

# *Seidhi Solai*, a Print based Open and Distance Learning Tool for Farmers

Reflections of farm women and men



JRD Tata Ecotechnology Centre  
M S Swaminathan Research Foundation



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**JRD Tata Ecotechnology Centre  
M S Swaminathan Research Foundation**  
Third Cross Street, Taramani Institutional Area  
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## FOREWORD

Knowledge empowerment is vital to improve the lives of the rural population, particularly the poor. M S Swaminathan Research Foundation (MSSRF) has been playing a significant role to promote sustainable rural livelihoods by providing local specific and need based scientific information /knowledge through Information and Communication Technology (ICT) and non ICT tools with a pro-poor, pro-women and pro-nature approach.

Lifelong Learning (L3F) for Farmers, a collaborative project of (MSSRF) and Common Wealth of Learning (COL) emphasises continuous learning among farm women and men using different information and communication tools, horizontal and vertical learning and networking with stakeholders by building their capacities to improve their food and livelihood security and income, and in promoting environmental sustainability and poverty reduction. This document based on case studies of farm women and men from Kannivadi region of Dindigul district, Tamil Nadu, brings out the benefits of reading and using the content in *Seidhi solai*, a local newsletter- one of the earliest information tools employed as part of the L3F for farmers- in their day today agricultural operations, livestock care and management and other allied activities. It is encouraging to learn that farm women and men value the content of the newsletter because it helps them in improving their agricultural production, in managing their livestock and reducing their expenditure.

We sincerely hope that MSSRF's partnership with COL would continue for many more years and contribute significantly in improving the livelihoods of rural women and men. I congratulate Dr L Vedavalli for painstakingly documenting the case studies and bringing out this publication. I also thank Dr R Rengalakshmi, Director, JRD Tata Ecotechnology Centre and her team in Kannivdi for their valuable service in making this programme effective.



Soumya Swaminathan

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MSSRF is immensely indebted to women and men from the villages of Kannivadi for giving their valuable time and sharing their experiences that reflected the impact of the project. Without their support this report would not have been possible.

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# *Seidhi Solai*, a Print based Open and Distance Learning Tool for Farmers

## 1. Introduction

This document is based on case studies of farm women and men from Kannivadi region of Dindigul district, Tamil Nadu, who have benefitted by reading and using the content in *Seidhi Solai*, a local newsletter in their day today agricultural and allied activities. This newsletter is one of the earliest information tools employed as part of the Lifelong Learning (L3F)<sup>1</sup> for Farmers, a collaborative project of M S Swaminathan Research Foundation (MSSRF) and Common Wealth of Learning (COL). The partnership, that commenced in 2004 aims at knowledge empowerment of rural farm women and men, in enhancing their capacities to improve their food security, livelihood security and income, and in promoting environmental sustainability and poverty reduction.

The MSSRF, in association with COL, has been engaged in activities and interventions that build the resilience of women and men farmers in the Kannivadi region, so as to equip them to address the challenges in production and marketing of farm products. MSSRF –COL partnership focus on building the capacity of the farmers to take informed decisions and to adopt appropriate technologies; in promoting innovation in sustainable agricultural practices; and in striving to enhance farmers' network. The project going by its name- 'Lifelong Learning for Farmers', strives to enable a farmer for lifelong learning and practicing of her/his learning in her/his fields.<sup>2</sup> The 'lifelong learning for farmers' also contributes substantially in the livestock care and management and other allied activities.

From our interaction with the women and men respondents we come to understand that the various information disseminating strategies related to agriculture and allied activities employed by the Reddiyarchathiram Sustainable Agricultural Producers Company (RESAPCOL)<sup>3</sup> are helpful to farmers in the Kannivadi region. Information

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1. Lifelong Learning for Farmers is a holistic model; it emphasises continuous learning among farmers using different information and communication tools, horizontal and vertical learning and networking with stakeholders. The L3F initiative focuses on linking human capital, with social and financial capital; it is believed that capacity building of farmers will be of help only when it is linked to social capital in the form of mobilised farmer groups and financial capital in the form of credit. The present study focuses on *Seidhi Solai*, a local newsletter as to how it has been of use and help to the farmers in their daily agricultural operations and livestock care and management.
  2. The strategies are carried out through grassroots institutions functioning at the local level: Kulumai Producers' Federation and Reddiyarchathiram Sustainable Agricultural Producers Company (RESAPCOL).
  3. Reddiyarchathiram Seed Growers Association (RSGA) has been renamed as Reddiyarchathiram Sustainable Agricultural Producers Company (RESAPCOL). Most of the farmers refer to it as RSGA or *Vidai* company (Seed Company) or MSSRF office. RSGA/*vidai* company RESAPCOL/MSSRF is used interchangeably.

for knowledge empowerment takes place through offline and online formats. The different modes of information include print media, notice board, mobile phones and other social media tools such as whatsapp, face book and You tube. Capacity building of the farm women and men is promoted by organising training and skill development programmes related to agriculture practices and livestock care and management. In addition to this, staff from RESAPCOL/MSSRF visits the fields of farmers to guide them and suggest crop advisories to be followed. It is envisaged that this would alert and prepare the farming community to adopt suitable practices and technologies to increase production and prevent losses. The farmer may use one of these or combination of these channels that suit her/his preferences. All the strategies that are used for information dissemination have the scope to reach many farmers from one individual.

## Focus of the present study

The present study is an attempt to understand the utility and effectiveness of *Seidhi Solai* in the lives of farmers in and around the villages of Kannivadi region of Reddiyarchatiram block of Dindigal district, Tamil Nadu.

## Study Area

Dindigul district was carved out of the composite Madurai District during September 1985. Agriculture is the primary and traditional occupation of majority of the population in the villages of Dindigul. The season for *manavari* (rain fed) cultivation is Aadi (July-August) *pattam* (season) and *iravai* (irrigated) is Ippasi (October- November) and Karthigai (November-December) *pattam*. The common crops presently cultivated in this region include *makka cholam* (maize) and *paruthi* (cotton); *sundal* (chickpea) and *kothamalli* (coriander) are also cultivated. Maize is cultivated during September-January and cotton generally during September-March. The crops cultivated fifteen -twenty years ago include rice, sugar cane, *kuchikizhangu* (tapioca), coriander, *sundal* and traditional variety of cotton. Kannivadi region is known for horticultural crops particularly the *pandal* or trellises (special structures used for twining vegetables) crops such as *pudalai* (snake gourd), *peerkankai* (ridge gourd), *sorakkai* (bottle gourd), *pavakkai* (bitter gourd) and so on. Other crops such as *kathari kai* (egg plant plant), *vendai* (ladies finger) and *milagai* (chilly) are also cultivated. However, the shortfall in the rainfall affects vegetable cultivation in a larger area. It is learnt that farmers cultivate vegetables now mostly for household consumption except a few (with irrigation facilities) who grow for market. Flower crops such as *malli* (jasmine), *kakarta* (a non fragrant jasmine variety) *sampangi* (white tuber rose flower) and few more flower crops are also cultivated for market. Fodder crops are cultivated for their cattle feed and also for market.

Livestock mainly milch cow rearing is also a main livelihood for the land owning and landless households in the villages.

## Methodology

The study primarily adopts a qualitative methodology. In depth and unstructured interviews were conducted with persons who were available and volunteered to share their experiences and views about the newsletter. A majority of them enthusiastically participated and recalled their experiences (particularly in the last four -five years) and shared their feedback. The detailed interviews helped us to understand farm women and men's perspectives on the usefulness of the content disseminated through the newsletter in their daily agricultural operations and allied activities such as livestock care and management. This report is primarily based on 25 case studies<sup>4</sup> collected from farm women (10) and men (15) from the villages<sup>5</sup> of Kannivadi region. The field work for collecting case studies was conducted during the months of April and May, 2021. The respondents are in the age group of 22 – 65 years. The respondents belong to Backward and Most Backward castes. Except one woman others are educated. A majority of them come from small and marginal land holding households owning less than two ha. Only two respondents own 6 ha of lands; farmers own wells and bore wells. Of late, number of bore wells has been on rise to meet the water requirement for cultivation. A common statement heard from the farmers has been that their irrigated lands have become rain fed because of the uncertain and insufficient rainfall during the last 15 years or so. There is no water in the wells. So they are able to cultivate their crops in one season only. If there is rainfall and if their wells get water, the scope for cultivating crops in two seasons a year is possible. Around 9 women and 14 men respondents own milchcows<sup>6</sup> (on an average, two to four cows) and other livestock such as goat and chicken.

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4. Detailed case studies are presented in the annexure; the 25 case studies of women and men farmers are examples which reflect their voices on the utility and effectiveness of *Seidhi Solai* in their lives.
  5. Case studies of women and men were collected from the following villages: Alathuraanpatti, Kandasampuram, Karamadai, Karattupatti, Karisalpatti, Kulathupatti, Oddakoilpatti, T Pudukpatti, Manayakaranpatti, Pothanayakkanpatti, Sirunaikkanpatti, Veerapudayanpatti and Navapatti
  6. Milchcows are bought mainly by using the bank loan provided for group members supported and guided by RESAPCOL/MSSRF. The group members, women and men are eligible to avail three such loans after the successful repayment of the earlier one.

## 2. *Seidhi Solai*, a flagship dissemination tool

The newsletter, a treasure house of information, has been one of the earliest and important information disseminating tools adopted by MSSRF to guide and help farmers and livestock owners in their day today activities and to improve their income by preventing losses. It is a flagship information dissemination tool for updating and promoting farmers' knowledge; when translated into English it means 'Treasure Trove of Information'. Dissemination of knowledge which is local and season specific is the speciality of this newsletter. It also provides information on government schemes, subsidies for farming and allied activities as also details on training programmes for both women and men.

It was in 2002 that it was first printed and circulated as a biweekly newsletter<sup>7</sup>. To start with 2000 copies were printed and distributed to many villages and the NGOs closely associated with MSSRF. The newsletter was distributed during social functions such as marriages, in *Panchayat* meetings, in tea stalls and in places of public gathering. However, the number of issues was reduced to 1000 in the year 2013. It was learnt that villages covered had to be restricted because of shortage of hands and non availability of distribution channels. Presently it is being distributed mainly to the shareholders in RESAPCOL, Self Help Groups<sup>8</sup> of both women and men (Farmers groups/Horticultural groups), partner Farmer Producer Organisations (FPOs) and other stakeholders or net working partners/NGOs closely working with MSSRF (either through courier or through newspaper distributing agencies). It is also distributed to farmers who visit or in contact with the RSGA office. The staff, when they visit farmers' fields for monitoring or provide some inputs about the standing crop, give them copies of the newsletter and encourage them to read and use the information relevant to them.

This newsletter is distributed free of cost and it covers varied topics on the cultivation of crops relevant to the prevailing agricultural season. It acts as a guide and reminder to a farmer about the steps to be taken for avoiding losses and improve income. Livestock care and management is another area of focus of the newsletter.

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7. It was stated that in the initial stages elderly and experienced persons from the villages were involved in collecting, verifying and developing the content (agricultural as well as veterinary) specific to the region. Inputs from experts from different fields of agriculture and livestock care and management from the Agricultural University and other institutions were taken.

8. The farm women and men are organized into farmers groups (*vivasaya kuzhu*) and *thottakalai kuzhu* (horticultural groups). There are exclusive women's groups, men's group and mixed groups. *Thottakalai* groups are formed by the Department of Horticulture with the support of RESAPCOL/MSSRF. RESAPCOL plays a major role in the functioning of horticultural group as well. It works closely with both the groups. Some of group members are landless labourers and rearing livestock. The farm women and men members get benefitted a lot through RESAPCOL.

*Seidhi Solai* is designed to capture the interest and attention of the targeted audience. The local women and men farmers find it quite interesting, useful and helpful because of the simple and local/season specific content (presented in colloquial and dialogue mode) that has easy applicability in their day today agricultural operations and livestock management. The question and answer section pertaining to the information covered in a particular issue encourages a farmer to reflect on the content. Farmers are able to apply their knowledge and improve their economic condition. During the monthly meetings of the farmers' groups the newsletter is read out by the leader of the group which is followed by discussion on the content and sharing of members' experiences and views. So, this acts as a best platform for sharing and exchange of information not only among the group members it is also shared with friends and relatives in their respective villages and surrounding ones. Reading and discussing the content in the meetings help those who have not gone to school like Ms Manimegalai from PothanaiyakanPatti and Ms Arulappan from KarisalPatti to learn and adopt the suggested methods in their fields. Not just that, there is also a sense of joy and camaraderie in sharing whatever they know with others.

Feedback from farmers on the newsletter was overwhelmingly encouraging; it is important to document how knowledge/awareness and adoption of knowledge / learning make a difference in a farmer's life. That the newsletter is yielding the intended results is evident from feedback collected through case studies, as documented in this report<sup>9</sup>.

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9. We would like to point out here that this report is based primarily on whatever the respondents could recall at the time of interview. Some of the farm women and men stated that they had learnt so much from *Seidhi Solai* and applied their learning in cultivating their crops but could not share with us all the details.

### 3. *Seidhi Solai* in the lives of farmers

Women and men farmers value the *Seidhi Solai* because of its timely delivery of content suitable to carry out their day to day agricultural activities based on appropriate knowledge. Details of crops (including vegetable and flower crops) based on season (and also based on land type-irrigated and rain fed) are given in advance along with other related information. For example, content on cotton and maize is covered during August-September and vegetables during January-February. This enables a farmer to get prepared for the upcoming season. Stage by stage crop advisories is provided from land preparation to harvest. During the crop cycle the farm women and men are kept alert about the associated practices such as weeding, fertiliser application in right proportion at right time, prevention and control of pests/disease, water management and so on. Sustainable practices in cultivation are encouraged; it also gives information related to preparation of bio inputs such as *panchakavya* (bio input useful in the growth and increasing the immunity of the plants), *poochiveretti* (plant based pesticide), vermin compost, enriched farm yard manure and so on. The newsletter also covers information on agricultural/ veterinary training programmes and government schemes/subsidies. Another, important area focused is, livestock care and management particularly milch cows; livestock is a source of income for the farming community; the earnings from livestock are considered important by the respondents because of the challenges (caused by uncertain rainfall and climate change) they confront in agriculture.

It may be of interest to know the range of content or information delivered through *Seidhi Solai* from the women and men respondents themselves. An oft repeated comment heard from the respondents has been *paruvathukku thagundha madhiri vivasaya parindhuraigal marrum. kaalnadai kurippupagalum kodukkiragal. Idhu engalakku sougariyamaga irukku* meaning *Seidhi Solai* disseminates season based crop and veterinary advisories; so it is convenient for them to adopt the relevant advisories. It was pointed out that one way or the other they are kept on alert about the measures to be taken at various stages of crop growth and cattle rearing. So it is helpful and convenient to adopt or use the advisories. What they did not know earlier they are able to gain knowledge about it now. Many farmers expressed the view that it has brought about lot of positive changes in their day today farming activities; they are able to reduce expenditure and increase the production. They are able to keep their cows, their other source of income in good health. It was encouraging to know that many farmers both women and men have been encouraged to put into practice the knowledge they gained through reading the newsletter. Importantly, farmers tend to share the information with their relatives and friends. So, *Seidhi Solai* indirectly benefits a lot of people, the respondents pointed out.

#### ***Seidhi Solai*: a guide and reminder**

Following statement by a young farmer namely Mr Velankanni from Karisalpatti village will give us a broad idea of the content/information dealt in the newsletter. He

feels it acts as a guide and reminder to him. He is of the view that he is able to save time and money by following the advisories.

‘... carries information relevant to a season such as what crop can be cultivated, the age of the crop, when to plough the land, the method and time of application of fertiliser, importance of micronutrients, pest and disease prevention and management, right time of spraying inputs and in what interval it should be done and when to apply growth promoters and the importance of soil testing and so on. It also provides useful information on water management by way of digging farm ponds and by digging grooves in the groves to collect and save rain water. It promotes organic farming. It is something like a guide and constant reminder for me. One has to just follow the instructions carefully. That is enough. One can benefit a lot by saving time and money’.

Mr Jnanavel, who has been in contact with MSSRF/*vidai* or seed company stated “The *Seidhi Solai* issued from the *vidai* company gives updated, local and season specific agriculture and allied related information to the farmer. The topics generally discussed are soil testing, micro nutrients, the right time for carrying out ploughing, water management, fertiliser application specific to a season or time, weed control, pest/disease control (such as how to control *padaipuzhu*) and so on. It is a kind of reminder and guide to us to follow the practices/activities specific to a crop and season.

According to Ms Kalarani aged 38 years from Alathuranpatti:

“*Seidhi Solai* issued from the farmers’ *vidai* company is a reminder and a guide to plant crops season wise. The agricultural and allied information is specific to our area. The information covers soil sample, land preparation, seed treatment, inter cropping, spacing, pest control, use of bio inputs and all activities related to that crop cycle. By using the information from *Seidhi Solai*, *selavaikuraithu varumanathai kootta therindhukonden* (I have learnt to reduce the expenses and increase the crop yield). It also gives information on cattle rearing, poultry and so on. I am able to take care of our livestock and poultry”.

The content or the crop advisories/livestock care in *Seidhi Solai* reaches even the persons who do not know to read and write. As already mentioned Ms Manimegalai, a farmer group member has been benefitting a lot by knowing and using the advisories through listening when the newsletter is read out during the monthly group meetings.

### **This paper (*Seidhi Solai*) gives equal importance to both agriculture and livestock care management**

Ms Manimegalai from Pothanayakanpatti who cannot read or write but articulate says: “This paper gives equal importance to both agriculture and livestock care management. In our monthly group meetings *Seidhi Solai* will be read out by the *thalaivi* or the leader

of the group. Though I cannot read or write, through listening I learn a lot. I came to know of fertiliser and pest management for cotton and maize. Most of our villagers followed the pesticide mentioned in the *Seidhi Solai* for *kuruthupoochi* (stem borer) on cotton crop. I don't remember the name of the pesticide. I learnt about basal application of fertiliser and leaving sufficient space between two plants. I also learnt that fertiliser should not be applied on the plant or near the plant".

Crop advisories/information provided in *Seidhi Solai* to a great extent aim to promote sustainable agricultural practices to improve production, farmers' income, reduce unnecessary expenditure and safeguard the environment. It is learnt that prior to coming into contact with MSSRF most of the farmers used fertilisers and pesticides indiscriminately. In the absence of formal effective agricultural extension service, the respondents were left at the mercy of the local input dealer. Fortunately, according to the respondents like Mr Jnanavel things began to change with the setting up of MSSRF and the subsequent formation of *Reddiyarsathiram Vidai Urpathiyalar Sangam-Reddiyarsathram* Seed Growers Association<sup>10</sup>; this has brought about perceptible positive changes in practising agriculture.

The following testimonials of women and men farmers would give us an idea as to how the farmers got benefitted by using the content disseminated through *Seidhi Solai* in their daily agricultural activities (cultivating their crops such as maize, cotton, vegetable/flower crops) and livestock care and management and availing government schemes/subsidies.

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10. The *vidai* company plays an important role in the day today life of a farmer. As an FPO it helps the farmers in many ways. He/she not only gets crop and veterinary advisories through various modes of information he/she (as members of RSGA) is able to get seeds and other farm inputs on credit. Instead of going to a private company or a private merchant she/he can get the inputs and guidance from *vidai* company. As an FPO it procures maize and cotton from the farmers and pays them the right rate immediately. After the harvest she/he can sell the product to RSGA. He/she does not have to depend on outside traders for marketing the product. The farm women and men are grateful that they are saved from borrowing from outsiders paying heavy interest. RSGA/RESAPCOL apart from being a Farmers' Producer Company (FPO) also functions as an Information Resource Centre for the farmers. The staff visits farmers' fields and give suggestions/advisories on the standing crop and for other related matters. They are easily accessible to a farmer. It is heartening to know that the farming community also refers to the RESAPCOL as a *vivasaya* (agricultural) office. Many particularly women have been benefitting a lot by its services. They have easy access to information and guidance. Without much difficulty they can get farm inputs from the *vidai* company. Almost all we contacted pointed out that *vidai* company and MSSRF brought about lot of positive changes in the farmers' lives particularly women. It has given them confidence and sense of security because they own milch cows which give income to meet their day to today household expenses. As one of the women farmers put it, "Farmers have the confidence now that if we go to *vivasaya* office we can get guidance. She added to say, "After our association with the company we need not have to borrow from outside. We can get quality seeds and other required farm inputs from the office on credit. We find it easy to repay the loan on time after our harvest of crops. We help other women outside our group also to buy things from the company. We stand as surety for them by giving in writing with our group seal. So not only the members but also the farmers outside the group get benefitted. In general, the farming households are saved from falling into debt trap!"



Crop wise content such as maize and cotton is very much appreciated by the farmers. Appropriate information and advisories are disseminated on vegetable and flower cultivation. The content on fertiliser application/management and pest control/management seemed to have benefitted the farmers in improving the production, reducing expenditure and minimising damages to environment. They have come to know of the importance of applying micronutrients, bio fertilisers and other bio inputs.

## **Fertiliser management, pest control /management and reduction of expenditure**

Farmers like Mr Dhandapani aged 67 years from Sirunaiyakkanpatti appreciates the *Seidhi Solai* (and the staff of MSSRF) for disseminating detailed information at the right time for fertiliser application, the quantity to be used and in what interval it should be carried out and so on. He adds to say that the newsletter also warns the farmer that delay in applying the fertiliser is of no use. He is of the view that when a farmer has right knowledge and understanding he /she will be able to carry out agricultural operations efficiently and improve the production. *Seidhi Solai* plays a significant role in equipping farmers with right knowledge and thus improve their livelihood.

Muthaiya from T Pudupatti says he has gained knowledge on various important aspects of agriculture by reading the *Seidhi Solai*; many farmers both women and men have been encouraged to put into practice the knowledge they gained through reading the newsletter. "I learnt about how to use fertilisers and organic inputs. It is through MSSRF I learnt and gained knowledge about *uyirurangal* (bio-fertiliser)". According to him the knowledge on fertiliser management has reduced the expenses as he (and other farmers also) is applying only the recommended dosage; because of this indiscriminate use of fertilisers is avoided and the environment is also not affected. "Earlier I used to apply two bags of Urea and two bags of Potash Superphosphate for one acre of cotton field. Now we know the prescribed percentage to be applied. By applying five kilos of Azospirillum and similar quantity of Phosphobacteria per acre mixed with *eru* (farmyard manure) as *adiuram* (basal application) we can considerably reduce the quantity of Urea and avoid using Potash and Superphosphate. Superphosphate and DAP are expensive. If we incur expense of Rs 500 in using bio fertilisers it will be Rs 1800/-in chemical fertilisers. We can easily save Rs 1000-Ra 1300".

Ms Selvi who was a group leader till last year cultivates crops such as maize, cotton and jasmine. She is of the view that contact and regular interactions with MSSRF/company has brought lot of positive changes in the day today farming activities. According to her the farming community in her area get information related to farming through *Seidhi Solai* (and also mobile phone) throughout the agricultural cycle; it helps them in selecting a suitable variety of crop and follow suitable practices. She continues to say

that they are able to take right measures to safe guard the plants and follow methods that will promote healthy growth. She pointed out that staff from MSSRF also visit farmers' fields regularly and provide guidance and advice about the standing crop. She says all this help the farmers in improving yield and reduce expenses. She says "We used to get 10-12 bags (100 kg / bag) of *makkacholam* (Maize); now we easily get 17 bags. Yield increase is possible because of time to time guidance and instruction provided to safe guard the crop from pests/disease".

## **Timely details aid in healthy growth of the crop and development of good pods**

Young Mr Velankanni from Karisalpatti who has taken up agriculture as his livelihood after he returned from Singapore was happy to share with us that he has been able to carry out his agricultural activities with the help of the information given in *Seidhi Solai*, Voice mail and the staff of MSSRF. He was happy to share with us, "In a recent issue of *Seidhi Solai* detailed information was given for cotton and maize cultivation. I started cultivating maize for the past two years. I made use of the information given in the newsletter. I carried out the ploughing operation and basal application of fertilisers. As prescribed I applied basal application of fertiliser. Last year I did not do basal application. Earlier I used to apply after the 50th day of planting the crop. It was mentioned that after 20-25 days of planting one can expect the attack of *padaipuzhu* (Amy worm) on the crop. I applied the input recommended in the newsletter to prevent pest attack. After the 30<sup>th</sup> day, it was prescribed to spray growth promoter (PGPR) and instructed to repeat the same between 40 – 45 days. It will tolerate drought. All these timely details aid in healthy growth of the crop and development of good pods. Since last year I have started using farm yard manure mixed with vermin compost. Earlier, I used to apply Urea, DAP and farm yard manure. The soil texture has improved and it looks fresh. Thanks to *Seidhi Solai* and MSSRF!"

Mr Ravanewarsn aged 50 years from Navapatti who was working elsewhere in a leather company until his father's demise a few years ago says that he had been doing agriculture without any clear idea and incurred heavy expenditure; he used to follow the neighbour's suggestions. He has gained clarity now. Contact with MSSRF/RSGA has given him access to information on crop cultivation. He is of the opinion that *Seidhi Solai thelivu kodukiradhu* meaning the newsletter gives clarity on crop cultivation and carry out agricultural operations based on knowledge. He gives an example, "The newsletter tells us about fertiliser management; importance of applying farm yard manure, details of *melurungal* (application of fertilisers - top dressing) and within how many days of a crop cycle they should be applied and so on. For instance, Zink should be applied to maize within 30 days and Magnesium within 30 days of planting cotton.

Today I use one bag of fertiliser instead of two bags. Earlier I (and others also) used to apply two bags of DAP ; now I apply one bag only; so I am able to save Rs 1400/- I have come to know as to how much quantity of farm yard manure should be applied for one acre. Earlier, we used to sell farm yard manure to outsiders”!

### **Awareness on soil test**

A majority of the respondents admitted that they did not pay attention to soil test earlier. *Seidhi Solai* along with other information channels played (and still play) a significant role in motivating farmers to take care of soil health by applying appropriate inputs in right quantity based on the soil type or soil requirement. It is evident from our interactions with the senior persons like Mr Mahalingam, Mr Dhandapani and Mr Natarajan who believe that the farmers’ awareness on soil test has increased remarkably particularly in the recent times; they apply right fertilisers in right proportion based on the soil type. *Seidhi Solai* and Voice mail encourage people to carry out soil test periodically.

### **Based on soil type inputs applied and indiscriminate use of fertilisers avoided**

Mr Mahalingam states: “We are advised to carry out soil test on regular basis. Based on the result we are advised what inputs to be applied and what inputs to be reduced or avoided. So we are avoiding arbitrary use of fertilisers. Earlier we used to think the more one feeds the soil the more will be the yield. So if my relative puts one bag of fertiliser I would put two bags thinking I will get better yield. It used to be a sort of competition between me and my relative! Now, we apply only the required quantity of fertiliser and thereby we experience reduction in our expenditure. We also safeguard the environment”.

