2. Data was also collected from the farmers who were registered and being served by sample AEs. From each sample AE, 10 registered farmers were selected in random. With a representative sample of the AEs and associated farmers from the selected districts the study has attempted to satisfy the general criteria of objectivity, credibility, reliability, internal and external validity of the present study.

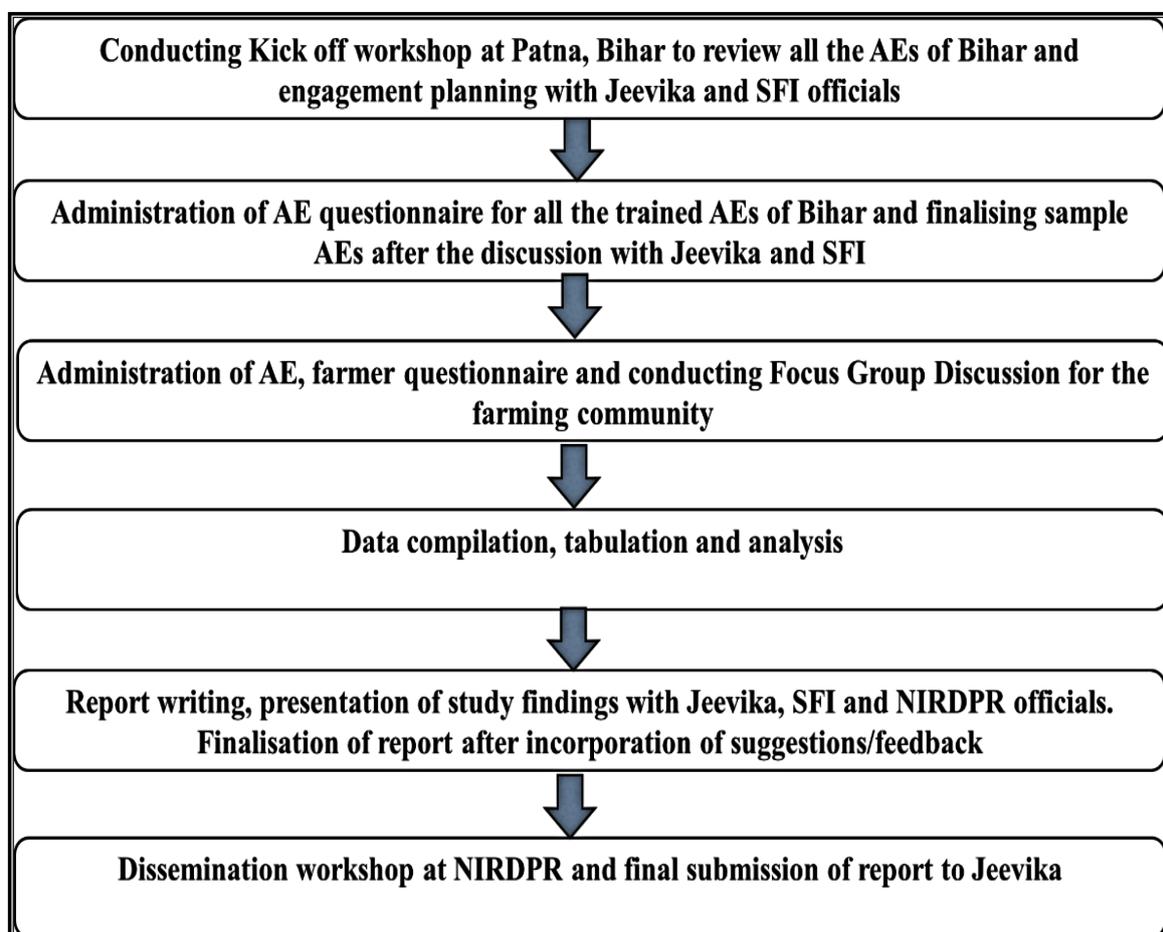
Focus group interviews becoming gradually more popular in exploring what individuals believe or feel and why they behave in the way they do. The main purpose is to understand, and explain, the meanings, beliefs and cultures that influence the feelings, attitudes and

behaviours of individuals (Rabiee, 2004). According to Lederman in (Thomas, MacMillan, McColl, Hale, & Bond, 1995, p. 208) “A focus group is a technique involving the use of in-depth group interviews in which participants are selected because they are a purposive although not necessarily representative sampling of a specific population, this group being focused on a given topic”. The uniqueness of a focus group is its capability to generate data based on the synergy of the group interaction (Green, Draper, & Dowler, 2003). As all the sample 15 AEs selected belong to 15 villages, FGDs were conducted in 15 villages. The purpose of conducting FGDs was to explore the level of participation of registered farmers in the meetings, the problems they have been experiencing and to what extent and how these challenges were being addressed by AEs. We have also discussed the level of cooperation between registered farmers and AEs, and asked them to evaluate the role of the AEs in their area.

2.3 Research Design Overview

This section gives an outline of the Study process. The Figure One illustrates the logical structure of the study process, which is discussed in the methodology section.

Figure 2.2: Process of the Study



2.4 AE assessment method, Sampling and method of analysis to achieve the objectives of the study

Agri-Entrepreneur Assessment

The Agri-Entrepreneur assessment was done by two methods;

1. Overall Review of all AEs present on ground
2. Primary Data collection and Personal Focused interviews with a sample set of AEs

Overall AE Review

The Overall Review was conducted through a one day long workshop that was carried out with active AEs, NIRDPR Officials, Jeevika Officials and SFI Team members. A common survey format was shared with the AEs to understand the following:

1. Demographic details of AE
2. Socio-Economic and Geographical Distribution
3. Nature of work prior to AE (as VRP/SEW) and continuation of the same thereafter
4. Cropping Patterns
5. Understanding of local agricultural challenges
6. Farmer Registrations and Regularity of Farmer Advisory
7. Income of the AE
8. Relevance of Training undergone
9. Status and Types of Enterprises
10. Performance of Business Operations
11. Usage Pattern of Digital Kits
12. Availability of Credit and Seed Money
13. Support Received from Mentors of the AE

A total of 131 AEs provided their responses to a pre designed survey schedule that was administered during the workshop. The findings are provided in the result section Part I. This assessment helped in developing an overall understanding of the program, the process of selection of AEs, the status of implementation of AE programme and the key variables that are to be explored further.

AE Performance Groups: Purposive Stratified Random Sampling

As part of the overall assessment it was seen that AEs performed differently given various factors. The project is in its nascent stage where AE operations on ground started only after June 2018. All the AEs are tested on the parameters of operations of the business. Basis of

Categorization (sampling) was done with a matrix of 6 key variables and a certain weightage have been given to each variable to further make an accurate assessment of the AEs performance.

The six variables identified at this stage of the program were:

1. Starting of an Enterprise
2. Conducting business transactions resulting in a turnover
3. Profitability of the Enterprise ; making a net profit
4. Providing Financial Services
5. Availing of Financial Assistance
6. Starting an Enterprise in a stipulated time period

Based on the importance of each parameter, weights were assigned and AE responses were thus scored on their performance of each parameter. The weights provided are detailed below:

Table 2.1: Selection of Variables and their Weights

Variable	Description	Importance	Weight
V ₁	Starting an Enterprise	Everyone who has been trained have been expected to start their business. Each AE is mandated to provide services to a group of 200 farmers. Selecting and Operationalising the enterprise is seen as a primary requirement for an AE. However, as the project is in its nascent stage, lowest weightage is given to this parameter. V ₁ thus becomes the foundational and basic element for further assessment.	5
V ₂	Availing Financial Assistance	For starting out operations, AEs avail financial assistance for their working capital needs. This can be in the form of seed money or any other institutional loan. Availing such a service reflects the fact that an AE is serving a considerable group of farmers which is the very first stage of starting operations.	10
V ₃	Providing Additional Financial Services	Digital inclusion and bringing farmers under formal financial transactions is also considered under this as it is in line with government's impetus on digital transactions. Hence, spice money initiative linkage by AE is considered as one parameter to facilitate financial inclusion and also for diversification of their own businesses. In Bihar AEs are working as agents providing Aadhar Enabled Transaction facilities	15

		along with other banking assistance. Financial Services are seen to be an additional service along with a primary business, hence it is also representative of diversification of business services. This spice money is one though directly not impacting the farmer directly but brings a positive change for the entire ecosystem in long run.	
V ₄	Business Profitability	AE sustaining himself under this project is very essential as his sustenance will give an idea of overall sustenance of program. At this stage of business, it is critical to see if there is a net profit that has been achieved. A net profit at this stage provides additional understanding of future business sustainability. However, given that most AEs are first time entrepreneurs, it is possible that time taken for earning a net profit is longer.	20
V ₅	Conducting Business Transaction Resulting in a Turnover	For an AE to be providing regular services to the farmers and continue to expand his/her business portfolio, it is critical that at this stage they receive a business turnover. This is a critical factor in assessing the go-getter attitude and entrepreneurship drive in the AE.	25
V ₆	Starting an Enterprise in a stipulated time period	It is important that a better performer also gets faster results. Generating certain turnover within three months is essential as that means farmers are trusting him fast and this model is creating enough traction in the villages and overall able to reach critical man and the model is along with particular AEs are ready for scale up. Further, starting an Enterprise is a factor is driven by AEM and Jeevika Official support, starting it well in time is dependent on an AE's drive to push the envelope. Given that most AEs were VRPs, a trusted relationship with the farmers existed on ground. The AEs who were able to galvanize this connect in a stipulated time period can be seen as kick-starters, hence, highest weightage has been provided to this variable.	30

Based on the response of each AE on the parameters given up, under further by adding in the provided weights; total scores were given to each AE.

$$5(v_1) + 10(v_2) + 15(v_3) + 20(v_4) + 25(v_5) + 30(v_6) = \text{Total Score}$$

Based on the total score, AEs were distributed across three distinct groups. These are:

1. Slow Climbers
2. Solid Climbers
3. Fast Climbers

Table 2.2: Process of Selection of Sample AEs

AE Category	Score Range	Description
Slow Climber	0 - 55	A slow climber AE is seen to be one who has either started a business or is in the process of starting out an enterprise. An AE who has started out a business, achieved a turnover and also a net profit can be slow climber if he or she was unable to do so in the stipulated time period. A slow climber will not have a diversified business portfolios and not be providing financial service as yet.
Solid Climber	55 - 70	A medium climber is an AE who is not providing financial services, however has taken up financial assistance to grow their businesses. Business transactions while carried out, for a solid climber may not have necessarily resulted in a net profit. These AEs exhibit potential to grow with handholding and mentoring. However, these AEs exhibit entrepreneurial spirit.
Fast Climber	70 - 105	An AE with a score greater than 70 is classified as a Fast Climber. A fast climber would have started a business in the stipulated time period by leveraging existing trusted network of farmers and assistance offered by Jeevika and SFI team members. This AE will be providing good services to farmers and also exhibit business acumen.

2.5 Limitations

The study at this stage assumes that AEs generally achieve one step after another step as listed in the parameters but may not be practically the case with all the AEs. But it has to be seen in the perspective that, this is just a categorization to further study of those AEs who have been put under various interval classes. Also as the program is in its initial stages, and entrepreneurship takes considerable time to show impact, this has to be taken as the best possible method for classification. Based on the purposive sampling derived slow, medium,

fast climbers; have been mapped under 5 districts where AE program has been launched. In total, around 43, 26 and 62 AEs were screened as fast, medium and slow climbers among a population of 131 AEs.

To further ensure the representation from each district, based on purposive sampling, one AE under each category for each district has been decided to select to do a further 360° study. i.e. 5 AEs from each stratum were decided to select the sample set of AEs. However, in order to represent the population of 43, 26 and 62 AEs from the fast, medium and slow climber categories, we have selected sample AEs with 5 as fast climbers, 3 as medium climbers and 7 as slow climbers from the five districts. Details are presented in Annexure 1.

Farmer Assessment

A group of farmers associated with each AE were invited for a Focus Group Discussion. For primary data collection, each farmer also filled out a pre-defined survey. FGDs were carried out across all districts.

Jeevika Officials and SFI Session

A group discussion was taken up with Jeevika officials. The group comprised of Mission Managers from the Block and Districts along with the State Lead of the program. SFI Team Members also participated in the discussion.

Feedback was taken on implementation and challenges faced on-ground. The interaction was with the aim of understanding the nuances of program design around seed money, honorarium, selection process, use of digital kits and process for licensing.

Chapter III

Results and Discussion

Quantitative and Qualitative information was collected from the following four different sources. That is,

- a) From the total population of AEs trained
- b) From the selected sample AEs
- c) From the registered farmers and
- d) Case studies and
- e) Focus Group Discussions. (Annexure I)

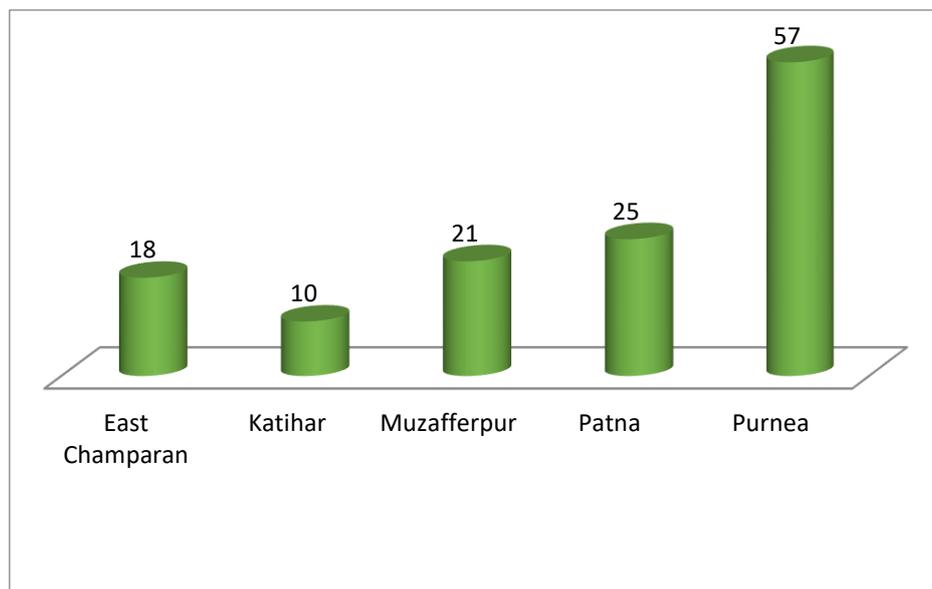
Accordingly, findings were presented under four parts in this chapter.

Part I: Overall Analysis of all Agri Entrepreneurs from Five Districts of Bihar

The study began with a kick-off workshop held at Patna. In total 131 AEs participated in the workshop. A pre-designed questionnaire was administered to a group of 131 AEs. This section presents the key findings of administered AE questionnaires of the study. Here we tried to understand the a) General process of selection of AEs by Jeevika, b) Educational qualification and work experiences of SEW/VRP's to select as AE, c) Major livelihoods being opted by AEs d) Support systems from Jeevika and also by mentors to AEs and finally to discuss future plans of AEs.

The Figure 3.1 presents a district-wise break-up of the AEs present at the workshop. The AEs were well represented from five districts. However, majority were from Purnea and Patna district.

Figure 0.1: District Wise Break-up of AEs total sample



Education is playing an important role in the adoption of new technologies by reducing learning cost (Holloway, Shankar, & Rahmanb, 2002).The education level among the sampled AEs is presented in Table 3.1. Majority of the AEs have completed intermediate, where as some AEs are graduates and some of them are also only matriculates. Very negligible number of AEs were illiterate and having only primary education. However, training to those AEs can motivate to adopt new technologies. Training is very important in the Indian context and in developing countries, in general, as less educated or even illiterate cannot make use of most information material without the support of educated persons.

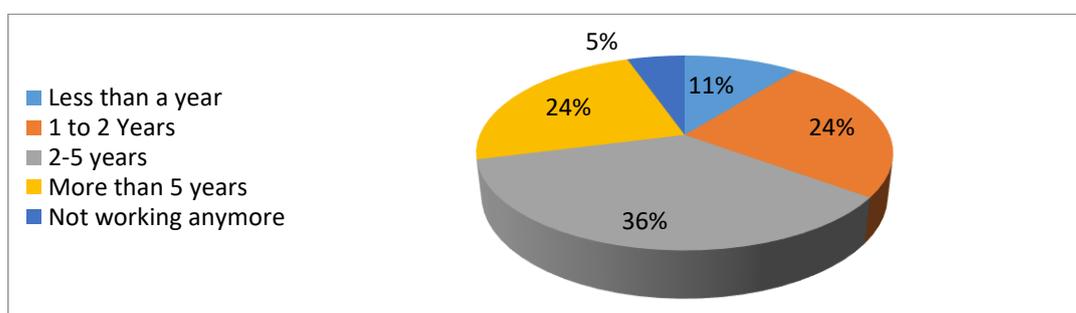
Out of 131 AEs, 95 were working as Village Resource Person (VRPs) under Jeevika. Since VRPs are connected directly with the Self Help Groups (SHGs)⁵, this association helps in creating affinity with the AEs. Further, it is seen that AEs are easily accepted at the community level and also share a trusted relationship with the farmers.

Table 0.1: Educational Qualifications of AEs

Education	East champaran	Katihar	Muzaffarpur	Patna	Purnea	Total
Primary	-	-	-	-	1	1
Matric	5	3	4	6	17	35
Intermediate	8	3	8	11	21	51
Graduation	4	4	6	7	15	36
Post-Graduation	1	-	3	1	2	7
Illiterate	-	-	-	-	1	1
Grand Total	18	10	21	25	57	131

More than 60% of the AEs have been associated with Jeevika for more than two years. Around 25% and 11% of AEs associated with Jeevika 1-2 years and less than a year respectively. Only negligible number of AEs around 5% were no more associated with jeevika (Figure 3.2).

Figure 0.2 : Working Experience with Jeevika



⁵<http://brlp.in/documents/11369/1099894/12.VRP+and+SEW+Policy+Paper+Dated+14+11+2013.pdf/0de5f870-879e-4fba-b0e0-572650041464>

It is observed from Table 3.2 that the nature of work conducted as a VRP has been beneficial in developing a relationship with the farmers. Mainly the nature of work was focused on conducting farmer meetings and helping them with farming followed by sale of inputs. Majority of the AEs i.e, 87 out of 131 AEs observed that they have been helping the farmers with farming. Bihar is one of the strongest agricultural states in India. Nearly 80% of the population are employed in agricultural in Bihar, which is much higher than the national average⁶.

Table 0.2: Understanding the nature of work with Jeevika as VRP/SEW

	E. Champaran	Katihar	Muzaffarpur	Patna	Purnea	Total
Blanks (No Answer)	1	1	-	1	-	4
Meeting with Farmers	4	-	1	6	7	18
Meeting with Farmers and Helping Farmers with Farming	5	7	10	8	28	58
Meeting with Farmers, Helping Farmers with Farming and Sale of Inputs	4	5	4	6	10	29
Meeting Farmers and Input Sale	-	-	-	1	1	2
Helping Farmers in Farming	-	-	-	3	6	9
Helping Farmers in Farming and Input Sale	-	-	1	-	1	2
Input Sale	2	-	-	-	1	3
Others	2	-	2	1	3	8
Grand Total	18	13	18	26	57	131

It is the fourth largest producer of vegetables and the eighth largest producer of fruits in India. Furthermore, food processing, sugar, dairy, and other manufacturing industries are some of the fast growing industries in the state. Moreover the dominant source of livelihood in all studied locations is farm based livelihood, however, the small and scattered landholdings puts stress on the profitability. While across the state 91%⁷ of the farmers are marginal farmers, the farmers being served under the AE program are all marginal farmers whose income is dependent on agricultural activities.