He added to say, “Details were given in *Seidhi Solai* as to how to improve the *kalarular nilam* (alkaline soil). The content on this aspect was useful for me because our land is *kalarularnilam* type; it limits the uptake of the necessary nutrients and thus affects the roots of the crop. To get more clarity I contacted the staff at MSSRF who provided the necessary recommendation. I was advised to reduce the quantity of Potash and Super to the soil and to improve the quality of the soil application of Zipsum was recommended. We can refer the newsletter when there is a need”.

Like, Mr Mahalingam , Mr Dhandapani was able to rectify and improve the soil health. Mr Dhandapani who never used to do soil testing now does it every three years based on the prompts given in *Seidhi Solai* and the staff. He has come to know that in his land *sambal chathu* (K) was on higher level; so he was told to reduce the quantity of *sambal chathu* and increase the quantity of *thazhai chathu* (N) and *mani chathu* (P). It was also suggested to put 10 tonnes of farm yard manure once a year. He says he can easily

manage to do it because he has five cows. He applies only the required inputs and thus avoids unnecessary expenditure.

Mr Natarajan also tells us that *Seidhi Solai* reminds the farmers about soil test. So ,most of them have come to know about the importance of soil test and one should apply fertilisers based on the soil type or quality such as *karisal man* (black soil), *vandal man* (alluvial soil) and *semman* (red soil). He mentioned that after applying farm yard manure and Zipsum (based on soil test result) the *Kaarathanmai* (alkalinity) level of the soil is at acceptable level.

**Use only *thevaiyana uram* (necessary fertiliser); avoid *thevaiyarra uram* (unnecessary fertiliser).**

Young Velankanni was also motivated to carry out soil eight months ago (early 2021) after reading the importance of it in the newsletter. MSSRF staff also recommended. He came to know that alkaline content was more in the soil. As per the recommendation of MSSRF staff he applied two bags of Zipsum mixed with 24 kilos of bio fertiliser per acre. Earlier he applied 15 bags of Zipsum for four acres. He mentioned that this knowledge helped him to use only *the vaiyana uram* (necessary fertiliser) and avoid the *thevaiyarra uram* (unnecessary fertiliser).

Mr Irudiyaraj, Mr Periyasami, Mr Jnanavel, Ms Selvi, Ms Priya, and Ms Kalarani are some farmers who cultivate their crops and follow the fertiliser, pest management and other practices as advised in the newsletter. They also carry out soil test periodically.

Irudaya Raj says that he planted maize in irrigated land based on *Seidhi Solai* guidance. There was no pest or disease attack on the crop. Similarly, he cultivated cotton. He was happy to share with us that the flowers were round shaped and robust and that he was very much satisfied with the yield. As per the guidance given in *Seidhi Solai* he gave his soil for testing. "Now", he says "I am using only the necessary inputs the soil requires. If we put more than what the soil require it will be a waste, I understood. Fertiliser expenses have come down by 20% -30%". He added to say that he learnt about *kalai nirvagam* (weed management) through *Seidhi Solai* and RSGA Facebook. According to him the technology was simple and could easily reduce number of hands working on weeding.

According to Mr Periyasami, "Based on the prescription given in *Seidhi Solai* we carry out fertilisers and pesticide application. For cotton, I applied fertiliser within 30 days of planting, then during 50-55 days of planting I carried out second dose of fertiliser application consisting of Potash, Urea, Super Phosphate, and DAP (consisting of five bags) (Factamfos is mixed with it). I could not apply micro nutrients this year because there was no rain at appropriate time. Likewise, I applied fertiliser within 22days of

planting of maize. Similarly, I took precautions to prevent and control *padaipuzhu* (Army worm) when it appeared by applying Emamectin. Again I noticed yesterday; I acted immediately. I am expecting a good harvest provided climate favours us”.

### **Seidhi Solai created awareness on the benefits of applying micronutrients to the crops**

Mr Natarajan, an elderly and experienced farmer pointed out that most of the farmers understand the utility of using micro nutrients to the crops. Thanks to *Seidhi Solai* and also Voice mail! A majority of them now apply micronutrients as basal application or mix it with sand and broadcast it. The farmers both women and men have come to know that they can to a large extent prevent certain pest/disease attack. “For example” according to Mr Natarajan, “*kanupuzhu* (stem borer) attack in cotton which causes knots in the stems has come down in the past few years”. He pointed out that *Panchayat* Union office gives micro nutrients to farmers free of cost. But the farmers did not use it in their fields previously. Natarajan is of the view that just giving the inputs does not serve any purpose. It should be explained well about the necessity and utility of using any input distributed or recommended. Now, having come to know of the importance of applying micro nutrients the farmers make use of it; if needed more they also buy from the *vidai* company, stated Mr Natarajan.

### **Micro nutrients and organic fertiliser improved soil health, crop yield and expenses decreased by 50%**

Mr Velankanni aged 54 years was very proud when he said that after he started applying farmyard manure/*maattu chaanam* (cow dung) mixed with bio fertilisers he could see soil looking fresh and healthy; now he finds a lot of earth worms, a sign of good soil in his field. He also said to the researcher, “You can see earth worms if you dig even in a dry area. After I started using micronutrients and organic fertilisers the expenditure has decreased. The harvest is good and I am able to sell the vegetables for higher rate in the market. For example, where I used to get Rs 10 today I am getting Rs20/-The vegetables look fresh and healthy. The farm expenses used to be around Rs 20000/ when we were applying chemical inputs; it has decreased by 50 % now. The life span of vegetable crop cultivated using chemical fertiliser is shorter and the yield will be less when compared to the crop raised using bio inputs. If a plant cultivated with chemical inputs yields six fruits, it will be 10 in the plant cultivated organically. Our banana plant raised by organic method yields 9 bunches of fruits but it will be five in a plant cultivated using chemical fertilisers”.

### **It is the result of Magnesium deficiency and not due to evil eyes**

Mr Muthaiya shared with us that he was not aware of anything about Magnesium deficiency and its consequences on cotton crop until he read about it in the newsletter

(which was also supported by voice mail). His ignorance was not only removed after reading the newsletter but it was also useful in knowing the symptoms and handling the particular deficiency in cotton. Through him many from his village became aware of this and took necessary action, mentioned Muthiyah

“Magnesium deficiency is a major problem in cotton crop; I was not aware of it until I learnt about it from *Seidhi Solai* (and voice message/mail). I got useful information from *Seidhi Solai* and voice message/mail to rectify Magnesium deficiency in cotton crop. The symptoms were given; we came to know that if the cotton crop is affected by Magnesium deficiency the leaf of the crop would turn light reddish in colour but the crop would look alright. This would appear around fruit forming stage ie during 50-60 days. Then suddenly the crop would start withering. Previously, we used to think that it was due to lack of water. So we used to irrigate the land and used to wonder why suddenly the crop is getting dried up even after watering the crop. We used to think someone had cast evil eyes or had done some black magic. This was because of our total ignorance about the Magnesium deficiency. Thanks to the information we got from the newsletter and voice message. It was pointed out that the moment we notice the change of colour of the leaf to red it is an indication of Magnesium deficiency and immediately the crop should be sprayed with Magnesium Edta powder. We understood that when it is spotted in one or two plants we should immediately take action; otherwise in no time the entire crop would be lost. I sprayed as recommended and I saved my maize crop. Thanks to the timely information!”

## **Zink deficiency rectified**

Muthaiya was also happy to share with us that he was able to rectify Zink deficiency in his field. “In order to rectify the zinc deficiency in the maize field I used the information given in *Seidhi Solai*. It was recommended that five kilos of Zink sulphate should be mixed with 10 kilos of sand and applied evenly to the field. This should be done within 10-15 days after weeding was carried out in the field. After 35 days of weeding operation one cannot go into the field. I applied when the crop was 20 days old. I learnt from the newsletter that Zinc should not be mixed with *perottachathu* (macro-nutrients)”.

## **Pest control and management**

Farmers like Mr Muthaiya strongly believe that one of the best things that farmers gained because of their association with *vidai company* is pest/disease control and management practices. Earlier, they did not have much knowledge about crop protection and used to approach the agro input dealer when they had pest problem in their crops; the dealer used to give four-five chemicals, says Muthaiya.

Muthaiya shares his experience in preventing and controlling *padaipuzhu* (Fall armyworm) and *thandu thulaippan* (stem borer) in maize crop: “In my maize crop I

could prevent and control the attack of *padaipuzhu* and *thandu thulaippan*. I think this was in the year 2019. While other farmers bought four-five chemicals I just applied / sprayed one kilo of Beauvera and one litre of *panchakavya*. The expenses was only Rs 200/- . In case of chemicals it would have been Rs1000 – Rs 1500/-”.

Ms Manjula pointed out that information given in *Seidhi Solai* serves farmers in different ways. She refers to *Seidhi Solai* when they cultivate cotton for *verpuzhu* (root grub), *thandupuzhu* (stem borer) and to prevent withering of flowers. She finds using neem extract as a pest repellent very useful. She used it for her cotton crop. It was effective.

Poonkodi was happy to share with us that her father followed the advisory given in the *Seidhi Solai* to control *kuruthu poochi* (stem borer) in maize crop; it was saved from the pest.

### ***Manjalottunni attai* (yellow sticky card) and *inakavarchi pori* (pheromone trap)- effective in pest control and in aiding the yield increase**

Mr Jnanavel mainly cultivates cotton and maize in his field. He states that he meticulously uses the information (other farmers also follow) related to pest control. For example, in cotton field he uses yellow sticky card and pheromone trap to control pests/ disease; he mentioned that many of his villagers and relatives benefit by following the pest control prevention and management methods suggested in the newsletter.

Jnanavel says, “I have kept *manjal attai* (yellow sticky trap) and adopted intercropping. By using *ottunni attai* and adopting intercrop in the cotton field I am able to control the pest attack. *Ottunni attai*, *inakavarchi pori* (pheromone trap) and *oodupayir seivadhuparri vilakkam solvadal payirai padukathu kolgirom. Poochi marundhu selavu kammiyagi ulladhu* (exhaustive information is given on the utility of yellow sticky card, pheromone trap and intercropping; so we are able to protect the crop from pests/insects. Pesticide expenses have come down). I am using *manjal attai* and *inakavarchi pori* for nearly 4-5 years. Looking at my field my fellow farmers wondered if this would solve the pest problem. I encouraged them to use bio control methods in their fields and seven of my fellow farmers have kept *manjal attai* and *inakavarchi pori* in their respective fields. They were happy with the results”.

A young Ms Priya aged 28 years is a regular reader of *Seidhi Solai*. She was happy to share with us that she gained some knowledge on organic farming and its benefits after reading the newsletter. She could control *andhu poochi* (Melon fly) in the *pudalai* crop within two days by using the information in *Seidhi Solai*. It was advised to keep 10 Pheromone trap per acre. It was effective. The household also came to know that by keeping the trap they can control *pazhaiee* (fruit fly) which attacks largely *pudalai*

and *kovai* plant. She was happy to share with us that a video was taken in their *Pudalai* crop field which was uploaded in the RSGA Facebook; it was viewed by more than 50000 persons. She also mentioned that she participated in a training conducted by Ms Arokiya Mary (staff of MSSRF) on yellow sticky card where the participants were advised to use 50 yellow sticky cards per care. She does as per the instructions and is of the view that yellow sticky card, light trap, fruit trap and other bio pest control methods are very effective in controlling pest attack both in vegetable as well as maize and cotton fields. She could see the difference, pointed out Ms Priya.

Mr Muthaiya who uses crop advisories in his daily agricultural operation was happy to share with us that he could save his crops from pest attack largely by using bio control methods recommended in *Seidhi Solai* and by the staff. He says, " ... based on the information on pest control and pest management practices provided in the newsletter I have kept yellow sticky card, pheromone trap and light trap in my cotton field. Pheromone trap attracts male pest while light trap attracts (to be kept between 6-10 pm) female pests. Some insects get stuck to the yellow sticky card. By keeping yellow sticky card I feel we can prevent 15 % of the insects/pests". He added to say that most of the farmers have come to know whether a crop is affected by bacteria or *poonjan* (fungus). This awareness and knowledge has helped him and others to take necessary action and cut down on expenses.

Ms Kalarani and Ms Selvi take necessary action at right time in their daily agricultural activities. They avoid excess use of fertilisers and pesticides. They use yellow sticky card and pheromone trap in their fields to control and manage pests. Ms Selvi says, "...we are cultivating jasmine in one acre of our land where we have reduced the application of inputs to control the pest/disease. Earlier we used to spray *marundhu* (chemicals) twice a week; now we spray 4-5 times a month. Earlier we spent Rs 1000 a week; now it is Rs 500/. *Paadikkumel selavu kuraiyudu* meaning expenses have reduced by 50 %. Likewise, we are able to save money and reduce excessive application of inputs to the other crops".

### **Prescribed dosage of pesticides at right interval and micro nutrients application prevents pest/disease attack and aids in increasing the crop yield**

Mr Jnanavel shares with us that he is able to control *padaipuzhu* (army worm) attack on his maize crop and improve the yield by adopting the right advisory for pest control and management. He said "*Padaipuzhu* attack has become common recently and crops were badly affected by the pest. In *Seidhi Solai* it was advised to apply pesticide 16 days after the sowing of the crop followed by another dose of spraying on 31<sup>st</sup> day.



The staff from MSSRF also said that by doing so we can save the crop from the pest. I benefitted by using the advisory. The details of the proportion of the pesticide to be used are also given in detail on the notice board displayed in the company. We also get the information through voice mail. The pest attack was less. Earlier I used to get 32 bags in 21/2 acres; now I get 41 bags. Also, the prescribed dosage of micronutrients application, apart from enriching the soil prevents pest/disease attack and aids in increasing the crop yield”.

## **Vegetable cultivation**

*Seidhi Solai* disseminates information on vegetable cultivation. As we have mentioned earlier Kannivadi region is famous for horticultural crops though in recent times the area of vegetable cultivation has come down because of the changing climatic condition. Farmers cultivating vegetables for market and farmers having kitchen garden find the content in *Seidhi Solai* useful for cultivating vegetable crops. Ms Priya, Mr Velankanni, Mr David Mariyadoss and Selvaraj cultivate vegetables for market and Mr Ganesan, Ms Nagalakshmi, Ms Manjula, Ms Manimegalai and Ms Latha having kitchen garden use the information given in *Seidhi Solai*.

## ***Seidhi Solai* covers exhaustive information on vegetable crops**

Velankanni from Karamadai pointed out that in one issue of the newsletter a whole page was covered with exhaustive information on pest control and management in vegetable crops (for example *ilaikaraugal* (leaf folder), *ilaipulli* (leaf spot), *verazhugal* (root rot) and so on. It was also advised to keep *manjal attai* (yellow sticky card) to prevent and control *saarorinji poochi* (sucking pest), *vellaiee* (white fly) and *inakavarchi pori* (pheromone trap) to control pest on the vegetable crops. When his egg plant was attacked by *maavu poochi* (Mealy bug) it was prescribed to spray Acephate and Imidacloprid. He did as prescribed and the pest got controlled.

Ms Priya, as we have mentioned earlier uses yellow sticky card, pheromone trap and fruit trap in her vegetable garden. She says they are effective pest control methods.

Mr Selvaraj found the details about *kova kai* (Ivy gourd) cultivation given in useful when he planted *kova kai*; he followed the instructions. The details such as how the planting should be done on different soils such as *karisal kadu* (alkaline soil) and *sevakadu* (red soil) and how to prepare a pit maintaining proper distance were useful while planting *kovakai* in his field.

Ms Manjula who has a small piece of land says “I am using the tips given in the *Seidhi Solai* in my kitchen garden in saving water and giving proper nutrients using the household waste”

## Inspired to have kitchen garden

According to Mr Ganesan who was working for an NGO before he took up the family's traditional occupation –agriculture says that *Seidhi Solai* gave him the direction when he was directionless and confused. His wife is a leader of a group (supported by RESAPCOL). He also participates in the monthly meetings. He reads the newsletter regularly and keeps them safely for reference at a later date. He uses it extensively for cattle care. The household also uses the information when they cultivate maize and cotton. The household was encouraged to have a kitchen garden after reading *Seidhi Solai*. Ganesan says “Based on the advice of the staff and *Seidhi Solai*, last year (2020) we had a kitchen garden where we cultivated vegetables in organic way. The yield particularly egg plant was very good. For tomato, chillies, egg plant *vattapaatti* (ridge formation in circles) is not good. Because it will prevent strong root development; the roots of the crop will get snapped. *Medai paatti* (raised ridges or platforms) is suitable for these crops cultivation. I helped many in ridge forming. I will teach who ever asks me. When I came to our village I did not know anything. Today I have learnt so much that I am happy to share the knowledge with others (*Onrum theriyamal vanden. Inru enakku therigiradhai cholli tharugiren*).

## Helping women to meet household needs

Like Mr Ganesan Ms Nagalakshmi aged 60 years from Navapatti has been motivated to have a kitchen garden. She reads the newsletter regularly; she finds information on kitchen garden very useful; she meticulously follows the instructions on fertiliser and pest management and in using water economically in her small vegetable garden. She grows them in organic way. The vegetables are tasty and most of them are free from pest/disease attack. Being leader of a group and one of the Directors of the *vidai* company she feels it is her duty to read the *Seidhi Solai* and share it with others. She says many women in her group have been inspired by the newsletter to cultivate vegetables at their backyard. This is helping them to meet the households' needs to an extent and few share it with their neighbours.

## Get fresh vegetables for six months

According to Ms Shanmugavalli, information on vegetable cultivation is discussed in detail in *Seidhi Solai*. She cultivates vegetables (Bendi, egg plant, *avarai mochai* (lab lab), tomato, *poosani*, *soraikkai* ) for household consumption. Earlier the household used to cultivate vegetables using chemical fertilisers. After their association with MSSRF and reading *Seidhi Solai* they are doing it in organic way. She says, “We can see the difference between the two types of cultivation. We can get fresh vegetables. For six months we do not have to depend on market for vegetables”.

Marudayi, is leader of a group and also an executive member of Kuzhumai Federation. Though she did not cultivate vegetables she encouraged many to have kitchen garden in their backyards when she read about kitchen garden in *Seidhi Solai*. She also got the seeds for them from the *vidai* company though she did not cultivate vegetables.

### **Reasons for adopting a particular method is explained well convincing the farmer to adopt the same**

*Seidhi Solai* does not stop with providing information specific to a season and associated practices to be followed. It also explains the reasons and benefits of following a recommended practice. So, when a farmer is convinced of adopting a particular practice or a method she/he would take efforts to adopt the same; not only that others are also encouraged to do the same in his/her field. To cite a few examples; summer ploughing helps in pest/disease control; final ploughing with neem cake acts as pest control; spacing between two plants are important because it allows for more air circulation thereby helping in the growth of the plants and in preventing pest attack; how intercropping, for example in cotton field with pulse crops or castor as hedge crop prevents and controls pest attack. It explains that the yellow flowers of the inter crop (pulse crop) attract pests and thus the main crop is saved; soil testing is important to know about the deficiency and excess of a nutrient in the soil and apply the required inputs in proper proportion to bring down the expenses and safe guard the soil health.

### **Farmers have come to understand that *kodai uzhavu* (summer ploughing) serves two purposes: promotes fertility of the soil and a good strategy to prevent pest**

The newsletter encourages farmers to undertake summer ploughing because it not only helps in improving soil fertility but also in controlling pests . While turning the soil upside down, it enables the pest lying underneath to come to the surface; when the worms and eggs are exposed to sun light they perish Also, summer ploughing will enable the soil to absorb rain water easily which will aid in healthy germination of the seeds.

Muthiyah says that five months ago (April 2021) he read about cotton cultivation, *kodai uzhavu* (summer ploughing) and rain water harvesting published in the *Seidhi Solai* . He followed the *kodai uzhavu* and rain water harvesting as per the instruction given in the newsletter. It was explained in simple language that by carrying out summer ploughing the eggs of the *puzhu* (insects/worms ) would come to the surface and subsequently will perish when exposed to the heat of the sun. This prevents pests and also ploughing helps to retain the moisture content of the soil” .

## Ploughing from south to north direction

Mr Jnanavel, also mentioned that in a recent issue of *Seidhi Solai* he read about the utility of ploughing the land from south to north direction and on which side the bunds/ridges should be made(*endha pakkam karai pidippadhu*). He adds to say that by ploughing like that the crops would always get sun light and it also acts as one of the pest control methods. He finds the information useful and that one can adopt them for a good growth of the crop.

Mr Velankanni from Karamadai pointed out that he followed the ploughing and bund formation instruction given in the newsletter. He has carried out ploughing from south to north direction before he planted *thakkali*<sup>11</sup>(tomato) because he was convinced about the reason given in the newsletter for adopting it. He mentioned "I have planted with three feet distance between the two *varappu* (furrow) so as to enable the plant to take the nutrients available in between the furrows. The tomato seedlings are planted from north to south direction based on the newsletter suggestion so as to enable the plants to get sufficient sunlight".

## Final ploughing with neem cake prevents pests

Ms Priya and her husband have been trying to cultivate crops employing organic methods to an extent possible using the content given in *Seidhi Solai* and their contact with MSSRF. One such method is carrying out final ploughing of their land using neem cake; as per the instructions given in the *Seidhi Solai* they use 12 kilos of neem cake per acre; they were convinced about using neem cake because it was explained in the newsletter that neem cake would act as a pest control. As told in the newsletter, she finds this as an effective pest prevention and control method. They have been following this for the past three years.

## Intercropping and pest control

Ms Kalarani, who uses yellow sticky card and pheromone trap to control pest also adopts intercropping as a strategy to prevent pest attack based on the information given in *Seidhi Solai* says, "I also came to know that intercropping with pulse crops will help in preventing and managing pest and disease attack. Earlier we used to think that the field would be crowded with other plants as intercrop. Now we know the role played by other inter crops in preventing and controlling the pest/disease. I plant castor as border crop and *ulundu* (black gram), *paasi payaru* (green gram), *mochai* (lab lab) and *thatta pauru* (cow pea) as intercrops in cotton field. These pulse crops serve

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11. Mr Velankanni was proud to show us the field (when we went to interview him) where he has carried out ploughing from south-north direction. He also showed us bunds formed in the field.

more than two purposes; one it safeguards and minimises pest/disease attack (because of the yellow colour of the flowers) on the crop and secondly we can use them in our food which are good source of protein. The leaf foliage adds to the nutrients of the soil. We are getting *oru kallili randhu mangai* meaning we get multiple benefits in following intercropping”.

Ms Selvi also echoes similar view. According to her, “We have been able to prevent pest and disease attack on *paruthi* (cotton) because along with it we cultivate many other crops as *oodhupayir* (inter crop) such as *ulundhu* (black gram), *paasi payaru* (green gram) and *thatta payaru* (cow pea); *kottai muthu* (castor) is cultivated as a border crop. The yellow colour of the flowers attracts the pest that normally attacks the cotton. By following this *oodu payir* method the cotton crop is saved from the pest attack of *vellai iee* (white fly) and *saar urinji poochi* (Aphids); pest population is reduced. We get pulses which can be used in our meal. We were introduced to this method of *palapayir saagupadi* (cultivation of diverse crops in a field) by *Seidhi Solai* and MSSRF. Since then we have been following this and we experience good result. Earlier, we only used to cultivate *kottai muthu* as a border crop in the traditional cotton crop field”.

Ms Poonkodi aged 32 years from Veerapudayanpatti, based on the advisory given in the newsletter cultivates crops such as *ulundhu* (black gram), *mochai* (lab lab) and *thattam payaru* (cow pea) as intercrop and *thuvurai* (red gram) and *kotta maram* (castor) as border crops. She mentioned that she came to know that *ulundu* would attract *vella poochi* (whit fly) and act as a pest control; also intercrop would prevent weeds in the field. She also added to say that she has learnt from *Seidhi Solai* that tying a rope (used film roll) around the maize field would prevent pest attack. She did as suggested in the newsletter.

## Spacing

Ms Priya by reading *Seidhi Solai* has understood that leaving sufficient space between two maize crops are essential; by leaving space between two maize plants it will take time for the pest to travel from one to another. Before that one can take precaution to control the pest by spraying the right harmless chemical, pointed out Priya. She also added to say that this will produce good round shaped healthy grains and the *kadir* (pods) will look healthy.

Ms Kalarani mentioned, “I came to know that leaving space between two farm beds enables free air circulation for the crops. This will help in plant growth. It also prevents pest attack”.

Ms Poonkodi who tries to follow the crop advisories to an extent said that she applied farm yard manure while ploughing the land; she did not apply micro nutrients. But

she followed the suggestion given in *Seidhi Solai* where it was pointed out about the necessity of leaving 31/2 feet gap between two crops and furrows. As per the instruction given in *Seidhi Solai* she planted cotton in furrows leaving necessary gap between the two furrows; she carried out basal application of fertiliser on the 22<sup>nd</sup> day after the planting of the crop.

## **Alternative cropping and crop rotation**

Mr Arulappan who cultivates jasmine is planning to replace jasmine crop after three years with vegetable crop. Because he understood the importance of adopting alternate cropping and crop rotation by reading *Seidhi Solai*. He has come to learn that continuous cultivation of a same crop in the field would affect the fertility of the soil and this will affect the yield of the crop.

Ms Priya has started to use alternative crops in her field without continuing with the same one. After harvesting of maize and cotton she cultivates vegetables in those fields.

When details and explanations are given for all the agricultural practices the farmer whether a woman or man is convinced about the efficacy of adopting them in his/her land. Soil health and plant health are taken care of by following these practices and methods. This reduces expenditure and help to increase the yield of a crop.

## **Pruning of jasmine**

Mr Arulappan is careful to look into the advisories given in the newsletter and uses them whenever necessary. Based on the information given in *Seidhi Solai* the household carries out pruning operations in their jasmine field. He said, "It was advised that the plants should be pruned after 15<sup>th</sup> of Thai (January-February); it enables growth of new offshoots which will increase the flower yield. We are experiencing good harvest of jasmine flowers as we are following the advisories carefully".

## **Water management**

Water management is another topic dealt in great detail in the *Seidhi Solai*. Few had installed drip irrigation and formed farm bunds to collect rain water encouraged by the content provided in the newsletter and other information channels.

## **Encouraged to adopt drip irrigation**

Mr Velankanni from Karamadai who reads and uses it in his daily agricultural activities says that one of the important aspects that he learnt is *neer niroagam* (water management). He says he was encouraged to adopt drip irrigation by staff of MSSRF and by reading *Seidhi Solai*. He was happy to share with us that he finds watering the crop like his tomato takes lesser time and water consumption is less; water is not wasted. He finds

it as a good water management technology. He was also glad to share with us that he got subsidy to install drip irrigation pipes with the help of MSSRF from Horticultural department. He also pointed out that he came to know about the availability of subsidy for drip irrigation from *Seidhi Solai*.

Ms Priya and her husband were motivated to have drip irrigation facility in their field. Her vegetable fields are irrigated through drip irrigation. She and her husband find it as water and time saving technology.

Selvi cultivates jasmine in one acre of land during Thai (December-January), Vaigasi (May-June) and Aani (June-July)- best season for the crop. Based on the recommendation given in *Seidhi Solai* and also through voice mail Ms Selvi and her husband were encouraged to adopt drip irrigation. She was happy to share with us: "We irrigate the crop for 15 days a month. During rainy season we save water (*mazhai neer thekkam*) by forming *varappu* (bunds). The stored water can be used for irrigation. We got *maniyam* (subsidy) for this with the help of the company. We are also using mulching sheet in our jasmine field which prevents weed growth and preserves water in the soil and regulates soil temperature. There is yield increase. We are getting big and well formed flowers now which enhance its market value".

### **Constructed a small tank**

A farmer by name Mr Dhandapani mentioned that importance of water management is emphasised in *Seidhi Solai* and in the meetings. He was encouraged to construct a small tank to harvest rain water. It serves the purpose. It was profitable for him! He was sad to mention that he had to dismantle drip irrigation<sup>12</sup> in his field because water is not sufficient.

### **I understand that simple water management techniques can help in preventing soil erosion, to retain water in our land and help in handling drought; I used to think they are not relevant**

A young Selvaraj who uses *Seidhi Solai* extensively in his crop cultivation and in cattle management says., "*Seidhi Solai* has exhaustively dealt with water management; details of different modes of water management such as digging farm bunds and installing drip irrigation are given; the staff also tell us how we can save water. The newsletter recommended digging farm ponds in the farmers' fields. I have come to know that care should be taken to retain the water in the fields by forming ridges in the field and that water can be diverted to the bore well".

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12. There are farmers who had adopted drip irrigation for some time. However, they (Example Mr Mahalingam and Dhandapani) had to dismantle it because water was not sufficient to irrigate even through drip irrigation. Such has been the situation for the past few years. Fortunately, there were some rains this year.

Mr Selvaraj's knowledge further got strengthened by attending NABARD meeting (organised in collaboration of MSSRF) on water management technologies. He said "During the meeting the officers explained about *varappu kattudal* (farm bund) and digging farm ponds and how to manage them. It was also explained how water can be stored in a low area or in pit and how it can be channelised to the bore well. I am planning to have farm pond after the harvest of the standing crop of maize in the month of Thai (January-February, 2022). I have a well. I can divert the water to the well. Then there is a possibility for cultivating crops in two seasons. Earlier I never used to pay attention to all this. I used to think they are not relevant to us. Now I understand that simple water management techniques can help in preventing soil erosion, to retain water in our land and it will help in handling drought".

## Preparation and use of bio fertilisers and bio pesticides

It is gathered from our interactions with our respondents that they have learnt to use fertilisers and organic inputs. Farmers are encouraged to produce their own organic input requirements. Many of them like Ms Latha, Ms. Manjula Ms Priya, Mr Natarajan, Mr Dhandapani, Mr Ravanendran, Mr Muthaiya, Mr Velankanni, Mr Mahalingam, Mr Arulappan and few others mentioned that it is through MSSRF and its various information tools they have gained knowledge on *uyirurangal* (bio-fertiliser), *nunnootta sathukkal* (micronutrients) and bio pesticides / repellents. The farm women and men pointed out that they did not have knowledge on micronutrients and the importance of seed treatment. They also added to say that they used to get bio inputs such as *Azospirillum* and *Phosphobacteria* from agricultural department and *Panchayat* union office. It used to lie in a corner of the field with no body taking care of it. They all owe it to the *vidai* company and its information channels because of which the farming community have come to realise the real use and benefits of bio inputs and micronutrients. Farmers like Mr Arulappan and Mr Velankanni from Karamadai have been encouraged to prepare enriched farm yard manure (with vermi compost) for their use after reading the newsletter. Ms Priya says that she and her husband have come to know about sustainable farming by reading *Seidhi Solai* and contact with *vidai* company. Ms Priya and her husband prepare bio inputs such as *panchakavya* for their land. Farmers like Mr Muthaiya<sup>13</sup> have been totally shifted to sustainable farming. He prepares various bio inputs for his own use and also for market. He says the credit goes to MSSRF/*vidai* company for whom he is eternally indebted!

13. Muthaiya aged 46 years has been closely associated with MSSRF from the beginning. He is totally an organic farmer today. Encouraged and influenced by his association with MSSRF and reading *Seidhi Solai* he is preparing bio inputs such as *AmirdhaKaraisal*, *Panchakavya*, *agniasthra* (a pest repellent) vermin vompost and so on for his own use and for the market. He is doing well. He has customers as far as KanyaKumari, Erode, Coimbatore and districts near Dindigul. He has bought five cows just for preparing the bio inputs. He also gives training on preparation of various bio inputs when MSSRF/RESAPCOL organises. He also visits others field to give suggestions and advice. Many farm women and men in Kannivadi region take his guidance if they have any doubt or if they need bio inputs.



Mr Velankanni 54 years stated that apart from providing information on yellow sticky card, pheromone trap, the *Seidhi Solai* also covered information on preparation of *thaavara ilai chaaru* (extract from plants), *panchakavya*, *meen amilam* (natural fertiliser derived from fish and jaggery)/fish Amino Acids fertiliser and *ootamerriya thozhuuram* (enriched farmyard manure). He prepares *thaavara ilai chaaru*, *panchakavya* and *meen amilam* for his own use. He has also prepared *ootta merriya thozhuuram* (enriched farmyard manure) and applied it to his field.

Mr Dhandapani who has personally been benefiting a lot by attending meetings, reading *Seidhi Solai* and listening to voice mail did not have an idea about organic farming earlier. He says, “I came to know about preparation of *panchakavya*, *amirdakaraisal* (a bio growth promoter and immunity booster), *poochiveretti* (a bio pest repellent) and vermin compost. As far as I am concerned I have not heard about all these before. Now I am preparing *panchakavya*, *poochi veretti* and vermi compost for my land. I am able to prepare and use these natural inputs by participating in trainings, meetings and by reading *Seidhi Solai*. Now, most of the farmers have got awareness about the uses and importance of micro nutrients to the crop”.

He continued to say “*Seidhi Solai* has given in detail about the preparation of *Poochikolli* (*Agniasthram*- organic pest repellent) by using ingredients such as garlic, tobacco, green chilli and cows urine. It is very effective in controlling the pest in cotton and maize crops. I also prepare *poochiviratti* by using *erukkam* (*Colotropis*), *arali* (*nerium*), *oomathai* (*Datura*), *adathodai* (chaste tree), *vembu* (neem), *nochi* (*nirgundi*) and *komium* (cows urine). This prevents and controls *vellaiee* (*white fly*), small flies and so on. There is no *karugal* (scorching) in the crop. I share the information with others particularly about the benefits of organic farming”.

Ms Priya and her husband were encouraged to prepare and use vermin compost after reading *Seidhi Solai*. They have dug a pit measuring 3x3 feet. They got a tractor load of vermin compost. According to Ms Priya, “Expenses get reduced when we prepare it ourselves; we do not have to spend on buying chemical fertilisers. Now the expenses related to fertiliser and manure have come down by Rs 10000/- per acre”.

## Information sharing

It was encouraging to know that information disseminated in the *Seidhi Solai* is used not only by the readers. It is shared with their relatives and friends to an extent possible. Sometimes, persons like Ms Kalarani, Ms Manjula, Ms Marudayi and – would have read some content in *Seidhi Solai* but they might not have used it for various reasons. But they share it with others who have benefited by using the same.

As we have already mentioned the newsletter is read out during the group meetings which offers a good platform for a discussion on the content. Persons like Mr Arulappan

shares with the farmers when they happen to meet in a common place like tea shop. It was interesting to know that his wife who does not know to read or right participates in the group meeting when he is unable to attend the same. Mr Arulappan was proud to say that his wife has such a grasping ability that she remembers even minute details and shares it with him and others.

### **My wife who cannot read or write shares the information on *kondai Puzhu thakkudal* in *kathari* and *verpuzhu* in *paruthi***

According to Mr Arulappan: “If you talk to my wife she will explain to you about *kondai puzhu thakkudal* (stem borer attack) in egg plant and *verpuzhu* (root grub) attack in *paruthi* (cotton) which she learnt by attending farmers group meetings. *Kondaipuzhu* cannot be easily observed in the plant. If we see carefully we can notice something like a knot on the affected stem of the plant. One has to cut the stem, only then it will be visible. Likewise when *verpuzhu* attacks the plant it cannot be seen. Only after 80 days the damage will be visible. Till then we think the crop growth is good. To prevent *verpuzhu thakkudal* it is advised to keep *kurunai marundhu* (Furadan) in the early days of the crop and suggested earthing up (*man anaikkachonnargal*). My wife shares this knowledge with her relatives and neighbours cultivating egg plant and other vegetables in their lands”.

Mr Arulappan added to say that he helps his neighbours and share with them the knowledge to cultivate vegetables. His sister does not know to read and write. Based on his suggestion she has cultivated onion and egg plant. She got a good profit. He says she has gained confidence and goes to the office (RESAPCOL) to get inputs and crop advisories.

### **Shared water management details though I could not practice it**

Ms Kalarani, has learnt about water management by reading and participating in meeting organised by MSSRF but could not practice it because she did not have the facility. However, she is happy to share with us that she has shared this knowledge with other farmers. Ms Kalarani was proud to say, “Based on my suggestion one professor from Janarthana Rahul College is using sprinkler in his *sampangi* (Tuberose) field. He also has drip irrigation facility. For the past two years he has been coming regularly to our office (RESAPCOL) and gets the necessary inputs he requires. He buys seeds of maize and cotton and micronutrients. He also sold the harvested maize to the office”.

### **Share information with fellow farmers**

Mr Ravanendran says, “I tell my friends about seed treatment. They used to wonder why they should do it again when the seeds are already treated. I tell them that when

proper seed treatment is done we can prevent *verazhugal noi* (root rot) and fungal attack. I tell them that I learnt this from *Seidhi Solai* only. Now, many of them realised the importance of seed treatment and they are doing. I distribute *Seidhi Solai* to 10-15 farmers”.

## **Share livestock information though do not own cattle**

It is heartening to point out that farm women like Ms Manimegalai, who never went to school and Ms Manjula share information on cattle care and management though they do not own milch cow. Manimegalai feels that the newsletter is very useful those who have livestock. “Though we do not own milch cows I share the information with others. *Seidhi Solai* has given preventive and remedial measures for *madinoi* (udder disease) and *kaananoi* (foot and mouth disease). By applying ground paste of simple ingredients such as *manjal* (turmeric), *sunnambu* (brick lime) and *sothukathazhai* (Aloe vera) and applying it on the udders one can easily cure the udder disease. I shared this prescription with one of my relatives in Paappankulam when her cow was affected by udder disease. Her cow got cured very fast, she said. The newsletter also gives certain important tips to prevent the disease in cattle during summer and also during rainy season. It is advised that the cattle should be tied in a hygienic place. It should not be allowed to get exposed to excess sun heat and it should not be allowed to get drenched in the rains. And, during rainy season dried fodder should be given to the cattle. I share the details with my circle of friends and relatives. They find it helpful and useful. I have chickens. I maintain them well based on the advisory given in the *Seidhi Solai*”.

According to Ms Manjula, *Seidhi Solai* covers exhaustively preventive and controlling measures of livestock diseases which she has read and remembers. Though she does not own cows, when some ones cattle is affected by *kaana noi* (Anthrax) and *ammainoi* (cow pox ) she shares the information with her/him for treating the same. She feels happy when they tell her that the prescription (grounded paste of *kathazhai* (Aloe vera), turmeric, chalk piece and lemon) was effective in curing the cows of the disease. For the farmers, who cannot read sharing of information is of great use to them and gives a satisfaction. She is happy to say, “ They appreciate me saying *Maadu illavittalkooda therinji vechiirukkiye enbargal* (though you do not have cattle you know about cattle management)!”

## **Information on deworming of goat shared**

Mr Ganesan who has five cows finds the newsletter extremely useful and he helps others to follow the prescription advised for treating diseases that affect livestock. If they are hesitant Ganesan explains to them in detail and they get convinced. For example, one elderly man by name Mr Iyyanar, who cannot read or write from his village was not

convinced about deworming his adult goats. He thought only the baby goat should be dewormed. Then Mr Ganesan had read out the content given in *Seidhi Solai* to Mr Iyyanar before he got convinced. Mr Ganesan is happy that the elderly person is careful in deworming both the adult goat and the little one. Mr Ganesan also helped the elderly person when his goat was affected by mouth ulcers using the information given in the newsletter. Ganesan also distributes *Seidhi Solai* to the villagers because he wants his villagers also get benefitted by using the content given in the newsletter.

### ***Seidhi Solai* is used as a reference material**

It is used as a reference material by persons like Mr Velankanni, Mr Ganesan, Mr Arulappan, Mr Periyasamy and Ms Priya, Ms Nagalakshmi and few others. Because human memory is short some persons like Mr Arulappan and Ms Priya keep most of the issues carefully for future reference. Ms Priya says she refers to it when she prepares *Panchakavya* and other organic inputs. Mr Arulappan uses it for cattle care and management; according to him “*Seidhi Solai, maadu valarpadhil enakku rumba ubayogamaga ulladhu* (The information from *Seidhi Solai* is very useful in cattle rearing)”. For Mr Ganesan, *Seidhi Solai* is something valuable to be preserved and used particularly in livestock care and management. Mr Periyasamy also refers to it for cattle care. Mr Velankanni uses it for both crop cultivation and veterinary purpose.

### **Information on government schemes/subsidy and training on poultry**

Apart from providing crop/veterinary advisories *Seidhi Solai* also carries information on various government schemes/subsidies (drip irrigation, subsidy for planting tomato and grading and packing tent) meant for small and marginal farmers.

#### **Drip irrigation**

Some of the famers have benefited by using schemes /subsidies from Horticultural department for drip irrigation. We have seen Ms Selvi, Ms Priya, Mr Velankanni and Mr Muthaiyah getting subsidies for drip irrigation and benefitting by adopting the technology.

#### **Subsidy for tomato cultivation**

Mr Velankanni also came to know about getting subsidy for planting tomato from *Seidhi Solai*. Details of procedure involved in getting the subsidy (such as for how much area the seedling is provided, what record to be submitted and so on) was clearly provided. In addition to getting *thakkali naarru* (tomato seedlings) free of cost from Horticultural department, the land was also ploughed for free of cost. He was happy that he was also given some cash and *Azospirillum* and other micro soil nutrients. He says, “I was not

aware that we can get seedlings at no cost from the department until I read it in the newsletter. As already mentioned, I planted tomato as advised in the *Seidhi Solai*".

## **Grading and packing tent**

Priya was able to build a *sippam kattum goodaram* (grading and packing tent) near her house in 2017. She shares, "We learnt about it from *Seidhi Solai* about getting a subsidy for constructing *sippam kattum goodaram*. We got a subsidy of 4 lakh from the horticultural department. The office (RSGA) at Kittampatti also gave us information on this and guided us in getting the subsidy. Our MSSRF connection enabled us to get the subsidy without any difficulty. We have entered into an agreement with the Reliance to sell our *kovakai* (ivy gourd) after participating in a meeting conducted in RSGA office. Reliance continues to buy from us. They come and collect the product and the amount is credited into our bank account. It has simplified our work".

## **Training on country chicken farming (*naattukozhivalarpu*)**

Ms Nagalakshmi, a confident woman says she never misses reading *Seidhi Solai* and she refers to it whenever she has doubts in her cotton and maize cultivation. Nothing misses her eyes, she says. She came to know through the newsletter about a training conducted in the Collectors office for two days on *naattu kozhi valarpu* (country chicken farming) during 2015. She was inspired to participate in the training; she believed that the training would help her to start country chicken farming as an economic activity to substitute household income. She immediately contacted the *vidai* company for further details. Guided by the office staff she attended the training. The newsletter also gave details about where to get the chicks. She first reared chicks and sold them but later she found it difficult to maintain them. Presently, she rears chicken for market. She has 250 chickens with her now. She was very happy to share with us that she is very much satisfied with the earnings through selling chicken. Her customers include outside the district. She was proud to say that she has not advertised about the product; through the word of mouth customers buy from her. She was also happy to mention that she has been able to give employment for four persons to help her in managing and maintaining the poultry farm.

Nagalakshmi mentioned that other women in her group also wanted to try; but because of lack of space and other facilities they are not able to do it as a regular economic activity. They rear few chickens; they use it during family functions and sell them also.

## **Few have apprehensions**

A great majority have been able to adopt the advisories and they are satisfied with the results. However, there are few respondents who were not convinced or confident enough about following certain advisories; for example, minor irrigation structures

and pest control practices. They feel by constructing farm ponds or any other minor irrigation structures it would restrict the area of cultivation. Mr Ravanewaran has come to know about drip irrigation and minor irrigation structures as effective water management methods from *Seidhi Solai* and the office. Information on farm pond construction was published in *Seidhi Solai* but he did not do it because he does not have sufficient land.

According to Mr Ravanendran in his village only 10% own lands; most of them have less land; they hesitate to adopt the method of bund structure of storing water for irrigation. They hesitate to have this structure because they fear they would lose cultivable area. However, he adds to say that gradually, people are getting aware of its benefits and showing interest to have such water saving structures. Using NABARD scheme around 20 farmers (including him) in his village has shown interest to adopt method of bund structure.

Ms Latha has started cultivating her 60 cents of land only for the past two years. Earlier her parents-in-law were in control of cultivating that land; she used to assist them. As a group leader she has gained knowledge on many aspects of agriculture. This is helping her lot to carry out their farming activities based on proper information. However, she adds to say that she is not able to carry out some of them either because it is not suitable to her land or she is hesitant to follow them for various reasons.

According to Ms Latha, "We have a small piece of land where we cultivate crops once a year; it is advised leaving space (for eg cotton) between plants will allow for free air circulation and for the plant to branch out enabling more flowering and increase the size and health of the cotton ball. But we do not follow the spacing as suggested in the *Seidhi Solai*. Because we think by planting more crops we can get more yields. Similarly, I am scared to have yellow sticky card in our field. No one in our village uses it. I have seen in the lands where I go for work. I am of the view that it is suitable for the lands with irrigation facilities and not for rain fed farming! Also, I think if I have it (which attracts the pests) I will not be cautious in taking care of the pest attack; my fear is that I will take it easy. Moreover, unless all the farming households do it we will not take the risk of taking any new initiative. Likewise, I have heard and read about *uyir urangal* (bio fertilisers) but again there is hesitancy that it might affect the yield. I am yet to get convinced of using bio fertilisers. Anything new is feared and doubted by us! However, there is a slight change among the young farmers and they are encouraging their household members to use bio fertilisers and other bio inputs".

## **Request for soil sample by SPIC**

Respondents like Mr Ravanewaran suggested that it would be helpful to the farmers if SPIC conducts soil testing regularly in the villages. He says, "...it will be good if

SPIC helps us with soil testing. It will help the farmers to use the required quantity of fertilisers; we can thus reduce the expenses. Otherwise we have to take sample soil to the Union Office. We normally do not get the results immediately and they also will not give us in detail as to what should be done”.

### **Need more content on vegetable cultivation**

Few of the respondents felt that the newsletter can cover more details on vegetable cultivation because the region is known for vegetable and other horticultural crops.

It is evident that *Seidhi Solai* has been playing a significant role in equipping a farmer with up to date information/knowledge related to the crops including vegetable crops. According to Mr Arulappan, “...the farmers are learning new technologies; *theriyadadai mushusaga therindhukolgirom* (meaning, what we did not know earlier we are able to have complete knowledge about it now). For example, earlier we used to apply only farm yard manure. Now I am told that if it is mixed with vermi compost and other micro nutrients (enriched farm yard manure) it will promote good growth of the crop”.

## 4. *Seidhi Solai* and livestock care and management

### *Seidhi Solai, maadu valarpadhil enakku romba ubayogamaga ulladhu* (information from *Seidhi Solai* is very useful in cattle rearing)

Akin to agricultural advisories, *Seidhi Solai* also serves a livestock owner with useful information for its care and management. It is very important that they are taken good care because for a greater majority of the farming and landless households in the villages of Kannivadi milch cows are important source of income. The villagers, particularly women find it very helpful in meeting their day to day expenses without much difficulty. The cattle also provide them with farm yard manure. Except two women respondents, others own milch cows. Mr Arulappan who owns four cows and uses the content in the newsletter pointed out that *Seidhi Solai, maadu valarpadhil enakku romba ubayogamaga ulladhu* (The information from *Seidhi Solai* is very useful for me in cattle rearing). Many persons echoed similar view.

*Seidhi Solai* covers exhaustively timely and suitable season based information on livestock disease prevention and appropriate treatment. Just before the onset of rainy season and summer season it will alert the livestock owner about the possible disease attack and how to prevent and treat the same. For instance, it warns a farmer during February-March about summer disease (mouth and foot disease) that commonly affects the livestock and advises to vaccinate the cattle in advance to prevent the same. The newsletter also deals in detail about the symptoms of different diseases. The treatment for most of the diseases prescribed is simple that can be prepared with locally and easily available plants such as *sothu kathazhai* (Aloe vera) , *manjal* (turmeric), *elumichai* (lemon) *sunnambu* (brick lime) and so on. The treatment is very effective. It stresses the importance of deworming both for adult and young livestock. It gives simple tips such as keeping the cattle shed in hygienic condition and the type of feed/fodder that is good for the cattle and other livestock. It is pointed out that generally, in most cases the disease can be easily treated without going to the veterinary hospital. One can get her/his cow treated by spending just Rs 25-30 instead of Rs 2000-7000/- pointed out many respondents.

### *Seidhi Solai* useful and helpful in cattle care and management

A young Ms Poonkodi has been a member of self help group supported by RESAPCOL for the past four years. Her household owns only a piece of land. Being a member of self help group she could buy milch cows<sup>14</sup> using the bank loan. Presently, she has

14. Except two women, other respondents own milch cows; they have availed bank loan to buy milch cows. According to the respondents they have been experiencing drought like condition for the past eight to 10 years because of insufficient rainfall and changing rainfall pattern. Under such circumstances it is the cow which comes to their rescue. They are able to earn some money by selling the milk. They are all grateful to REASAPCOL/MSSRF for helping the farmers in getting the bank loan for buying milch cows and in many other ways.



three milch cows and a calf. She was prompt in repaying the loan. She was very happy to share with us that the household could meet the daily expenses by selling the milk. Taking good care of the cows is very important for her (and also for other farm women and men). Like in carrying out her agricultural activities she finds the newsletter very helpful in taking care of her cows and calf.

According to Ms Poonkodi, “*Seidhi Solai* carries very useful and helpful information to raise livestock in a healthy manner. We get details of preventive measures of disease (such as *vai pun* (mouth ulcer) *kaana noi* (Anthrax) *madi noi* (udder disease) *kaal kulambhu veekkam* (foot rot disease) and treating them. Calf care is also dealt in detail. The prescriptions are simple and effective. The necessity of maintaining hygiene in a cow/goat shed is explained in a simple manner for the health of the cattle. I apply the paste of *sothu kathazhai*, *manjal*, *elumichai* and soap or chalk piece for udder disease. We clean the *kaal kulambu* with warm salt water and apply *manjal* (turmeric) paste after that. We also use turmeric spray. For mouth ulcers I give the treatment as done by my elders. I vaccinate my cows to prevent *kaana noi*”.

***Seidhi Solai vanda piragudhan kozhi, pasu mudaliyavarrai kaapparra mudigiradhu (It is after getting to read Seidhi Solai that we are able to safe guard chicken, cows and other household animals!)***

One can get a broader perspective of livestock information disseminated through *Seidhi Solai* and how the information helps in rearing and protecting the livestock from diseases from the case study of Mr Velankanni from Karamadai. He has been using the services of RESAPCOL regularly for the past five years after he became a member of a horticultural group supported by MSSRF. Mr Velankanni who has 10 cows, 10 goats, 15 chickens and few ducks finds the newsletter equally good in livestock care and management as that of agriculture. He follows the newsletter prescription to treat his cows, goats and chicken. His is an example, as to how the newsletter serves the livestock owners need in safeguarding their cattle, goat and chicken. He is grateful to the newsletter for presenting the information appropriate to the diseases that affect the cattle and the poultry in a particular season or period.

According to Mr Velankanni, “I am getting benefitted in safe guarding our goat and chicken from *kazhichal noi* (diarrhea) .Earlier, there were occasions where we have lost our poultry in large numbers; we had lost 60 numbers due to *kazhichal noi*. When our chickens were affected with *kazhisal noi* two years ago it was the advisory in the newsletter that saved them from the disease. As mentioned in the newsletter we used plants such as leaves of *keezha nelli* (*Phyllanthus Niruri*) and *velam pattai* (bark of *Acacia* sp), small onions in treating the fowl. It was very effective. We treated them with the

juice extract of *keezha nelli*; also *velam pattai* was boiled in the water and the extract was given; we also gave small onion pieces mixed with kerosene to treat them. The traditional medicine worked well. Earlier, I used to treat the chicken with some tablets bought from the medical store but it was of no use. I totally stopped treating them with tablets now. Now, I follow what is prescribed in the newsletter. The disease gets controlled in the early stages itself. It is a great relief for us.

Similarly, when my cows were affected by *madi noi* (udder disease) I applied a mixture of pastes of *manjal* (turmeric), *elumichai* (lemon) and *sothu kathazhai* (Aloe vera) and *sunnambu* (brick lime) after washing the udder with clean water. This we have to do atleast four times a day for four days. During September-October, *kaana noi* (Anthrax) affects the cows. This is because of keeping the cow shed in an unhygienic manner with lot bees infesting the shed. This results in boils in the feet of the cows. Now, we are keeping our cattle shed clean and neat. We are planning to construct a small passage to drain the cows' urine and collect it in a pit in proper manner. We can use it for our lands as manure. We are getting necessary things ready for this. (*Vaikka seidhu komiam pidikkanum. Adarku vendiyadai seidu kondu iruukuren. Kaal vetti kondu irukkom*).

I also learnt about fertility problems of cows and how to overcome it. We also learnt that *thaadhu uppu* (mineral salt) is a good micro nutrient to increase the disease resistance level of live stock. The office got us *thaadhu uppu* from KVK, Namakkal. I feed them following the method instructed in the newsletter. We hang a block of *thaadhu uppu* from a convenient and comfortable place so that the goat or the cow can comfortably lick the block of the mineral salt on its own instinct and stay away when the animal does not require. *Seidhi Solai* also gave details about constructing suitable shed for goats.

The animals and the hen and ducks are safe and healthy. The mortality rate of the chickens has totally comedown. I must tell you that *Seidhi Solai vanda piragudhan kozhi, pasu mudaliyavarrai kaapparra mudigiradhu* (It is after getting to read *Seidhi Solai* that we are able to safe guard chicken, cows and other household animals!)”!