⁶ <https://www.ibef.org/states/Bihar.aspx>

⁷ <http://niti.gov.in/writereaddata/files/Bihar.pdf>

Table 0.3: Reason for joining AE programme

Service of Interest	Number of AEs
Agriculture Input	29
Agriculture Input, Spice Money, Nursery, Market Linkage	29
Agriculture Input and Spice Money	16
Agriculture Input, Spice Money, Nursery	12
Agriculture Input, Spice Money, Market Linkage	10
Agriculture Input and Nursery	11
Agriculture Input and Market Linkage	12
Spice Money	3
Spice Money, Nursery	1
Spice Money, Nursery, Market Linkage	1
Nursery	3
Market Linkage	2
Others	2

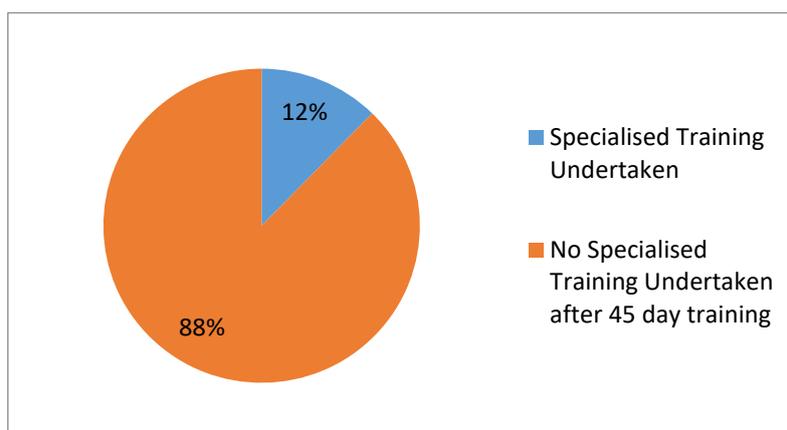
The rural economy in the study area is based primarily on Agriculture. Moreover for the majority of the trained AEs (87%) the source of livelihood is based on farming (Table 3.4).

Table 0.4: Main Livelihood Sources

Type of Livelihood	E. Champaran	Katihar	Muzaffarpur	Patna	Purnea	Total
Blank	1		3	1		4
Farm Based Livelihoods	17	5	15	21	53	112 (87%)
Farm and Non-Farm Based Livelihoods			1		1	2
Farm and Labour Based Livelihoods		5	1		2	8 (6%)
Non Farm Based Livelihoods				2		2
Service Based Livelihoods				1		1
Others			1		1	2
Grand Total	18	10	21	25	57	131

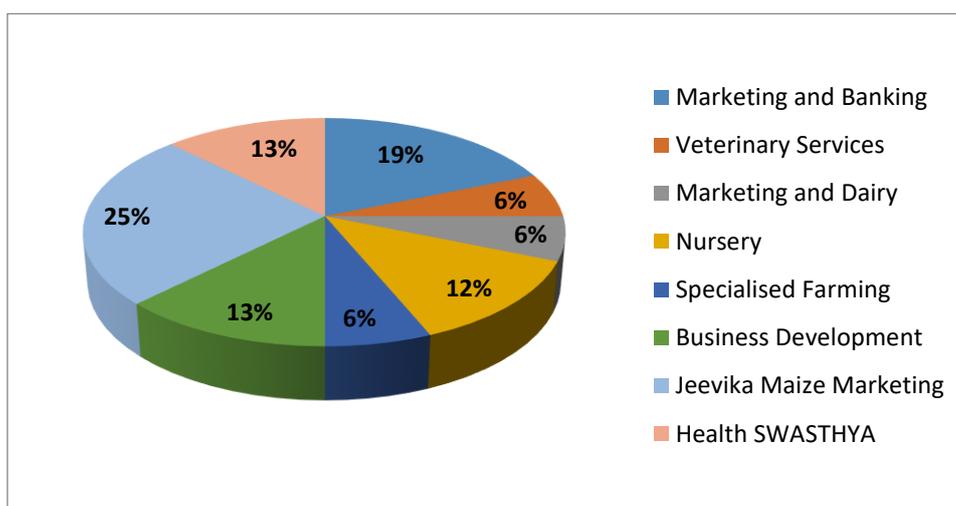
This might be the reason for nearly 45% of the AEs (58 AEs) seem to prefer opting for services such as Agri-Input, Spice Money and Nursery (Table 3.3). Setting up of an agri-input store was seen as the strongest appeal for AEs to choose the program. Providing market linkages to the farmers was also most important for some AEs for joining AE programme. Majority of the AEs, nearly 88%, mentioned that they did not undergo any specialised training after 45 days AE Induction Training (Figure 3.3).

Figure 0.3 : Specialised Training



The one who have undergone specialised trainings was mainly related to maize marketing provided by Jeevika officials (24% out of 16 AEs) and Banking (19%) followed by maize marketing, nursery, business development, specialised farming, dairy, Veterinary Services, etc (Figure 3.4). Majority of the AEs were joined in order to provide input services and nursery services to the farmers.

Figure 0.4 : Type of Specialised Training Undertaken



Wheat, maize, paddy, pulses, foxnut, fruits and vegetables are the major crops grown in the districts of Bihar under the present study (Table 3.5)

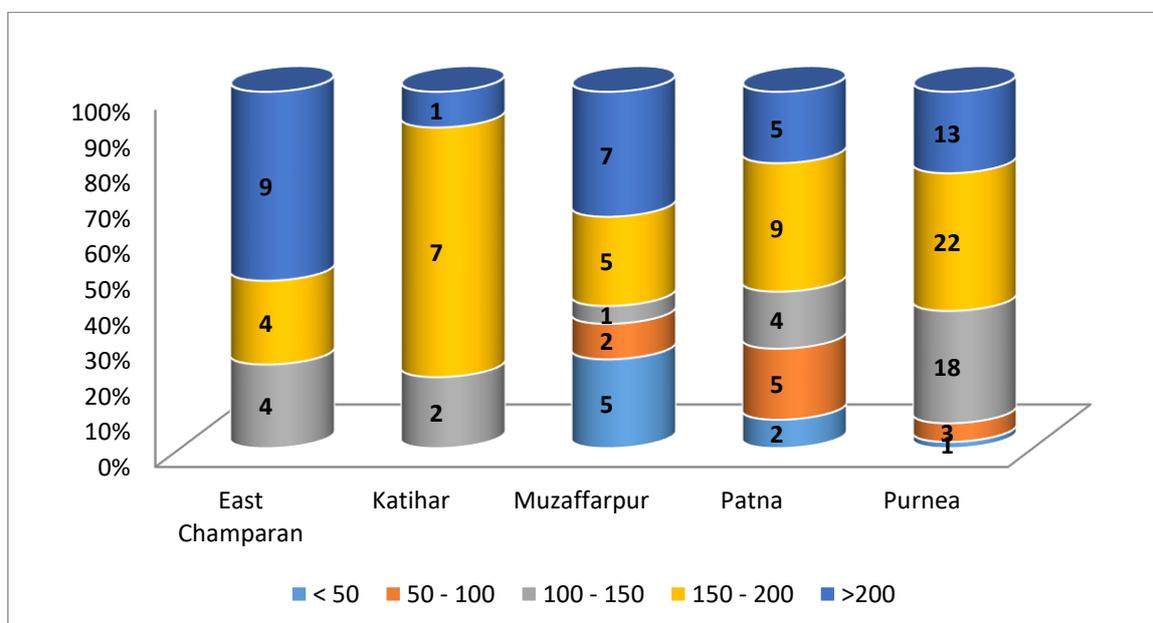
Table 0.5: Major crops of the selected districts of Bihar state

East Champaran	Wheat	Maize	Paddy	Potatoes					
Kaithar	Wheat	Maize	Paddy	Potatoes	Banana	Jute			
Muzaffarpur	Wheat	Maize	Paddy						
Patna	Wheat	Maize	Paddy				Pulses		
Purnea	Wheat	Maize	Paddy					Vegetables	Fox Nut

The recent study from the ICRIER calculated the composition of the agriculture sector in Bihar, i.e the share of the value of output from different segments as a percentage of the total value of output from agriculture and allied activities (GVOA) (at current prices), the results indicated that in the TE 2013-14 cereals accounted 24%, F&V 19.8%, livestock 31%, pulses 2%, fishery 5.2% and others 13.5% etc. From our observation in Bihar AEs are trained only on crops, therefore there is a lot of scope/potential for the AEs to be train in allied sectors like livestock, fishery etc thereby they can serve to farming community. Therefore SFI can take the lead to expand the subjects of training to allied agri activities.

More than 20,000 farmers are registered with all the AEs across the Jeevika project. As per the project guideline, each AE has to work with 150 – 200 farmers from their locality. The number of farmers registered under AEs is presented in Figure 3.5. Around 37% of the total AEs have registered farmers in the range of 150 to 200 farmers and around 27 percent of AEs have registered more than 200 farmers respectively. In total 64% of the AEs followed the guidelines i.e registered farmers under each AEs were more than 150 farmers. The remaining 36% of the AEs (46 AEs) are in the process of the farmer registration to reach their target. Among the study districts in Patna and Purnea the registered farmers are more under each AE.

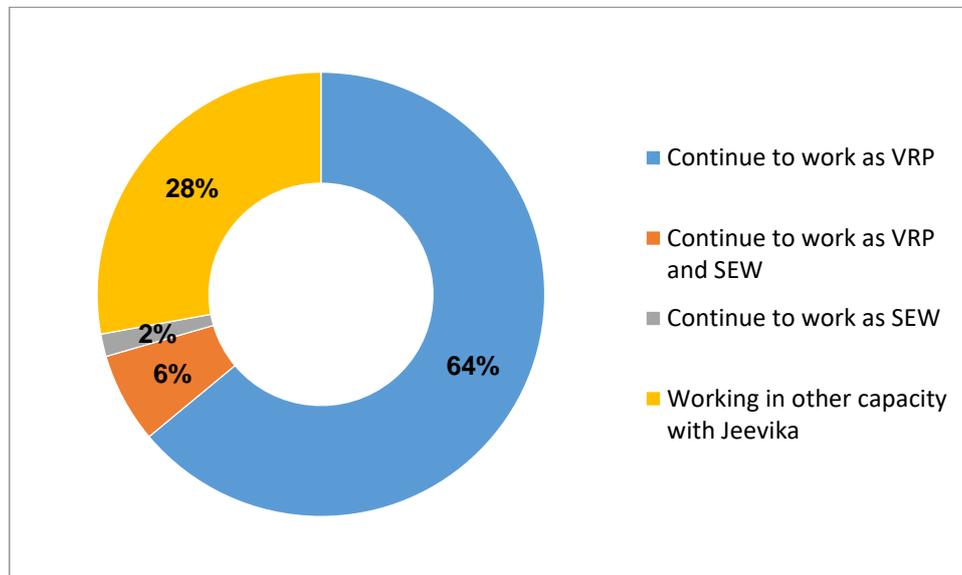
Figure 0.5 : Number of farmers registered



It is important to note that post AE training, the AEs are continuing their work as Jeevika VRPs and SEWs. 122 AEs mentioned that they continue to carry out responsibilities from

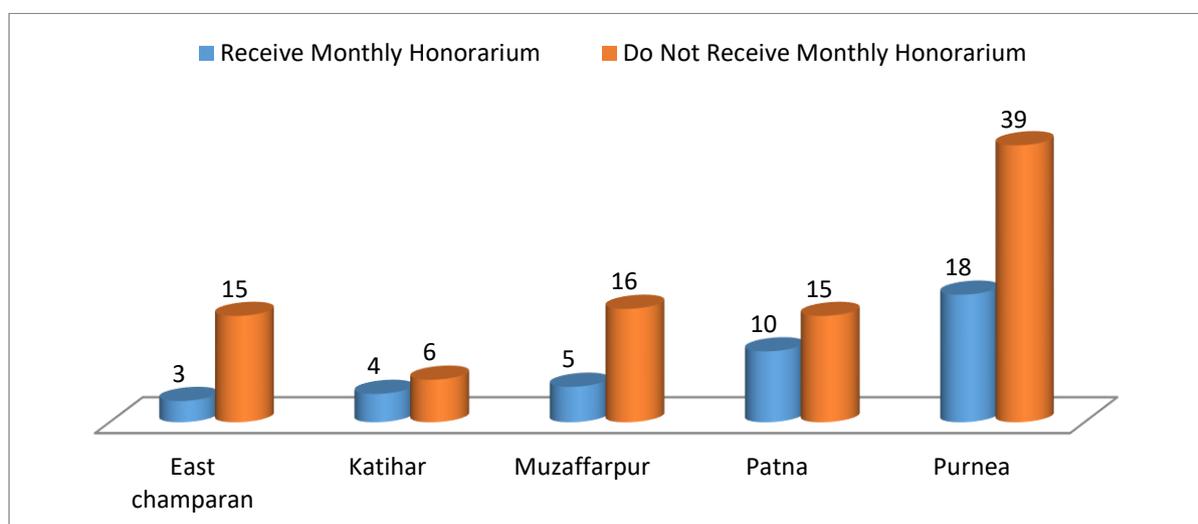
Jeevika. It can be seen from the figure 3.6 that a majority of AEs (60%) are working closely with Jeevika as VRPs. This helps the AEs to develop a strong connect with the farmers and also provides them with a strong social position. Further, 26% of AEs working in other capacity with Jeevika in one or the other way.

Figure 0.6 : Attachment with Jeevika post AE training



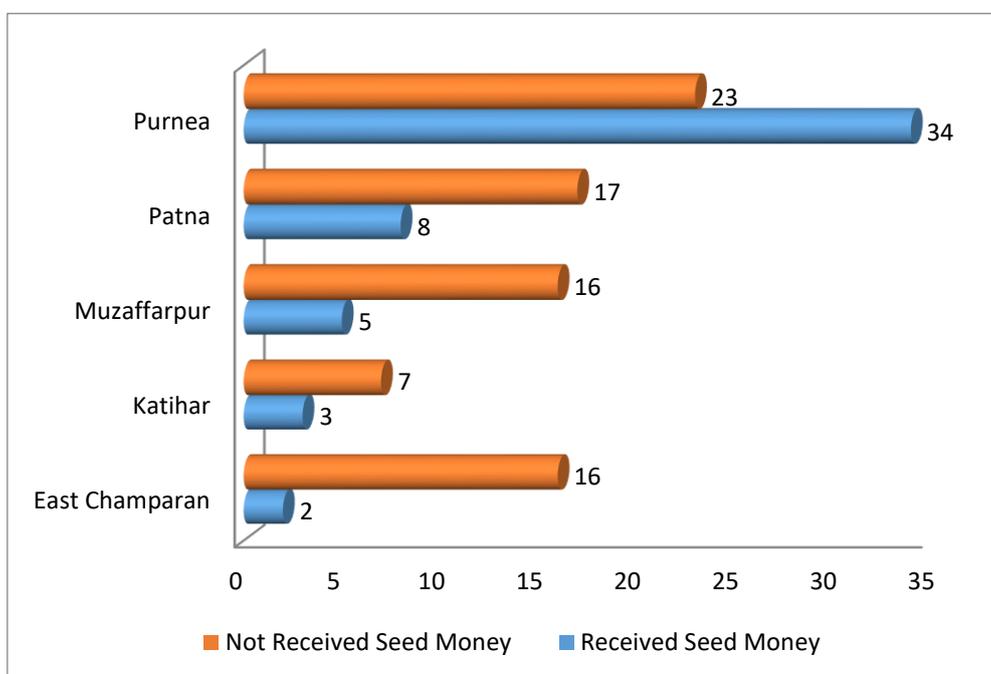
As per the discussion with the Jeevika officials, all AEs who continue providing services under their roles and responsibilities as VRPs/SEWs or other activities, are getting a monthly honorarium ranging between INR 1500 – 3000 being provided by Jeevika. This honorarium provides a cushion till an AE reaches regularity in business transactions. However, during our survey only 40 AEs reported that they are receiving this honorarium from Jeevika (Figure 3.7).

Figure 0.7 : Monthly Honorarium from Jeevika



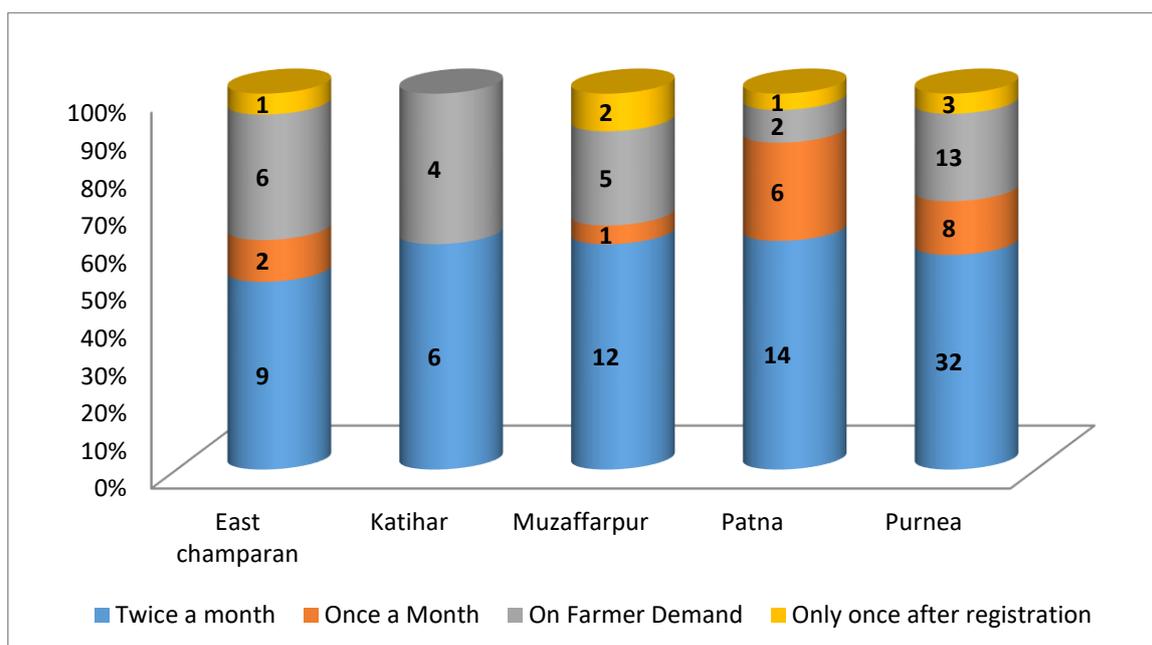
Seed Money is being provided as a loan to the AE. INR 30,000 is given through the Village Organisation (VO) to AEs. Around 40% of the AEs have received seed money. It can be seen that AEs in Purnea have been actively provided the seed money (Figure 3.8). It is observed in the field that the support provided by Jeevika staff in Purnea on licenses and seed money has been exemplary. There was effective coordination between both the SFI and Jeevika staff. The seed money has to be repaid in 30 equal instalments. In addition, AEs also have access to a general loan of INR 30,000 from the VOs. The decision of the amount of credit to be given out is based on the VO's discretion. However, majority of the AEs (60%) were not receiving the seed money and this might be the one of the constraints to AEs to start their business on time and register the farmers to provide their services.