**Today I have gained much knowledge in cattle care that many call me for help even at mid night. Thanks to *Seidhi Solai***

Mr Ganesan from Alathuran Patti is full of appreciation for the livestock content disseminated regularly through *Seidhi Solai*. According to him since he cultivates his land for only one season he is not able to use all the information fully given for agriculture. “...but” he says “livestock care is daily affair. As I have five milch cows, two claves and native variety of chicken I find *Seidhi Solai* extremely useful and helpful; it helps us to spend Rs 25 instead of Rs1500/-. I encourage others to read the newsletter; I distribute it. I also share the information (for example, deworming of cow and calf).

Mr Ganesan states, "We can effectively cure *madi noi* by grinding lemon, *sunnambu* (brick lime), *manjal* (turmeric), and *sothu kathazhai* (Aloe vera) into a paste and apply it on the cleaned udders for three to four times per day for three-four days. Similarly, for *kanai noi* paste of aloe vera, turmeric and neem leaves would be effective in curing it; just by spending Rs 20 we can treat the cow. In medical shop they will give glycerine to treat foot and mouth disease. For *vayaru kolaru* or *vayaru ubbasam* (stomach upset or bloat in cattle) it is sufficient if we give *soda uppu* (baking soda) 75 to 100 gms; for younger cows it is enough if we give 50-70 gms of baking soda. Baking soda should be mixed with water and given to the affected cows. It will flush out all the dirt from the liver. We should not feed the cow more with *pasalai keerai* (spinach). It will cause stomach problem. If I give starchy feed to a cow I feed it also with little quantity of baking soda. If one neglects the symptoms of *madi noi* and does not attend to it immediately by the time the doctor comes the cow will be affected severely; sometimes there are chances of losing the cow also. The hospital expenses will be around Rs 5000/.

I came to know that deworming of a cow or goat is essential even when it is pregnant. Many of us were under the information deworming is done only in the young animals/calves. It is only after reading the newsletter does we come to know that it is important even for adult animals.

Similarly, for chicken I meticulously follow the guidance and prescriptions given for feeding the chicken and treating them when they are affected by diarrhoea".

Mr Ganesan expressed his gratitude when he said "The newsletter gave me a sense of direction not only in carrying out our agricultural operations but also in livestock care. Today I have gained much knowledge in cattle care that many call me for help even at mid night. Cattle owners from surrounding four -five villages come looking for me when their cattle are affected by indigestion, *kana noi* and *madi noi*. They have the confidence in me. I do my best as a service. My wife and daughter are proud of my service to the fellow farmers. When the farmers tell me that their cattle are cured of the illness it gives a great sense of satisfaction to me. Thanks to *Seidhi Solai!*"

## **Helps me to take good care of my cows and also help my fellow farmers in treating their cattle**

Like Mr Ganesan, Mr David Mariadoss from Karisal patti who has six cows, three calves and 10 chickens uses the content from *Seidhi Solai* to take care of his cows and chickens and also help others in treating the cattle. According to David Mariyadoss, "*Seidhi Solai* does a great service in cattle care and management; it helps me to take good care of my cows. I have helped my fellow farmers in treating their milch cows when affected by udder disease by using the ground paste of Aloe vera, turmeric, lime kiln, and lemon. I prepare the paste and take it to the household with affected cow. I tell the owner to milk

the cow once in two hours". He continued to say "In my experience within two days the disease gets cured. It is simple prescription but effective in treating udder disease. We do not have to go to a doctor. We are able to save money and time".

## **Useful in overall livestock care and management**

Ms Priya, Ms Marudayi, Ms Rajeswari, Ms Poonkodi, Ms Shenbagavalli, Mr Arulappan, Mr Dhandapani, Mr Periasami, Mr Natarajan, Mr Selvaraj, Mr Irudayaraj, Mr Mahalingam and many others are unanimous in saying that *Seidhi Solai* (also voice mail/message alerts about the cattle disease and preventive/ management/ treatment measures) carries valuable information on livestock management. They all find it useful because it warns them or prepares them to handle possible season based disease attack on cattle and other livestock and to take preventive measures to safe guard the cattle from diseases such as *madi veekkam* (udder edima ), *madi ammai noi* (cow pox), *kaal kulambu veekkam* (foot rot disease) and skin related problem. Also, details such as treating *kudal puzhu* (intestinal worms) and other diseases are given in detail. As a preventive and safe measure of spread of diseases it advises to keep the cattle shed clean and neat; and to avoid keeping the cattle in the hot sun. It is advised to use turmeric spray as a disinfectant and vaccinate cattle on time or in advance as preventive measure. It also suggests the type of feed (*pasun theevanam* (green fodder), *vaikol* (dry straw)) and the quantity to be given to improve the milk yield. It encourages the farmers to cultivate Azolla for cattle feed.

The respondents stated that minute but useful guidelines help them significantly in the overall cattle care and management. The women and men respondents mentioned that as per the instructions given in the newsletter they have vaccinated their cattle; they keep their cattle shed in hygienic manner. They tie their cows in a dry place and avoid keeping them in the hot sun. Some of them mentioned that if they observe slight swelling in the udder they immediately treat the cow by giving lime orally which will act as a curative and preventive treatment. Some are cultivating Azolla and they say that the cows fed on Azolla yields more milk (more than two litres than usual). Ms Manimegalai, though does not have cows is of the view that *Seidhi Solai* is very useful for those who have cows. She rears chickens. She says she maintains them well using the advisory given in the *Seidhi Solai*.

## **Small but effective tips for prevention of diseases**

Mr Arulappan finds the newsletter very useful in taking care of his cows because it is useful in preventing disease attack on the cattle. It gives simple but effective tips for good cattle care. For example, he says "It gives necessary precautionary tips one has to take before and after milking every cow such as washing the hands properly with soap and the right time to milk the cow; it also emphasises that a calf should be sufficiently

fed with its mother's milk and rearing the calf with proper care. We have come to know about the necessity of keeping the cow shed or where the cows are tied in hygienic manner. All this help in preventing the cows from getting affected by various health issues. We became aware of all this by reading the *Seidhi Solai*".

Persons like Mr Dhndapani, Mr Periyasami, Mr Velankanni (from Karisalpatti) and few others mentioned that they learnt through *Seidhi Solai* and the staff that *thaadhu uppu* (mineral salt), an effective micro nutrient would help in digestion, strengthen the bones, muscles and improve the immunity in livestock. Similarly, Mr Arulappan, Mr Velankanni, Mr Periyasamy and Ms Priya also stated that they learnt from *Seidhi Solai* feeding the cows and goats with *thadhu uppu* will act as a disease resistant. So, as suggested by the newsletter they tie a block of *thadhu uppu* to a pole in a place where their cows and goats can have easy access to lick the salt whenever they feel like.

Mr Mahalingam and others stated that it is advisable to feed the cattle during summer with gruel prepared out of small grains because it will give cooling effect to the cattle and thus can avoid getting diseases in summer. For example, *kambang kouzh* (peral millet gruel) will help prevent and control *ammai noi* or cowpox in milch cows. Mr Mahalingam also pointed out that the cattle owners are kept warned to keep and maintain the place where livestock are normally kept during the day and night. It should be dry devoid of dampness. And the cattle should be prevented from getting exposed to heat particularly during summer. This will cause diseases such as *kaana noi*.

Mr Periyasamy says that he has learnt about the precautions to be taken during winter and rainy season such as the need to tie the live stock in a clean and dry place, the shed to be washed using phenol, feed the cattle with dry fodder/feed and during rainy season it is advised to wash cows feet with Potassium permanganate or salt mixed in warm water and so on. According to him these are all useful and helpful tips for livestock care and maintenance that can be easily adopted.

Ms Shanmugavalli who has 2 cows says, "the concept of cleanliness in maintaining the cattle shed in hygienic manner and keeping the udders clean is highlighted as measures of precaution in preventing cattle diseases. She stated, "After milking the cow I give fodder to it so that it won't be tempted to lie down immediately and thus can avoid udders getting infected." Like Ms Shanmugavalli, Mr Mahalingam and few others follow this practice. According to them newsletter helps to safe guard the cattle; the cattle owners are saved from spending Rs 4000 -Rs 5000/-

## **Treated the wound caused by crow bite**

Mr Periyasamy also uses advisories for livestock care and management; he was able to treat his cow bitten by a crow. He says, "When my cow was bitten by a crow I did

not know as to how to treat it. The veterinary doctor gave some medicine. But there was no improvement. I referred to *Seidhi Solai*; a traditional prescription for treating the wounds was given using *kuppamepni thazhai* (Indian Nettle), *elumichai* (lemon) and *sunnambu* (bricklime). There was one more ingredient. I forgot. I will have to refer the newsletter. The treatment was very effective; within 9 to 10 days, the wound got healed. I was also saved from unnecessary expenses”.

## **Treated broken horn**

Mr Selvaraj, a regular reader of *Seidhi Solai* also uses the content extensively for safeguarding and treating his cows. He encourages others to use the advisories. He was happy to share with us, “Once one of my cows broke its *kombu* (horn). I was very worried and anxious. Fortunately, I could treat it. Based on a newsletter’s prescription I applied the paste *sothu kathazhai* (Aloevera), turmeric and neem paste for treating wound. It had a good effect. I was relieved. I have safeguarded my cows on many occasions from *madi noi* (udder disease) by using the prescription given in *Seidhi Solai*. On few occasions I did not pay much attention when I saw the symptoms and I paid heavily for it. I learnt that spraying Potassium permanganate on the udders during rainy season is good for cattle health and I follow it. I have come to understand that it is necessary to feed the cows with *ootta chathu* (nutrients).

## **Need solution for preventing and controlling ticks**

Few of the respondents like Mr Rajeswari and Mr Periyasamy pointed out that ticks are a big problem they are facing in their cows. Mr Periyasami stated “We are not able to prevent or control tick problem on the cow. Hospital medicine does not work. Even giving injection does not help in treating it; it again appears after three months. Preventing and managing it is a big problem we are facing in our cattle. I am washing the cow using *erumbu marundhu* (Borax powder used to get rid of ants); after few weeks it reappears! It will be helpful and useful if we are suggested some medicine by the office to control and treat the ticks”.

## **Sharing of information**

### **Share livestock information though do not own cattle**

It is interesting to point out that farm women like Ms Manimegalai (who never gone to school), and Ms Manjula share information on cattle care and management though they do not own milch cow. Ms Manimegalai feels that *Seidhi Solai* is very useful those who have livestock. She says “Though we do not own milch cows I share the information with others. It has given preventive and remedial measures for *madi noi* (udder disease) and *kaananoi* (Anthrox). By applying ground paste of simple ingredients such as *manjal*

(turmeric), *sunnambu* (brick lime) and *sothukathazhai* (Aloe vera) and applying it on the udders one can easily cure the udder disease. I shared this prescription with one of my relatives in Paappankulam when her cow was affected by udder disease. Her cow got cured very fast, she said. The newsletter also gives certain important tips to prevent the disease in cattle during summer and also during rainy season. It is advised that the cattle should be tied in a hygienic place. It should not allow to get exposed to excess sun heat and it should not be allowed to get drenched in the rains. And, during rainy season dry fodder should be given to the cattle. I share the details with my circle of friends and relatives who find it helpful and useful. I maintain my chickens well based on the advisory given in the *Seidhi Solai*".

According to Ms Manjula, *Seidhi Solai* covers exhaustively preventive and control measures of livestock diseases. Though she does not own cows, when some one's cattle is affected by *kana noi* and *ammai noi*, she shares the information with her/him for treating the same. She feels happy when they tell her that the prescription (grounded paste of *kathazhai* (Aloe vera), turmeric, chalk piece and lemon) was effective in curing the cows of the disease. For the farmers, who cannot read sharing of information is of great use to them and gives a satisfaction. She is happy to say, "They appreciate me saying *Maadu illavittalkooda therinjivechiirukkiye enbargal* (though you do not have cattle you know about cattle management)!"

### **Information on deworming of goat shared**

Mr Ganesan who has five cows finds the newsletter extremely useful and helps others to follow the prescription advised for treating diseases that affect livestock. If they are hesitant Ganesan explains to them in detail and they get convinced. For example, one elderly man by name Iyyanar, who cannot read or write from his village was not convinced about deworming his adult goats. He thought only the baby goat should be dewormed. Then Ganesan had read out the content given in *Seidhi Solai* to Iyyanar before he got convinced. Ganesan is happy that the elderly person is careful now in deworming both the adult goat and the little one. Mr Ganesan also helped the elderly person when his goat was affected by mouth ulcer using the information given in the newsletter. Mr Ganesan also distributes *Seidhi Solai* to the villagers because he wants his villagers also get benefitted by using the content given in the newsletter.

The respondents value the information on season and contextual based advisories and other details regarding livestock care and management that some of them preserve issues of the newsletter for later use.

## 5. Concluding Remarks

Uncertainties in weather conditions and ever growing new pests and diseases are throwing more and more new challenges to the farmer throughout the world. It is placing new demands on the farming community which needs more skills and updated information/knowledge to handle the new challenges in their day today activities. In this context it is important to promote continuous learning of farm women and men to deal with these uncertainties and improve their livelihood by promoting suitable production technologies. This is exactly what M S Swaminathan Research Foundation (MSSRF) – Common Wealth of Learning, Canada (COL partnership) is striving to do through the Lifelong Learning (L3F) initiative in and around the villages of Kannivadi, Didigul district, Tamil Nadu by addressing problems related to agriculture and livestock care and management. The continuous learning is promoted by employing different modes of information which include print media, notice board, mobile phones and other social media tools such as Whatsapp, face book and You tube. Training and skill development programmes related to agriculture practices and livestock care and management are conducted for women and men farmers. Besides, the staff from RESAPCOL/MSSRF visit the fields of farmers to guide them and suggest appropriate crop advisories to be followed. The information disseminated through different modes keep them in constant touch with the agricultural and livestock information relevant to that time and season.

This present study is based on 25 case studies of farm women and men from the villages of Kannivadi region, who have tremendously benefitted from reading and using the content in *Seidhi Solai*, a monthly local newsletter issued by RESAPCOL, related to agriculture and livestock. It has gained a wider appreciation among the farming community for its timely season based and local specific agricultural and livestock information. The farm women and men testimonies reveal the benefits and efficacy of this newsletter in preparing and equipping the farming community in handling various issues connected to their agriculture and livestock and thereby improve their income. The content in *Seidhi Solai* is complemented with other channels such as voice mail, training programmes, meetings with experts and the staff at MSSRF/RESAPCOL.

The structure and the presentation of the content in the newsletter are very much appreciated by the farm women and men. It is viewed as a guide and reminder to the farmers and livestock owners. Necessary information that is relevant to a particular season crop cycle is disseminated step by step. Right from the land preparation and other details such as seed treatment, fertiliser management, and pest /disease management are disseminated. The importance of soil testing, spacing, intercropping, multi-cropping, water management and so on is covered. In general, the newsletter promotes



sustainable agricultural practices. Similarly, season specific livestock information/ advisories are valued by the respondents.

Many are of the view that the continuous flow of relevant season and contextual information related to agriculture and livestock has positive impact on the farming community. The women and men farmers are happy that they are able to take good care of their livestock because of the timely guidance and alerts from *Seidhi Solai*. Earnings from the milch cows are very helpful for the household to meet its day today and other expenses.

Farmers have been able to reduce the expenditure and increase their income from the field. There is increased awareness on the importance of using micronutrients and bio fertilisers to the crop. They try their best to adopt sustainable agricultural practices which has helped them to improve yield and safe gourd soil health to an extent possible. Based on proper understanding they carry out their activities now. Women are happy to share with us that they are inspired to learn new technologies. They are able to keep their cows, the other important source of income, in good health. They are happy to mention that they feel confident because one way or the other are kept informed about the measures to be taken at various stages of crop growth and cattle rearing. One of the elderly respondents mentioned, "We tend to forget but the *Seidhi Solai* and the staff are our reminders. It is like a *thoondu kol* (driving force) for us. It is of great help" .According to another respondent, "Reaching a greater number of farmers with information is difficult but *Seidhi Solai kondu selgiradhu* (meaning the newsletter does that job)!"

The content in the newsletter is valued by the respondents that some of them preserve the issues that could be used as reference material in future; for instance, to prepare bio inputs such as *panchakavya* and *amirdha karaisal* and to treat the diseases affecting the livestock.

It was heartening to know that the contents in the newsletter is not just used and benefited by those who have access to the newsletter; the content is also shared with their relatives and friends. We have seen that even some respondents who could not use advisories (for example, water management due to lack of facilities) are sharing it with others outside their village. Similarly, we have examples of few women who do not own cattle themselves but are happy to share prescriptions for treating cattle related diseases such as udder disease with others who engage in cattle rearing. When the cows were cured of the disease it gave them a sense of satisfaction. It is interesting to point out that one of the women who helped her relative to treat the cattle does not know to read or write. She gathered the information when the newsletter was read

out in the group meeting. Similarly, we have seen that a spouse of one of our male respondents who had never gone to school sharing information to prevent and control *kondai puzhu* (stem borer) in *kathari chedi* (egg plant). She attends the group meeting when her husband cannot participate. Just by listening to the content read out in the group meetings she grasped it well and shared it with her friends and relatives. These are few examples; there are more incidences of sharing information related to both agriculture and livestock care and management.

During our informal interactions with our respondents and other farm women and men, the need and necessity of equipping them with up to date information through *Seidhi Solai* and also through voice mail, training programmes and meetings with experts for their knowledge empowerment has clearly been expressed. According to them, continuation of these services would convince and increase their confidence and motivate the farmers particularly the younger generation to continue agriculture as their main livelihood option. One of the youngsters doing his PhD pointed out that it is because of MSSRF/RESAPCOL programmes youngsters in Kannivadi region now evince interest in agriculture.. According to him this interest should be sustained by institutions such as MSSRF. Farmers do not get any guidance from the agricultural extension service. He added to say that MSSRF is seen as a great support system for which the farming community is grateful.

As one of the male respondents had put it a farmer has to struggle a lot against many odds and he needs guidance and support at every stage of the crop cycle. He was pleased to say, “ we are happy at least we have guidance through *Seidhi Solai* and from different modes which enable us to carry out agricultural activities with proper information and knowledge. The staff from MSSRF visit our fields often and provide us good inputs as to how to handle a particular crop condition. This is the type of guidance and support we need!” Another young man, Mr Ravaneswaran stated “I have been reading *Seidhi Solai* regularly. I have become aware of many aspects related to agriculture and cattle care and management. But for the *vidai* company (RSGA), I would have given up agriculture and got a job as a watchman somewhere. If farmers in this area are able to cope up with difficulties and carry out agriculture without losing interest, it is mainly because of the functioning of the company to improve the lives of farmers!”

According to Ms Manjula, “Coming of MSSRF/*vivasaya* office to our area has brought in lot of positive changes in the lives of the farmers. I can say that we learnt about certain fundamental aspects of agriculture. In general, it has given a direction to the farmers. *Nalla vivasayatha parri cholli koduthargal* meaning, it created lot of awareness and taught the farmers in doing agriculture in the right manner. I did not have any farming background but it created awareness and interest in me about agriculture. The

staff also visit farmers' field and give them appropriate guidance. Farmers have the confidence now that if we go to office we can get guidance! The office has developed to such a great height!

After our association with the company we do not borrow from outside. A farmer is saved from falling into debt trap. We can get quality seeds and other required farm inputs from the office on credit. We find it easy to repay the loan on time after our harvest of crops. We also help other women outside our group also to buy things from the company. We stand as surety for them by giving in writing with our group seal. So not only the members but also the farmers outside the group get benefitted. If today women are coming out in our villages and going to the banks, and participating in various training programmes it is because of the services and programmes of MSSRF".

## Appendix

### Case studies

**Name: Mr Arulappan**

Age: 52 Years

Education: Class 8

Village: Karisal Patti, Dindigul District

My name is Arulappan. I am 52 years old. I live in Karisal Patti village. I have studied up to Class 8. We have 11/2 acres of land where we mainly cultivate *malli* (jasmine) and *mullai* (royal jasmine). We also cultivate fodder crop in a small piece of land with *agathi* (august tree/*Sesbania grandiflora*) as an intercrop. We used to cultivate egg plant but we have not been cultivating since four years because of water shortage. We had planted guava but we had to pull them off as we had birds' problem. We have a well with bore. As a family we work on our land. My wife and also my daughter, who is a staff nurse, help me during holidays in the field with watering the plants and in maintaining the *thottam* (jasmine field). We have a son who is a design engineer. My son sees face book of MSSRF and YouTube to know about the crop related details to share with us. My children also read *Seidhi Solai* and tell us the advisories to be followed in our land. I also read the newsletter. We have four cows. We sell milk to a local milk vendor. Cows are source of income to the family and they also give us organic manure - *thozhu uram* (farm yard manure).

I am member of a farmers' group supported by MSSRF and horticultural department. I got introduced to MSSRF 10 years ago. Since then I have been benefitting a lot in our cultivation of crops and cattle management. We get regularly information/advisories through phone (voice message/ mail) about cattle disease and management, government schemes and education for children; the staff from MSSRF periodically visit our land. In addition to all this we also get monthly a local newsletter namely *Seidhi Solai* giving the farmers timely crop/veterinary advisories and information on farming related trainings and new technologies. The phone message, *Seidhi Solai* and the weekly visit of the staff help us a lot to carry out farming activities based on knowledge and in safe guarding our cattle.

Usually cows get affected by *madi noi* (Mastitis) and *komari noi* (foot and mouth disease). Sometimes they do not take feed. Also the eyes sometimes accidentally get poked by a stick or by insects. For all these we do not have to go in search of a veterinary doctor; we get medical prescriptions from the doctor over the phone. The voice message provides the doctor's phone number. We get solutions to the problem by making a phone call. In case there is any doubt regarding the purchase of a prescribed medicine we can

contact the doctor over the phone to get clarifications. Sometimes I give the phone to the medical store person and the doctor will tell him the name of the medicine. I cannot read English. It is really a blessing to get veterinary advisories without much of a trouble. Our time and money are saved. We get immediate solutions to the problem. The doctor is easily accessible over the phone and he is patient in listening to us and gives us necessary prescription. I have contacted him more than three times in the last two years. In case he missed my call he will call me the next day. Once when my cow was affected by *madi noi*, the doctor advised medicine to be given three times a day for four days. One of the ingredients he prescribed was *sorru kathazhai* (Aloe vera).

*Seidhi Solai, maadu valarpadhil enakku romba ubayogamaga ulladhu* (The information from *Seidhi Solai* is very useful in cattle rearing); possible attack of a disease during a particular season and the preventive measures to be taken are given in detail and in advance; so, it is useful in preventing disease attack on the cattle. It gives necessary precaution one has to take before and after milking every cow such as washing the hands properly with soap and the right time to milk the cow ; it is also emphasised that a calf should be sufficiently fed with its mother's milk and rearing the calf with proper care. We have come to know about the necessity of keeping the cow shed or where the cows are tied in hygienic manner. All this help in preventing the cows from getting affected by various health issues. We became aware of all this by reading *Seidhi Solai*.

We keep every issue of the newsletter safely because we can refer to it later; our memory is short; we do not remember the details. We follow all the instructions very carefully. We, the farmers also share the information during farmers' meeting and remind each other about the information given in *Seidhi Solai* when we happen to meet in a common place. When I am not able to attend the meeting my wife participates on my behalf. Though she has not studied much she has a good grasp of what is being discussed and very clearly explains the discussion that takes place during the meeting. For example, during maize season she attended one of the meetings. The members discussed the details that appeared in *Seidhi Solai*. Though we do not cultivate maize she explained to me clearly about the details of the discussion (such as how much gap one should leave between two plants and how to carry out ploughing operation and so on). I also share with her the information that comes in the newsletter. Her memory is good and follows the instructions carefully.

If you talk to my wife she will explain to you about *kondai puzhu thakkudal* (stem borer attack) in egg plant and *ver puzhu* (root grub) attack in cotton. This also she came to know by attending the farmers' meeting. *Kondai puzhu* cannot be easily observed in the plant. If we see carefully we can notice something like a knot on the affected stem of the plant. One has to cut the stem, only then it will be visible. Likewise when *ver puzhu* attacks the plant it cannot be seen. Only after 80 days the damage will be visible. Till

then we think the crop growth is good. To prevent *ver puzhu thakkudal* it is advised to keep *kurunai marundhu* (Furadan) in the early days of the crop and suggested earthing up (*man anaikka chonnargal*). My wife shares this knowledge with her relatives and neighbours cultivating egg plant and other vegetables in their lands.

Based on the information given in *Seidhi Solai* we carry out pruning operations in our jasmine field. It was advised that the plants should be pruned after 15<sup>th</sup> of Thai (January-February); it enables growth of new offshoots which will give good flower yield. We are experiencing good harvest of jasmine flowers as we are following the advisories carefully.

Importance of soil testing was pointed out in the newsletter and also during the farmers' meeting. Before carrying out ploughing I give soil for testing; I gave it six months ago. Based on the advice I applied necessary inputs to correct the soil. I do not remember the names and proportion of the inputs used. We came to know of the importance of changing the crop (crop rotation) and planting different crop in a field on regular basis. My jasmine crop is three years old. After two years we will change the field for jasmine.

On the advice of MSSRF we have planted *agathi* (*Sesbania grandiflora*) as an intercrop in the fodder crop field. *Agathi keerai* is good for cattle. It can be used to treat *kaana noi* (Anthrax) that normally affects the cattle. It helps in preventing diseases in cattle such as in curing mouth ulcers. It can also be given as feed to the cattle.

We are avoiding unnecessary fertiliser and other input application now. Now I am getting the necessary input from the *vidai* company. Previously I used to purchase from private input dealer very often. We used to spray inputs to the crop every now and then. We were spending Rs 500 per week on input purchase now it is the same amount we are spending but every two weeks.

One way or the other we are kept alert about the measures to be taken at various stages of crop growth and cattle rearing. We are learning new technologies; *theriyadadai mushusaga therindhu kolgirom* (meaning, whatever we did not know earlier we are able to have complete knowledge about it now.) For example earlier we used to apply only farm yard manure. Now I am told that if it is mixed with vermin compost and other micro nutrients it will promote good growth of the crop. I had read in the *Seidhi Solai* about vermin compost preparation; I am making all the arrangements to prepare it. We are encouraged to produce to meet our own organic input requirements. On the whole our association with MSSRF has brought about lot of positive changes on our family and many others in our farming and cattle rearing. We have been able to reduce the expenditure and increase our income from the field. We are able to keep our cows, our other source of income in good health. We can benefit if we are able to sell our milk to an authorised company or to a milk collection centre. We would be grateful to MSSRF

if it helps us in this. Local milk vendors are not allowing government to set up a milk society here!

**Name: Ms M Kalarani**

Age: 38 Years

Education: Class 12

Village: Aalathuran patti

My name is Kalarani aged 38 Years. I come from a village namely Aalathuran patti. I have studied up to Class 12. I am married with two daughters. We own less than an acre. We have taken nearly two acres on lease. We do not have irrigation facility. We normally cultivate cotton in our land and maize on the lease land. There is no rain for the past six months. Had it rained on time by now weeding operation would be going on in maize field! We have nearly 20 chicken, four goats and a cow and a calf.

My contact with MSSRF started 10 years ago as a Women Farmer's Group member. As a member of the group I used to attend all the meetings conducted by MSSRF; the meetings were related to agriculture and allied activities. As the days rolled by I started tacking interest in almost all the activities of MSSRF. I am a member of agricultural women's group namely Roja Magalir kuzhu.

I am happy to say that I am one of the progressive farmers in this area. I have participated in many trainings organised by *vidai* company and in trainings conducted by other institutions such as Gandhi Gram Rural University (vermin composting and how to handle farm implements or machinery), Agricultural or Horticultural departments on the recommendation of MSSRF. I have participated in water management training. I also attended the gender meeting organised by MSSRF. I have got *Siranda vivasayi* award from Gandhi Gram Rural University and Reliance Foundation! Thanks to the encouragement and support rendered by MSSRF. I am using some of the knowledge I gained through the trainings and interaction with the experts and staff of MSSRF to some extent. I am not able to use some of them due to certain factors (because of insufficient hands and less land holding). However, I share the knowledge with my friends and relatives. I am an active participant of farmers' Whatsapp group.

Seidhi Solai issued from the farmers' *vidai* company (Reddiyar Sathiram Seed Growers Association) is a reminder and a guide to plant crops season wise. It also gives information on cattle rearing, poultry and so on. The agricultural and allied information is specific to our area. The information covers soil sample, land preparation, seed treatment, inter cropping, spacing, pest control and management, use of bio inputs and all activities related to that crop cycle. We cultivate crops based on the information given in the newsletter. Following the details one can choose the crop for that season and cultivate it; by using the information from *Seidhi Solai, selavai kuraitu varumanathai kootta therindhu*

*konden* (I have learnt to reduce the expenses and increase the crop yield). I am able to take care of our livestock and poultry.

I came to know that leaving space between two farm beds enables free air circulation for the crops. It also prevents pest attack. The weather information helps us to take precautions in carrying out our agricultural activities such as planting a crop and irrigating the land. The newsletter also warns us about the possible pest attack in a season. To prevent and control pest attack I use yellow sticky card and pheromone trap as recommended in the newsletter. I also came to know that intercropping will help in preventing and managing pest and disease attack. Earlier we used to think that the field would be crowded with other plants as intercrop. Now we know the role played by other inter crops in preventing and controlling the pest/disease. I plant castor as border crop and *ulundu* (black gram), *paasi payaru* (green gram), *mochai* (lab lab) and *thatta pauriru* (cow pea) as intercrops in cotton field. These pulse crops serve more than two purposes; one it safeguards and minimises pest/disease attack on the crop and secondly we can use them in our food which are good source of protein. The quantity of the pulses is sufficient for household consumption for one year. The leaf foliage adds to the nutrients of the soil. I plant *magarandam ulla payirgal* (pollen crops) which will help in increasing bee population. Bees will promote more pollination activity and thus help in the yield increase of the crop. This is important from food security point of view. We are getting *oru kallil irandhu mangai* meaning we get multiple benefits in following intercropping. Earlier we used to think that our field would look crowded with many crops. Now we know the benefits of *oodu payir* (intercropping).

I have reduced the use of chemical application to our crop. I am using organic inputs and less harmful chemicals. I have come to know that stubbles can be integrated into the soil by using rotavater. This will enrich the soil. Earlier we used to burn the crops residues or allowed the cattle to graze it.

I cultivated *vendai* (ladies finger) a few years ago (based on the suggestion of the company) which brought lot of appreciation for me. The yield was very good. The plant photographs were sent to foreign countries. I faced little water shortage; otherwise I would have got more profit. I bought water for Rs 5000 to irrigate the land. After the expenses I got a profit of Rs 50000/ per acre. This was the first time I ever cultivated ladies finger. I constantly used to get in touch with MSSRF office for guidance. Unfortunately, I could not continue with this vegetable cultivation. There is no sufficient rainfall and also it requires more labour which is not available these days. People hesitate to enter the *vendai* field after 10 AM. It will cause lot of itching. One has to use gloves to pluck the vegetable. I wish to cultivate it but what to do? There is no rain and we need more hands!



I help my neighbours and share with them the knowledge to cultivate vegetables. My sister does not know to read and write. Based on my suggestion she has cultivated onion and egg plant. She got a good profit. Now she herself goes to the office to get inputs and advisories.

I have learnt about water management by reading *Seidhi Solai* and participating in meeting organised by MSSRF but could not practice it because we do not have the facility and the opportunity to practice it. However, I am happy to share with you that I have shared this knowledge with other farmers. Based on my suggestion one professor from Janarthana Rahul College is using sprinkler in his *sampangi* (Tuberose) (*Agave amica*) flower land. He also has drip irrigation facility. For the past two years he has been coming regularly to our office and gets necessary inputs he requires. He buys seeds of maize and cotton and micronutrients. He also sold the harvested maize to the office.

I share my knowledge in the Whatsgroup status hoping many will view it. I gave traditional medicinal tips when Corona was at its peak to safe guard one from cold, cough and fever. At least one will benefit by reading it-that was my idea. I shared with them the benefit of inhaling in proper way. I also shared about soil test. I am happy to say that many came forward to give for soil test when SPIC from Thoothukudi visited our villages. Though a majority were men there were few women who came forward.

I have shared with you whatever I could recall now. I would like to reiterate that our expenses related to farming have come down. When others spend Rs 10000/- our expenditure would be around Rs 5000-6000/- The yield and our profit have also increased! The association with the office has brought in lot of positive changes not only on me but on other women and men farmers. Women do not hesitate to come out and purchase the inputs. They show interest in learning new agricultural technologies and practice agriculture based on right knowledge. Now they have the opportunity and surely will get benefitted!

I help my friends and relatives in purchasing ground nut, coconut and sesame oil from the office. In case they want to get anything (farm inputs) on credit I stand as a guarantor for them. Then, gradually I will withdraw from this and will make them connect with the office directly.

**Name: Ms Manimegalai**

*Age: 47 Years*

*Education: -*

*Village: Pothinaikan patti*

I, Manimegalai 47 years aged come from Pothinaikan patti Village. I have not gone to school. We cultivate a small piece of land. It is undivided property. It is in my father-

in-law's name. The property will be divided between four brothers. I have one son and three daughters. All are married. My son works in a company. And my husband also works out side. So, I take care of the entire agricultural operations. Once a year only we can cultivate our lands (August-September season) because of water shortage. We cultivate maize. I have a small kitchen garden.

I have known Kittampatti office since seven years. I am a member of Malligai Vivasaya Kuzhu consisting of 15 members. This group was started in 2014. Our group functions very well. We have understanding among us and share the group work. We take turns to go to the bank to deposit the money. All of us in the group have availed cattle loan from the bank. I have never gone out of the village before. Now I participate in agricultural meetings and go to the bank. Few of our group members who did not know to sign their names have learnt to do it. Being a member of this group is a great advantage. Our mental stress and pressure have come down considerably. We are saved from the money lenders. Earlier, we used to have cash only to pay the interest and the principle will remain as it is. But now, our group savings come to our rescue. We borrow and repay the loan with interest along with some principle amount without any difficulty. We do not feel the financial pinch after we became members of Self Help Group.

In our monthly group meetings *Seidhi Solai* is read read out by the *thalaivi* or the leader of the group. Though I cannot read or write, through this I learn a lot. I came to know of fertiliser and pest management for cotton and maize. Most of our villagers followed the pesticide mentioned in the *Seidhi Solai* for *thandu thulappan* (stem borer ) on cotton crop. I don't remember the name of the pesticide. I learnt about basal application of fertiliser and leaving sufficient space between two plants. I also learnt that fertiliser should not be applied on the plant or near the plant. All these were also discussed in the meetings organised by the company in our village.

We get weather forecast information. They tell us about the rainfall. They will also tell us whether it is right time to apply fertiliser or postpone it by few days. If rain fall is going to be more it is advisable to wait for few days. Otherwise, it will go waste. Moreover, the staff from the office visit our fields and provide their guidance. They will suggest only inputs that are not expensive but effective one.

The office gave vegetable seeds (tomato, kathari (egg plant), milagai (chilly), avarai (lab lab), paagai (bitter gourd), and keerai (greens) for our group members and also other 10 households in our village. We were encouraged to grow the vegetables in organic way. I am happy to share with you that I got good yield of the vegetables that I sold them in the market for nearly four-five weeks. I did not spend on vegetables for home consumption. All the households were happy with their vegetable harvest. I selected and preserved seed material and again planted. You can see them; it is just in front of

my house. It would be helpful if the office give us quality vegetable seeds so that we can take care of our household requirement and can earn some income by selling them.

*Seidhi Solai* gives equal importance to both agriculture and livestock care management. Though we do not own milch cows I share the information with others. *Seidhi Solai* has given preventive and remedial measures for *madi noi* (udder disease) and *kaana noi* (Anthrax). By applying ground paste of simple ingredients such as *manjal* (turmeric), *sunnambu* (brick lime) and *sothukathazhai* (Aloe vera) and applying it on the udders one can easily cure the udder disease. I shared this prescription with one of my relatives in Paappankulam when her cow was affected by udder disease. Her cow was cured very fast, she said. The newsletter also gives certain important tips to prevent the disease in cattle during summer and also during rainy season. It is advised that the cattle should be tied in a hygienic place. It should not be allowed to get exposed to excess sun heat or get drenched in the rains; and, during rainy season the cattle should be with dry fodder. I have chickens. I maintain them well based on the advisory given in the *Seidhi Solai*.

I am happy that I am able to meet our household expenses by borrowing from group savings . And, if I want seed material or chemicals or other farm inputs I can get it on credit. This also can be repaid without much of a strain. I also help my relatives and neighbours who are not members of the office to get the inputs on credit. We would be grateful to the office if it also gives us fertilisers. It will avoid us from going to Dindigul or Kannivadi.

We have been experiencing uncertain weather for the past 10 years. It is affecting our harvest. Sometimes it rains heavily when we had just finished applying fertiliser or any other input to the crop. We need continuous guidance from the office.

**Name: Ms Rajeswari**

Age: 35 Years

Education: Class 8

Village: Veerapudayan patti

I, Rajeswari aged 35 years come from Veerapudayan patti village. We have five *kuzhi* land and a pump set. Fodder crop and cotton and maize are standing crops in our field now. Our land is not a fertile one. The water content is bitter in taste. We can cultivate cotton and maize only if it rains. We do not cultivate vegetables because of the soil and water quality. We have 2 cows and a calf. We were in Thiruppur working in a banyan company. It is 10 years since we returned to our village to cultivate crops in our land. As we cannot depend only on agriculture for our household needs my husband has a small eatery in a neighbouring village. After completing the work at home and the fields I help him at the eatery.

I know MSSRF for the past five-six years. We were inspired to join the company when we heard about the benefits of being a partner. We learnt that we can get seeds and the essential agricultural inputs from the company for low price and on credit. From our village we formed a group namely Sindu Nadhi group for which I am the leader. We conduct monthly meetings. I have not been able to go for group meetings for the past five-six months because of my daughter's health. She needs frequent hospitalisation. But some other member will lead the meeting.

One best thing that happened to our villagers particularly women after our contact with the Kittam patti office has been that we have all developed in our lives both socially and economically. Being members of a credible group we have got cattle loan. This has brought about dramatic change in our lives. It has made us come out of our laziness and become responsible persons taking care of the cattle we got through bank loan and become active earning members for the household. We have started going to the bank (*Ellorum munneri ullom. Somberiyaga irundavargal ippa porupaga agavendiyagivittadu. Maattu loan kidaithu maadu vangi ullom. Paal virkirom. Ippa naanga bank kooda poga arabithu vittom*). We have become bold and courageous. I never had a bank account. For the first time I started bank account with Pandiyan bank (Tamil Nadu Girama bank) and applied for cattle loan. So far I have got two loans from the bank for buying milch cows. First loan I got Rs 70000/ in two instalments three years ago and the second loan of Rs 90000/ two years ago. We are selling milk to a private person. We are satisfied with the earnings from selling the milk. It is of great help particularly when doing agriculture is not economically viable; the climatic condition also discourages a farmer to practice agriculture with enthusiasm. My husband supports me in taking care of the cattle.

Today, most of the households in our village have cattle; a majority did not have cows before. Initially I found it difficult to handle them. I did not know how to hold the rope also. Now, I am able to take care of them.

Our group members are very understanding. Recently, I got a loan from our group (*ul kadan*) to meet my daughter's hospital expenses. I did not attend the meeting also. Knowing my situation our group members took a decision to give me a loan from our group savings. It was timely. I am paying subscription of Rs 200 as monthly savings in our group. One nice thing about our group is we help each other and we also help our village women to avail the credit facilities available in the company. All the households in our village are related to each other. We, as a group stand as a guarantee to the individual giving it in writing with our group seal.

*Seidhi Solai* published by the company carries useful information appropriate to a season for agriculture and cattle rearing. As a leader of the group I read the content to the group members. Those who have difficulty in following it I explain to them again.

Though I don't cultivate vegetables I shared the information for egg plant and tomato with vegetable growers and they told me that they were happy with the yield. I have a short memory. So I immediately share with others whatever I know. I have shared information for treating udder disease in cows.

*Seidhi Solai* carries timely information for preventing cattle diseases and managing them. Most of the prescriptions can be prepared with the items that are easily available such as *Sothu kathazhai* (Aloe vera) , *manjal* (turmeric), *elumichai* (Lemon) *sunnambu* (brick lime) and so on. We have to grind them and apply it on the udder after cleaning it properly for three to four times in a day. Sometimes I feel lazy to prepare this paste. I take veterinary doctor's help. I keep my cattle shed clean without dampness as instructed in the *Seidhi Solai*. I saw in *Seidhi Solai* about the usefulness of giving *thadhu uppu* (mineral salt) to the cattle. So far I have not given it to my cows. I will give now. We spray turmeric in liquid (to prevent infection) form on the cattle. Ticks are a big problem. Even if we give injection it again appears after three months; it is a big problem we are facing in our cattle.

We also get information for water saving through phone (Example, importance of *sottu neer pasanam* (drip irrigation) ) We also get weather forecast. It is very useful to carry out our agricultural operations such as planting maize and so on. We have not been getting any phone messages for the past few months.

I buy seed material from the company on credit. This time I bought seeds for Rs 4000/. I also buy necessary inputs for the crop. If we have any problem in the crop I go to the office or I contact them over them. Sometimes the staff also visit out fields. Our pesticide expenses have come down now. Earlier we used to spray twice; now it is only once. When cotton crop (*ilai suruttu noi* (leaf curl disease) and *kai puzhu* (bollworm)) and maize (*kuruthil puzhu* (cob borer) ) were affected by pest I contacted the staff and carried out the remedial measures as prescribed by them. They also told me to keep *manjal attai* (yellow sticky trap) in our cotton field but I did not keep. I cultivate cotton only in a smaller area. I have also attended some trainings organised by the company such as weeding machine operation and to operate a small tractor.

I am thankful to the *vidai* company for its help and guidance to the farming community for improving their livelihood.

**Name: Mr K Mahalingam**

Age: 64 Years

Education: Class 9

Village: Oddakoil patti

I, Mahalingam come from a village namely Oddakoil patti. I am 64 years old and I have

studied up to Class 9. We have 61/2 acres of land with a pump set. We have both dry and wet land. Earlier my main crop used to be sugar cane in the wet land. In dry land we used to cultivate crops suitable to the season. Now situation has changed due to the changing weather condition. It has been a dry period for the past few years. So, we are forced to change our cropping pattern. Now, we are cultivating cotton and maize in our land. If we have water we cultivate vegetables. Life of a farmer has become uncertain. We have to struggle a lot. We have three cows; two bought with loan through the group and another one with our savings.

I know RSGA since its inception. Initially, I was a member subsequently became one of the Board of Directors; Presently I am the President.

Under uncertain and unfavourable climatic condition, MSSRF's presence and setting up of FPO have been a great source of help and support for the famers in our area. If I have to say in one sentence about the benefits of them is *Selavai kuraitthu, varuvayai koota rumba udavyaga irukku* meaning it is helpful in reducing the farm expenditure and increasing a farmer's income. We keep getting early alerts from the staff and through different medias such as phone and a newsletter by name *Seidhi Solai*. In fact they teach us about the right agricultural methods and practices at various stages in a crop cycle. The farmers are given information in advance; so it is easy for him to plan the agricultural operations. For instance, we are told in advance the benefits of summer ploughing; it helps destroy the eggs of worms in the beginning itself. Summer ploughing helps the soil to absorb rain water easily which will aid in healthy germination of the seeds. Keeping yellow sticky card would reduce the pest attack and thereby we can reduce pesticide expenditure. Yellow sticky card helps in controlling the *andhu poochi* (Melon fly) in the early stages itself; if mother pest dies it will prevent the reproduction of the pest.

We are advised to carry out soil test and based on the result they tell us the inputs for the soil. We get the result soon with details of deficiency and what inputs to be applied and what inputs to be reduced or avoided. So we are avoiding use of fertilisers in arbitrary manner. Earlier we use to think the more you feed the soil the more will be the yield. So, if my relative puts one bag of fertiliser I would put two bags thinking I will get better yield. It used to be a sort of competition between me and my relative! Now, we apply only the required quantity of fertiliser and thereby we experience reduction in our expenditure. We also avoid unnecessary problems. Our land is *kalar ular nilam* (alkaline soil); it limits the uptake of the necessary nutrient and thus affects the roots of the crop. I was advised to reduce the quantity of Potash and Super to the soil and to change the quality of the soil application of Zypsum was recommended. The staff at MSSRF gave me this recommendation; also the details were given in *Seidhi Solai*

as to how to improve the *kalar ular nilam*. One can refer the newsletter whenever we need. Department of agriculture also does soil testing but the results from there would take long time. They carry out soil testing in the farmers' field only to complete their scheduled work. They have to show how many soil tests have been done!

I am applying bio fertilisers to vegetable crops. I am applying micronutrients to maize crop. For stunted or *kurugiya* crop micro nutrients will help in promoting healthy growth of the crop. I do seed treatment for *vella cholam* with *Azospirillum* which helps in healthy root formation. It will help in uptake of NPK.

*Seidhi Solai* would prepare a farmer in advance about the agricultural activities to be undertaken- it would tell us to prepare the land during summer if there is scope for rains at that time. It will alert us if there are indications for light rains which helps us greatly in carrying out fertiliser application. We also get weather forecast details (as to how much rain we can expect on a particular day or during a particular period) through voice mail. In uncertain climatic condition, providing information on weather is very helpful to the farmers to plan one's agricultural operations! Suppose if it is indicated that we may get 1cm-2 cm rain we can plan- we will not irrigate the land during that time and postpone application of fertilisers. Otherwise, it will be waste of time and money for the farmer.

*Seidhi Solai* and through Voicemail we become aware of the water management. I have got the pipes for drip irrigation. There is a problem in installing the drip irrigation pipes in some lands because three persons will be sharing an acre. It is sad that even here brokers have entered!

*Seidhi Solai* also serves a farmer with useful information for cattle management. It gives timely information on disease prevention and treatment based on season. For instance, it warns a farmer during February-March about the summer disease that commonly affects the livestock and advises to vaccinate the cattle in advance to prevent disease attack on cattle. So, the cattle are saved from disease attack and thus one saves Rs 5000/- -Rs 7000/- *Seidhi Solai* and Voicemail remind the cattle owner about the importance of keeping and maintaining the cattle and its shed in a hygienic manner. In order to prevent udder getting infected we are told to give some fodder to the cow after milking it so that it won't lie down immediately. It is told to feed the cattle during summer with the gruel prepared out of small grains because it will give cooling effect to the cattle and thus can avoid getting diseases in summer. If we give *kambang kouzh* (pearl millet gruel) we can prevent and control *ammai noi* or cowpox. Reaching a greater number of farmers with information is difficult but *Seidhi Solai kondu selgiradhu* meaning the newsletter does that job!

MSSRF organises veterinary camp in summer for vaccinating the cattle. They will inform us in advance about the camp which enables the farmer to bring the cattle to get vaccinated. Similarly, we are prepared in advance to take care of the cattle from getting affected by *komari noi* (foot and mouth disease) in winter and *madi noi* (udder disease).

Agriculture as an occupation or livelihood has lost its charm or the status/respect in the society. Society does not respect a farmer these days. Farming has not been viewed as a profitable/viable occupation by the people. I had to uproot nearly two acres of coconut crop because of insufficient water. We used to harvest 4000 coconuts per year. We are defeated in the battle. In spite of all this, having the company in our area has been of great help and service to the farmers of Kannivadi and the surrounding villages. We can get quality seeds and farm inputs on credit. We can sell our cotton and maize to the company. Many farmers are getting indirectly benefitted by the company services and activities. Crop advisories and other information reach the other farmers who are not members of the company through their friends and relatives. They also get farm inputs based on the recommendation of a member farmer in the company. I must say that *payan paduthum vivasayikku maraimugamaga valarchi adaya vaippu niraya undu* meaning one can develop well by using the services of the company.

Farmers' expectations are more; some expect the company to function like a government office or department. They want the company to give everything as a *maniyam* or subsidy or write off the debt. Government has spoiled them. I come to understand this when I am working closely with the company. When compare to outside input shops the company gives things (seeds and other farm inputs) for much lesser rate; they are helping us to reduce our farm expenditure by almost 50 %.

**Name: Mr Jnanavel**

*Age: 42 Years*

*Education: Class 10*

*Village: Manayakaran patti*

My name is Jnanavel. I am a native of Manayakaran patti, Dindugal district. I am 42 years old and studied up to Class 10. We own 21/2 acres of land. *Paruthi* (Cotton) and *makka cholam* (maize) are the main crops we normally cultivate in our land. I know about MSSRF ever since it started functioning in Kannivadi. I was told about this organisation through one of the staff who visited our fields. I also know about the *Vivasayigal kootamaippu* from its formation days. My association with MSSRF is more than 20 years.

The association has brought in perceptible positive changes in practicing agriculture. We were not aware of the importance of taking soil test, seed treatment, and preventive



measures for pest and disease control and management methods. We did not get the services from agricultural extension. Fortunately, things began to change with the setting up of MSSRF office and subsequent formation of Farmers' Federation and setting up of vidai company (*Reddiyar Chathiram Vidai Urpathiyalar Sanga Arakattalai-Reddiyar Chadram Seed Growers Association*). The *vidai* company plays an important role in the day today life of a farmer. He is able to get seeds and other inputs on credit. Instead of going to a private company or a private merchant he can get the inputs and guidance from MSSRF. After the harvest he can sell the product to RSGA. He does not have to depend on others. The staff come for field visit and gives us suggestions/advisories on the standing crop and for other related matters.

We learnt about soil test/soil health and the right method of ploughing the land. I also came to know of the *neer melanmai* (water management) and its importance. I gained knowledge on various aspects of agriculture such as pest/disease prevention and management practices and cattle rearing and management by participating in related trainings, through voice mail, *Seidhi Solai*, a monthly local newsletter and interaction with MSSRF staff. My learning continues; I read *Seidhi Solai* regularly, pay attention to voice message/mail ; through MSSRF association I have got good contact with seed company people. They come and see my field and suggest good practices. Getting similar information through various channels act as reminders; if we miss voice message we can refer *Seidhi Solai*. I am also in the farmers' Whatsapp group. We exchange information in Whatsapp group. We can get our doubts clarified when we go to the MSSRF office or when the staff visit our village.

So far I have done soil testing three times. After the soil test I came to know that *gandaga* (acid) content was very high in our field. Before conducting soil test I used to apply 10 bags of Urea for two acres of land. I was advised to reduce the quantity of Urea application-from 10 bags it was reduced to two bags. I understood the importance of soil health and how it has to be taken care of for good crop growth. We have avoided unnecessary usage of Urea by which we are not only maintaining the soil health but it has also reduced the unnecessary expenses. Crop yield has also increased.

Weather forecast information disseminated from MSSRF is helpful. I was not aware of this earlier. It is disseminated through voice message. I also get to know from Whatsapp discussion. This information is also given in *Seidhi Solai*. Weather forecast information or warning help us to plan our agricultural activities and take a decision whether to go ahead with the work as already planned or delay it by few days. For example, sometimes we get ready to plant seeds of a crop anticipating rain in a particular season but it may not rain; during such time the rainfall information help us to postpone the activity by a few days or a week. Last year (2020) I was getting ready to sow *makka*

*cholam* but I was told to wait for a week because the forecast indicated rains only after a week. I and more than 50 % of the villagers stopped the idea of sowing. We got rains after a week and all of us got a good yield. Had we proceeded with planting the week earlier we would have met with considerable loss. Half of the seeds would not have germinated! This would have affected the yield!

The *Seidhi Solai* issued from the *vidai* company give us updated, local and season specific agriculture and allied related information to the farmer. Through voice mail also we get the information. It is a kind of reminder and guide to us to follow the activities specific to a crop and season. The topics generally discussed are soil testing, the right time for carrying out ploughing, water management, fertiliser application specific to a season or time, weed control, pest/disease control (such as how to control *padai puzhu*) and so on. As already mentioned, I mainly cultivate cotton and maize in my field. So, I use information and details regarding these crops. I meticulously use information (other farmers also follow) related to pest control in cotton cultivation; I have kept *ottunni/manjal attai* (yellow sticky trap) and adopted intercropping. By using *ottunni attai* and adopting intercrop prevents the pest/insects affecting the cotton crop and I am able to control the pest attack. *Ottunni attai*gal, *ina kavarchi pori* (pheromone trap) and *oodu payir seivadhu parri vilakkamga solvadal payirai padukathukolgirom*. *Poochi marundhu selavu kammiyagi ulladhu* (The information on the utility of yellow sticky card, pheromone trap and intercropping is exhaustive; so we are able to protect the crop from pests/insects). Pesticide expenses have come down). I am using *manjal attai* and *ina kavarchi pori* for nearly 4-5 years. Looking at my field my fellow farmers wondered if this would solve the pest problem. I encouraged them to use them in their fields and seven of my fellow farmers have kept the yellow sticky card and *ina kavarchi pori* in their respective fields.

*Padai puzhu* (army worm) attack has become common recently and most of the crops were badly affected by the pest. In *Seidhi Solai* it was advised to apply pesticide 16 days after the sowing of the crop. On 31<sup>st</sup> day another dose has to be sprayed on the crop. The staff from MSSRF also said that by doing so we can save the crop from the pest. I did as advised. I benefitted. The details of the proportion of the pesticide to be used also are given in detail on the board displayed in the company. We also get the information through voice mail. The pest attack was less. Yield was not affected. Earlier I used to get 32 bags in 21/2 acres; now I get 41 bags. The prescribed dosage of micronutrients application, apart from enriching the soil prevents pest/disease attack and aids in increasing the crop yield.