Figure 0.8 : Status of Seed Money Provided to AEs



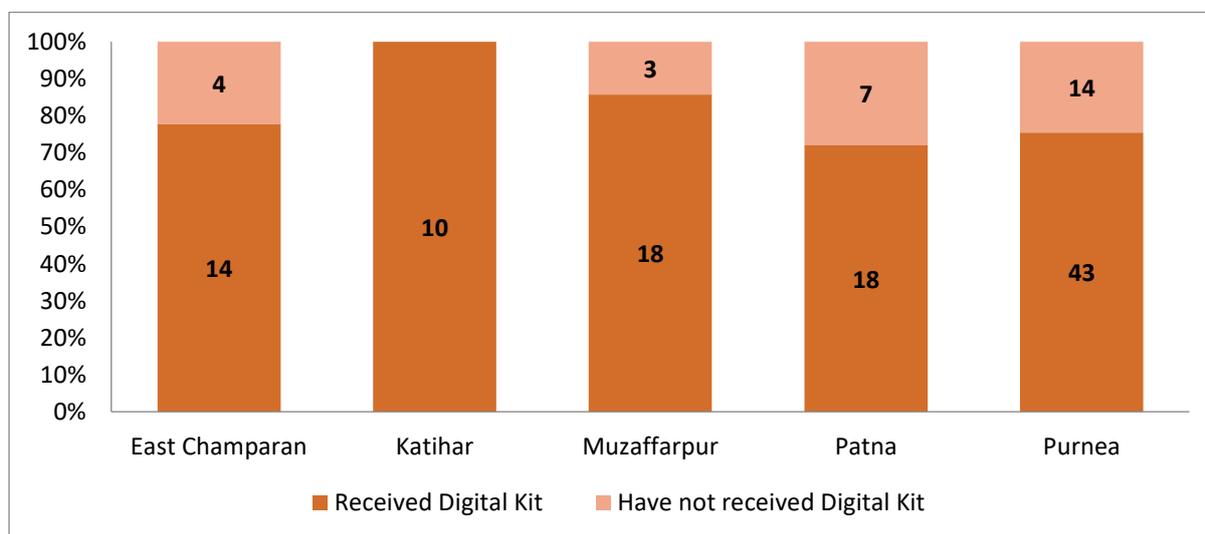
The frequency of AE meetings with the farmers is observed as the AEs are meant to provide agri extension services to the registered farmers. Farmers meetings are held regularly by AEs. Most AEs (56%) conduct meetings at least twice a month. Additionally, AEs also conduct meetings on demand by farmers. The meetings are conducted for advisory purpose and is seen that AEs regularly showcase farmer training videos through the use of digital kits. While majority of them (52 percent) are meeting twice in a month, nearly 35% of the AEs meet the farmers only on demand and 5% of the AEs met farmers only once after the registration.

Figure 0.9 : Frequency of Farmer Meetings



The use of digital technology helps to increase adoption rates of technology amongst marginal farmers 79% of the AEs (103 AEs) received digital kit and remaining 21% of the AEs (28) still did not receive the digital kit (Figure 3.10). Providing digital kits to the AEs on time is an important parameter as the success of the AE programme depends on the extent of meeting the extension needs of the farmers while making some revenue.

Figure 0.10 : Status of Digital Kit Provided to AEs



Increase in frequency of meeting will be helpful for both AEs as well farmers; it can support strong linkage between farmers and AEs. While the AEs can increase their services and business based on the farmers need, the farmers can avail the good services frequently.

Furthermore, the information such as frequency of advice provided to farmers from AEs, their present sources of agricultural advice, giving solutions for farmer's major problems in farming activities, areas of need for agricultural advice etc together, these components provide the information that can lead to the effective design and implementation of AE programmes to maximize farmers' registration and participation. Patna and Purnea district AEs are bit ahead in receiving the digital kit and in frequency of meeting the farmers compared to other three districts.

Majority of the AEs (around 52%) are displaying the videos twice in a month. Nearly 35 % of the AEs are displaying videos on demand(Figure 3.11) AEs should frequently display the videos to the farmers, which is very much needed to enhance the impact of AEs work and also videos will definitely trigger interest for overall development of the farming community. This coincides with an emerging understanding that ICT technologies are only as useful as the content they carry and the intent and skills of the people using them (Toyama, 2010). Furthermore, by looking those videos frequently farmers may get themselves new ideas for extension experiences. Video has tremendous power to trigger learning across people, organizations and across cultures (Van Mele et al., 2010b). As AEs are from the local community and demonstrate the technologies rather than experts, and that all is explained in an easy-to understand in the local language. Videos are very useful tool to reach illiterate, youth, women and to training groups. Some of the research findings from developing countries resulted that Agricultural training videos have had significant impacts on women's livelihoods in Bangladesh (Van Mele et al., 2007; Chowdhury et al., 2011) and Benin (Zossou et al., 2009a, 2010).

Figure 0.11 : Frequency of Displaying Videos

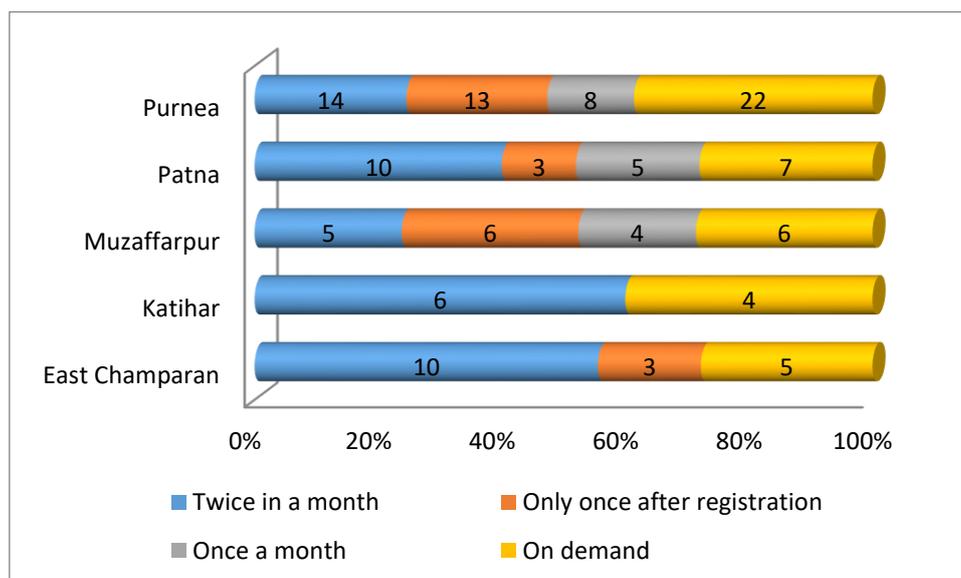


Table 0.6: Enterprises opted by AEs

Enterprises opted for	East champaran	Katihar	Muzaffarpur	Patna	Purnea	Total
Agri Input	1	1	2	7	12	23
Agri Input and Spice Money	1	1	2	2	10	16
Agri Input, Spice Money and Nursery	3	1	2	-	3	9
Agri Input, Spice Money, Nursery and Market Linkage	2	2	8	2	8	22
Agri Input, Spice Money and Market Linkage	3	2	2	1	6	14
Agri Input, Spice Money, Market Linkage and Other	-	-	-	1	-	1
Agri Input and Nursery	3	-	-	2	5	10
Agri Input, Nursery and Market Linkage	-	-	1	1	2	4
Agri Input, Nursery and Other	-	-	-	-	1	1
Agri Input and Market Linkage	2	1	-	1	3	7
Agri Input and Market Linkage	-	1	-	-	-	1
Spice Money	-	-	1	2	-	3
Spice Money and Market Linkage	1	-	-	1	1	3
Nursery	-	1	2	2	2	7
Market Linkage	-	-	-	1	-	1
Other	-	-	-	-	1	1

As in the Table 3.6, among the different enterprises, Agri Input is the most preferred business choice for AEs. In total 23 AEs opted agri input store alone as their primary business. Further, 84 AEs have opted for Agri-Input stores with a combination of Spice Money, Market Linkage and Nursery to maintain consistency in income through the year. AEs are providing basic services of input supply through stores, advisory, market linkage, financial services and nursery for seedlings etc. AEs are closely mentored for selecting the most suitable enterprise feasible to their area of operations and this decision is based on both; their local knowledge and advice from the AE Mentor. Majority of the AEs started their enterprises by taking mentors suggestion and also with their own experience. However, AEM played a critical role in suggesting the type of business. In total 106 AEs reported of an AEM involvement in enterprise decision making process. Mentoring can no doubt strengthen the AEs workforce and, in turn, improve the quality of services rendered by AEs to the

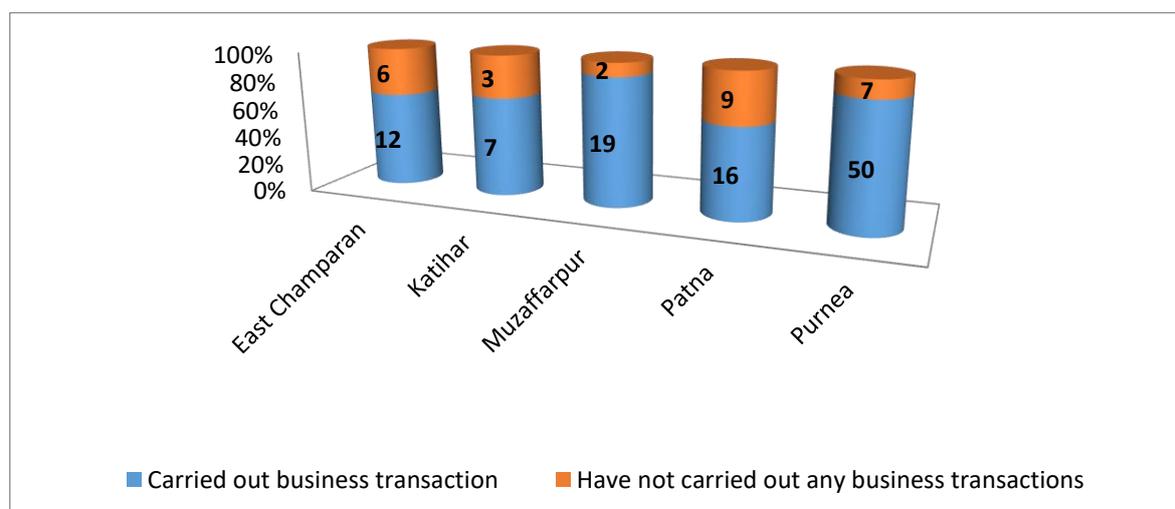
farmers ultimately resulting in farming communities receiving better services. In addition, mentoring also helps to retain AEs in the business activities and continue in providing extension services, which can curb the pervasive challenges of extension activities of that area.

Table 0.7: Reason for the selection of Enterprise by AEs

Decision making process for selecting enterprise	E. Champaran	Katihar	Muzaffarpur	Patna	Purnea
Own Experience	-	-	-	-	1
Own Experience and Mentor Suggestion	8	5	7	8	25
Mentor Suggestion	10	3	8	13	19
No Information	-	2	6	4	12

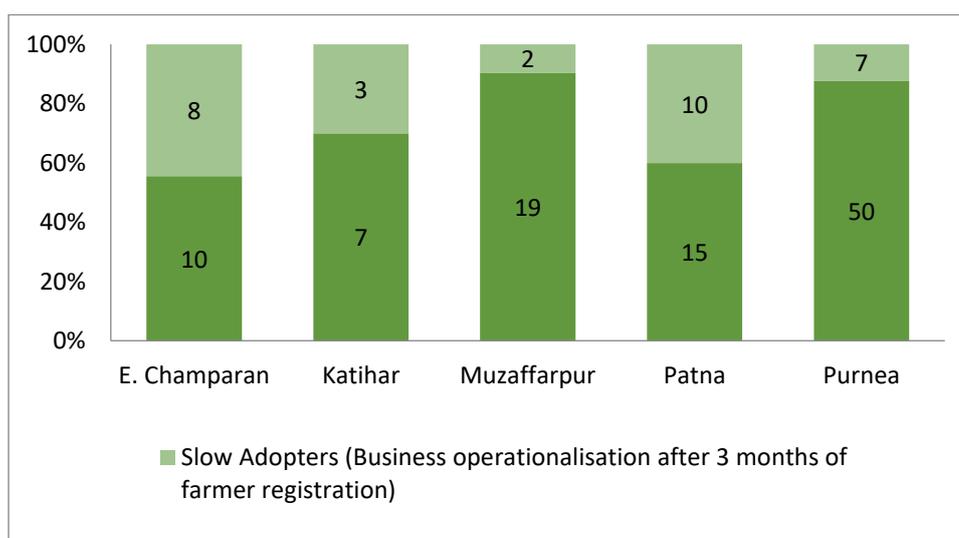
From the figure 3.12 we can see that 80% of the respondents have already started their businesses. However, this number is seen to be highest in Purnea

Figure 0.12: Enterprise Operationalisation



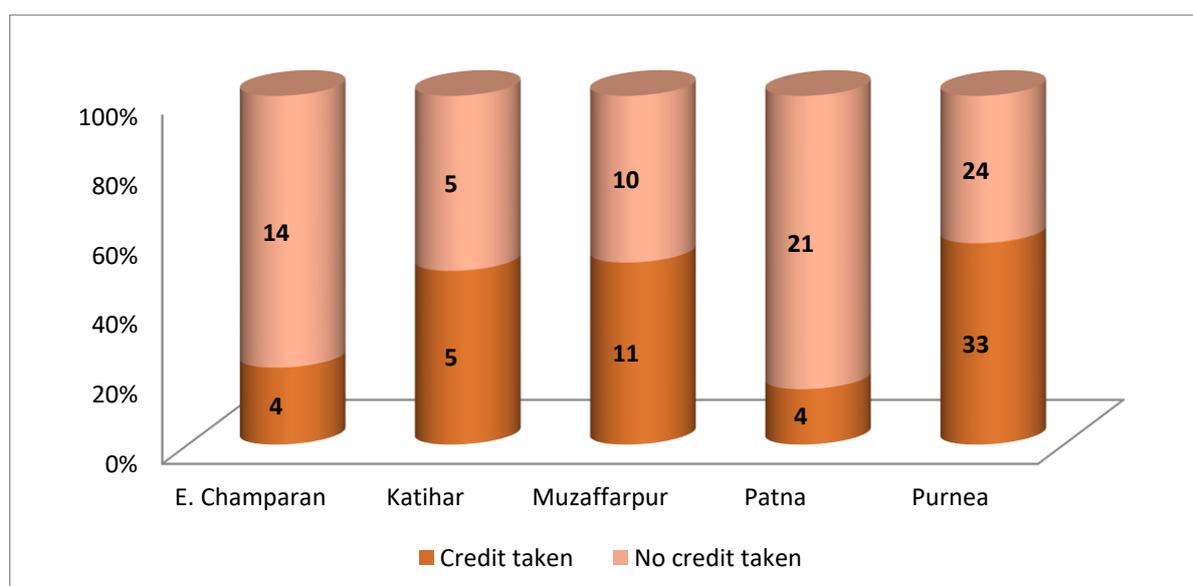
This might be the result of the access to seed money that has been provided to the AEs. Furthermore, among the 80%, nearly 78 % of the AEs (Figure3.13) started their business operationalisation with 3 months of farmer registrations. Overall, early receipts of financial assistance add to the working capital flow for all the AEs and quicker turn around on starting the services. Majority of the AEs mentioned during the survey that if they need to get on time seed money, to kick start their business

Figure 0.13: Status of Business Operationalization



Finance is the back bone for any business, more so for agriculture which has traditionally been a non-monetary activity in the rural area in most developing countries. Credit facilities are the integral part of the process of commercialization of the rural economy. In case of AEs, credit is an important tool for getting the inputs on time, thereby efficient in providing on time services to the farming community thereby increase the productivity of the farms particularly those of small ones. In particular, access to formal sector is more advantageous to the AEs as it lessens the exploitation and rates of interest for loans are controlled.

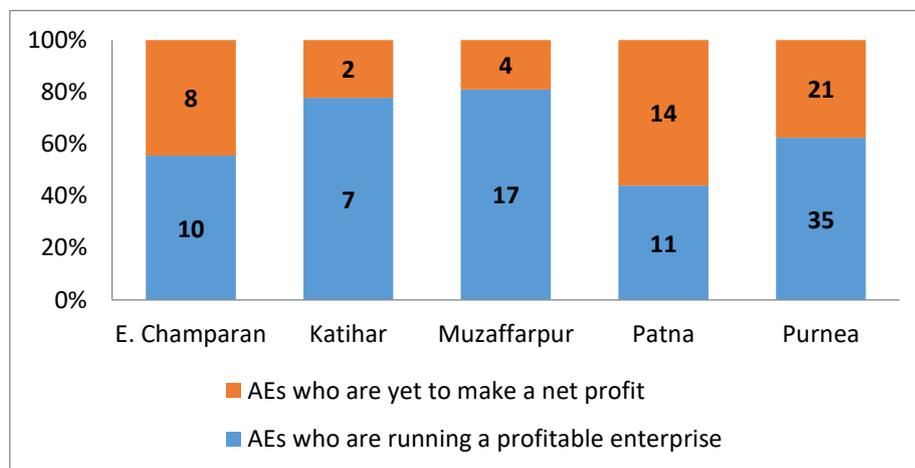
Figure 0.14 : Receipt of loan status for formal sector



Unfortunately as we can see from the figure 3.14 around 57 percent of the AEs are not having access to the formal loans. The outreach of formal agri entrepreneurial credit is not

adequate in the study area but it is very crucial and significant for the AEs to start and run their business profitably. At present 61 % of the total AEs in five study districts are running profitable enterprises (Figure 3.15).

Figure 0.15 Status of Profitability of Enterprises



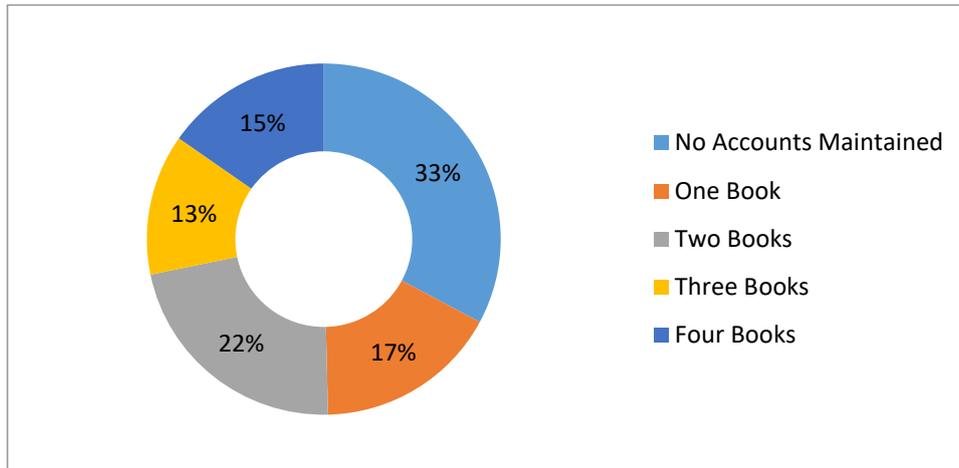
Majority of the AEs mentioned that they are getting good support from their mentors regarding agri Input, spice money, market linkage and nursery enterprises (Table 3.8). However, as nearly 40 % of the AEs are not running profitable business enterprises mentors can put some efforts in identifying the problems/ challenges and they could give time to time advises or solutions to overcome their challenges.