Recently, the utility of ploughing the land from south to north direction and which side we should have the bunds (*endha pakkam karai pidippadhu*) were explained in *Seidhi Solai*. We were told that by ploughing in that manner the crops would always get sun light. It

is also useful for *payir padukappu* (crop protection). I also learnt benefits of constructing a bund in an appropriate place in the field. Based on the inputs we have constructed the bund and followed the ploughing method as advised for the rabi season for planting maize. I did not have knowledge about this earlier; now I am using it. Looking at my field some farmers wondered why I was doing it in a different manner. I explained to them the usefulness; six of them have followed this in their respective fields.

Similarly, for maize also I follow the advisory that is published in *Seidhi Solai* and the relevant information I get through other channels from MSSRF and benefit a lot. For example, last year (2020) by following the agro advisories I harvested good yield in maize. Normally, per bag we get within 62 kgs. Last year it was 68 kilos for me. The grains were well formed and attractive/shining. I applied micro nutrients (25 kgs of zink sulphate mixed with 25 kilos of soil) when there was dampness in field) after the fifth day of sowing.(it should be applied within 25 days of planting ). I followed other pest control methods as prescribed in the *Seidhi Solai* and the staff.

In the *Seidhi Solai* there is a section on question and answers related to the information covered in that particular issue. I answer the questions and send it to the office. My answers will be always right. It is a revision for us. This is a kind of checking whether we have read and understood the content given in the newsletter.

I have participated in training and demonstration programmes such as digging farm pond (*pannai kuttai*) and using mulching sheet. I have sufficient water facility to irrigate the crops. So I have not dug a farm pond in my field. The training is helpful in learning about water management. I can use this training when I confront water shortage. During a dry period I can go in for alternative crop! Though I do not use mulching sheet (because I do not cultivate jasmine) I can share the information with other farmers cultivating the crops where they can use mulching sheet. My *sagalan* (co-brother) has mango and guava crops in his field. It is a dry area with red soil. So I told him about the benefits of using mulching sheet and drip irrigation. He and two of my other relatives in the same village have taken to drip irrigation in their fields. It is since two years they are using drip irrigation. They are able to avoid unnecessary wastage of water and time. The crops look healthy.

My field has also been used for demo purposes on few occasions. It helped me to have contact with fertiliser and seed companies (example Syngenta Company). The company directly come to our field. Whenever they visit our field we can get additional information or any other clarification. When the company people and MSSRF say I am doing farming based on right knowledge I feel encouraged and happy. Many farmers also visit the demo plot. It gives a sense of happiness when they appreciate me.

I try to help my relatives and other farmers in getting seeds and other inputs from the company (RSGA). My *chithappa* (father's younger brother) used to hesitate to visit the company and get inputs. He hesitated because someone had to give him *jaamin* (guarantee). He is not a member of any group. He used to get seeds from Oddan Chathiram and Dindigul for credit with heavy interest rate (Rs 5 - 6/- per hundred). Last year I helped him to get maize seeds (for credit) from our *vidai* company. He was very happy when he got good harvest and the grains were of good quality with good weight. For one *chippam* (gunny bag) he got 76 kilos. Normally, a minimum of 60 kilos per *chippam* we get. The staff from MSSRF was surprised when he was told about it. He used to sell his product to the private person earlier. They will set their own standards to fix the price. It will be a loss to the farmer. Now he sells the harvested product to the *vidai* company and he is very much satisfied with the earnings.

Ever since we came in contact with MSSRF we have been able to avoid unnecessary expenditure and wastage of inputs. Crop yield has increased. My *Chithappa* says *indha office (MSSRF) vandadu kadaavulin varapirasadam* meaning setting up of MSSRF/RSGA is a boon from God for the farmers of Kannivadi and surrounding villages!

**Name: Mr Dhandapani**

*Age: 67 Years*

*Education: S.S.L.C*

*Village: Sirunayakkan patti*

I am Dhandapani, aged 67 years. I hail from Sirunayakkan patti. I had done my Higher Secondary Schooling. I have two daughters and a son who is a school teacher. Our household owns three acres of land. We have a well and a pump set. But there is no water in the well. Ten years ago our lands were under irrigation. Today it is rain fed. The situation is becoming worse year after year. A decade ago we used to cultivate sugar cane, rice, and banana and mulberry crop. We could not continue with seri culture after Gaja cyclone. Now, the common crops cultivated are cotton and maize. After January-February there won't be any crop in the field. We are not cultivating vegetables because of water shortage. We cultivate few vegetables for our household consumption. Most of us have our houses in and around the fields. Only few households stay in the main village. I own five milch cows.

I am in contact with MSSRF since it was set up and I am a share holder in the company (RSGA). Coming of MSSRF and setting up of the seed company in Kannivadi area have given the farmers general confidence to practice agriculture with hope in spite of all the difficulties faced by them. The farming community is updated with information related to agriculture and livestock through conducting training programmes and *Seidhi Solai*,

a local newsletter in vernacular. The staff visit our fields and the farmers have easy access to the staff for any guidance.

Farmer groups both male and female supported and facilitated by the vidai company/ MSSRF are functioning in all the villages in and around Kannivadi. They all know about the company and they make use of the facilities. Most of the members have got loan to buy cows. I made use of the cattle loan twice. It is a huge help to the farmers. *Vivasayiai varumayil irundhu kaapparru girargal* meaning a farmer is saved from falling into poverty.

I personally have been benefiting a lot by attending meetings, reading *Seidhi Solai* and listening to voice mail. I did not have an idea about organic farming. I came to know about preparation of *pancha kavya*, *amirda karaisal*, *poochi veretti* and vermin compost. Farmers have got awareness about the uses and importance of micro nutrients to the crop. As far as I am concerned I have not heard about all these before. Now I am preparing *pancha kavya*, *poochi veretti* and vermi compost for our use. I am able to prepare and use these organic inputs by participating in trainings, meetings and by reading *Seidhi Solai*. I have been preparing for the past two years. I have bought a Kangeyam cow (an indigenous breed) particularly for this purpose. Micronutrients promote the growth of earthworms. Organic manure helps in healthy growth of the crop. I do not use *kalai kolli* (chemical weedicide) because it will kill the earth worms. You can see my field! You will find a lot of earth worms!

*Seidhi Solai* has given in detail about the preparation of *Poochi kolli* (Agni asthram-organic pest repellent) by using ingredients such as garlic, tobacco, green chilli and cows urine. It is very effective in controlling the pest in cotton and maize crops. I also prepare *poochi viratti* by using *erukkam* (Colotropis), *arali* (nerium), *Oomathai* (*Datura*), *ada thodai* (chaste tree), *vembu* (neem), *nochi* and *komium* (cows urine). This prevents and controls *vellai iee* (white fly), small lies and so on. There is no *karugal* (scorching) in the crop. I share the information with others particularly about the benefits of organic farming.

I do seed treatment with Azospirillum and *Phosphobacteria*. I learnt about this in a meeting organised by the company. I also participated in training on maize cultivation in Vaagarai, a place near Palani where they told us about seed treatment. I spray *pancha kavya* and tonic once in 15 days. Last year as per instructions given in the newsletter I did basal application of fertiliser, did seed treatment and I took care to leave sufficient space between two plants. We tend to forget but the *Seidhi Solai* and the staff are our reminders. It is like *thoondu kol* (driving force) for us. It is of great help.

*Seidhi Solai* is of much use in giving local based information both for agriculture and livestock care and management. It tells us the right time for fertiliser application, the

quantity to be used and in what interval it should be carried out and so on. It also warns us that delay in applying the fertiliser is not of much use. It explains the purpose of proper application at right time for good harvest of the crop. It has helped me to get proper understanding about proper fertiliser application. So, we avoid indiscriminate use of the inputs and thus reduce our expenditure.

We never used to do soil testing. Now I am doing once in three years. Based on the soil test results we are advised the necessary application of inputs and in what proportion it should be used. This enables one to use the required inputs to the land and thus one can save money. In my land *sambal chathu* (K) was on higher level; so I was told to reduce the quantity of *sambal chathu* and increase the quantity of *thazhai chathu* (N) and *mani chathu* (P). Once a year I was told to put 10 tonnes of farm yard manure. I have five cows; so I can easily manage. Earlier, we used to cultivate *thakka poodu* (Dhaincha) and plough it into the soil. Now- a- days we are not able to do it due to shortage of water.

The meetings organised by the company allows for sharing of views and experiences. We can get our doubts clarified. For example, I had a doubt whether we can apply organic fertiliser along with the chemical fertilisers. We were told that using both will not give any result. It should not be mixed and used separately. Chemical input will destroy the microorganisms. We were told to spray tonic separately. This is useful information for us.

*Seidhi Solai* tells us to take precautions to safe guard our livestock during winter and summer against diseases such as *madi noi* or udder disease and *komari noi* or (mouth and foot disease). It tells us the necessity of vaccinating the cows well in advance. As soon as I notice udder disease I immediately treat it with lime, chalk piece and *manjal* (turmeric). I will give two limes orally to the cow. This is the best treatment for *madi noi*. I participated in a meeting where the veterinary doctor explained about *kudal puzhu* (intestinal worm) and *kazhisal* (diarrhoea) in goats. Around 150 livestock owners participated in the meeting. I came to know through *Seidhi Solai* and the staff that giving *thaadhu uppu* (mineral salt) would help in digestion and improve the immunity in livestock. I have not given so far. It is not available in the nearby market. We have been advised to cultivate azolla for cattle feed. It requires little water only. I should cultivate it.

Apart from providing crop and livestock advisories and guidance to farmers, the company also helps them in other ways also. We can get farm inputs on credit and repay it after the harvest of crop. The input dealer will give us a bill for Rs 1000- 2000/. We are using only the required inputs; so we are avoiding unnecessary expenditure. Vidai company procures our products-maize and cotton. We get immediate payment for that. *Ingu edai thulliyamaga irukkum* meaning the weight of the product would be

perfect. If a farmer can market his product for right rate that is a great help. We can buy cooking oil and coconut oil from the company for much lesser rate.

In *Seidhi Solai* and in the meetings they keep telling us about the importance of water management. I have constructed a tank to harvest rain water. In case of rain fall shortage the staff tells us to cultivate *ulundu* (black gram), *thatta payaru* (cow pea) and *paasi payaru* (green gram) which require minimum water. They told us to cultivate black gram as intercrop in cotton field. From one acre I harvested 200 kilos of black gram. It was a profit for me. I had drip irrigation but now I have dismantled it as there is no water.

The Vidai Company also gave training on value addition of moringa. I could not participate in that training. Farmer can really benefit economically if he cultivates and gives leaves, flowers and fruits for value addition. But, water is a problem. Rainy season is coming to end but there is no water in the well yet. We have two dams but no water. We are experiencing lesser and lesser rain year after year. We do not know what we are going to do! Enna thevaiyo niruvanam tharugiradhu. *Mazhai varuna bhagavan thane tharanum* (What we want institution is giving but water/rainfall only rain God can give us) !!

**Name: Mr Irudhaya Raj**

Age: 38 Years

Education: EEE (Polytechnic)

Village: Kandasamipuram

Irudhaya Raj is my name. I am 38 years of age. I was born and brought up in Kandasamipuram. I have completed EEE in a Polytechnic college. I own 15 acres of land. We are traditionally agriculturalist. So I am interested in continuing agriculture for our livelihood. We cultivate crops such as cotton, maize, *sundal* (Chicpea (*Cicer arietinum*), small onion and *malli* (coriander). If our water pond gets filled up we can cultivate *suryagandi* (sun flower) and *milagai* (chilly). It is since 12 years we are cultivating maize and cotton; before that we used to cultivate *vella cholam* (pearl millet) and *naattu sundal* (traditional variety of chicpea which is small in size with good taste). If it had rained on time, you would have seen greenery all around; by now weeding operation would have started. I am also engaged in proper installation of drip irrigation pipes and related accessories in our area depending on the land size and requirement of the farmer.

I know MSSRF for a long time. I am one of the early members of RSGA and presently one of the Board of Directors of Karisal Urpathiyalar Kuzhu (FPO). We are divided into four groups of 25 members each to avoid the interference of brokers. The RSGA, supported and motivated by MSSRF is doing a lot of service to the farmers in the Kannivadi region through organising training programmes related to agriculture

and allied activities, disseminating information through Voice mail, mobile phone, *Seidhi Solai*, a local newsletter and personal field visits of the MSSRF staff. In addition to this there are Whatsapp groups where farmers discuss and share various farming related information. YouTube and Facebook of RSGA are another effective source of information to the farmers.

Through Whatsapp we can send photographs of a crop affected by disease/pest and get clarification. Whatsapp also keeps us informed about the latest market trend. Based on it one can stock a particular harvested crop or sell it immediately. Whatsapp is a good platform for discussion and exchange of information among the farmers including women farmers.

Through YouTube and Facebook, farmers share their experiences. We do not have to visit ones field. Time is saved and we can learn many things from our fellow farmers of our region. When the farmers express their views and opinions it is helpful for others in carrying out next level of their farming related activities.

Various aspects of farming are compiled and presented in an effective manner in *Seidhi Solai* for a rural farmer to understand easily and apply the knowledge in his/her field. It is written in a simple colloquial dialogue mode. So, generally a farmer would find it interesting to read the newsletter and he is motivated to apply the same. The choice of words is good and attractive. The overall approach adopted in *Seidhi Solai* is effective in reaching many farmers. A farmer can easily get convinced about what is said in the newsletter. I feel it is an effective and easy method of disseminating information.

Details of crops suitable for a particular season are given much in advance along with other related information. This enables a farmer to get prepared for the upcoming season. Views and opinions of farmers are also published in the newsletter. Pest and disease control methods given in advance cautions the farmer and also prompts him take necessary precautions. The concept is explained in a very simple manner that a farmer understands what is being said. For example, if the crop leaves turn into in *pazhuppu* (yellowish brown) *niram* (colour) it is said it is an indication of *sambal noi* (Downy mildew). *Seidhi Solai* also carries information on organic farming and its benefits.

As per the guidance given in *Seidhi Solai* I gave my soil for testing. I was advised to apply Gypsum. Now I am using only the necessary inputs the soil requires. If we put more than what the soil require it will be a waste, I understood. It helps in better fertiliser management. Fertiliser expenses have come down by 20% -30%. Similarly, for a crop we get necessary advice as to how much micronutrient and other things are required for its healthy growth. Earlier, we used to apply more quantity of Urea than required



for the soil. The staff's field visits also help a lot in carrying out right input application and other measures to be taken during a crop cycle. *Ippa purindhu, therindhi seigirom* (Now based on proper understanding we are doing our work).

I planted maize in irrigated land based on *Seidhi Solai* guidance. There was no pest or disease attack on the crop. Similarly, I cultivated cotton. The flowers were round shaped and robust. I am very much satisfied with the yield. I learnt about *Kalai nirvagam* (weed management) The technology was simple. It is cheap and best. We can easily reduce number of hands working on weeding. I came to know this through Facebook and *Seidhi Solai*. It was very useful.

We can also know about weather forecast such as wind direction and *paruvanilai marrangal* (climate change). If I miss reading *Seidhi Solai*, I will get the message through Voice Mail. I will never miss Voice Mail on weather related information. It helps in planning and scheduling certain activities such as advancing or postponing of harvest of a crop by a day or two. We get weather message such as direction of wind and rain forecast in a dialogue mode.

Content on livestock care and management are given in a simple manner in *Seidhi Solai*. The household remedies prescribed are very effective in treating the cattle. For instance, when a cow suffers from *madi noi* (udder disease) we can cure her using *nartham pazham* (citron fruit/bitter orange), *elumichai pazham* (sweet lime) and chalk piece. This is my experience with my cow when it was affected by *madi noi* (udder disease). Otherwise I would have spent Rs 1500 if I had gone to a veterinary hospital and there was also a risk of losing the cow!

Pest attack has become more these days. Now pest attacks even the traditional variety of maize. We never used to apply chemicals for maize (traditional variety). Only for the past three years we are doing it. Students from Coimbatore Agricultural University visited our field and cautioned us that spraying of a chemical to the crop should be carried out either in the early morning hours or during evening. Otherwise, it will cause harm to the crop and the environment.

I participated in agri related training in Mangalam for four days; it was useful. Training on Moringa powder preparation was given in Theni and Kanyakumari. I learnt about the usefulness of moringa and its value addition.

I have undergone training on goat rearing, care and management at Kattu pakkam near Chennai. We were taken for field visit also. We were told that *thaadhu uppu* (mineral salt) is good for healthy growth of the goat and in increasing the milk yield. We were told that even for young goats it is good. A block of *thaadhu uppu* can be hung in a place where the goat can have comfortable access to lick it whenever it feels like and be away

when it does not feel like. I am putting into practicing whatever I learnt in the training. It is satisfactory.

I have also undergone training on bee keeping. I have kept bee hive boxes near the lemon trees. I find it is effective in preventing pest attack on the lemon tree. It is since one and half a month (first week of August, 2021) I kept the boxes. Pest attack is less.

I wish to become a *valarum vivasaiyaga* (emerging/growing farmer). I wish to take it to farmers what they do not know or aware of. I am interested in organic farming and planting traditional varieties of crops. I want to avoid hybrid seeds. I have *naattu vidhai* (traditional/native seed) of *makka cholam* and *kotta muthu* (castor).

As I have mentioned earlier, I have been engaged in installing of drip irrigation pipes in our locality and surrounding areas. I am sharing the knowledge I know about drip irrigation and whatever I learnt through Facebook. I also visit farmers' fields. I am happy to share with you that I helped 50 farmers in laying the pipes and sprinkler covering nearly 25 acres in Sirumalai area. In order to minimise the impact of heat I fitted something like butter fly sprinklers for *chou chou* (*Sechium edule*) and pepper crop. Even for a small plot of land we can have this facility. Government/Department of Agriculture gives subsidy to a farmer to get drip irrigation facility. The problem is that they do not generally explain well to a farmer as to how to install the pipes and sprinkler. So, the farmer folds the pipes and leaves it aside. It will go waste. Similarly, when fertiliser is given the department staff do not normally give the farmer the details of dosage/proportion of the input to be applied.

**Name: Ms G Nagalakshmi**

*Age: 60 Years*

*Education: Class 10*

*Village: Navapatti*

My name is Nagalakshmi aged 60 years, coming from a small village namely Navapatti. We are traditionally farmers. We own one and a half acre land. We own a well with pump set. We cultivate maize and cotton in our field. We have few medicinal herbs and vegetables in our backyard. We also cultivate azolla for cattle. We have few coconut trees and banana plants that are sufficient for our household requirements. We own two cows. We have a small poultry (traditional variety of chicken) farm or *kozhi pannai* which is essentially for market.

I was introduced to the vidai company by its present President in 1998. In the same year I joined farmers self help group and currently one of the directors of the company. In our village there are five women's group and two men's groups. Almost all the groups

are functioning well. Association with the company and becoming members of self help groups have brought about remarkable changes in the farmers lives particularly women's lives. Group consists of both literate and non literate members. Women are no longer confined to the household and their farm activities. They go to the banks and handle their transaction without difficulty. Their self confidence and self esteem level have increased considerably. They are able to take decisions at the household and farming front. They are able to give their children good education. Monthly savings of group members and the facility to borrow from the savings for low interest rate has been of great help to the women in handling various issues at home and farming front. We have our own savings; we do not have to borrow from *kandhu vandikkarar* (persons lending money on heavy interest). Borrowing money for higher interest rate has come down significantly.

Another important benefit of being member of a self help group is he or she can avail bank loan to purchase milch cows which can be repaid easily. Banks (and also NABARD) such as Pandiyan *Grama vangai* also encourage the groups to avail the mlch cow loans. Sometimes the bank also gives subsidy to the groups. After complete repayment of earlier loan one can apply for another loan. There are members who have six milch cows. So, the other source of income for the group members is from selling milk to the milk centres both managed by the self help groups and also private milk centres. We are grateful for the company for this. When climate is playing havoc in farmers lives the earnings from selling milk has been a great source of support and help to meet the household and other expenses.

Persons over 60 years of age cannot take up hard work; they can earn money by managing and taking care of milch cows. We did not have any problem selling milk in our village and also surrounding villages. I would like to point out that this earnings were particularly helpful during the time of Corona (*Corona nerathil maadu kai koduthadhu*). It saved the people from borrowing money to meet the household food and other requirements. So there is progress particularly in women. They have milch cows; have vegetables and chicken required for the household ; they can manage. There is definitely a tremendous development of women (*Munnerramthaan vivasaayigalukku; Kurippaga pengal. Maadu parthaal podhum. Veettu thevaikku kozhi and kaikarigal irukku. Idhu munnerram dhane?!*) We do not have to depend on the children; though we spend 50% of the income on management and care of the cattle the balance 50% is a profit for us (*pillaigalai namba vendam; paadhi madukku selavu poga meedhi namakku laabam*). We are grateful to the company and MSSRF!

Farming community in our area is fortunate to have MSSRF/*Vidai* Company; farm women and men are benefitting a lot through the services of the company and MSSRF.

We get necessary and useful information related to agriculture and allied activities through voice mail, messages and *Seidhi Solai*, a local newsletter. Apart from this they also organise meetings, training programmes and field visits for farm women and men. So we get up dated information for us to carry out our agricultural activities and get to know new technologies and farming methods. Staff also visit our fields and give us necessary advice and suggestions.

I had attended 10 weeks training programme on eco veg in Viridhu Nagar district; learnt about herbs and their uses. As part of the training we visited *nelli* (goose berry) *thoppu* and herbal garden. Learnt about 10 types of *katrazhai* (*Aole vera*). I also had opportunity to participate in livestock and organic cultivation training conducted in Theni, Madurai and Thirumangalam. When we participate in training programmes we are encouraged to try them out in our households.

Training on vermi compost was useful. We prepared for our use for four to five years; we found it useful for our tree crops. For the past two years I have not been able to prepare it because I have to take care of the grand children. Also, I am not motivated because of shortage of rainfall. I would be encouraged to prepare it if it rains (*mazhai peidhal aaroom vandu vidhum*). We try our best to do farming in organic way.

Weather forecast information through Voice Mail is very useful for the farmers. It is reliable and dependable. We can plan our agricultural activities such as chemical/fertiliser application, sowing and harvesting. I find it useful particularly during harvest time; we can either postpone or advance the harvest based on the weather prediction.

I read *Seidhi Solai* regularly; as leader of the group I read out the content given in the newsletter for the benefit of the group members. It enables group discussion and sharing of experiences and knowledge. I found traditional medicinal tips useful; I have followed the instructions given for season specific crop cultivation and vegetable cultivation. The yield was good. We use the information in our day today agricultural activities. I cultivated different types of greens. But I could not continue with it because of shortage of water.

Vidai company is doing a great service to the farming community by providing seeds of maize and cotton and other farm inputs on less rate than outside shops. Farmers can get inputs on credit and they can repay soon after their harvest of the crop. So farmers are saved from borrowing money from the money lenders on higher rate of interest. The farmers to some extent are relieved from mental and financial stress. We can help non shareholders in the company by getting them necessary seed material and other farm inputs on credit by giving written assurance. I have helped two of my relatives to get cotton seeds. Thus the services of the company cover a larger section of the farming

community. The company also sells cooking oil and coconut and sesame cake to the farmers.

I never miss reading *Seidhi Solai* and I refer to it whenever I have doubts in my cotton and maize cultivation. Nothing misses my eyes. I came to know through the newsletter about a training conducted in the Collectors office for two days on *naattu kozhi valarpu* (country chicken farming) during 2015. I was inspired to participate in the training; I believed that the training would help me start country chicken farming as an economic activity to substitute household income. I immediately contacted the office for further details. Guided by the office staff I attended the training. The newsletter also gave details about where to get the chicks. I first reared chicks and sold them but later I found it difficult to maintain them.

Presently, I rear chicken for market. I have 250 chickens with me now. I am very happy to share with you that I am very much satisfied with the earnings through selling chicken. My customers include not only from nearby areas but also outside the district. I have not advertised about the product; through the word of mouth customers buy from me. I am also happy to mention that I have been able to give employment for four persons to help me in managing and maintaining the poultry farm. I take care of my chickens well based on the suggestions and advice given in *Seidhi Solai* and the staff; they are generally well protected from diseases.

Other women in my group also wanted to try; but because of lack of space and other facilities they are not able to do it as a regular economic activity. They rear few chickens; they use it during family functions and sell them also.

It would be of great help if women are given training to earn income from home; marketing of the product should also be easy for us. So that women do not have to go outside the village to earn income for the family. By staying in ones village their children education also would not get affected.

**Name: Mr R Ganesan**

*Age: 57 Years*

*Education: Class 12*

*Village: Alaturan patti*

I, Ganesan hail from Alathuran patti. I am 57 years old. I have had education up to Class 12. I am married with one daughter and a son. My daughter is married and my son is studying in a college. We are traditionally agriculturalists. But I am focussing on agriculture as an occupation only from 2007. Before that I worked for a non profit organisation as programme associate. It is a service oriented organisation. I worked in Pudukottai and Madurantagam. Salary was not sufficient to meet our family expenses. So we decided to work on our land of 21/2 acres. We have a well with pump set.

Earlier we cultivated *vendiyam* (fenugreek), all vegetables, tobacco and so on. Because of the prevailing drought like condition we had to shift to *makka cholam* (maize) and *paruthi* (cotton). We have fodder crop for our cattle. I have five cows, two calves and traditional/native varieties chickens.

I came to know of MSSRF through the then Chairman, Kannivadi. As far as I am concerned this is the best thing that happened to me. Services of MSSRF to the farming community in our area are commendable. All our relatives in this village are members in the company. My wife is a member of Roja women's' group. I also attend the group meetings. A staff from MSSRF will also be present on that day. *Seidhi Solai*, a local newsletter printed and circulated free of cost to the farmers is read out by the leader of the group which gives a direction to a directionless farmer. It helps the farmers to carry out agricultural operations in economical manner. This has been true in my case. The newsletter gave me a sense of direction not only in carrying out our agricultural operations but also in livestock care. Today I have gained much knowledge in cattle care that many call me for help even at mid night. Cattle owners from surrounding four -five villages come looking for me when their cattle are affected by indigestion, *kana noi* (Anthrax) and *madi noi* (udder disease). They have confidence in me. I do my best in treating their cattle. My wife and daughter are proud of my service to the fellow farmers. When the farmers tell me that their cattle are cured of the illness it gives a great sense of satisfaction to me. Thanks to *Seidhi Solai*.

*Seidhi Solai ill oru pulli pottu kodukkirargal. Adhil oru nalla kolam poduvadhu nam kayyil. Veedagavum kattalam. Eppadi venralum payan paduthalam* meaning *Seidhi Solai* is just a dot given by the company. It is up to us to use the dot for beautifully drawing or build a house on it. We can use it the way it suits us! Such is the benefit and use of the newsletter written in simple and interesting manner.