Table 0.8 : Support services received from their respective mentors

AEM Support received across various enterprises	E. Champaran	Katihar	Muzaffarpur	Patna	Purnea
Agri Input and Market Linkage	1	2	2	4	7
Agri Input, Spice Money and Nursery	4	-	1	-	7
Agri Input, Spice Money, Nursery and Market Linkage	7	2	10	5	12
Agri Input, Spice Money and Market Linkage	3	2	1	1	5
Agri Input and Nursery	1	1	1	2	6
Agri Input, Nursery and Market Linkage	1	-	2	1	-
Agri Input, Nursery and Others	-	-	-	-	2
Spice Money	-	-	-	1	2
Nursery	-	1	1	1	2
Market Linkage	-	-	-	2	-
Spice Money	-	-	-	-	1
Agri Input	-	1	3	6	11

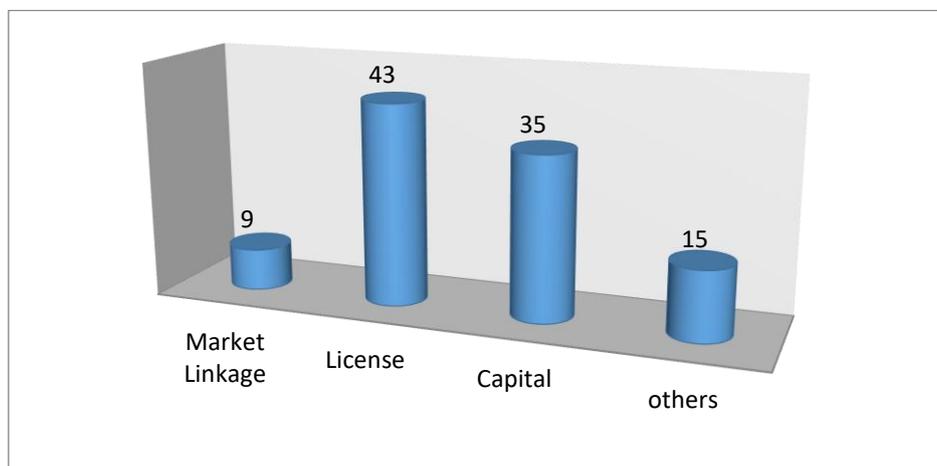
Nearly 33% of the total AEs are not maintaining any books of records (Figure 3.16). 39% of AEs are maintaining one to two books. Remaining 28% were maintaining more than three books of records. Books of accounts help an entrepreneur to keep track of business transactions. Also helps to maintain or improve business profitability. Therefore all the AEs need to be trained the importance of record keeping for one or two days during the AE training programme.

Figure 0.16 : Status of Maintenance of Books of Accounts



Out of the total, 102 AEs mentioned that they are facing critical issues for expanding their businessn (Figure 3.17). 43 AEs mentioned that mainly they are not getting licences for seed, fertilizer and pesticide sales. Followed by that 35 AEs are facing problem with access to capital for the investment. Further, 15 AEs were facing issues with market linkage, irrigation, soil condition, unable to understand the farmers problems, and are unable to sensitise the farmers, and few of them are not getting proper guidance from their mentors etc,

Figure 0.17: Issues in Business Expansion by AEs



Part II: Analysis of performance of Sampled Agri Entrepreneurs

The previous part has given a birds eye view on the implementation of AE programme. In this part we tried to understand the AE specific issues such as impact of AE training programme and the support systems to AE, post AE training. Table 3.9 presents the district wise selection of sample AEs

Table 3.9: District Wise Sample AEs selected

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
E Champaram	1	1	1	3
Katihar	1	-	2	3
Muzaffarpur	1	-	2	3
patna	1	1	1	3
purnia	1	1	1	3
Grand Total	5	3	7	15

Table 3.10 presents the gender wise distribution of sample AEs and observed only one among the sample AEs in slow climber category.

Table 3.10: Gender wise distribution of Sample AEs

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
Male	5	3	6	14
Female	-	-	1	1
Total	5	3	7	15

Almost all the AEs were under the small and marginal category of landholding. Five AEs were with less than one acre, six AEs were with a land size of one to three acres and four AEs were with more than 3 acre land holding category. The average land size of fast climbers and medium climbers was more with 2.66 and 3 acres respectively compared to slow climbers whose land size was only 1.62 acres.

Table 3.11: Average Land Size of selected AEs

	Fast Climbers	Medium/Solid Climbers	Slow Climbers
Average Land holding in acres	2.66	3	1.62

Further, Most of their families have been engaged with farming since many years. Similar to other AEs, the sampled 15 AEs' major source of income is from VRPs. Their main entrepreneurial activity is also input business and spice money agency.

Experience in agriculture doesn't seem to influence the entrepreneurial inclination as reflected in Table 3.12 where slow climbers have more experience in agriculture compared to fast and medium climbers.

Table 3.12 : Experience in agriculture in years

Years	Fast Climbers	Medium/Solid Climbers	Slow Climbers
Less than One	-	-	-
One to Three	-	-	-
Three to Six Years	-	-	-
More than Six Years	5	3	7
Total	5	3	7

Similarly status of income before AE activity also seems to have trivial impact on entrepreneurial inclination which is reflected by the fact that majority of AEs selected in all the three slow, medium and fast climber categories have been with some income generation activity before joining in AE training programme (Table 3.13).

Table 3.13: Status of income before AE activity

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers
Yes	4	2	6
No	1	1	1
Total	5	3	7

Majority of AEs (73.3 percent) observed that they have some source of income before joining in AE training programme. Those who reported having a source of income were the employees of Jeevika working as Village Resource Persons (VRPs), mainly. However, the AEs who have been working as VRPs along with their own farming seem to have climbing the entrepreneurship ladder faster than others. Table 3.21 shows that income from VRPs was the only major source of income for slow climbers.

Table 3.14: Source of income before AE activity

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
VRP	-	1	5	6
VRP and Farming	4	-	-	4
Self Employed	-	1	1	2

Table 3.15: Enterprises Selected by AEs

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
Inputs (Seed and Nursery)	-	1	2	3
Inputs (Seed, Fertilisers and Pesticides and nursery)	-	2	-	2
Input and Spice Money	3	-	-	3
Input , Spice Money and BC	1	-	-	1
Input , Spice Money and Market)	1	-	-	1
Spice Money	-	-	3	3
None	-	-	2	2
Total	5	3	7	15

Majority of slow climbers (42 percent) were engaged with only spice money business.(Table 3.15) Around 28 percent of the slow climbers have not decided regarding the enterprise they would be engaged in. Whereas, 60 percent of the fast climbers have diversified their activities with input business and spice money business. Some of the fast climbers have also initiated taking up the marketing and Banking correspondence in addition to spice money business and Inputs business. One each among the selected AEs in fast and medium climber's category have started fertilisers shop.

Table 3.16 : Reasons for the Selection of Enterprises by Selected selection of enterprises

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
#NA	-	-	1	1
advice from mentor	2	3	6	11
guidance by SFI and demand from the community	2	-	-	2
self-employment	1	-	-	1
Total	5	3	7	15

The categories of a good entrepreneur such as observing the demand from the community as a need for a particular problem and the zeal to start the own enterprise were observed among the fast climbers. As observed in Table 3.16, 60 percent of the fast climbers have the entrepreneurial inclination to start their own business and was supported

by the mentors of SFI. Whereas, in case of medium and slow climbers, the influence of mentors of SFI was observed in the selection of an enterprise.

Table 3.17: Source of Knowledge and Technical Inputs for selected AEs

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
#NA	1	-	3	4
field training	-	--	-	-
AE Training	3	2	1	6
Jeevika Training	1	1	3	5

The main source of knowledge and technical inputs for fast and medium climbers was AE training itself (Table 3.17). Whereas, 42 percent of the slow climbers, who were also the VRPs of Jeevika, observed that their major source of knowledge and technical inputs was Jeevika itself. In addition, 42 percent of slow climbers could not answer this question reflects that they need continuous refresher courses in addition to the 45 day AE training that they have undergone.

Table 3.18 : Additional Specialized Training

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
#NA	-	-	2	2
Yes	4	3	4	11
No	1	-	1	2

In response to the question on any specialised trainings these selected AEs have undergone, majority of the AEs in the three categories have responded positively. However, fast and medium climbers have specifically suggested that they have undergone trainings on nursery management by SFI and maize marketing by Jeevika. Whereas, slow climbers could not reply on this. The fast climbers seems to have good communication skills and business tactics. This was observed in especially in Purnea where the selected AEs in fast and medium climbers category were having very good business development acumen because of their entrepreneurial abilities even before joining as AE itself. They were also having business planning and execution skills, post-harvest knowledge and awareness about the existing schemes. As seen in Table 3.19, the fast climbers were following multiple knowledge practices followed by medium climbers. The slow climbers need to pick many more areas for sustaining themselves into the business.

Table 3.19 : Areas of Knowledge of selected AEs

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
Rural Communication Skills	4	2	3	9
Rural Agri Marketing	3	1	0	4
Seeds, Fertilizers, pesticides acts and regulations	5	3	5	13
Book keeping and basics of account	3	0	0	3
Agri Advisory Services	5	3	4	12
Post Harvesting Knowledge	1	1	0	2
Business Planning and Execution	1	0	0	1
Kisan Credit cards and other schemes	3	0	0	3
Irrigation practices	2	1	0	3

Table 3.20 indicates average number of farmers registered by each of the three categories of AEs. While the average number of farmers registered by fast and medium climbers was almost equal. The slow climbers have less registered farmers relatively.

Table 3.20: Average number of farmers registered

	Average of farmers enrolled
Fast Climbers	238
Medium/ Solid Climbers	237
Slow Climbers	184

It is observed from Table 3.21 that a wide range of services were being offered by fast climbers to the registered farmers including financial and crop insurance, marketing, farm management etc in addition to the crop advisory and input services. The main services being offered by medium and slow climbers were crop advisory and input services. The crop advisory services were being rendered through digital video platforms provided by Jeevika. However, it is important to note whether they have been providing these services while continuing their services with Jeevika or independent of it. Around 10 out of 15 selected AEs (66.66 percent) have responded that they have been continuing as VRPs of Jeevika.

Table 3.21: Services rendered by the selected AEs to the registered farmers

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers
Technical/crop advisory	5	3	6
Financial and crop insurance	2	-	-
Marketing	2	-	2
Farm management	3	-	-
Input services	5	3	4
Any other	2	-	-

In response to the query on the type of financial assistance the AEs have been receiving from Jeevika while continuing their services with Jeevika, majority of the AEs including fast and medium climbers were not clear whether the monthly salary that they have been receiving is a honorarium as AE or it is a monthly salary that they have getting regularly (Table 3.22). Only 40 percent of selected AEs among fast climbers responded that they have been receiving honorarium as part of AE enterprise and it may be stalled after few months. Around 60 percent among fast climbers and 66.6 percent among medium climbers and 14 percent among the slow climbers have received Rs.30,000 as seed money from Jeevika to kick start their business activities.

Table 3.22: Financial Assistance from Jeevika under AE programme

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
Seed fund from jeevika	3	2	1	6
Honorarium from jeevika over and above your monthly salary	1	2	1	4
Only honorarium up to 20000 for three months from jeevika	2	0	0	2
Only regular monthly salary from jeevika	2	1	0	3

It is observed from the Table 3.23 that there was a big difference in the average turnover between fast, medium and slow climbers. This may be due to wide range of activities that the fast climbers have been involved in.

Table 3.23: Current Turnover of selected AEs

	Average Current Turnover (Rs)
Fast Climbers	825000
Medium/ Solid Climbers	96666
Slow Climbers	94285

Table 3.24 presented the problems being encountered by the selected AEs. Majority of them in all the three categories observed that availing licenses for input shops, initial capital required to run the enterprise have been the major hurdles in continuing the AE enterprise.

Table 3.24: Problems being encountered by Selected AEs

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
#NA	1	-	1	2
availing mudra loan capital	-	1	-	1
	1	1	-	2

competition	-	-	1	1
delay in licence and bank linkage	1	-	-	1
financial problem, mudra loan, seed money and technical knowledge	1	-	1	2
licence	-	-	1	1
licence and loan	-	-	1	1
licence for shop	-	-	1	1
licence, seed money, mudra loan linkage	-	-	1	1
loan and licence	-	1	-	1
seed money	1	-	-	1

However, surprisingly 71 percent of the slow climbers did not incline to exit the AE programme. None of the AEs in medium climber category wanted to exit the programme. Whereas, 40 percent of AEs from fast climber category wanted to exit the programme given a chance. This has given a perspective that the fast climbers may be entrepreneurial but they may be looking for better opportunity and leave the programme, given a chance. Therefore, the mentors need to focus more on medium climbers followed by slow climbers by giving them the necessary support systems.

Table 3.25: Exit from the enterprise

Response	Fast Climbers	Medium/Solid Climbers	Slow Climbers	Total
#NA	-	-	1	1
Yes	2	-	1	3
No	3	3	5	11

Factors impacting AE Performance

Based on the field study and broad spectrum of services being offered by the AE on “paid service concept”, the following pulling down and contributing factors are identified.

Pulling Down Factors

• Inordinate delay in getting statutory licenses for input business
• Delay in getting Bank credit for investment in AE activities
• Overlapping of area of operation of AEs in some villages
• Technical snags with the Spice Money equipment
• Technical snags with the AV Kit provided to AEs
• Lack of technical know-how on soil management, plant protection management, crop

advisory, price discovery
<ul style="list-style-type: none"> • Competition of neighbouring FPOs, Cooperatives and state run Agri- input stores
<ul style="list-style-type: none"> • Very agro ecological nature of the areas providing limited scope for traditional crops and lack of approach to livelihoods diversification in such areas
<ul style="list-style-type: none"> • Passive response from the local Jeevika persons in some cases and also from local Line Departments.
<ul style="list-style-type: none"> • Delay and wide time gap between training and actual commencement of AE enterprise in the field

Contributing factors

<ul style="list-style-type: none"> • Close monitoring by the mentor and time to time handholding support at the initial stages
<ul style="list-style-type: none"> • Regular refresher courses on the issues of current importance like season, market etc.,
<ul style="list-style-type: none"> • Giving financial muscle to the AE for running the enterprise to his/her full potentiality through Bank linkages
<ul style="list-style-type: none"> • Up to date and wide range of need based videos added to the AE kit regularly
<ul style="list-style-type: none"> • Strong convergence with stake holders like KVK, RARS, ATMA, Jeevika, NABARD, Banks, DOT Centers and Agriculture colleges
<ul style="list-style-type: none"> • Strong tracking tools to keep track of the physical and financial performance on weekly basis by the Mentor
<ul style="list-style-type: none"> • Clear Business Plan for each AE for next one year with clear cut outreach, operational and financial indicators drawn in a participatory way
<ul style="list-style-type: none"> • Saturation approach in enrolling the farmers in each village without leaving any body
<ul style="list-style-type: none"> • Diversification of AE value added services to custom hiring, warehousing, contract farming and processing

Part III: Assessment of Sampled Farmer

Here we have tried to understand the AEs work from the perspective of farmers. Findings were obtained through focus group discussion with the farming community and predesigned survey was conducted to the AE associated farmers in five districts. We also gathered some information by direct observations in the locations, as well as discussion held with the Jeevika and SFI officials. The following section provides details of farmer demographic details, farming experience, land use and landholding pattern, technology in use, awareness of the AE program, satisfaction with AE services and details of services that are provided.

In total 150⁸ Farmers, with an average of 10 farmers per AE (15 from the FGD) were individually discussed across all the districts. Table (3.26) given below provides the distribution of different categories of farmers across the district. Our sample analysis shows that distribution of female farmers were more from the districts of E.champaran, Muzaffarpur and Purnea. Overall 52 % of the sampled farmers are female. Nowadays more number of women are entering farming with strong motivation therefore proper vocational trainings should be given to them. From the data set of 131 AEs from Bihar only 7 women are trained as AEs. More number of women AEs should be trained.

Table 3.26: District wise farmer distribution

District	Female Farmers	Male Farmers	Total Farmers
E.champaran	30	0	30
Katihar	3	27	30
Muzafferpur	19	8	27
Patna	6	24	30
Purnea	19	12	31
Grand Total	77	71	148

The education level among the sampled farmers is generally low as we can see from the table..In general education plays an important role in the adoption of new technologies by reducing learning cost (Holloway, Shankar, & Rahmanb, 2002).However, as other scholarly findings show that (Kisaka-Lwayo, 2008), there is a non-significant relationship between education and different kinds of technology adoption. In studied districts, where the majority of farmers are less educated, around 40% are illiterate and 32% are primary, adoption of different technologies by them is a challenge for AEs. Often argued that, with the lower level

⁸Two farmers schedule were rejected as we did not have much information from them.

of education the farmers might face difficulties, for example: in record keeping which is necessary for organic certification. However, training motivates farmers to adopt new technologies. Training is very important in the context of Bihar in specific and India in general, as less educated or even illiterate farmers cannot make use of most information material without the support of trained persons. However, as these farmers were associated with AEs, with frequent extension contact and involving them in different training activities, displaying need based videos will definitely educate and motivate them to adopt different kinds of farming practices and technologies.

Table 3.27 : Education level

Level of Education	Number of Farmers		Number of Farmers
	Female	Male	
Primary	18	29	47
Matric	5	17	22
Intermediate	4	8	12
Graduation		7	7
Post-Graduation	1		1
Illiterate	49	10	59
Total	77	71	148

As per the analysis, Farm based activities were seen to be the predominant source of livelihood across all districts except E.Champaran and Katihar (Table 3.28). Overall more than 46% of the respondents are primarily involved in agriculture and another 33% are involved in agriculture and allied Activities. In E.Champaran and Katihar majority of the farmers' livelihoods source is primarily from both agri and allied activities. Regarding secondary occupation, 26% of the total farmers are involved in allied activities and 14% are involved in agriculture labour activity. As majority of the farmers are involved in farming and extension services are very negligible in different parts of Bihar, AEs are the need of the hour and will be definitely playing an important role in the adoption of different farming practices especially for farmers with poor education and illiterate farmers and also to provide various services to the farming community.

Table 3.28: Primary Occupation of the registered sample farmers

District	Only Agriculture (Cultivation)	Allied Agricultural Activities	Agricultural Labour	Other Labour	Household Industry	Others	Agri and Allied AgriActivities	Agriand Household Industry	Agri and Agri. Labour	Agriand Allied along with other labour	Agri and Allied along with a trade	Agriand Allied along with govt. service
E.Champaran	1	1					26	1	1			
Katihar	4						21	0	1	1	1	2
Muzfarpur	13	2	2		2		0	5	3			
Patna	30						0	0	0			
Purnea	21	3	1	2		2	2	0	0			
Total	69	6	3	2	2	2	49	6	5	1	1	2

Table 3.29 : Secondary Occupation of the registered sample farmers

District	Only Agriculture (Cultivation)	Allied Agri Activities	Agri Labour	Other Labour	Household Industry	Trade	Others	Agriculture and Allied AgriActivities	Agriculture and Agri. Labour	Agriculture and Household Industry	Agriculture and Allied along with a trade
E.Champaran	2		2	1				21	1	1	
Katihar	1	1						17	1	0	1
Muzfarpur	5	1	9		3			1	3	4	
Patna		3		12	3		1	0	0	0	
Purnea		8	1	7	2	2	1	0	0	0	
Total	8	13	12	20	8	2	2	39	5	5	1

The land size is to some extent reflective of the status of cultivator households and their farming potential. In Bihar, the average landholding size is 0.61 ha. In the study area there is little variation among the districts with respect to average land size possessed by the farmers. With respect to average irrigated land, it is on a bit higher side in the districts of Katihar (1.35 Ha) and Patna (1.83 Ha) compared to other districts. Whereas, in case of average rainfed land E. Champaran is in the higher side,(0.99 ha) compared to Muzaffarpur (0.29 ha) and Purnea (0.63 ha)(pl see Table 3.30).

Table 3.30 : Types of landholding

District	Average of irrigated leased-in land (Ha)	Average of irrigated leased-out land (Ha)	Average of Irrigated own land (Ha)	Average of irrigated cropped area (Ha)	Average of Rainfed leased-out land (Ha)	Average of Rainfed Leased land (Ha)	Average of Rainfed own land (Ha)	Average of Rainfed cropped area (Ha)
E.Champaran	0	0	0	0.25	0.71	0.63	0.99	0.99
Katihar	0.7	Insufficient Data	1.35	0.38	NA	Insufficient Data	Insufficient Data	Insufficient Data
Muzaffarpur	0	0	0.11	0	0.24	0.27	0.29	0.29
Patna	1.15	1.2	1.83	2.76	Insufficient Data	Insufficient Data	Insufficient Data	Insufficient Data
Purnea	0.25	0.48	0.91	0.75	0.39	0.27	0.63	0.48

The number of farmers having owning rainfed or irrigated land were only 45% and remaining 55% were the tenant farmers (Table 3.31). This clearly shows that land owners reap all the government benefits and the technological and other agricultural development in that region. In the absence of strong acts protecting the interests of the tenants, there is huge indebtedness amongst the tenant farmers and overall they stand to suffer losses.

Table 3.31 : Number of farmers and types of landholding

Landholding Type	No. of Farmers		Average in Ha
	Yes	No	
RF own land	66	82	0.69
RF Leased in land	35	113	0.40
RF leased outland	37	111	0.46
Irrigated own land	67	81	1.1
irrigated leased inland	31	117	0.53
irrigated leased out land	17	131	0.37

Table 3.32 : AE Awareness by the farmers

Source of Awareness	E.champaran	Katihar	Muzaffarpur	Patna	Purnea	Total
As a customer	-	-	-	-	1	1
Farmer meeting	-	-	5	-	3	8
Not aware	-	-	-	-	5	5
Same village	-	28	-	5	-	33
SHG meeting	29	-	13	9	22	73
Through Jeevika	-	2	9	16	-	27

AE Program awareness was mostly done through SHG meetings, Farmers' Meetings, and also through Jeevika program. Around 50% of the farmers came to know about AE program through SHGs. This bears testimony to the role played by existing cadre of SHGs on ground in leveraging their networks. AE being from the same village is also an important contributing factor that derives early awareness and subsequent adoption. Nearly 88% of the interviewed farmers mentioned that the respective AE's of that village/block approached them to appraise them of the initiative and create awareness about the services they are providing to them. However, 6% of the total respondents were not aware of the AE services. In general majority of the farmers mentioned that after the association with AEs their average income is increased but it is very early to quantify the increased income due to AEs intervention. Further, farmer meetings are held more than twice a month across all districts. SHG meetings provide a good platform for AEs to regularly hold advisory sessions.

Table 3.33: AEs Approach

District	Did you approach the AE	Did the AE approach you	Not aware	Total
E.Champaran	2	27	1	30
Katihar	2	26	2	30
Muzafferpur	1	26	-	27
Patna	5	25	-	30
Purnea	-	25	6	31

Nearly 35% of the respondents mentioned that the frequency of meeting was once in a month or two months, or may be with more time gap particularly in the districts of E.Champaran and Muzaffarpur. Around 32% of the respondents mentioned farmer meetings happened regularly i.e. once in a week, especially quite more in the districts of Katihar and Purnea. However, 5% of the respondents mentioned there were no meetings held after the registration (Table 3.34). SHG meetings provide a good platform for AEs to regularly hold advisory sessions therefore the mentors could take responsibility and cross check whether the meetings are regularly happening or not. They could make sure frequency of meeting is

happening fortnightly. Also they could give suggestions and handholding support for the AEs and farming community to regularly participate in the meetings.

Table 3.34: Frequency of AE Meetings

Frequency of farmer meeting	E.Champaran	Katihar	Muzaffarpur	Patna	Purnea	Total
Once in a month	-	1	-	9	3	13
Once in two months	-	2	-	1	6	9
Two times in a month	1	3	-	15	1	20
Once a week	1	24	1	5	16	47
More than two months	25	-	26	-	1	52
No meeting after the registration	3	-	-	-	4	7

Table 3.35 Issues being faced with production

District	Low price realization	Low Income	Dependence on only one livelihood	Low Yield	Lack of information regarding various schemes	Others
E.champaran	1	2	2	29	4	1
Katihar	1	11	8	11	20	-
Muzaffarpur	-	3	13	17	2	1
Patna	2	20	8	19	10	2
Purnea	10	15	10	3	12	1
Grand Total	14	51	41	79	48	5

Across all the five districts, most common issues that are being faced by the farmers are low yield (54% of the total participants), low income (35%), and lack of information regarding various schemes (33%), dependence on only one livelihood activity (28%) and low price realization for their produce (9.5%) (Table 3.35) Low yield may be attributed to unscientific methods of farming, lower quality of inputs and incorrect usage of inputs. Further, lack of diversification of crops may be the reason for low income realisation. Lack of education might be directly impacting on the lack of awareness of the various ongoing programmes. Therefore, AEs play an important role in educating the farmers regarding various schemes and programmes of government with respect to that state. In addition, they can train and give them the information regarding diversification of the cropping pattern, cultivation practices through displaying videos, aggregation of their produce through collectivisation and remunerative marketing to realise better price for their produce. Presently AEs are delivering the above mentioned services to some extent, however, there is lot of potential to overcome the mentioned issues by the farmers through AEs' intervention for further improvement.

Table 3.36: Satisfaction with AE Services

District	Satisfied	Not-Satisfied
E.Champaran	19	11
Katihar	27	3
Muzaffarpur	27	-
Patna	30	-
Purnea	26	5
Grand Total	129	19

In general, farmers' satisfaction with AE services is quite high in the study area. Not only do AEs command the respect of the community but the general awareness with the help of the 45 day induction training program has helped foster a trusted relationship between the farmers and the AEs. This has helped build confidence of farmers which further facilitates ease of adoption of new practices.

As per the details of the services that are being provided by AEs as shown in the Table 3.37, majority of the respondents have availed services relating to crop advisory (97%) followed by Input services (57%), financial services (56%) and marketing (48%) services. Respondents were very happy that they were getting the information regarding price of local traders and buyers and also of nearby markets through AEs. Further, seedlings from nurseries is a commonly used service along with financial services that are being provided at select AE Enterprises. As can be seen from table, that a majority of farmers are availing multiple services from the AEs hence in its true nature, an AE is seen to be working or growing to be as a one-stop-shop for the farmer needs. However, very limited number of farmers are getting information on crop insurance, credit information, and produce aggregation compared to spice money and other input services. Particularly, spice money is seen to be a significant value added to the farmers. For most of the villages withdrawal of money at door step has provided significant savings of both time and money for the farmers.

Table 3.37: Types of Service

Districts	Financial Services	Input Services	Crop Advisory	Market Information
E.Champaran	16	18	29	16
Katihar	16	3	27	12
Muzaffarpur	27	19	27	9
Patna	5	18	30	15
Purnea	19	26	31	19
Grand total	83	84	144	71
% to total (148)	56	57	97	48

Table 3.38: Details of Services being provided by AEs

District	Financial Services				Input				Marketing		
	Crop insurance information	Credit Information Support	Spice Money/FI NO Bank	Credit	Pesticides	Fertilizers	Seedlings	Seed	Connecting to Traders	Price information	Product Aggregation
E.champaran	11	11	30	12	30	30	30	30	11	27	15
Katihar	10	16	23	24	20	20	14	23	15	30	15
Muzaffarpur	7	7	27	9	9	19	27	27	7	25	9
Patna	23	15	12			1	20	30	28	28	
Purnea	16	17	31	17	28	28	21	27	16	31	18
Total	67	66	123	62	87	98	112	137	77	141	57

In general, Bihar state is having five agricultural colleges, two state agriculture universities, one horticulture, and one dairy technology college. In addition, all 38 districts of Bihar are having Krishi Vigyan Kendras (KVKs) that provide crop diagnostic services to farmers. In addition, the KVKs use a significant portion of their lands to multiply varieties of seeds and propagate planting material to sell to farmers as a means of partially supporting their operations. Despite a strong institutional set-up, the output for Bihar is disappointing due to slow adoption of technology and the efficiency in the transfer of new technology to farmers (ICRIER, 2018). Furthermore, low credit availability, the risk aversion of farmers to adopt new technology and a historical dominance of cereals in Bihar's cropping pattern reflect the poor performance of agriculture research and education and extension in the state. However, the state has put in strong effort to improve the prevailing conditions, for instance The Bihar Agriculture Management, Extension and Training Institute (BAMETI)⁹, supported through ATMA funding, serves as a financial support and coordinating body for extension training and communication capacity-building activities within the state. Several non-governmental organisations are also active in building capacities to AEs as part of their larger state livelihood projects. One such example is PRADAN which promotes the System of Rice Intensification (SRI) through its field programs. Some of the other organisations are promoting technology demonstrations and disseminations like Aga Khan Rural Support Program (AKRSP) and Digital Green which are working closely with the government. Therefore AEs can explore all the mentioned institutional services and then connect the farmer communities to access the benefit. The mentors in the study area are well committed, but they could explore all the possible ways to connect AEs and farmers with different organisations, convergence with different schemes/programmes etc to provide 360 degree support services to farmers. At present mentors and AEs are mounting their programs only on Jeevika where as it is advised that they should look at other schemes on a revenue model.

⁹BAMETI is the nodal agency responsible for the implementation of ATMA in the state of Bihar.

Part IV: Success and failures: Key messages

Case Study I

Changing Landscape of a tiny village through AE services – case of Adhapa Village in Phulwari Shariff

Mentor: Pritam Kumar

Name of the AgriEntrepreneur: Shri Madhur Kumar

Block: Pulwahri Sharif; District: Patna



Adhapa village is an example of how AE can transform the landscape of the village with his sustained efforts galvanized by strong convergence with state sponsored schemes.

The villagers were migrants and despite having fertile lands and water table within 100 ft., they were dependent on diesel pump sets to pump water from the adjoining Pun pun river. The land holding being less than 1 acre, was uneconomical with diesel expenses on irrigation.

With the support of Jeevika and SFI, community solar pump was installed covering nearly 16 acres of land owned by 12 farmers.

Assured irrigation has given confidence and opportunity for the farmers to transform their traditional agriculture into cash rich vegetables. In addition nursery services provided by the AE also helped them get quality saplings at the farm gate.

In put services coupled with convergence for solar pump schemes of Jeevika, has literally transformed the landscape of the village from subsistence food crops to market

With the support of Jeevika and SFI,



driven high value horticulture crops. The transformation took less than one year and now more and more farmers are teaming up to have collective solar units to energize their bore wells.

To the question as to why 275 farmers are associated with the AE, the community gave a candid reply that earlier they were going to Nabatpur, a distant market town for all the agriculture needs including Agri inputs and market. Now that they can get the much-needed inputs from village point itself saving huge amount of time and money. They are also very much satisfied with the quality nursery saplings being sold to them by the AE at their farm gate itself. Their biggest challenges are fluctuating and exploitative markets and compulsions of stress migration during the lean periods. They are also satisfied with the crop advisory services being rendered by the AE through AV Aids kit. The designate Mentor from SFI is also providing seamless technical support to the AE which is giving him much needed self confidence in his new assignment. Going by the good start and considerable ground already covered by the AE he can be classified as Fast Climber.

To the question about their future plans, the client farmers have assertively replied that they wanted to make their agriculture remunerative with market driven high value horticulture crops and wanted to slowly shrink the cycles of stress migration year after year.

Case Study II

Lady Agri Entrepreneur driving the revenue model of enterprise centric service provision

Mentor: Dharendra Kumar

Name of the AE: Ms. Shanta Devi

VillageMahant,**Block:** Mariyari

District: Muzaffarpur

Background:

MS Shanta Devi is one of the very few lady AEs who has shown real entrepreneurial abilities in transforming the agribusiness of her client farmers. Being lady VRP working for Jeevika, in the same village, made her job quick transformation to AE.



She is also farmer by herself with 2 acres of land. They grow wheat, Mustard, Potato, maize and paddy and this is also a potential belt for Litchi fruits and earned name all across the county for best quality litchis. All the farmers are micro land cultivators or tenant farmers. She is naturally adjusting to the job of AE from being VRP, the assignment which is coming to an end soon. The time honored contributions of ladies to agriculture in the area is particularly visible as Shantadevi could handle nursery business with ease. She is yet to get licenses for seeds and fertilizers to commence the input business. She is able to achieve a financial turnover of Rs. 1.00 Lakh through sale of fertilizers, seed and nursery plants though the Spice Money hard ware has not got off due to technical snags.

The AE being lady, has excellent rapport with the local SHGs and it stands to her advantage. She got Seed Fund of Rs. 30,000 from Jeevika as she herself is group leader. They are all good goat Rarers and can explore modern goatery as additional gainful employment. In the meeting all her peer SHG members in the village expressed solidarity with her AE initiatives and promised all out support.

Her being a SHG leader and Jeevika program direct participants give good chance for success. The community have reposed faith in her in the role of AE. Given her ability to do Rs.1.00 Lakh business without much support coming from others, she can be rated as Solid Climber and has all potentiality to graduate to be the Fast Climber.

This is a case where a Lady VRP is assigned with the responsibility of AE and she is naturally adjusting herself to the new role with ease. This is a case where SFI and Jeevika can critically examine the success rate and as evidenced in this case, more no., of lady AEs can be inducted which will result in higher success rate. The contributing factors for success as lady AE is that there is not much external factors like men changing their enterprise or getting other priorities at the expense of AE role. There is also immediate acceptance by the community end users as Jeevika itself is credible program and villagers believe that Jeevika is always for their help only. In her case there is also very good support coming from her husband which makes her job quite easier.

When questioned what her vision is, she emphatically told that her SHG colleague members in the village should get the benefit of ease of doing agriculture through her AE role. She has her task well cut and wanted to address the water shortage issue through solar pumps. She wanted to immediately take licenses to kick start in put business.

Case Study III

Agri Entrepreneur working to the fullest potentiality right from go

Mentor:Gaurav

Name of the AE:Nand Kishore Kumar

Village:Mahant ,**Block:**Arerag, **District:** E Champaran



Nand Kumar's case is how untapped entrepreneur abilities latently hidden in a rural youth can be brought to surface. Nand Kumar who was popular VRP for the local women SHGs of Jeevika, the AE opportunity is something shot in the arm. He has centrally located kirana store already in the promising village of Mahant.

The AE business opportunities in the shape of inputs, Agri-equipment and Spice money added shop keeping units to the already buzzing business shop.

Nand Kishore Kumar has steered past the initial hiccups and is now having a business turnover of Rs.40 Lakhs, perhaps the highest amongst any AEs in the entire SFI – Jeevika project.

When interacted with the women clientele group of the AE, they were all praise for the initiative and acknowledge the ease of getting quality inputs at reasonable prices.

The case of NandKishor exemplifies that location of the enterprise unit makes lot of difference. The unit in this case is located in the cross section of 4 roads in the main village. It also a case where, the AE has thought out of box and widened the shop keeping units to kirana and general utilities also making the business base wider. It was a natural transformation from general entrepreneur to Agri entrepreneur buoyed by the good will earned through VRP assignment.



When asked about what could be the potential turnover in next 2 years, he emphatically replied that it could be anywhere ranging from Rs.1 crore to Rs.1.2 crores per annum. The Mentor Mr. Gaurav is also confident that the AE can be a show case model of SFI initiative. Here in the case all in gradients have gelled well. The Jeevika person is all supportive, the AE is hardworking and enterprising and the areas is full potential for such initiative. The Mentor is also working towards making the AE work to full potentiality.

In other cases where the growth is not as exponential as it is in the present case, there were compromises in investment, shop location, diversification of shop keeping units and initial hard work that is badly needed to spread the information across user groups.

In the case of NandKishor Kumar, the next stop could only be custom hiring wherein he will buy sophisticated agriculture machinery to hire out to the farmers. Already his nursery and input stores are poised to grow fast.

Case Study IV

A case of overlapping and duplication of AE's Job

Mentor: Guarav

Name of the AE: Ram Vinay Ram

Name of the Village: BaluvanEkavan, **Block:** Prasvand,Paharanpur, **District:** E Champaran

Ram Vinay Ram's is a case of wrong combination of AE's placement. There are 2 more AEs in the same village and Jeevika should have screened the candidates while selecting their villages of operation. With all initial hiccups he could be able to do business of Rs. 1, 25,000 of fertilizers and seeds worth Rs.60, 000 so far. He claims that his business could have been anywhere around Rs.20 Lakhs per annum with licenses and capital in place. Mere AE placement and induction training could not help in this case and there was much needed handholding support in terms of getting licenses for the inputs sales, much needed bank linkages for the AE and also technical back up of Spice Money.



The village is problematic with high percentage of saline soils and much nursery business depends on soil reclamation. One of the members in the group discussion was expressing unhappiness over deduction of fee for her remittances to her husband in migration.

There should have been transparent display of charts indicating costs of financial services and the scheme should also stipulate the tariffs of charges so that there is no place of price discrimination. The highest impact on such discrepancy is on user groups who are hopefully looking at the AE for the solutions to their vested problems in agriculture like quality in puts, nursery and crop advisory.

Chapter IV

Conclusion and Recommendations

Overall Review of all AEs present on ground

Out of the 131 AEs interviewed, 95 were working as VRPs under JEEViKA. More than 60 percent of the AEs have been associated with JEEViKA for more than two years. Since the VRPs are connected directly with SHGs, the AEs are seen easily accepted by the community and share a trusted relationship with the farmers. Mainly the nature of work was focused on conducting farmer meetings and helping them with farming followed by sale of inputs. Majority of the AEs i.e, 87 out of 131 AEs observed that they have been helping the farmers with farming. The rural economy in the study area is based primarily on Agriculture. Moreover for the majority of the trained AEs (87%) the source of livelihood is based on farming. This might be the reason for nearly 45% of the AEs (58 AEs) seem to prefer opting for services such as Agri-Input, Spice Money and Nursery. Setting up of an agri-input store was seen as the strongest appeal for AEs to choose the program.

Majority of the AEs, nearly 88%, mentioned that they did not undergo any specialised training after 45 days AE Induction Training. The one who have undergone specialised trainings was mainly related to maize marketing provided by Jeevika officials (24% out of 16 AEs) and Banking (19%) followed by maize marketing, nursery, business development, specialised farming, dairy, Veterinary Services, etc. Majority of the AEs were joined in order to provide input services and nursery services to the farmers.

Around 37% of the total AEs have registered farmers in the range of 150 to 200 farmers and around 27 percent of AEs have registered more than 200 farmers respectively.. Among the study districts in Patna and Purnea the registered farmers are more under each AE. Post AE training, the AEs are continuing their work as Jeevika VRPs and SEWs. 122 AEs mentioned that they continue to carry out responsibilities from Jeevika. Only 40 AEs reported that they are receiving the honorarium from Jeevika. Around 40% of the AEs have received seed money. It can be seen that AEs in Purnea have been actively provided the seed money. It is observed in the field that the support provided by Jeevika staff in Purnea on licenses and seed money has been exemplary. The seed money has to be repaid in 30 equal instalments. In addition, AEs also have access to a general loan of INR 30,000 from the VOs. The decision of the amount of credit to be given out is based on the VO's discretion. However, majority of the AEs (60%) were not receiving the seed money and this might be the one of the constraints to AEs to start their

business on time and register the farmers to provide their services. 79% of the AEs received digital kit and remaining 21% of the AEs (28) still did not receive the digital kit. Providing digital kits to the AEs on time is an important parameter as the success of the AE programme. Patna and Purnea district AEs are bit ahead in receiving the digital kit and in frequency of meeting the farmers compared to other three districts.