Let me talk about the uses and help of *Seidhi Solai* in livestock care. We are not cultivating crops year around. We have crops in our fields only for one season. So, I am not able to use all the information given for agriculture. But live stock care is a daily affair. As I have livestock, I find the content useful and helpful. The newsletter carries such a valuable information on livestock care and management based on season it has helped us to spend Rs 15 -20 instead of Rs 1500/. It gives simple and effective remedies to treat foot and mouth disease, udder disease, mouth ulcers and stomach upset. Similarly, we get information for goat and chicken care and management.

Just before the onset of rainy season and summer season it will alert the livestock owner about possible disease attack and how to prevent and treat them. It stresses the importance of cleanliness of the cattle and maintaining the cattle shed in a hygienic manner. It also alerts us to inoculate the livestock on time to prevent disease attack.

We can effectively cure udder disease by grinding lemon, *sunnambu* (brick lime), *manjal* (turmeric), and *sothu kathazhai* (Aloe vera) into a paste and apply it on the cleaned udders for three to four times per day for three consecutive days. Similarly, for *kana noi* paste of aloe vera, turmeric and neem leaves would be effective in curing it; just by spending Rs 20 we can treat the cow. In medical shop they will give glycerine to treat foot and mouth disease. For stomach upset it is sufficient if we give *soda uppu* (baking soda) 75 to 100 gms; for younger cows it is enough if we give 50-70 gms of baking soda. Baking soda should be mixed with water and given to the affected cows. It will push out all the dirt from the liver. We should not feed the cow more with *pasalai keerai* (spinach) . It will cause stomach problem. If I give starchy feed to a cow I feed it also with little quantity of baking soda. If one neglects the symptoms of *madi noi* and does not attend to it immediately by the time the doctor comes the cow will be affected severely sometimes there are chances of losing the cow also. The hospital expenses will be around Rs 5000/.

I distribute *Seidhi Solai* to our villagers; I encourage everyone to read and get benefitted. At least look at the picture, I would tell them. Deworming the livestock periodically even when pregnant is essential. Many were under the information deworming is done only in the young animals/calves. It is only after reading the newsletter does we come to know that it is important even for adult animals. I had read out this particular content to an elderly person by name Mr Iyyanar who cannot read or write. He is not a member of any group. He has 30 goats. When his goat was affected by mouth ulcers I helped him to treat it by following the prescription given in *Seidhi Solai* . He got his goat cured of mouth ulcers. However, he was not convinced when I told him about the necessity of deworming the adult goat also. He was under the impression that only for calves/lamps it is done. Now he is careful in deworming the adult goat even if it is pregnant. After I read out the content on deworming in the newsletter, he regularly deworms the goats. Similarly, for chicken I meticulously follow the guidance and prescriptions given for feeding the chicken and treating them when they are affected by diarrhoea.

Information on season based crops cultivation is very clear and timely. It prepares the farmer starting from land preparation to harvest of the respective crop. It reminds the farmer about fertiliser application at various stages of crop growth and prevention and management of pests/diseases. If there is any doubt or we need any clarification the staff visits the field and give advisories suitable to the condition/problem.

For maize and cotton step by step guidance was given in the newsletter. Field demonstration of cotton and maize was conducted. It was so useful. We get to know about different pests that affect the crops. We were shown the pest in the microscope. How fast the pest, *padai puzhu* (Army worm) spreads we understood. We came to know

about organic pest control methods for *maavu poochi* (mealy bug) and *vellai poochi* (white fly).

*Vellai poochi* attack on cotton, papaya, guava, egg plant and some flower crops got controlled using organic method. It did not respond to chemical method. We were advised to adhere to leaving proper spacing while planting a crop. I could not do it properly for my maize crops by using manual labour. Only with machine it would be possible.

Based on the advice of the staff and *Seidhi Solai*, last year (2020) we had a kitchen garden where we cultivated vegetables in organic way. The yield particularly egg plant was very good. For tomato, chillies, egg plant *vatta paatti* (circular ridge) is not good. The roots of the crop will get snapped. *Medai paatti* (raised ridge) is suitable for these crops cultivation. I helped many to put *vatta paatti*. I am willing to teach those who show interest. When I came to our village I did not know anything. Today I have learnt so much that I am happy to share the knowledge with others (*Onrum theriyamal vanden. Inru enakku therigiradhu cholli tharugiren*).

This year we did not continue our vegetable cultivation because we needed area for fodder crop cultivation. We have at the backyard lime, curry leaves, chikku, guava and moringa.

My wife has attended training programmes such as coconut tree climbing and operating the weeding machine and *kadali odikkum* machine. We cannot afford weeding machine. It is costly. So we are not in a position to use the weeder.

In spite of the uncertain rainfall and whether condition we are able to manage to some extent because we have credit facility to buy seeds and other agri inputs from the company. We feel relaxed these days because we have the confidence that we can repay the loan when we harvest our crops. We have got two cattle loan through the group from the bank. Cow's milk is additional source of income for us. We are not in debts today; thanks to MSSRF and Vidai Company. My wife and daughter always say if we are able to manage our farm expenses without any difficulty and without depending on money lenders, the credit goes to the company and the office! We express our sincere gratitude to all concerned!

**Name: Ms C Manjula**

Age: 44 Years

Education: Class 9

Village: Alathururan patti

I am Manjula aged 44 years. I belong to Alathuran patti. I have studied up to Class 9. We have two acres of land where we have fodder crop and in small area cotton. We



have a kitchen garden at our back yard. My husband goes for outside work. We have a son who is studying in a college. We do not own any cattle. The fodder crop is for the market.

It is since 18 years I got married. I am a member of a group (Roja Magalir Kuzhu) associated with MSSRF even before I got married. Though we did not own any land, landless people were also encouraged to participate in the meetings organised by MSSRF because we can share whatever we have learnt from the meeting with other farm women and men. I was young and I was curious to know about the office. I used to participate enthusiastically in all the group activities. I also thought I can visit places. Subsequently, I developed interest in group activities and in knowing about agriculture.

As a member of self help group I participated in programmes organised by the office (MSSRF) and came to know about *Pancha kavya* and *Trichoderma* and organic pest repellent prepared with neem. I also participated in vermi compost training. Our group thought we can take it up as a microenterprise. But we did not have sufficient hands to help us. So we gave up the idea. I also participated in training programmes on drip irrigation in Namakkal, and training on moringa cultivation in Periya Kulam. Some farmers who attended the training on drip irrigation were motivated and have installed in their lands. Drip irrigation technology was new to the farmers then (10 years ago). It was explained how drip irrigation would help in economical use of water. Now, I see many farmers having drip irrigation facility in their lands. I also learnt to do *ottu kattudal* (Hybrid seed production) in cotton. I was involved in hybrid seed production for three months for which I got payment/salary. I have not participated in any training recently.

In between I was not here for three years. Again now for the past eight years I am actively participating in the group activities. Individually, I have benefitted a lot. I did not know anything about agriculture. If I have developed interest in agriculture now it is mainly because of my association with MSSRF. I will continue to support all the activities of MSSRF. As I told you, I have planted cotton in the field on a smaller area. I have a kitchen garden in the back yard. It is sufficient for our household consumption.

*Seidhi Solai* is very useful which covers details of season specific crop cultivation and the associated practices that should be followed. We have office very close by. So, if we have any doubt or need any clarity we go to the office or get it cleared from a progressive farmer who goes past our houses. They also will come and enquire if we need any help. Not only farmers in our village get benefitted through the office farmers from Dindigul also get benefitted by it. Our relatives from Dindigul seek our help in case they face any problem with their crops. We get the necessary advisory from the office and share it with them.

I am using the tips given in the *Seidhi Solai* in my kitchen garden in saving water and giving proper nutrients using the household waste. When we cultivate cotton we refer *Seidhi Solai* for *ver puzhu* (root grub), *thandu puzhu* (stem borer) *kondai puzhu* (bud worm ) and to prevent withering of flowers. I find using neem extract as a pest repellent very useful. I used it for my cotton crop. It was effective. The office is very near to our house. So we have easy access to the staff to get our doubts clarified. So, we do not depend much on *Seidhi Solai* for carrying out agricultural operations.

*Seidhi Solai* covers exhaustively preventive and controlling measures of livestock diseases. I have read it. Though I do not own cows, when some ones cattle is affected by *kana* (Anthrax) and *ammai noi* (cow pox ) I share the information with concerned person. I feel happy when they tell me that the prescription (grounded paste of *kathazhai* (Aloe vera), turmeric, chalk piece and lemon) was effective in curing the cows of the disease. There are many farmers who cannot read; they find this information is useful. They appreciate me saying *Maadu illavittal kooda therinji vechi irukkiye enbargal* (though you do not have cattle you know about the diseases and treatment of cattle)!

The office encouraged our group (consisting of 12 members) to take up organic tomato cultivation for market. We cultivated in a farmer's field (60 cents) in Pudupatti and sold the product in Kannivadi market for a good profit. There was a demand for it because it was organically cultivated. The group bore the cultivation expenses. The farmer who had given the land did not charge anything from us. The vegetable looked attractive and nice. Visitors from Australia also visited our tomato field and appreciated us. We sold for Rs 20/- per kg about 18 years ago. I was not married then. My memory is still fresh about our participation in cultivating tomato. I would have cultivated tomato if I had water facility. Some members who were with us from the beginning are not in the group now (either due to migration or age or death of the members). New members have joined in their place. There are still six old members in the group. Of late (for the past 5-6 years) conducting meetings for the groups have come down. I miss going to the meetings.

By attending various meetings organised by MSSRF and the seed company we learn many things that are relevant to our livelihood and lives. One such thing is coming to know of Ru Pay card. I came to know that by having this card we can get insurance. We were not aware of it; even the bank people did not tell us about it. Since seven years I have this card. Our group leader, Ms Marudayi took efforts to create awareness on getting ATM card as a Ru pay card.

The company also reaches farmers through voice mail, an effective dissemination method. The farmers are given details of cotton and maize cultivation, when to apply fertilisers, how to prevent and control pest/ disease in the crop. It will alert the farmers

about the impending rain. This forecast is 90-95 % accurate, as far as I am concerned. When I hear the message on rain I immediately spread word about it to my neighbours and relatives. They can have the feed ready for the cattle and even they can wash their clothes before that so that it will get dried. We are not getting voice mail for the past three-four months!

The company gives seed material and other farm inputs on credit to the farmers. We buy the inputs through the group. The company also sells *sundal* (chickpea) and cooking oil for much lesser rate. We get benefited by purchasing them. The company also buys the harvested maize and cotton from the farmers and pays them immediately. The farmer is saved from looking for a good buyer who will give right rate for their product. We make use of the facility available in the company for grinding maize for cattle feed and for extracting oil from coconut and ground nut.

Coming of MSSRF to our area has brought in lot of positive changes in the lives of the farmers. I can say that we learnt about certain fundamental aspects of agriculture. In general, it has given a direction to the farmers. *Nalla vivasayatha parri cholli koduthargal* meaning It created lot of awareness and taught the farmers in doing agriculture in the right manner. I did not have any farming background but it created awareness and interest in me about agriculture. The staff also visit farmers' field and give them appropriate guidance. Farmers have the confidence now that if we go to office we can get guidance! The office has developed to such a great height!

It is really heartening that the office is doing yeoman service but sometimes we feel discouraged and wonder what is the use of having all this? It is either no rain or rain during wrong time! What can a farmer do? Last year (2020) the cotton crop was so good that the farmers believed they will all become *lakhshadi pathi* ie they thought they can earn in lakhs. But, rain during a non season (January-February) time spoilt the whole thing and shattered farmers' hope. Cotton crop was totally affected by fungus. Normally, rains will recede after December 15. There was no sufficient rain fall for the last 12 years. Only last year we had rains but at wrong time! My aunt has cotton crop in her field. The crop has turned into red colour. It is a symptom of pest attack. The field is filled with water. She cannot apply chemicals nor does she can carry out weeding operation! Such is the condition of most of the farmers now!

**Name: Ms Latha**

Age: 41 years

Education: Class 5

Village: Pothinaikan patti

My name is Latha aged 41 years. I come from Pothinaikkan patti. I studied up to Class 5. I am married with children. I am taking care of our land and the livestock.

My husband goes for outside work because we cannot get sufficient earnings from agriculture to meet our expenses. We will get one *kuzhi* (60 cents) of land as our share. Another one *kuzhi* will go to my brother-in-law. Property has not yet been divided between the two brothers. Until two years ago my parents in law were managing the farm operations; we used to help them. Whatever, they told us to do I used to do that. After the responsibility was given to us we began to do it on our own; now gradually I come to know of the farming operations. Ours is a small plot where we can cultivate once a year only.

Our group namely Malligai (associated with Vidai Company) has 15 members. I am the leader of this group. This is helping me a lot to carry out our farming activities based on proper information. Though we are not able to carry out 100% what is suggested we are trying to follow that is suitable and possible for us. I have come to know of various details such as soil testing, ploughing, and the purpose of spacing, rain water harvesting, fertiliser application at various times of growth of maize and cotton; pest prevention and control methods, use of tonic (growth promoter) for preventing withering of flowers and for healthy flowering in the crop, application of *uyir uram* (bio fertilisers), tying of yellow sticky card for pest control and so on. Most of these I learnt by reading *Sedhi Solai* and through the staff members.

All our group members listen to the content presented in *Sedhi Solai* while I read out in group meeting which is held on every 7<sup>th</sup> of the month. There are few who cannot read and write. Most of them try to follow the guidance given in the newsletter and carry out their agricultural operations. In our village most of us have only little piece of land. So, some of the advisories given in the newsletter cannot be followed. It is not feasible; *Sedhi Solai* is very useful for those who have large fields and have water facility. However, I follow the ploughing according to the instruction given in the newsletter; apply fertilisers as suggested at different periods of time; for example for maize fertiliser should be applied within 21 days of planting then by 55<sup>th</sup> day; similarly for cotton I follow the advisory for fertiliser application and for good flowering I apply tonic/growth promoter. To prevent withering of flowers I spray growth promoter when there is drizzling. Most of us carry out the suggestions depending on the circumstances and the size of the land. At present, (31 Oct 2021) we are engaged in fertiliser application for our maize crop.

I also learnt about rain water harvesting and vegetable cultivation through voice mail. I have also listened to weather forecast through voice mail. As I told you ours is a small plot so rain water harvesting is not possible. It will further shrink our land. In between I was not following the voice mail. Hereafter, I will resume paying attention to details

disseminated through voice mail. Once a year we cultivate and our land being small we do not follow the spacing as suggested in the *Seidhi Solai*. We think by planting more plants we can get more yield. They tell us leaving space (for eg cotton) will allow for air circulation and for the plant to branch out enabling more flowering and increase the size and health of the cotton ball. Similarly, I am scared to have yellow stick card in our field. No one in our village tie it. I have seen in the lands where I go for work. It is suitable for the lands with irrigation facilities and not to rain fed farming! I think if I have it (which attracts the pests) I will not be cautious in taking care of the pest attack; my fear is that I will take it easy. Moreover, we have the habit here unless all the farming households do it we will not take the risk of trying anything new. Likewise, I have heard and read about *uyir urangal* (bio fertilisers) but again there is hesitancy that it might affect the yield. I am not yet convinced of using bio fertilisers. Anything new is feared and doubted by us! Two youngsters in our village are encouraging that we should use *pancha kavaya* (organic growth promoter) and other organic inputs. I think one by one will gain confidence to use them. Hereafter, step by step I will carry out the farming operations as suggested in the *Seidhi Solai* and by the staff.

In the group meetings the staff members stress the importance of kitchen garden. Last year (2019-2020) the company gave us seeds of different vegetables such egg plant, bitter guard, chillies, lab lab, pumpkin and greens . We were happy with the yield. This year also we had asked for vegetable seeds. What you see now in front of you is last year's crop.

I have attended meetings and training programmes such as weeding, coconut tree climbing and how to carry out ploughing operation using a machine. We were told that subsidy is given for buying the ploughing machine. Most of us are marginal farmers and we cannot afford it. We suggested that the company can get one and rent out it to farmers.

The staff visit our fields. My cotton crop is affected by Aswini poochi (Aphids). Mr Shiva visited the field and has given us recommendation to control the pest. Their direct inspection of our field and the crop give us confidence and encourage us to move forward.

The company is doing yeomen service to the farming households. We get quality seeds from the company and other pesticides, weedicide and tonic. We can sell our cotton and maize to the company. We are saved from unnecessary hassles of looking for a right *viyapari* (merchant). We are saved from borrowing from the money lenders. We can get cooking oil and groundnut cake for the cattle.

We have got a cow and a goat. We bought using bank loan. I have taken loan thrice from the bank. Third one repayment is going on. Our group is functioning well. I try to

encourage our group members to take active part in the group activities. Through male group members only we formed our group. But male group is not functioning well. I wish to form one more group in our village. Most of them know only cattle rearing! I also want them to get benefitted by being in a good group.

**Name: Mr S Muthaiya**

Age: 46 Years

Education: Class 12

Village: Pudupatti

I, Muthaiya reside in Pudupatti village in Dindugal district; I own one acre of agricultural land. I have four cows. My wife helps me a lot in agricultural activities, in taking care of the cows and preparing *panchakavya* and other organic based items such as pain balm, *agar bathi*, phenol and so on. I have two school going daughters. I cultivate mainly *paruthi* (cotton) and *makka cholam* (maize) during Sept/October-January.

I have known MSSRF since 1998. I have participated in all the training programmes related to agriculture- from seed to seed training, 20 day training on crop types and crop production, precision farming and cattle management and so on. I used to take active part in the activities of Village Knowledge Centre set up by MSSRF in our village. I am happy to share with you that I encouraged more than 50 persons to participate in MUPP (Microsoft Unlimited Potential Programme) training on skill development in computers. I was also part of adult education programme conducted by the VKC. The VKC had a data base on the crop related information, livestock, human health, weather forecast and so on. The villagers benefitted a lot through the services of the VKC. I also went to Jeypore in Odisha along with MSSRF technical team to set up a VKC in that district. In between for some years I was not involved in farming; my parents were taking care of it. Only for the past three years again I resumed cultivating my lands.

I learnt about new agricultural technologies such as quality seed production, precision farming, and preparing *panchakavya* and so on. The training on quality seed production helped me to produce ladies finger seeds and supply to the *vidai* company. Similarly, I was encouraged to prepare *panchakavya* for my use in our lands and also for selling to other farmers. I have shared my experiences through Whatsapp. During this month (September 2021) I have sold 30 litres. One Whatsapp group member bought 15 litres. More than 70 % of the farmers in our village have undergone *panchakavya* training and use it in their fields. Some of them prepare it for themselves. Mr Nataraj, a long time member in the RSGA gives guidance to the farmers.

One of the best things that a farmer gained because of our association with *Vidai Company* is pest/disease control and management. Earlier, we did not have knowledge

about crop protection. We used to approach the agro input dealer when we had pest problem. The dealer used to give four-five chemicals.

Now, we have come to know whether a crop is affected by bacteria or *poonjan* (fungus). I also learnt about how to use fertilisers and organic manure. It is through MSSRF I learnt and gained knowledge about *uyir urangal* (bio-fertiliser). This awareness and knowledge has helped me cut down on expenses. Now, I have totally shifted to organic farming. For this purpose only I have bought the cows. If a farmer has one cow that itself is an asset for him!

I read *Seidhi Solai*, the local newsletter issued monthly by the *vidai* company. This carries relevant and appropriate local and season specific agriculture and allied activities information to the farmers and cattle owners. The information/topics generally covered are: crops and their varieties suitable for *maanavari* (rain fed) and *iravai* (irrigated) farming and for *kodai* (summer) season. The season for *manavari* cultivation is Aadi (July-August) *pattam* (season) and *iravai* is Ippasi (October- November) and Karthigai (November-December) *pattam*.

I have gained knowledge on various important aspects of agriculture by using the *Seidhi Solai*: right method of farming, *uzhaviyal thozhil nutpam* (technology related to ploughing), what crops and its varieties can be cultivated based on the type of land and season, *ura melanmai* (fertiliser management), use of bio fertilisers and bio micro nutrients, pest management, *mazhai neer segarippu* (rain water harvesting) and many other aspects. The details of technology and methods of farming are given in detail but in simple manner which make it possible for a farmer to adopt the same without any difficulty. Important topics like pest management and fertile management are given in dialogue mode between two farmers which makes the reading interesting and at the same time it gets registered well in the mind.

The knowledge on fertiliser management has reduced expenses as we are applying only the recommended dosage; indiscriminate use of fertilisers is avoided which helps in promoting soil health and safeguarding the environment. Earlier I used to apply two bags of Urea and two bags of Potash Superphosphate for one acre of cotton field. Now we know the prescribed percentage to be applied. By applying five kilos of Azospirillum and similar quantity of Phosphobacteria per acre mixed with *eru* (farmyard manure) as *adi uram* (basal application) we can considerably reduce the quantity of Urea and avoid using Potash and Superphosphate. Superphosphate and DAP are expensive. If we incur expense of Rs 500 in using bio fertilisers it will be Rs 1800/- in chemical fertilisers. We can easily save Rs 1000-Rs 1300.

Likewise, based on the information on pest control and pest management practices provided in the newsletter I have kept yellow sticky card, pheromone trap and light

trap in my cotton field. Pheromone trap attracts male pest while light trap attracts (to be kept between 6-10 pm) female pests. Some insects get stick to the yellow sticky card. By keeping yellow sticky card I feel we can prevent 15 % of the insects/pests.

In my maize crop I could prevent and control the attack of *padai puzhu* and *thandu thulaippan* (stem borer). I think this was in the year 2019. While other farmers bought four-five chemicals I just applied /sprayed one kilo of Beauvera and one litre of *panchakavya*. The expenses came to only Rs 200/- . In case of chemicals it would have been Rs1000 – Rs 1500/- In order to rectify the zinc deficiency I used the information given in *Seidhi Solai*. It was recommended that five kilos of Zink sulphate should be mixed with 10 kilos of sand and applied evenly to the field. This should be done within 10-15 days after weeding was carried out in the field. After 35 days of weeding operation one cannot go into the field. I applied when the crop was 20 days old. I learnt from the newsletter that Zinc should not be mixed with *perootta chathu* (macro nutrients).

I was not aware of Magnesium deficiency in cotton crop until I learnt about it from *Seidhi Solai* (and voice message/ mail). It is a major problem in cotton crop. I got useful information from *Seidhi Solai* and voice message/ mail to rectify Magnesium deficiency in cotton crop. We came to know that if the cotton crop is affected by Magnesium deficiency the leaf of the crop would turn light reddish in colour but the crop would look alright. This would appear around fruit forming stage ie during 50-60 days. Then suddenly the crop would start withering. We used to think that it was due to lack of water. So we used to irrigate the land. We used to wonder why suddenly the crop is getting dried up even after watering the crop. We used to think someone had cast evil eyes or had done some black magic. This was because of our total ignorance about the Magnesium deficiency. Thanks to the information we got from the newsletter and voice message. It was pointed out that the moment we notice the change of colour of the leaf to red it is an indication of Magnesium deficiency and immediately the crop should be sprayed with Magnesium EDTA powder. We understood that when it is spotted in one or two plants we should immediately take action; otherwise in no time the entire crop would be lost. I sprayed as recommended and I saved my maize crop. Thanks to the timely information!

Five months ago (April 2021) I read about cotton, *kodai uzhavu* (summer ploughing) and rain water harvesting published in the *Seidhi Solai*. I followed the *kodai uzhavu* and rain water harvesting as per the instruction given in the newsletter. By carrying out summer ploughing the eggs of the *puzhu* (worms/insects) come to the surface and eventually perish because it gets exposed to sunlight; ploughing helps to retain the moisture content of the soil. By rain water harvesting we can prevent water flowing to the other field and the nutrients will stay in our land itself.



I have not been reading *Seidhi Solai* for the past three months. I did not go out of the house because of the fear of Corona. I didn't go to the office. Otherwise I would have got it.

We also get agro advisories through voice mail and in the display board kept outside the company. We can approach the staff of MSSRF anytime for guidance. Farmers' Whatsapp group is one more addition to get information and exchange of experiences. The advisories we get from different modes keep us in constant touch with the agricultural information relevant to that time and season.

Our Whatsapp group is very active and constructive exchange/sharing of information takes place. One such advisory shared was on preventing, controlling and managing *komari noi* (foot and mouth disease) on the cattle. By using beetle leaves, jeera, jaggery and lime (as advised by a veterinary doctor) I treated my cow for a week and my cow got rid of the disease.

I am following *uyir ura thozhil nutpam* (Bio fertiliser technology). I participated in the training on bio fertiliser preparation conducted by MSSRF. I also learnt about vermicompost preparation by attending that training. I have been inspired to do only organic farming. I bought cows only for this purpose. I heard someone saying that with one cow one can do farming in 10 acres of land.

Had MSSRF not come to our area we would not have come to know about new technologies and bio fertilisers and micro nutrients. A majority use micronutrients in their fields. MSSRF focuses on women empowerment through their economic/social development. If today women are coming out and going to the banks, and participating in various training programmes it is because of MSSRF. Some women conducted adult education programme. Our women are members of many women farmers groups and they take lead role in handling group activities. They know accounting and maintain accounts well. Seeing their efficiency in handling the group activities, accounts and repayment capacity, banks come forward to give them loan. Some of the groups got a percentage of their loan waived because of their prompt repayment. These groups are doing the work which corporate companies are doing. This is one of the significant contributions of MSSRF. Women have become entrepreneurs. These women are not only producers and suppliers of things like bio fertiliser and bio micro nutrients they are also researchers.

**Name: Ms G Shanmugavalli**

*Age: 47 Years*

*Education: Class 10*

*Village: Kulathu patti*

My name is Shanmugavalli coming from a village namely Kulathupatti. I am 47 years

old and I have school education up to Class 10. I have two sons. One has completed his diploma course and my younger one trying to get into computer course. We have five acres of land consisting of both irrigated and dry lands. We are cultivating three acre; we have given two acres on lease to others. Five families share a well for irrigation. We cultivate cotton, maize and vegetables mostly for household consumption. We have two cows. .

When I heard about MSSRF office at Kannivadi I, on my own got associated with it as a volunteer; then I became a group member. Now I am *Kuzhumai Kootamaippu Seyarkuzhu uruppinar* (Kuzhumai Federation Executive Committee Member). It has brought about a lot of positive changes on me. I am a confident person now. Earlier I have to look for my husband's support or someone to accompany me to go to Dindigul, a nearby town. He does not accompany me these days. I go to the bank and handle the accounts. I have motivated many to join the group. They are doing well. Earlier, I did not have any idea about a group and its functions.

The company plays a significant role in the farmers' day today life. We get guidance from the office of MSSRF and through *Seidhi Solai* and voice mail. The office also conducts training to farm women and men such as vermin compost preparation, Panchakavya and other organic inputs. We are also taken to other places to attend trainings related to our livelihood. Through our group I got bank loan twice to buy milch cows. I have repaid the loan. We are getting some earnings by selling the milk. We are selling to milk society run by a private person.