Majority of the AEs (around 52%) are displaying the videos twice in a month. Nearly 35 % of the AEs are displaying videos on demand. Among the different enterprises, Agri Input is the most preferred business choice for AEs. In total 23 AEs opted agri input store alone as their primary business. Further, 84 AEs have opted for Agri-Input stores with a combination of Spice Money, Market Linkage and Nursery to maintain consistency in income through the year. Mentors are playing a critical role in suggesting the type of business. In total 106 AEs reported mentor involvement in enterprise decision making process. In total 80% of the respondents have already started their businesses. However, this number was seen highest in Purnea. This might be the result of the access to seed money that has been provided to the AEs in this district. Furthermore, among the 80 percent, nearly 78 percent of the AEs started their business operationalisation with 3 months of farmer registrations. Overall, early receipts of financial assistance add to the working capital flow for all the AEs and quicker turn around on starting the services. Majority of the AEs mentioned during the survey that if they need to get on time seed money, to kick start their business. Around 57 percent of the AEs are not having access to the formal loans. The outreach of formal agri entrepreneurial credit is not adequate in the study area but it is very crucial and significant for the AEs to start and run their business profitably. As nearly 40 % of the AEs are not running profitable business enterprises mentors can put some efforts in identifying the problems/ challenges and they could give time to time advises or solutions to overcome their challenges.

Nearly 33% of the total AEs are not maintaining any books of records and 39% of AEs are maintaining one to two books. Remaining 28% were maintaining more than three books of records. All the AEs need to be trained the importance of record keeping for one or two days during the AE training programme. Main issue cited by majority (43) of AEs was the need to get seed, fertilizer and pesticide licenses. Followed by this 35 AEs are facing problem with access to capital for the investment. Further, 15 AEs were facing issues with market linkage, irrigation, soil condition, unable to understand the farmers problems, and are unable to sensitise the farmers, and few of them also cited that they are not getting proper guidance from their mentors,

Review of Sample AEs

The AEs who have been working as VRPs along with their own farming seem to have climbing the entrepreneurship ladder faster than others. Income from VRPs was the only major source of income for slow climbers. Majority of slow climbers (42 percent) were engaged with only spice money business. Around 28 percent of the slow climbers have not decided regarding the enterprise they would be engaged in. Whereas, 60 percent of the fast climbers have diversified their activities with input business and spice money business. Some of the fast climbers have also initiated taking up the marketing and banking correspondence in addition to spice money business and Inputs business. One each among the selected AEs in fast and medium climber's category has started fertilisers shop. Sixty percent of the fast climbers have the entrepreneurial inclination to start their own business and was supported by the mentors of SFI. Whereas, in case of medium and slow climbers, the influence of mentors of SFI was observed in the selection of an enterprise.

The main source of knowledge and technical inputs cited by fast and medium climbers was AE training. Whereas, 42 percent of slow climbers (42 percent), who were also the VRPs of Jeevika, observed that their major source of knowledge and technical inputs was Jeevika itself. In addition, 42 percent of slow climbers could not answer this question reflects that they need continuous refresher courses in addition to the 45 day AE training that they have undergone. Fast and medium climbers have specifically suggested that they have undergone trainings on nursery management by SFI and maize marketing by Jeevika. Whereas, slow climbers could not reply on this. The fast climbers seems to have good communication skills and business tactics. This was observed in especially in Purnea where the selected AEs in fast and medium climbers' category were having very good business development acumen because of their entrepreneurial abilities even before joining as AE itself.

The main services being offered by medium and slow climbers were crop advisory and input services. The crop advisory services were being rendered through digital video platforms provided by Jeevika. Around 10 out 15 selected AEs (66.66 percent) have responded that they have been continuing as VRPs of Jeevika. Around 60 percent among fast climbers and 66.6 percent among medium climbers and 14 percent among the slow climbers have received Rs.30,000 as seed money from Jeevika to kick start their business activities. Majority of them in all the three categories observed that availing licenses for input shops, initial capital required to

run the enterprise have been the major hurdles in continuing the AE enterprise. Surprisingly 71 percent of the slow climbers did not incline to exit the AE programme. None of the AEs in medium climber category wanted to exit the programme. Whereas, 40 percent of AEs from fast climber category wanted to exit the programme given a chance. This has given a perspective that the fast climbers may be entrepreneurial but they may be looking for better opportunity and leave the programme, given a chance. Therefore, the mentors need to focus more on medium climbers followed by slow climbers by giving them the necessary support systems.

Perspective of Registered Sample Farmers

Overall more than 46% of the respondents are primarily involved in agriculture and another 33% are involved in agriculture and allied Activities. In E.Champaran and Katihar majority of the farmers' livelihoods source is primarily from both agri and allied activities. Around 50% of the farmers came to know about AE program through SHGs. This bears testimony to the role played by existing cadre of SHGs on ground in leveraging their networks. Nearly 88% of the interviewed farmers mentioned that the respective AE's of that village/block approached them to apprise them of the initiative and create awareness about the services they are providing to them.

Nearly 35 percent of the respondents mentioned that the frequency of meeting was once in a month or two months, or may be with more time gap particularly in the districts of E.Champaran and Muzaffarpur. Around 32 percent of the respondents mentioned that farmer meetings happened regularly i.e. once in a week, especially quite more in the districts of Katihar and Purnea. Across all the five districts, most common issues that are being faced by the farmers are low yield (54% of the total participants), low income (35%), and lack of information regarding various schemes (33%), dependence on only one livelihood activity (28%) and low price realization for their produce (9.5%). In general, farmers' satisfaction with AE services is quite high in the study area. Not only do AEs command the respect of the community but the general awareness with the help of the 45 day induction training program has helped foster a trusted relationship between the farmers and the AEs.

Majority of the respondents have availed services relating to crop advisory (97%) followed by Input services (57%), financial services (56%) and marketing (48%) services. Very limited number of farmers is getting information on crop insurance, credit information, and produce aggregation compared to spice money and other input services. Particularly, spice money is seen to be a significant value added to the farmers. For most of the villages withdrawal of money at door step has provided significant savings of both time and money for

the farmers. The mentors in the study area are well committed, but they could explore all the possible ways to connect AEs and farmers with different organisations, convergence with different schemes/programmes etc to provide 360 degree support services to farmers. At present mentors and AEs are mounting their programs only on Jeevika where as it is advised that they should look at other schemes on a revenue model.

Recommendations

The following overall recommendations are made to help the program managers for effective interface and future design of the program. These recommendations are in addition to the specific AE level recommendations given at the Annexure.

1. Bihar is with complete micro land agriculture with average land holding being not more than 0.5 acre. (0.61 acres as per Government of Bihar). In such situation promotion of FIGs (Farmers Interest Groups) in the SHG spirit can sustain the model on long term. It can help in financial inclusion through Group Loans, crop insurance coverage and interest subvention schemes. There is also very good support coming for such groups from Government and NABARD.
2. Support structures for the Mentor at district level with specialists in agriculture, agribusiness, livestock and fisheries can help the AEs on long term. The support structures can provide technical guidance in all facets of agriculture contextualizing it to the specific needs of the AE.
3. Somewhere in the process SFI and Jeevika should also explore network of AEs to get scale advantage in marketing, procurement, Input business etc., Eg. Purnea is the biggest market for Maize in the country and all the client farmers of AEs in the district are growing maize. They can be linked to NCDEX and ENAM if a mechanism is evolved for “pool and sale”.
4. Water table in Bihar by and large is very much amenable for community solar pumps and a special drive should be made at state level to help drive this program of solarisation of agriculture irrigation
5. Organic farming is taking huge leap forward and AE should be specially trained in organic Good Agriculture Practices and he should be supported to establish Organic Input stores as part of his input business wherever it is feasible.

6. The convergence with local RARS, KVK, ATMA, Department of Agriculture, Fisheries, Livestock, DoT centres and Agriculture Universities should be conceived more rigorously. E.g. in Katihar district Banana Panama wilt is a serious problem and the AE and Mentor should leverage the services of local KVK and RARS for guidance to control the disease.
7. Bank linkage is still a rough edge for the AEs and without institutional finance the AE cannot do robust agribusiness
8. There are still rough edges in leveraging the seed money provided by Jeevika and some of the AEs are unable to take off for this reason.
9. Statutory License is another rough edge that needs to be smoothed and it requires state level policy support for ease of getting licenses
10. AE is a concept galvanized around rural livelihoods and if need be the AE should be encouraged to organize livelihoods skill training programs on a revenue model basis. Such skill training programs are demanded by communities in all the Districts. It will also help the AE stabilize his incomes during Agriculture off season.
11. Crop Colony approach is fast gaining momentum wherein group of farmers synchronize their critical agriculture operations like nursery raising, transplantation and harvest in the same week so that scale of economies can be reached for market linkages.
12. The induction training program should be reinforced with refresher programs periodically on the model of "Training and Visit System" (Benor System) so that the skills of AE are upgraded constantly.
13. The basket of services of each AE can be still diversified with custom hiring center, ware housing, transport vehicles, power weeders and packing houses and advanced inputs like mulch sheets, pheromone traps and yellow sticky papers etc.,
14. Many farmers were demanding soil test and each of the AE can be provided with simple soil testing kit and soil testing can be done on paid service basis.

15. There are very good subsidy schemes available under Integrated Mission for Horticulture Development for such activities and for FIGs of farmers the schemes are very supportive.
16. Some of the farmers were demanding provision of fingerlings to take up fisheries and such activities can not only win the confidence of the AE but also can boost his revenues.
17. Papaya seedlings distribution is one of the popular activities of AE and such saplings can be still diversified to different crops for micro nutri gardens.
18. Stall fed goat rearing, poultry and dairy are also promising off farm activities that can sustain the activities of the AE and provide additional gainful employment to the farmers.
19. Stress migration is a serious concern and a micro plan for each household to provide jobs at the village itself through off and non-farm activities can be conceived to the extent possible which can also boost revenue of the AEs. There is no village that has been studied, without men folk migrating to far off places for work. The migration can be gradually reversed with the AE support in promoting on farm and off farm livelihoods with the support of Jeevika.
20. There is need for developing strategic business plan for one year for every AE with projected cash flows and the plan can be closely monitored by the Mentor with corrective measures wherever there are short comings.
21. Cross learning visits for the farmers and AE to show the successful case studies like in Phulawani village where solar pump was installed can synergize the good practices.
22. In some cases farmers are taking up mushroom cultivation and such farmers can be supported by the AE in span material supply and marketing which can generate additional income for the AE
23. The AV kit provided to each AE is effective to some extent but the equipment can be used for wide range of videos and SFI can make pool of good learning videos and update them constantly. There are also instances wherein the AV equipment is not functional

24. The Spice Money concept is well conceived and is providing very good revenue stream for the AEs. Wherever there are technical problems they need to be addressed immediately
25. In bigger villages the bouquet of services can be diversified to xerox unit, travel ticket booking, mobile payments, DTP and courier services to increase sources of income of AE.
26. The model cash flow for an AE can be conceived which makes his enterprise financially and operationally sustainable.
27. There is need for strong convergence with NABARD at district level and Mentor can sensitize the local DDM of Nabard about the AE Model as NABARD can provide grant support for capacity building and also pursue Bankers for linkages.
28. In areas like Katihar, where some of the villages are prone for water logging there is need for paradigm shift from traditional agriculture to in land fisheries and such transformation provides ample opportunity for the AE for his enterprise.
29. Ideal equation for AE in his enterprise should be that he buys from farmers 70% (marketing) and sells to farmer 30% (in puts). Since sale of Agri inputs is a low hanging fruit and easily doable all the AEs are confining their revenue streams to “input business”. But in marketing of the agriculture produce with “pool and sale” concept the AE can earn much revenue and also can help the farmers in a bigger way.
30. Custom Hiring of farm equipment is another big opportunity for the AE and none of the AEs studied have made steps towards establishing a custom hiring center
31. Ware housing and packing houses are also another big revenue models in the bouquet of value added services
32. Vermi-Composting is also an area which is unexplored and sale of vermin compost and assistance in setting up vermin compost units can be a win-win revenue model.
33. There is also need for collective procurement of all the AEs in a district, like procurement and sale of plastic mulch sheets or nursery equipment like portrays. The synergy of such collective procurement can be explored by the Mentors.

34. There was question about whether AE services gradually turn into exploitative and monopoly making the community to stand lose on long term. For this question the SFI team emphatically replied that there would be checks and balances against such exploitative practices and close monitoring indeed can put check on this right from beginning.
35. Some of the AEs are appearing to be non-starters or non-performers. There is need to develop objective criterion to identify such AEs and wean them away so that the commitment of the Mentor is not wasted on non-performing AEs.
36. Also selection of new AEs should be done taking into confidence the local Mentor from SFI so that the Mentor also owns the entire transition process of AE right from beginning.
37. The districts that are studied are highly suitable for summer Cole crops. Mentors and AEs have to be specially trained to encourage summer cole crops in the ensuing summer season.
38. In Muzaffarpur which is litchi fruit capital of India, the AEs in the district can specially focus on value chain of Litchi which is a very potential agribusiness opportunity for all the AEs in the districts of Muzaffarpur and E Champaran.
39. It is found that there is vast scope for contract farming inviting corporate partnerships for vegetables and value added agriproducts.
40. Designation of seed villages and contract farming for seed production is another area where AE can play pivotal role.
41. In the villages where soil salinity is a serious problem, there is need to train the AE on soil reclamation practices providing him with supply source of green manure seeds, soil amendments like gypsum and technical support which also generate revenue for the AE.
42. It is to be noted by the Program Planners that in Bihar, Farmer Producer Organizations are going to come up in a big way in all the districts. The AE should be geared up to the new program of farmers collectives and if required he should be trained in the promotion and management of FIGs and FPOs. Eventually he can shift his role model to that of

FPO Manager which is more broad based and gives him better revenues and helps the farming community with more evolved value chain for their products

43. Placed below are some assumptions for Optimum scale at which AE model can be financially sustainable

Model AE

Projected Cash flow and Revenue Streams

Optimal Indicators for AE to be self-sustainable

Outreach Indicators: 1 or 2 villages with 400 farm households

Operational Indicators: one Input store, one nursery with capacity of 1 Lakh saplings, Spice Money Hardware and AV Kit

Financial: as shown below

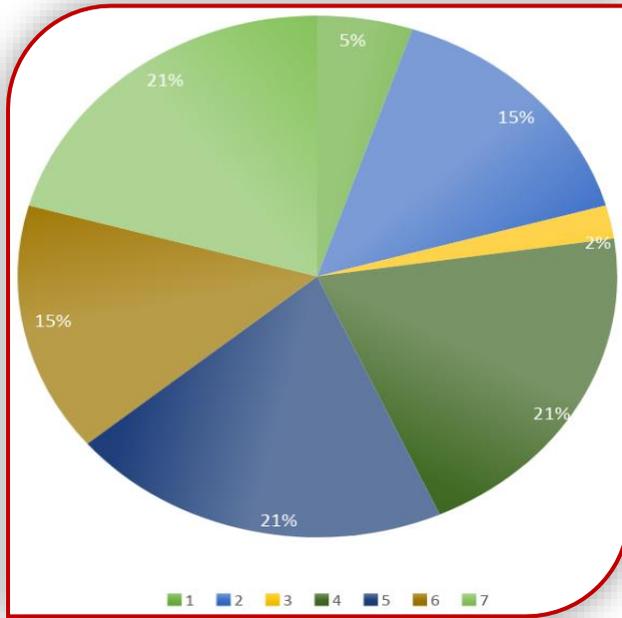
Sl. No	Revenue Stream	Financial Turnover	% of Net Margin	Revenue Rs.	Remarks
1	Sale of chemical fertilizers	Rs.20, 000,00	5%	1,00,000	Time period 1 year
2	Seeds, Pesticides	Rs. 5,000,00	15%	75,000	
3	Spice Money Agency	Rs. 20,000,00	2%	40,000	
4	Nursery Business	Rs. 2,000,00	20%	40,000	
5	Organic Inputs	Rs. 2,00,000	20%	40,000	
6	Farm Equipment, Mulch sheets, seed trays, etc.,	Rs. 2,00,000	15%	30,000	
7	Others (soil amendments, vermin compost, neem cake etc.,)	Rs. 1,00,000	20%	20,000	
	Total	Rs.66,000,00		3,45,000	

Assumptions

- Time period of 1 year for AE to stabilize his/her enterprise
- Each AE can earn Rs.600 per day which is taken as opportunity cost or compensation
- The projected financial turnover is subject to sanction of timely loans and other support like licenses
- All the AEs are also practicing farmers and the income from his own agriculture is in addition to the above projections.

His own expenses like travel, rents,

transport and labor are provided for and net % of margin is only taken.



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Annexures

1. Categorization of AEs (Sample) based on performance indicators – Fast, Medium and Slow Climbers

District	Name of AE	Performance Indicators (carry 20 max marks each)					Remarks
		Mobilization	Extension services	In put services	Banking services	Market services	
							>70 FC 50-70 SoC <50- SLC
Patna	Madhur Kumar	15 (20)	15(20)	15(20)	15(20)	10(20)	70 - FC
	Chandan Paswan	18(20)	18(20)	18(20)	-	-	54 - SoC
	Sivasankar Chowdhury	15 (20)	-	-	-	-	15 SLC
Muzzafarpur	Md. Ashroff	15(20)	-	-	-	-	15 SLC
	Guddukumar	18(20)	18(20)	18(20)	18(20)	5(20)	77 FC
	Shantidevi	18(20)	12(20)	15(20)	-	15(20)	60 SLC
E Champaran	Nandkishore	18(20)	18(20)	18(20)	18(20)	10(20)	82 FC
	Ramvinay Ram	15(20)	-	-	-	-	15SLC
	Hiralal Ram	15(20)	10(20)	15(20)	15(20)	-	55SOC
Purnea	Mithilesh Kumar	18(20)	15(20)	15(20)	15(20)	10(20)	73 FC
	Abeshkumar	10(20)	-	-	-	-	10 SLC
	Sumanthkumar	15(20)	10(20)	18(20)	-	10(20)	53 SoC
Kathihar	Deepak Kumar	15(20)	10(20)	-	15(20)	--	40 SLC
	Sudarshan Kumar	15(20)	-	-	-	-	15 SLC
	Sanjaykumar Yadav	15(20)	15(20)	15(20)	15(20)	-	60 FC

2. Details of Focused Group Discussions

Focus Group Discussion I	
Name of the Village: Adhhapa:	Mentor : Pritam Kumar
Name of the Agri Entrepreneur : Shri Madhur Kumar	
Block: Pulwahri Sharif Patna	District:
Date of Visit: 16-1-2019 : 10.00 am	
No., of community members in FGD: 10 farmers	

Background:

The AE started functioning from 2018. The AE has undergone induction training for 45 days in Hyderabad and Pune. There are 275 farmers registered with him and he is reported to be covering 12 villages close by. He is also VRP for the Jeevika Program but this assignment may end soon. He is also farmer by himself cultivating small patch of 0.03 cents of land locally. The farmers have tendency to migrate during the stress period to far off places in the country. They grow Gourds, beans, Palak, Coriander, Turmeric, Ginger, Mustard, Potato and peas besides cereal crops of wheat, paddy and maize. All the farmers are micro land cultivators or tenant farmers.

Basket of services provided by the AE:

- a. Seeds, chemicals and Fertilizers
- b. Nursery plans
- c. Financial services through Spice Money partnership
- d. Crop Advisory services
- e. Solar Pump utilities

Financial Performance:

He has achieved a financial turnover of Rs.60, 000 that includes seed money provided through loan by Jeevika to the extent of Rs.30, 000

Observations:

The AE has brought about significant change in the landscape of the village agriculture. The community members who participated in the FGD have expressed that the total area of around

30 acres in the village has undergone sea change from looking barren or single cropped to flush green vegetable patch. They have honestly attributed the change to the services being rendered by the AE. The local Jeevika person from the Block is also supporting the AE in various issues like getting licenses, seed money etc., as informed by the AE and Mentor.

To the question as to why 275 farmers are associated with the AE, the community gave a candid reply that earlier they were going to Nabatpur, a distant market town for all the agriculture needs including Agri inputs and market. Now that they are able to get the much-needed inputs from village point itself saving huge amount of time and money. They are also very much satisfied with the quality nursery saplings being sold to them by the AE at their farm gate itself. Their biggest challenges are fluctuating and exploitative markets and compulsions of stress migration during the lean periods. They are also satisfied with the crop advisory services being rendered by the AE through AV Aids kit. The designate Mentor from SFI is also providing seamless technical support to the AE which is giving him much needed self confidence in his new assignment. Going by the good start and considerable ground already covered by the AE he can be classified as Fast Climber.

Recommendations:

- a. The much needed MUDRA loan or any institutional credit linkage is yet to be actualized to reach break-even financial turnover which is worked out to be nearly Rs.30 Lakhs per annum
- b. Significant impact can also be seen in how the solar pump set was being operated and shared by 15 farmers which is a model that can be emulated by other AEs also across the project.
- c. The AE is transitioning from VRP position and as such can mobilize more no., of farmers with local SHGs as entry point. As of now he is operating far below his potentiality.

Focus Group Discussion II	
Name of the Village:	Sarama
Mentor :	Pritam Kumar
Name of the Agri Entrepreneur :	Shri Chandan Paswan
Block:	Masaudhi
District:	Patna
Date of Visit:	17-1-2019 : 10.00 am
No., of community members in FGD:	30 farmers

Background:

The AE started functioning from 2018. The AE has undergone induction training for 45 days in Hyderabad and Pune. There are nearly 100 farmers registered with him and he is reported to be covering 2 villages close by viz. Sarvann and Nisiyama. He is also VRP for the Jeevika Program but this assignment may end soon. He is also farmer by himself cultivating 3 acres of land locally. The farmers have tendency to migrate during the stress period to far off places in the country. They grow all types of vegetables, potato, wheat and paddy. All the farmers are micro land cultivators or tenant farmers. In this particular village women groups are very active and are closely associated with AE for all their agriculture activities.

Basket of services provided by the AE:

- Crop Advisory services
- Inputs – seed and pesticides
- Mulch sheets
- Nursery

Financial Performance:

He has achieved a financial turnover of Rs 10,000 that includes seed money provided through loan by Jeevika to the extent of Rs.30, 000

Observations:

He could make good and humble beginning in spite of critical challenges like not able to get Fertilizer Input store license. The local village has very active women SHGs. In this village there are critical problems of land tenancy, electricity supply to farm lands, problem of pests and diseases to crops and unpredictable rainfall and credit linkages. Some of the women were requesting support for activities like backyard poultry and fisheries.

The women groups are active and each of the member is saving up to Rs. 10 per week and have got SHG Bank linkage credit up to Rs.30, 000 per household which is helping with finance

support for agriculture. This is also the village where the feedback about Agriculture Extension through AV Aids provided by the program were very positive. When asked about the challenges they are facing they narrated about going to far away market town for fertilizers, lack of credit support in addition to problem of pests and diseases to their crops. Going by the humble beginning and still lot of area unexplored for the AE activities, the AE can be classified as Average Climber

Recommendations: (overall recommendations are separately annexed)

1. The much needed MUDRA loan or any institutional credit linkage is yet to be actualized to reach break-even financial turnover which is worked out to be nearly Rs.30 Lakhs per annum
2. Jeevika should support to get the licenses from the Line Departments so that the twin objective of timely supply of inputs at door step of the farmer and also revenue for the AE can be achieved.
3. The AE is transitioning from VRP position and as such can mobilize more no., of farmers with local SHGs as entry point. As of now he is operating far below his potentiality.
4. There is felt need for diversification to backyard poultry and fishery which is needed to explored together by Mentor and the AE
5. Spice Money and other support services are to be expedited so that the AE can work to full potentiality with moderate assured revenues

Focus Group Discussion III	
Name of the Village: Bhodora	Mentor : Pritam Kumar
Name of the Agri Entrepreneur : Shri SivasankarChowdury	
Block: Masaudhi	District: Patna
Date of Visit: 17-1-2019 : 1.00 pm	
No., of community members in FGD: 10 farmers	

Background:

The AE started functioning just recently. The AE has undergone induction training for 45 days in Hyderabad and Pune. There are nearly 125 farmers registered with him and he is reported to be covering only one village which is big village. He is also VRP for the Jeevika Program but this assignment may end soon within 3 months. He is also farmer by himself cultivating 1 acre of own land and 2 acres of leased land locally. The farmers have tendency to migrate during the stress period to far off places in the country. They grow all types of vegetables, potato, wheat and lentils. All the farmers are micro land cultivators or tenant farmers. In this village AE is yet to kick start his work in full steam which he is promising to commence very soon.

Basket of services provided by the AE:

- Only Crop Advisory services

Financial Performance:

He has not yet started any value added service except crop advisory

Observations:

The AE is fairly new and yet to commence any tangible business. Farmers when interacted have informed that they are frustrated with the way subsidy schemes of government are implemented and the agriculture implements being supplied at subsidized prices by the Department are costlier than open market prices. They have observed that their close by market is getting 3 trucks of potato every day from outside there by creating glut for their own product. Some of the farmers have undergone training in mushroom cultivation and have pointed out that mushroom cultivation support can be good for them. When explained about the success story of Phulwani village in their own district they expressed readiness to for a cross learning village to Phulwani.

Recommendations:

1. This is a case of non-starter and the AE is yet to get his acts together
2. Farmers are proactive and can associate with the AE actively if timely services are provided.
3. This is the village where livelihoods diversification through mushrooms is found potential
4. A cross learning visit to Phulawani village to see solar pump laid in partnership with group of farmers and nursery etc.,so that the farmers here in this village can also get motivated.
5. The village is having critical marketing challenges and a strategic plan for aggregation and marketing of potato can be explored.
6. Given the slow start and the AE is yet to kick start his work he can be classified as Slow Climber

Focus Group Discussion IV	
Name of the Village: Devariya:	Mentor : Dhriendra Kumar
Name of the Agri Entrepreneur : MdAshraff	
Block: Paroo Muzaffarpur	District:
Date of Visit: 18-1-2019 : 1.00 pm	
No., of community members in FGD: 10 farmers	

Background:

The AE started functioning recently. The AE has undergone induction training for 45 days in Hyderabad and Pune. There are 243 farmers registered with him and he is reported to be covering 4 villages viz. Chain Pura, Chandpur, Sariya and Barampur. He is also VRP for the Jeevika Program but this assignment may end soon. He is also farmer by himself cultivating small patch of 0.36 acres of land on lease. The farmers have problem of soil alkalinity and water shortage. They migrate during the stress period to far off places in the country. They grow wheat, Mustard, Potato, maize and paddy and this is also a potential belt for Litchi fruits and earned name all across the county for best quality litchis. All the farmers are micro land cultivators or tenant farmers. He could not access the seed money also as he could not muster the much needed fertilizer license.

Basket of services provided by the AE:

- Skill training program under DDUKY as VRP training 22 youth for Tailoring

Financial Performance:

He is yet to kick start other activities

Observations:

The AE has started construction of shop room at the front of his house and has also shown the construction of vegetable nursery. But for this there is nothing significant ground that he could cover. But he seems to be a promising entrepreneur and given the right inputs and support may grow eventually. This is one village where he is getting support from Jeevika person in addition to excellent motivation being given by the Mentor.

Recommendations

1. The AE need to put his acts together and start working to roll out all the expected services to farmers.
2. He is having excellent support from the Mentor and he should make use of the support provided by mentor to accelerate the growth
3. The local farmers have reflected very positively about the initiative of AE services to Md. Ahsorff and have positively asserted that it is going to make a huge difference in their agriculture
4. This is village where Non-Farm Sector activities have also been shown potentiality and the program of AE should also explore such NGS activities where potential outreach and impact are possible.
5. This is most potential litchi fruit belt of the country all possibilities through AE model to explore procurement, packing and marketing of litchis can be possible.
6. The local farmers have complained about the quality of soils and soil testing and soil reclamation is very critical intervention needed by the AE
7. Given the delayed start and much ground yet to be covered , the AE is classified as Slow Climber

Focus Group Discussion V	
Name of the Village: JagannathPurDokra	Mentor : Dhirendra Kumar
Name of the Agri Entrepreneur : Shri Guddu Kumar	
Block: Saraiya	District: Muzaffarpur
Date of Visit: 18-1-2019 : 4.00 PM	
No., of community members in FGD: 25 farmers and SHG women	

Background:

The AE started functioning from 2018 and could take off very well. The AE has undergone induction training for 45 days in Hyderabad and Pune. There are 115 farmers registered with him and he is reported to be covering 4 villages' viz. Chakna, Gopimathpur, Muyagudi in addition to Jagannathpur. He is also VRP for the Jeevika Program but this assignment may end soon. He is also farmer by himself cultivating 5 acres of land locally. The farmers have tendency to migrate during the stress period to far off places in the country. They grow wheat, paddy, potato, mustard, vegetables and litchi. All the farmers are micro land cultivators or tenant farmers.

Basket of services provided by the AE:

1. Organic input stores
2. Seeds , fertilizers and pesticides
3. Nursery
4. Spice money
5. Crop advisory

Financial Performance:

He has achieved a financial turnover of 27.00 Lakhs with initial investment of Rs.5.00 Lakhs in spite of not getting any seed money support from Jeevika

Observations:

Guddu Kumar as AE could rise very fast with bouquet of services provided to the local farmers and winning their heart. During the group meeting, the community was all praise for his services and they are extremely happy with the financial services being provided through Spice Money agency. They observed that they could book train tickets for their migrant spouse in far off places, the remittances were easily done and even simple services like paying mobile phone bill

or TV dish bill were very easy. His Spice Money business turnover was Rs. 18.00 Lakhs which is a noteworthy service in financial inclusion sector. Here in this case the support of Jeevika was not significant but the Mentor Mr. Dharendra Kumar could guide him properly and the AE attributes to his success fully to the Mentor.

Recommendations:

The much needed MUDRA loan or any institutional credit linkage is yet to be actualized to reach break-even financial turnover which is worked out to be nearly Rs.30 Lakhs per annum

1. Significant impact can also be seen in how the solar pump set was being operated and shared by 15 farmers which is a model that can be emulated by other AEs also across the project as this village is reeling under severe water stress though ground water table is amenable for solar pumping.
2. The AE is transitioning from VRP position and as such can mobilize more no., of farmers with local SHGs as entry point. As of now he is operating far below his potentiality.
3. Jeevika should proactively support him in getting much needed in put licenses and also the seed money capital loan.
4. Farmers have expressed challenges in the market front for their produce and the AE together with Jeevika and SFI can evolve simple market models like 'pool and sale' as the AE is very much closely knitted to the farming community.
5. The village is having highly potential for community solar pump units and it can be explored intensively.
6. This is a very high potential litchi fruit belt and majority of the farmers have litchi plantation. The AE can explore distant markets where the fruit is in much demand and SFI can also work on fruit processing and cold supply chain models which are much needed in this district.
7. Given the outstanding performance and evolving as role model the AE can be classified as Fast Climber and the contribution by the mentor in molding him successfully is also noteworthy.

Focus Group Discussion VI	
Name of the Village: Mahant	Mentor : Dhriendra Kumar
Name of the Agri Entrepreneur : Ms. Shanta Devi	
Block: Mariyari Muzaffarpur	District:
Date of Visit: 19-1-2019 : 9.00 am	
No., of community members in FGD: 20 SHG members	

Background:

The AE started functioning after induction training program in Hyderabad and cross learning visit to Pune. The AE has undergone induction training for 45 days in Hyderabad and Pune. There are 200 farmers registered with him and he is reported to be covering only 1 village. She is also active VRP for the Jeevika Program but this assignment may end soon. She is also farmer by herself and her family cultivates 2 acres of land. They have water problem with acute shortage in summer for crop cultivation. Hence men folk migrate during the stress period to far off places in the country. They grow wheat, Mustard, Potato, maize and paddy and this is also a potential belt for Litchi fruits and earned name all across the county for best quality litchis. All the farmers are micro land cultivators or tenant farmers.

Basket of services provided by the AE:

- Nursery of vegetables and papaya
- In put store and seeds store yet to commence

Financial Performance:

She is provided with the kit for Spice Money operations but the machine has technical snags and as such the lady could not commence this business. Otherwise she is able to achieve a financial turnover of Rs. 1.00 Lakh through sale of fertilizers, seed and nursery plants.

Observations:

The AE being lady, has excellent rapport with the local SHGs and it stands to her advantage. Otherwise she is having challenge of obtaining the license for fertilizer business. She is planning to have nursery of papaya seeds and the Mentor is helping her with the technical support for growing and selling the papaya sapling of Red Lady variety and distribute them amongst the SHG members for back yard kitchen gardens. The total attendance of the meeting was ladies as the men folk have either migrated to cities for work or have gone to field for agriculture work. It is also observed that the local Jeevika anchor person is not much of help to her. However she

got Seed Fund of Rs. 30,000 from Jeevika as she herself is group leader. They are all good goat Rarers and can explore modern goatery as additional gainful employment.

Recommendations:

1. Ms. Shantakumari is the lone lady AE in the study of 15 AEs across 5 districts. Her being a SHG leader and Jeevika program direct participants give good chance for success. The community have reposed faith in her in the role of AE.
2. She is yet to get support for fertilizer license which is a vexed issue across many AEs and she seem to have entrepreneurial ability and family support to be good AE provided support is given in critical areas like input license etc.,
3. This village is a good case for exploring community solar pumps as water shortage is critical during summer season
4. The village is also have potential to be a model goatery village through modern goat rearing techniques like stall fed and semi stall fed goat rearing which can be explored through the AE as revenue model
5. Simple technical snags of machinery have let down her from earning revenues through Spice Money agency which are avoidable and have to restore at a very quick phase.
6. The idea of distributing papaya saplings is a very innovative idea and it can be extended to other nutri garden plants also
7. The lone supporter in her case is the Mentor and Jeevika person could have supported pro-actively.
8. Mudra Loan or any other Bank loan can be of good help to her at this stage
9. Given her ability to do Rs.1.00 Lakh business without much support coming from others, she can be rated as Solid Climber and has all potentiality to graduate to be the Fast Climber

Focus Group Discussion VII	
Name of the Village: Bahadurpur	Mentor : Guarav
Name of the Agri Entrepreneur : NandKishor Kumar	
Block: Arerag Champaran	District: E
Date of Visit: 19-1-2019 : 3 PM	
No., of community members in FGD: 20 SHG members and 5 farmers	

Background:

The AE started functioning after induction training program in Hyderabad and cross learning visit to Pune. The AE has undergone induction training for 45 days in Hyderabad and Ranchi. There are 400 farmers registered with him and he is reported to be covering 4 villages. He is also active VRP for the Jeevika Program but this assignment may end soon. He is also farmer by herself and her family cultivates 2 acres of land. They have water problem with acute shortage in summer for crop cultivation. Hence men folk migrate during the stress period to far off places in the country. They grow wheat, Mustard, Potato, maize and paddy and this is also a potential belt for goatery, dairy and poultry. He is by far the most successful AE in this program, as observed and measured by financial turnover and other performance indicators.

Basket of services provided by the AE:

- Nursery of vegetables and papaya
- In put store and seeds ; nursery plants
- Kirana stores
- Spice Money
- Equipment for farm operations

Financial Performance:

With wide range of value added services he could achieve financial turnover of Rs.36 lakhs of which Rs.25 Lakhs is through fertilizers and inputs and Rs.11.00 Lakhs through Spice Money Agency. This has also left him with Rs. 3.50 Lakhs annual net income, making him the complete self-sustainable revenue model out of this innovating project.

Observations:

The AE Mr. Nandkumar is role model for all AEs and through his entrepreneurship and the good will that he has with the SHGs as VRP, could reach financial turnover of Rs.36 Lakhs within short time and which is also the highest recorded amongst all the AEs in the Program in Bihar state. The store and outlets were impressive and well-appointed and the farmers are observed buying and discussing with him while this study was being done. Being VRP he could utilize the full potentiality of good will with the SHG women members and that was perhaps the reason why there were good number of ladies present in the meeting. The men folk in the village migrate to towns for work in the slack season. Not that there are no challenges and the farmers have acute water shortage during summer though there is ground water table available for potential solar pumping. The other challenges are proper and timely crop advisory and extension support.

Recommendations:

1. Mr. Nandkumar is by far the most successful AE across all the 5 districts and his model of success can be replicated in all other places
2. The contributing factors like prim locality in put stores, excellent support from Mentor and good will amongst the community can all groom a successful AE.
3. With community patronage he is planning summer cole crops and cucurbit crops which can fetch good price. The same approach can be studied and explored with other AEs under similar agro-climatic conditions
4. There is need for diversification of livelihoods from primary agriculture and there is scope for stall fed goatery, diary and poultry that can be safety nets from stress migration.
5. This is potential case for now promoting Farmers Interest Groups amongst the clients that can help financial inclusion with services like bank loans, crop insurance and subsidy entitlements.
6. Community owned solar pumps can be of good success here due to high water table and high cost of diesel pumping of water. There is need to explore the opportunity.
7. Given his outstanding entrepreneurial abilities and quick success to sustainability can rate him as Fast Climber
8. The contributions of the Mentor in grooming this AE is also noteworthy.

Focus Group Discussion VIII	
Name of the Village: BaluvanEkavan	Mentor : Guarav
Name of the Agri Entrepreneur : Ram Vinay Ram	
Block: PrasvandPaharanpur	District: E Champaran
Date of Visit: 20-1-2019 : 9.00 am	
No., of community members in FGD: 10 SHG members and 10 famers	

Background:

The AE started functioning after induction training program in Hyderabad. The AE has undergone induction training for 45 days in Hyderabad. There are 312 farmers registered with him and he is reported to be covering only 1 village. This is a village with 3 AEs trained and there seem to be overlap in their services. The AE is by himself a farmer cultivating 2 acres of land. He is licensed service provider for Pay TM and he is claiming to have invested around Rs. 2.00 Lakhs in the AE business. The community is have teething problems in their agriculture with soil salinity and wild boar damage to crops. He asserted that but for the capital shortage he could have been anywhere in Rs.1.50 Lakhs volume of business every month. This village with saline soils in not a promising village for vegetables and as such the nursery business may not be profitable as claimed by the AE. The menfolk migrate regularly to Delhi and Punjab and do ice cream sales business there. They are growing sugar cane, mustard, vegetables and maize in addition paddy, potato and wheat.

Basket of services provided by the AE:

- Crop advisory
- Pay TM services
- Seeds and fertilizers through other licensee

Financial Performance:

With all initial hiccups he could be able to do business of Rs. 1, 25,000 of fertilizers and seeds worth Rs.60,000 so far. He claims that his business could have been anywhere around Rs.20 Lakhs per annum with licenses and capital in place.

Observations:

There are 3 AEs located in the same village and the process of selection of AE has to be revised to avoid such overlap. The Mentor is trying to reallocate the villages so that all the AEs in the village can have sustainable enterprise. Otherwise the SHG women who were in the meeting have expressed satisfaction with his services, except that one woman complained of deduction of Rs.50 from her account for a remittance of Rs.10,000 from his husband working in Delhi. It was clearly explained by the Mentor and the AE as to why they charge Rs.50 for the service. The village is a problematic village with saline soils and wild boar problems. One lady is reported to have lost all her half an acre mustard crop due to salinity.

Recommendations:

Mr. Ram Vinay is slowly getting into the core business of AE overcoming the initial hiccups and he needs full support at this point to stabilize.

1. There is very good potentiality for solar pumps in this village and if possible a group of farmers can be taken to Phulwani village in Patna district for a cross learning visit to show how a group of 10 to 15 farmers can harness the solar pump.
2. There is need for soil testing and the AE can start soil sampling and tests as a paid service.
3. There is very good scope for summer cole crops in the village which can get good price in the market. His nursery should schedule the saplings for summer transplantation.
4. Mudra Loan and Seed Money are still grey patches that need to be taken up by Mentor immediately.
5. There is very good scope for convergence with state sponsored programs for training the youth in the village in some nonfarm sector activities.
6. With concerted effort he is taking the enterprise forward and can be classified as mid climber and the support rendered by the Mentor in this remote village is noteworthy.
7. Loose ends like setting of Spice Money apparatus are issues that can be easily fixed so that the enterprise can take off in this remote village immediately.

Focus Group Discussion IX	
Name of the Village: Rampurwa Bazaar	Mentor : Guarav
Name of the Agri Entrepreneur : Hiralal Ram	
Block: PrasvandPaharanpur	District: E Champaran
Date of Visit: 20-1-2019 : 9.00 am	
No., of community members in FGD: 10 SHG members and 10 famers	

Background:

The AE started functioning after induction training program in Hyderabad and cross learning visit to Pune. The AE has undergone induction training for 45 days in Hyderabad and Ahmednagar. There are 235 farmers registered with him and he is reported to be covering only 1 village. He is also active VRP for the Jeevika Program but this assignment may end soon. He is also farmer by himself cultivating 1 acre own land in addition to 2 acres of leased land. They have water problem with acute shortage in summer for crop cultivation. Hence men folk migrate during the stress period to far off places in the country. They grow wheat, Mustard, Potato, maize and paddy.. All the farmers are micro land cultivators or tenant farmers. This is the one AE who is reported to be canvassing door to door to mobilize the farmers and bring them together.

Basket of services provided by the AE:

- Crop advisory
- Nursery of vegetables and papaya
- In put store for fertilizers, seeds and pesticides is yet to start
- Nursery is under construction and may be ready by another 1 month
- He got all the equipment to commence the Spice Money backed financial services and it may take another one month
- He is also planning to get papaya seed of high quality and raise saplings with the help of the Mentor

Financial Performance:

With all initial hiccups he could be able to do business of Rs. 60,000 so far. But with the support of Mentor and things getting in place soon he may become stable AE. He is yet to get the seed fund of Rs. 30,000 from Jeevika and the proposed Mudra loan is still a distant dream.

Observations:

Heeralal is one of the three AEs in the village and his area of operation needs to be clearly demarcated. Otherwise in spite of lack of financial support, he is able to drive initial business in fertilizers and seeds. He seems to have earned confidence of the community and especially working rural women are listening to his advice and explanations. The village being problematic with saline soils throws challenges and also opportunities for the AE. When asked about how the Mentor is supporting, he affirmatively told that Mentor is giving full support and guidance in his new portfolio. The Jeevika VRP assignment has ended and he is relying only on AE revenues as of now for his livelihoods.

Recommendations:

1. The AE should be provided with support to start his enterprise, by getting licenses and seed money without which the entire commitment on him in this program will turn unproductive.
2. The village is having serious problem of soil salinity and soil testing kit can help the AE, to provide much needed soil test services on paid service basis generating handsome income to him.
3. Dhincha seed (green manure crop) and gypsum can be supplied to local farmers which another business opportunity for him
4. Solar pumps can be of high potentiality in this village and AE can facilitate this service on paid service model.
5. He is the one who has taken Pay TM service provider job and the model of Pay TM should be compared with Spice Money for both Advantages and lacunae so that there can be two different replicable service providers available.
6. The village can have good opportunity for off season vegetables as water is available during the summer season also.
7. AE has informed that the women can be trained in making sweet boxes and he informed that he is skilled trainer in making sweet boxes for the sweet meat shops of local towns and there is huge demand for the boxes that can generate very good employment for the women.
8. The overlap of services is a problem that need to be addressed immediately
9. Given the enterprise drive and support he is getting from Mentor in spite of reports that he is having financial problems personally he can be rated as emerging Solid Climber
AE

Focus Group Discussion X	
Name of the Village: Halalpur	Mentor : Piyush
Name of the Agri Entrepreneur : Mithilesh Kumar	
Block: Damdah Block	District: Purnea
Date of Visit: 21-1-2019 : 10.00 am	
No., of community members in FGD: 10 SHG members and 10 famers	

Background:

The AE started functioning after induction training program in Hyderabad and cross learning visit to Pune and Odisha the AE has undergone induction training for 45 days in Hyderabad and Pune and Odisha. There are 150 farmers registered with him and he is reported to be covering only 3 villages viz. Halapur, RamavtarChwok and Kukren. His VRP services have been closed a couple months back and he is solely dependent on his agriculture in addition to the present AE assignment for income. The village is far off from the main market in Purnea and poses quite significant problems in transport of inputs and also marketing of outputs. He is very pro-active AE with his own farming activity in 5 acres. The area is very resourceful with fertile soils and water and is one of the most potential maize crop belts in the country. But markets are very exploitative with middle men and small traders and Mithilesh is trying to learn the ropes of maize marketing by paying Rs. 10 to Rs.20 more per quintol. This is a village where the model is perfectly taking off. They are growing maize, jute, paddy, fox nut in low land, potato, vegetables and banana. His VRP assignment is closed 1 month back and he is full time into AE work.

Basket of services provided by the AE:

- Crop advisory
- Nursery of vegetables and papaya
- In put store for fertilizers, seeds and pesticides
- Very neatly laid down nursery that supplies high value horticulture crop saplings that include celery etc.,
- Spice Money backed financial services
- He is also planning to get papaya seed of high quality and raise saplings with the help of the Mentor
- Very technically laid out demonstration plot of capsicum crop with plastic mulch supported by SFI
- Market support services are being contemplated

Financial Performance:

He is able to get Rs.1.30 Lakhs seed fund loan from Jeevika groups and could generate monthly trade of Rs. 15000/- so far. He is reported to have generated Rs. 35 Lakhs business in Spice Money Agency so far. He is charging Rs.21 for Rs.5000 withdrawal or deposit @ 0.4% + Rs. 1 charge.

Observations:

Mithish Kumar is one of the success stories in the AE project. He has made smart beginning and is poised to grow into fullfledged AE. The community is so closely knitted with AE that, when he could not get license for fertilizers, but still doing fertilizer business, local Agriculture Department wanted to stop him. But the local villagers and Sarpanch came to his rescue and defended him so that he could continue the business. The community is very much satisfied with the financial services being provided through Spice Money Agency. Being a local farmer, family person of a Jeevika member and well trained AE, he has promising future in this AE portfolio. The demonstration plot laid out for capsicum crop and the way he has built the nursery are all very impressive and fulfil the mission with which AE portfolio is invented by SFI and Jeevika. The Mentor is also guiding him very closely and standing by him in all operations which is giving much needed confidence and expertise.

Recommendations: (overall recommendations are separately annexed)

- a. This is a village of paradox, with some of the richest and most fertile soils with assured irrigation throughout the year, and yet farmers keep migrating to cities for work. The reason being land less ness and unremunerative agriculture, which should be keenly studied by the AE and Mentor to suggest ways and means to reduce stress migration.
- b. There is need for livelihoods diversification in the village supported by skill training programs in stall fed goatery, dairy and poultry.
- c. There is need for crop colony approach to mitigate market vagaries, which is discussed in general recommendation for all the AEs to be followed
- d. The videos provided in the AV kit of the program are not contextual and there is need to update them and made more village specific crops oriented.
- e. Solar pumps also provide much needed low cost sustainable irrigation for collective of 10 to 15 farmers.
- f. He has introduced plastic mulch sheets and the practice now should be extended to as many vegetable gardens as possible and Supply of mulch sheets can be a good source of revenue for the AE.

- g. With very good beginning and lot of potential in store, the AE can be classified as Fast Climber. The support provided by the Mentor is noteworthy in this case.

Focus Group Discussion XI	
Name of the Village: Borarahi	Mentor : Piyush
Name of the Agri Entrepreneur : Abhesh Kumar	
Block: Banmahishi Block	District: Purnea
Date of Visit: 22-1-2019 : 11.00 am	
No., of community members in FGD: 30 SHG members	

Background:

The AE is working for the past 2 years as AE and recently concluded his VRP assignment with Jeevika. He is expected to cover 4 villages Viz. Thakur Pathi, Borarahi, Naulakhi and Karveli. He reported that he has enrolled 150 farmers for his services. The village is having Maize, wheat, Potato and Jute crops. The village is having consistent migration of men for work to far off places. The village is water logged area leaving not much scope for vegetables. The majority of the cultivators are land less and do tenancy cultivation @ Rs.10,000 for 0.04 acres. There is good support coming from local Jeevika line functionary.

Basket of services provided by the AE:

- Crop advisory is the only service he is providing

Financial Performance:

He is not able to take up any financial service as he complains that there are 4 such service providers already functioning in the same village

Observations:

Abhesh Kumar is a non-starter in spite of being AE for the past 2 years. The Mentor is trying to motivate him but could not succeed. He is trying to get him Input store in a month. The AE is complaining that there is an Farmer Producer Company by name Aranyaka working in the close by village. It is selling fertilizers, seeds and pesticides at competitive prices and he could not commence any business due to competition factor. The local traders are giving inputs for credit and this is another strong reason why he could not take off. For Spice Money, there are already 4 such service providers and he felt it is not worth to pursue the Spice Money services due to competition. It is a case of AE not taking off due to several external factors. However the Mentor wants to get him build a building and start input stores before June 19.

Recommendations:

This is a case of non- starter AE. The Mentor should try to get the input business at the earliest and should follow a dead line before which if it is not starting he can as well terminate the AE. The village is around 50 km from the District HQ and there is no point in wasting energy by traveling to this place frequently for the sake of a non-starter. Instead the same energy and time can be invested on emerging AEs. This is a case of Slow Climber given all parameters of growth for the past 24 months.

Focus Group Discussion XII	
Name of the Village: MehariyaParvath	Mentor : Piyush
Name of the Agri Entrepreneur : Sumanth Kumar	
Block: Mehariya Block	District: Purnea
Date of Visit: 22-1-2019 : 12.30 am	
No., of community members in FGD: 5 men and 10 women	

Background:

The AE is working for the past 1 year but due to unfortunate road accident he got his leg fractured causing disruption to his work. He could not also start Spice Money Agency as the village has got poor mobile network. He is also a farmer with 3 acres of land being cultivated. He is continuing as VRP and the assignment come to an end soon. He got trained in Hyderabad for 45 days in additions to computer training for 4 days in Maharastra. He has registered 200 farmers under his AE services. He got Rs. 30,000 seed money from Jeevika and is able to kick start input business with moderate input store where fertilizers are stored. They grow maize, wheat, paddy, potato, jute and vegetable. He is looking after 3 villages Viz. Moriya Parvath, Bolachand and Mehariya.

Basket of services provided by the AE:

- Crop advisory is the only service he is providing
- In put sales of seeds, fertilizers and pesticides though he is het to get fertilizer license
- Could not take up Spice Money Agency due to poor mobile connectivity in the village
- He is yet to get nursery business

Financial Performance:

He could reach a business turnover of Rs.80000 in one year and got seed money of Rs.30,000.

Observations:

Sumith Kumar met with an accident and could not take up AE services for the first 6 months. Now he is fully recovered and has commenced the business of Inputs in an impressive way. He is poised to grow further provided financial assistance through credit is provided. He seem to have won the confidence of the local community and started working on his complete portfolio.

Recommendations: (overall recommendations are separately annexed)

In spite of initial challenges the AE seemed to have won the confidence of the community and moving forward. He should be assisted to get required loan fund to invest in inputs business.

There is also need to look into the issue of mobile connectivity and Mentor can guide him to get the mobile network that works in the village to start the Spice Money Business.

With all challenges in the past he could cope up and bounce back to business which is highly appreciable and he could be rated as Solid Climber. The support being provided by Mentor is laudable and the engagement can be further taken forward with facilitation of loan and technical guidance in getting right mobile network for the Spice Money business.

Focus Group Discussion XIII		
Name of the Village: DakshinKatakosh Mentor : IC Kant		
Name of the Agri Entrepreneur : Sanjay Kumar Yadav		
Block:	Manihari Block	District:
	Katihar	
Date of Visit: 22-1-2019 : 7.00 PM		
No., of community members in FGD: 10 men		

Background:

The village DakshinKatakosh is a remote low lying area on the Banks of river Ganga. It is perilously vulnerable to the floods of Ganga and during the rainy season overflowing river water touches up to the border of the village. Due to water inundation much of agriculture is done only in rabi season and during the kharif season they rely on live stock or migrate to cities for work. Yadav was earlier VRP in the village for Jeevika Program but eventually he turned into full time AE activity. They grow vegetables like parval, potato and brinjal in addition to whet, maize, mustard and rice. Majority of the people in the village migrate to Punjab and Delhi for work and whoever is cultivating have learnt about the services being provided by Yadav through the SHGs and by himself. The AE is also a local farmer cultivating 2 acres. Majority of the farmers in the village are Kisan Credit Card holders in the local SBI. Manihari is the nearest market town.

Basket of services provided by the AE:

- Crop advisory
- In put sales of seeds, fertilizers and pesticides
- Spice Money Agency for the past 1 month
- He is yet to get nursery business and wanted to start supply of papaya saplings and scope for vegetable nursery is limited due to low lying area

Financial Performance:

The AE is working for the past 1 year but started his input store one and half month back and could get business of Rs. 8.00 Lakhs within short period. He has also recently commenced the Spice Money Business. As of now he is not able to sell fertilizers directly due to lack of license and if he can get license, the direct sales can boost his enterprise substantially. He is yet to get seed money of Rs.30,000 as he is not holder of Fertilizer License.

Observations:

Yadav is a promising AE and the community also have reposed faith in his services in this remote village. Within short span of one and half month he could do impressive financial turnover and is poised to grow substantially. It is informed that in the district of Katihar so far no AE got the fertilizer license. Since it is a low lying water inundated area there is good scope for live-stock, fisheries and poultry.

The community have reposed full faith in the AE and are keen to avail his services and support him in his endeavors.

Recommendations: (overall recommendations are separately annexed)

1. In Katihar district so far none could get fertilizer license and effort should be made to get them at the earliest which will boost the enterprise and income for the AE
2. The low lying area of Manihari block is suitable for off farm livelihoods like livestock, poultry, fisheries and non-farm sector skill based training programs. The village is highly suitable for in-land fisheries with small investments that can be explored.
3. Almost all the respondents have informed that they are holders of Kisan Credit Card. This village is a ripe case for promotion Farmers Interest Groups and leverage Bank loans as per RBI guidelines.
4. The intensity of migration is also very high in the village in spite of abundant natural resources available in this village situated close to the Ganga river. There should be clear plan of action as to how many are migrating and what could be the coping mechanism to create safety nets for the migrants.
5. Manihari market is good market and if the farmers can plan Crop Colony approach there is good scope to get better market prices.
6. He is not yet got any seed money and waiting for fertilizer license which is mandatory for the seed money. Jeevika Program should be persuaded to release the Seed Money upfront rather than after obtaining the license.
7. With his impressive performance against all odds he can be rated as fast climber and the support services of Mentor are also appreciable

Focus Group Discussion XIV	
Name of the Village : Gori Pachma	Mentor : IC Kant
Name of the Agri Entrepreneur : Deepak Kumar	
Block: Korah Block	District: Katihar
Date of Visit: 23-1-2019 : 11 PM	
No., of community members in FGD: 10 men and 20 SHG members	

Background:

Goripachma is a remote village in Korah block but endowed with rich alluvial soils and good water facility. Deepak Kumar is VRP turned AE and may continue the VRP work for some more time. The villagers, majority of them migrate for work to Delhi and Punjab in spite of living in a village with rich natural resources. Jeevika line functionary allotted to the block is reported to be not very actively supporting the AE. There is weak market linkage and small traders dominate the markets who resort to weighment pilferages, low prices and spurious trade practices. They are growing banana, maize, vegetables and potato in large areas. After 45 day training program the AE started the work 1 year back but except Fino Bank agency he is not doing any other activity as of now. Otherwise he is farmer by himself cultivating small patch of 0.10 acres. Farmers when interacted have reposed full faith in the AE and have promised to support him in all his activities.

Basket of services provided by the AE:

- Crop advisory
- In put sales of seeds, fertilizers and pesticides is yet to commence as licenses are not given
- Fino Financial Services is being rendered
- He is yet to get nursery business and the nursery is under construction

Financial Performance:

The AE is into Fino Financial services and has reached up to Rs. 5 to 6 Lakhs as of now. Meanwhile the server broke down and he could not progress further. He did not get the seed money as he is yet to get the licenses.

Observations:

Kumar is a promising AE and the community also have reposed faith in his services in this remote village. The village is having huge plantation under Banana but the crop damage is

constantly growing due to Banana Panama wilt. Mono cropping of banana year after year is causing lot of damage and unless a concerted effort is made by the entire banana growing community together, it is going to spell greater damage. Farmers are very progressive as we could discuss with them about advanced practices of banana cultivation practices and other progressive agriculture practices. He is intending to take up fertilizers, seed and pesticides business in addition to IDFC Bank agency. Nursery is already under construction and may get ready by another one month. Loan and Licenses are critical challenges for this AE

Recommendations: (overall recommendations are separately annexed)

1. In Katihar district so far none could get fertilizer license and effort should be made to get them at the earliest which will boost the enterprise and income for the AE
2. Banana Panama wilt is threatening the banana crop to the extent that they may up root the crop forever. This gives an opportunity for the AE if he is trained in integrated package of practices and plant protection measures for the wilt disease and he can sell the pesticides and fungicides in addition to helping the farmers.
3. Seed Money and Bank loans can help the AE with boost in business and efforts should be made to address this critical gap
4. Farmers in the village very receptive and forward looking and with concerted effort by the AE and Mentor the enterprise can be sustained
5. Given his commencement of Financial Services and need for covering more ground to commence in put business, he can be rated as Solid Climber. The Mentor is also making commendable effort outreaching to this far away village from Katihar.

Focus Group Discussion XV	
Name of the Village : Satbeherichandpur	Mentor : IC Kant
Name of the Agri Entrepreneur: Sudarshan Kumar	
Block: Sameli Block	District: Katihar
Date of Visit: 23-1-2019 : 1 PM	
No., of community members in FGD: 15 men and 10 SHG members	

Background:

Kumar has enrolled as AE a year ago and has undergone 45 day training program. But so far he could not take up any activity except helping a farmer to grow half an acre of cucumber crop. His input shop is under construction and has promised to complete it and commence work from February. There is also intensive follow up from Jeevika person to complete the work. He has registered 146 farmers so far. He himself a farmer cultivating small patch of 0.25 acres. The farmers when appraised about the AE model of service to them, they are all appreciating it and promising to extend complete support. There is Bihar Institute of Fertilizer Cooperative in the village which is providing fertilizers to the farmers to some extent. Otherwise farmers are buying from private dealers at higher price with Rs.100 differential. He wanted to start nursery and seed shop soon. Farmers here are growing Maize, wheat, potato, Banana and other vegetable crops.

Basket of services provided by the AE:

- No activity so far

Financial Performance:

No activity so far. He is planning to start Spice Money Agency once the shop is ready.

Observations:

He is a non- starter and has promised to kick start all the activities from February. There are critical needs to farmers like soil testing, crop advisory and fertilizer supply at their village. Farmers have complained about exploitative traders for whom the produce is sold on credit basis with 2 months period.

Recommendations: (overall recommendations are separately annexed)

This is a case of non- starter for several reasons. The Mentor is expected to constantly follow up with deadlines and incase he is unable to take off within 3 months, they can contemplate to terminate him. Given his performance so far he can be rated as Slow Climber and the Mentor

need to make a clear plan for him and rigorously follow it up. The distance is too far away and incase he is not able to take off, within 3 months, they can contemplate to terminate him. Given his performance so far he can be rated as Slow Climber and the Mentor need to make a clear plan for him and rigorously follow it up. The distance is too far away and incase he is not able to take off, the Mentor has to make a strategy for substitution to save the time and cost of travel.