The *Vidai* Company is a God sent to us in this area. We can get quality seeds and other farm inputs for lesser cost than outside shops. We get these materials on credit. We can repay after harvest of our crops. This is wonderful service and great help. If there is shortage of seed material we can go again to the office; the staff smilingly give us what we want. Otherwise we have to go to Reddiyar chathiram or Dindigul or Oddan Chathiram. It saves us from physical strain of travelling and our time; more importantly we get quality seeds for much cheaper rate.

Being member of a group also helps me in several ways. I can get cattle loan. I have got cattle loan twice and I have cleared my loan. From the group I can get *ul kadan* (loan from the group savings). We are able to redeem our pledged jewels. We could educate our eldest son by taking loan. He has completed his Auto Mobile Engineering. We could not have spent on his education even if we had more lands. The facility from the company and the loan from the group have more or less stopped the entry of the money lenders in this area. Generally, a farmer would always be in debts. His/her inability to repay the money lender his interest would get accumulated and sometimes it would be more than the principal amount. We end up selling our belongings. Fortunately,

farmers in this area are saved from being in perpetual debts. Thanks to MSSRF for everything!

I participated in a training on *kalappu theevinam* (mixed cattle feed) for cattle conducted in a college in Madurai five years ago. Our group did not want to take it up as an enterprise because they feared they might end up in debts. I tried individually but could not continue as my husband met with an accident. The feed will be in powder form. I also participated in mushroom cultivation training but I could not put into use because there is no market facility. Had we lived near Kannivadi I would have taken us as an economic enterprise. I also attended cattle training conducted in Collector's Office at Dindigul. It is useful in taking care of my cows.

I have come to know many useful things by reading *Seidhi Solai*. *Seidhi Solai* is very useful in taking the right information at right time to the farmers in this area. It gives us a direction. We have come to know about *ootta chathu* (micro nutrients), importance of soil test, *thazhai chathu* (N), *manichathu* (P) and *saambal chathu* (K), pest attack on crops, vermin compost preparation, *pannai kuttai* (farm pond) and so on by reading *Seidhi Solai* and through the staff. I have never heard about soil test before. Based on the newsletter and the staff's advice I have done twice in our land. Based on the soil test result they have suggested applying micro nutrients and other fertilisers with NPK combination. I have been able to improve my knowledge and I am able to share it with others. I did not try preparing vermin compost; I apply farm yard manure to the field. I could not have farm pond because we do not have sufficient land to have one.

If I do not understand something I get my doubt cleared from Sir (staff from MSSRF); he visits our lands and give us advisories based on the condition of the crop. Last year, based on his advice, I sprayed pesticide twice to control *padai puzhu* (army worm) in my maize field. It was controlled and we had a good yield. But other farmers sprayed four to five times. Then I told them not to do like that. Now, after seeing me around 50 farmers in our village have reduced pesticide application. My husband shares the knowledge with our villagers. They have respect for my husband and they would listen to him.

Information on vegetable cultivation is also discussed in detail in *Seidhi Solai*. I am cultivating vegetables (Bendi, egg plant, *avarai mochai* (lab lab), tomato, *poosani* (pumpkin), *soraikkai* (bottle gourd)) for household consumption. Earlier we used to cultivate using chemical fertilisers. After our association with MSSRF we are doing it in organic way. We can see the difference between the two types of cultivation. We can get fresh vegetables. For six months we do not have to depend on market for vegetables.

We get weather information through voice mail. So I am able to apply fertilisers at an appropriate time. And, it is useful to share the information with others. I contact

Devarajan sir (MSSRF staff) about the possibility of rains in our area. Weather message is really very useful as far as I am concerned. On several occasions I have either postponed spraying or applying chemical or other inputs to the land. They will warn us not to spray chemicals. There were days I had mixed fertilisers and did not apply. Thus I could save money and energy.

*Seidhi Solai* prepares us to vaccinate the cattle on time and take measures to prevent udder disease, mouth and foot disease and so on. The concept of cleanliness in maintaining the cattle shed in hygienic manner and keeping the udders clean is highlighted as measures of precaution in preventing cattle diseases. After milking the cow I give fodder to it so that it won't be tempted to lie down immediately and thus can avoid udders getting infected. We also get similar information through voice mail. All these aid in safeguarding the cattle from disease attack.

It is since two months I read *Seidhi Solai* and I have not gone to the office also. I am busy with farm work and house construction. After my husband met with an accident most of the farm work is taken care of by me only. I have to look after the cows also. We have labour problem too. We are not sure how we are going to do agriculture in future! In spite of various issues we face, we feel confident because of the presence of the company here: we are blessed to have it in our area. Through the company we are all functioning as different saving groups. Company give us all the necessary farm inputs on credit for much lesser rate than the outside shops and guide us through the staff, *Seidhi Solai* and voice mail by way of providing relevant season based agricultural and livestock management information. We are able to harvest better yield with less expenditure and take care of the cattle which is another source of income for us. The group saving helps us to meet our unforeseen and other essential expenditure such as education, marriage, hospitalisation and to redeem pledged jewels and so on.

**Name: Ms K Marudayi**

*Age: 44 Years*

*Education: Class 10*

*Village: Alathuran patti*

I, Marudayi aged 44 years used to be a timid person until I became a member of a Farmers' Self Help group associated with RSGA and supported by MSSRF I had never gone out of the village. Today I am a confident person. I am an executive member of *Kuzhumai*. My association with them transformed me a lot. If I am talking to outsiders, conducting/participating in meetings and going out are all because of my association with MSSRF and my activities as a member in the group. It is not just me; it has brought about a lot of positive changes in the lives of other women and men farmers. We were not aware of the concept of what a group was and its purpose until we came into

contact with the company. Our group has been functioning for the past 17 years. I mobilise people when plant clinic sessions are conducted. As members of the group we came to know many things related to agriculture and cattle management through *Seidhi Solai*, Voice mail and trainings.

I have studied up to Class 10. I married my maternal uncle. I have two daughters. One is married. My husband is working as a shutter opener of the river Cauvery. He helps me in agriculture and cattle care. We own ½ acre of land; it is rain fed. We sold one acre six years ago. We used the money to conduct my daughter's marriage and build a new house. We are cultivating fodder crop in our field. We cultivated maize last year (2020). We got seeds and other necessary farm inputs from the company. We sold the harvested crop to the company. We own two cows. We bought it using bank loan through the group. I attended training on livestock rearing and management in Namakkal and kitchen garden, visited Pudukerry, and Pudukottai in connection with starting a milk centre.

Agriculture was remunerative livelihood option until 12 years ago. Since then, almost all the lands have become rain fed. Weather conditions have become uncertain. It is since 20 years we cultivated vegetables in this area. Most of us cultivate only maize, cotton and fodder for the cattle. When the bank came forward to giving loan for the group members purchasing milch cow, this created an interest in cattle rearing to earn income for the household. Earlier, we had cows for our domestic needs only. Fortunately, group members got bank loan for buying milch cow. We could repay it without any difficulty. We can get second loan also after clearing the previous loan. Bank gives loan to the members based on the group functioning and the repayment capacity of the farm women and men. In the beginning we were selling the milk to a private person. He did not pay us well; moreover the measuring of milk was not satisfactory. So we (group) decided to have our own milk centre with the guidance and help from the company. Around 13 members supply milk to the centre on regular basis. Once a week we pay them based on the quantity they sold to the centre; Rs 1.10 per litre is given as incentive to the members; that is our group profit. The profit earned by the milk centre is shared among the members based on quantity sold by each member. Some amount will be kept aside as group savings. The provision of incentive is not applicable to non group members.

We get useful and helpful information on agriculture and cattle management through *Seidhi Solai* and Voice mail. Livestock related information is very useful as many households own cattle. We are, well in advance warned about possible attack of season based diseases and its preventive and management measures. We get to know market position for our crops and other things.

I participated in cattle management training where I learnt about cattle rearing, about *pasun theevanam* (green fodder types), *vaikol* (dry straw) the quantity to be given to improve the milk yield. In the training we were given seeds of Azolla, COFS and *Vel Masal*. Later we collected our own seeds from the crops we cultivated. Details of these also came in *Seidhi Solai* and Voice mail. The office staff encouraged us (women) to milk our cows. It was really challenging. Now we have learnt to do it. Thanks to the office for this. Our group prepared vermin compost and marketed it but could not continue; it was mainly because agriculture could not be practiced due to the uncertain rainfall; so few opt out to look for alternative job to earn money for the family.

In the initial days of MSSRF, series of meetings would be conducted involving both women and men farmers. We were asked to become members of RSGA by paying Rs 2000/ as membership fee. Subsequently, we were motivated to organise ourselves into groups. The membership fee was reduced to Rs 1000/ now. In the beginning there were six members (two female and four male) in our group namely Iyyan Thiruvallur kuzhu. The male members are still in the group. My brother and cousin are members in our group. I enthusiastically used to participate in all the group meetings. I am the leader of the group. I read out *Seidhi Solai* to the members and share the information with non members also. I used to answer all the questions given in the newsletter. I have shared (and still) information related to livestock with my relatives and neighbours . *Seidhi Solai* helps us to remember the content and discuss about it. We got our soil testing done free of cost. During the last three years due to my ill health I could not get myself to do much. However, I continue to make my contribution.

During one of the meetings organised by the office, we were told about Ru Pay card which gives insurance cover. Until then none of us knew about it. Even banks did not tell us as to how one can change the ATM card into Ru Pay card. I took great effort in telling my group members and others about getting a Ru Pay card. We all have that card since seven years. MSSRF plays a great role in reaching people with important details like this to help the farming community.

Based on *Seidhi Solai* information I encouraged many to have kitchen garden in their backyards. I got the seeds for them from the company. In our village most of us are members in the groups. I share the Kuzhumai meeting details with our villagers. *Enga ooril thagaval parimarram poikonde irukkum* meaning in our village exchange of information takes place regularly; so learning becomes easy. We wish to get *Seidhi Solai* regularly. We used to listen to Voice mail (water management and weather forecast). For the past few months we have not been getting it. Whether details disseminated through voice mail are very good. It really helps and guides the farmer to take precautionary measures

in applying fertile or pesticides. We can prepare land based on the information. We can cut the fodder crop and safe guard it for cattle .

We came to know what a group is and its purpose and usefulness. We do not borrow from outside. We borrow from group savings. *kadan vangunvadhun theriyadhu. Thiruppuvadum theriyadhu* (meaning we borrow but before we could realise we would have repaid the loan). We, the farm women and men have developed a lot. If women have developed and are confident to handle the situation it is because of MSSRF/RSGA. Our group is functioning well and maintain all the records well. Because of this, Bank approaches us to enquire whether we require any additional loan from them. We are getting seed material and other required farm inputs from the seed company. For other expenses (for instance weeding ) we borrow from the group savings. This month I have given Rs 14000 as agricultural loan to the group members. Interest rate is very less (Rs 1.50). We will always have some cash in our group account as back up cash for emergency expenses related to agriculture. One of the significant contributions by the company is saving the farmers from the clutches of *kandhu vaddikaran* (money lender charging heavy interest). Otherwise today most of us would have sold our lands!

We are getting up to date information through Voice mail and *Seidhi Solai*. And, the staff is always ready to give us guidance and agro advisories. In spite of all the support and help, going by the present condition agriculture does not seem to be a good livelihood option! My mother's family is known for doing agriculture. They have almost given up since four years. They did very well in mulberry cultivation. They had drip irrigation. There is no water for drip irrigation. Only consolation and hope for the farmers to continue with agriculture is support from the company in different ways!

**Name: P Periyasamy**

*Age: 65 Years*

*Education: Class 10*

*Village: T Pudupatti*

I am Periyasamy from T. Pudupatti village. I am 65 years old. I have studied up to Class 10. I own two acres and 6 cents of land. We have a well with pump set. We rear two cows, two goats and few chickens. We have planted cotton and maize in our field. We are not able to cultivate vegetables due to shortage of water. All our land once irrigated today is rain fed. The situation is bad for the past seven years ie from 2013.

I came into contact with MSSRF through the present president Mr Mahalingam. I am one of the shareholders in the company. Since then we have been benefitting a lot through the *niruvanam* (Seed Company/MSSRF). The seed company started with the support of MSSRF is doing a great service to the farmers. It gives appropriate crop

and livestock advisories / up dated information through organising meetings, through phone (Voice mail) and importantly *Seidhi Solai*, a local newsletter.

In addition to the guidance and crop/veterinary advisories the company also helps the member farmers by way of giving them seed material and other farm inputs on credit without charging any interest. The farmer is able to repay it after the harvest of the crop. The items at the company are sold at lower price than the outside shops. For example, the maize seed material sold for Rs 1300 in the market is sold for Rs 1150 in the company. Similarly, if a chemical is sold outside at Rs 1500 it will be Rs 1200 in the company. This is a profit. Isn't it? They will not think that their job is over with the selling of chemicals; they will also explain how to apply it for the crops. The farmers can sell their maize and cotton to the company and they are immediately paid. The product is weighed correctly. The farmer is saved from unnecessary anxiety and falling into debts.

The group members can get bank loan for buying cow. I got my cows using the bank loan. I have cleared it. I am not eligible to get loan anymore as I have crossed 60 years of age.

We get to know from *Seidhi Solai* about fertiliser management, pest/ disease prevention and control. Based on the prescription given in the *Seidhi Solai* we carry out fertilisers and pesticide application. I applied fertiliser within 22 days of planting of maize. Similarly, I took precautions to prevent and control *padai puzhu* (Army worm) when it appeared by applying Emamectin. Again I noticed yesterday; I should act immediately. For cotton, I applied fertiliser within 30 days of planting, then during 50-55 days of planting I carried out second dose of fertiliser application consisting of Potash, Urea, Super Phosphate, and DAP (consisting of five bags) (Factamfos is mixed with it). I could not apply micro nutrients this year because there was no rain at right time.

Last year (2020), some people from Coimbatore University visited our area and gave micronutrients; i applied and the crop was very good. But, the heavy rains at wrong time of the plant growth spoilt the whole thing. My cotton crop was fully affected by fungus. The bolls became black; it was a great loss. The crop looked so healthy and nice that I and other farmers were expecting a good yield and increased income. But our hopes were shattered. This year the crop looks good; if it remains like this we can compensate last year's loss. Cotton is sold for higher rate this year. This year, due to delay in rains I carried out planting in three different phases. If it rains in Margazhi (December-January) it will be good for the crop.

Earlier, ie 10 years ago agriculture was a profitable occupation. I could build my house without taking any loan. I used to cultivate tomato and sell for a profit. I had water in my well. Since 2014 we are not cultivating vegetables as there is no sufficient water



for irrigation. Hence, it is no longer a profitable occupation. We may not lose but we do not get any profit. Weed is a big problem now. We don't know from where it is coming. It must be either through seeds or fertilisers. I do not prefer to use chemical weedicides. This year I did not have an option. I had to use it. Labour is also a big problem which hinders carrying out certain agricultural operations on time. Added to this peacock and rabbit are posing a problem for agriculture. The present farm situation is very disheartening! So, not many are in a position to continue with agriculture as a livelihood. We have to work very hard. Not worth it, I feel. I am not expecting my sons to practice agriculture. Both are employed outside.

*Seidhi Solai* provides timely information on livestock care and management. The prescription for udder disease is simple and can be prepared with lime, aloe vera, turmeric and chalk piece. The grinded paste should be immediately applied as soon as one notices it (Three times a day for 3-4 days) We should not delay the treatment; otherwise it may prove fatal. We can avoid going to the hospital. More importantly we do not have to bother the cow by forcing her into walk to the hospital. It is very difficult to make the affected cow walk. Also, the injection should be given within 8 hours of noticing the symptoms; this may not be possible for a farm women or men to take the cow within that period. The treatment prescribed in *Seidhi Solai* is easily available and can be prepared without delay and apply in 10 minutes; thus we can save our cow and our earnings.

*Seidhi Solai* also tells us the measures that need to be taken during winter and rainy season. It stresses the need to tie the live stock in a clean and dry place; the cow should be fed with dry feed; it is also pointed out that the livestock shed should be washed using phenol. During rainy season it is advised to wash cows feet with Potassium permanganate or salt mixed in warm water. Details of treating *kudal puzhu* (intestine worm) in goats were also given which was helpful in treating my goats. These are all useful and helpful tips for livestock care and maintenance. These tips and treatment can be easily adopted.

When my cow was bitten by a crow I did not know as to how to treat it. The veterinary doctor gave some medicine. But there was no improvement. I referred *Seidhi Solai*; a traditional prescription for treating the wounds was given using *kuppamepni thazhai* (Indian Nettle), *elumichai* (lemon) and *sunnambu* (brick lime ). There was one more ingredient. I forgot. I will have to refer the newsletter. The treatment was very effective; within 9 - 10 days, the wound healed. I could also save money.

We are not able to prevent or control tick problem on the cow. Hospital medicine does not work. So I am washing the cow using *erumbu marundhu* (borax powder used to

get rid of ants); after few weeks it reappears! It will be helpful and useful if we are suggested some medicine by the office.

I share information with my fellow farmers for treating disease affected cattle (for example udder disease) . When Aswini affected cotton crop I told my farmer friends the chemicals to be applied for controlling the attack. Now, most of the farmers are aware of the *padai puzhu* and how to prevent and control it. *Seidhi Solai padippavargalukku ubayogam. Padikkadavargalaku illai* meaning it is useful for those who read *Seidhi Solai*; those who do not read it, they are missing something!

We get *vanilai seidhi* (weather forecast) through voice mail and also in *Seidhi Solai*. We plan our agricultural operations based on the weather forecast. We will postpone applying chemicals by a day or two if unfavourable weather is predicted.

Information on farm pond construction was published in *Seidhi Solai*. I did not do it because I do not have sufficient land area.

Despite the difficulties faced by a farmer there is a hope that we can handle the situation! This is because we have vidai company which helps us a lot in various ways as mentioned by me earlier. Whether we have ready cash or not we can get the seeds on time and get other necessary farm inputs. This is a big help. We can return excess seed material to the company. We cannot do this with input dealer. I have helped two of my relatives to get maize and cotton seeds from the company. *Idhu oru sowgariyam allava?* (Is this not a great help?) . We can't get farm inputs on credit from the input dealers even for higher interest rate. It is impossible to get! We also get fresh cooking oil from the company. Most of the farmers buy from the company for their household use. The oil is also sold at lower price. The company helps to sustain the interest of a farmer to do his/her agriculture.

**Name: Ms Poonkodi**

*Age: 32 Years*

*Education: Class 10*

*Village: Veerapudayan patti*

My name is Poonkodi aged 32 years. I studied up to Class 10. I am married with five daughters and a son. My husband works in a hotel. I take care of farming activities and the cattle. We had little agricultural land; we sold it because we did not have proper approach road to our land. Now we have taken five *kuzhi* (1 *kuzhi*=60 cents) on *guthagai* (lease) where we cultivate cotton, maize and *vella cholam* (pearl millet). We cultivate *thatta payaru* (cow pea), *mochai* (lab lab) and egg plant as inter crop in the cotton field for our household consumption.

It has been four-five years since I am in association with the company (RSGA). It has been a wonderful experience being part of *magalir kuzhu* (women's group). Through the group I came to know about the activities and services of the company. Today we have three milch cows and a calf. We own them and sell the milk. It was possible because as a women's group member I got *paal maattu* (milch cow) loan from the bank. I have so far availed three such loans. I was prompt in repayment of the loan. I am contemplating of getting fourth loan; but I am hesitant because managing them maybe difficult, I feel.

I read *Seidhi Solai* which we get from the office and also listen to voice mail. Both give us information for our crop cultivation, weather and cattle management. Whatever is applicable and relevant for us we adopt it (*engalakku thevayanadhai eduthukkuvom*). The farmers in general are really getting benefitted by it. It has been nearly three months we got voice mail. *Vanilai arikkai* (weather forecast) is useful in planning our activities.

I read *Seidhi Solai* and try to use the information for our crop cultivation and in taking care of the cattle. For example, for cotton cultivation, the information covered include the necessity of leaving 31/2 feet gap between two crops and furrows and cultivating crops such as *ulundhu* (black gram), *mochai* (lab lab) and *thattam payaru* (chic pea) as intercrop and *thuvarai* (red gram) and *kotta maram* (castor) as border crops. I came to know that *Ulundu* (black gram) will attract *vella poochi* (white fly) and act as a pest control; intercrop would prevent weeds in the field. Based on the advisory given in the newsletter we are undertaking measures for pest prevention and control. It was also suggested to keep light trap in the field but I did not do it.

I have learnt from *Seidhi Solai* that tying used film roll around the maize field will prevent pest attack. I did as suggested by *Seidhi Solai*. Based on the newsletter I carried out basal application of fertiliser on the 22<sup>nd</sup> day after the planting of the crop. We were told to apply micronutrients but I did not do. I applied farmyard manure while ploughing. Then I planted the crop in furrows leaving necessary gap between the two furrows. My father followed the advisory given in the *Seidhi Solai* to control *kuruthu poochi* (shoot borer) in maize crop. He was happy to share with me that his crop was saved from the pest. *Seidhi Solai* carried a write up on the preparation of *man puzhuuram* (vermi compost). I have not attempted yet.

Staff from MSSRF visit our fields and give us guidance about the precautions we need to take for a healthy crop harvest. Two years ago pest attack on cotton crop was explained to us with the help of a microscope. We carried out pesticide application as recommended by them. The result was good. In a group meeting it was explained about *ver poochi* (root grub), *kuruthu puzhu* (shoot borer) and how they can be prevented and managed. They also told us how to prevent withering of fruit and funnel dropping in the crop.

I also carried out soil testing. Based on the soil test result I was advised to reduce the quantity of Urea application. I have reduced about 25 % of it now. Our expenses have reduced because we are using only required fertiliser and chemicals.

*Seidhi Solai* carries very useful and helpful information to raise livestock in a healthy manner. We get details of preventive measures of disease (such as *vai pun* (mouth ulcer) *kaana noi* (Anthrax) *madi noi* (udder disease) *kaal kulambhu veekkam* (foot disease) and treating them. How to give care for a calf is also dealt in detail. The prescriptions are simple and effective. The necessity of maintaining hygiene in a cow shed is explained for the good health of the cattle. I apply the paste of *sothu kathazhai* (Aloe vera), *manjal* (turmeric), *elumichai* (lemon) and soap or chalk piece for udder disease. We clean the foot affected by *kaal kulambu* disease with warm salt water and apply *manjal* paste after that. We also use turmeric spray. For mouth ulcers I give the treatment as done by my elders. I vaccinate my cows to prevent *kaana noi*.

With all the help and guidance we have been finding it difficult to practice agriculture since the last three years. Weather is acting against us!!

After our association with the company we need not have to borrow from outside. We can get quality seeds and other required farm inputs from the office on credit. We find it easy to repay the loan on time after our harvest of crops. We also help other women outside our group also to buy things from the company. We stand as surety for them by giving in writing with our group seal. So not only the members but also the farmers outside the group also get benefitted.

**Name: Mr P Ravaneswaran**

Age: 50 years

Education: Class 10

Village: Navapatti

I, Ravneswaran aged 50 years, belong to a village namely Navapatti. I have completed my Secondary School level education. I cultivate two acres of my land. I have also taken three acres on lease. I do not have a well. All the five acres are rain fed. The common crops cultivated under the changing climatic condition in this area are cotton and maize. Our area soil (*karisal man*) is not suitable for vegetable cultivation even if we have water for irrigation. So, we cultivate vegetables on a small scale after January. I was working in a leather unit for seven years; my father used to take care of the lands. He used to cultivate mainly *vella cholam* (pearlmillet) and in some area traditional variety of cotton. We have three cows and two calves.

I know MSSRF from the beginning. I know the efforts it took to mobilise women and men by organising meetings and later bringing them together by forming into groups and

followed by setting up of a seed company (RSGA). Its contribution for the development of agriculture in this area from the day of its inception has been phenomenal.

Most of us were not aware of micronutrients and its importance; we have not heard of it. Now we have come to know through the office (MSSRF and RSGA). When farmers came to know that the micronutrients will aid in good flowering and fruiting in a crop, they started applying it. Farmers used to apply more Urea thinking that it will promote good growth of the crop. They were deceived by the lush growth of the plants but they did not realise that overdose of Urea is harmful to the soil and the crop. We have also come to know about *thazhai chathu* (N), *mani chathu* (P) and *sambal chathu* (K). 90% of women and men farmers have become aware of this now and are using them correctly.

The company gives farm inputs to the farmers on credit and we clear it after harvest of our crops. It also buys maize and cotton from us. We get the payment immediately. It would be helpful if the company builds a godown where the farmers can store the harvested crop and sell it when market rates are favourable to the farmers.

The company through its newsletter namely *Seidhi Solai* has been playing a great role in creating awareness on season based suitable crop cultivation and right agricultural practices. It is written in a simple language in a dialogue mode. *Paadam madhiriye varum* meaning *Seidhi Solai* presents the content in a lesson pattern. Every topic is well structured so that a farmer can easily understand and adopt in his field. It provides content specific to one season; if it covers all the aspects related cotton in one month and in the subsequent month it will talk about maize cultivation; in August-September, topics related to cotton and maize are generally covered. In the month of Thai (January-February) the content will focus on vegetable cultivation. The newsletter tells about fertiliser management; importance of applying farm yard manure, details of *mel urangal* (basal application of fertilisers) and within how many days of a crop cycle they should be applied. For instance, Zink should be applied to maize within 30 days and Magnesium within 30 days of planting cotton. *Seidhi Solai theliou kodukiradhu* meaning the newsletter gives clarity on various aspects of crop cultivation.

I used to do agriculture without any clear idea and incurred heavy expenditure. I followed my neighbour's suggestions. Now I have clarity. I do it based on knowledge. Today I use one bag of fertiliser instead of two bags. Earlier I (and others also) used to apply two bags of DAP ; now I apply one bag only; so I am able to save Rs 1400/- I have come to know as to how much quantity of farm yard should be applied for one acre. Earlier, we used to sell it (farm yard manure)!

We all came to know about the utility of carrying out soil testing through the newsletter and through the office staff. It is *Seidhi Solai* which created awareness about *kaarathanmai*

(alkalinity) and *amilathanmai* (acidotic state) of the soil. MSSRF organised soil testing camp through SPIC. It was useful. We got the results soon. It will be good if SPIC comes on regular basis and help us with soil testing. It will help the farmers to use the required quantity of fertilisers; we can thus reduce the expenses. Otherwise we have to take it to the Union Office. We normally do not get the results immediately and they also will not give us in detail as to what should be done. Based on the soil test results I was told to apply three bags of Super phosphate per acre as basal application and Potash, Urea and DAP each one bag as *mel uram* (top dressing).

*Seidhi Solai* also carries information on various government schemes meant for farmers. It highlighted the subsidy given for drip irrigation which can be utilised by the small and marginal farmers. I came to know about water management through drip irrigation from *Seidhi Solai* and the office. We also came to know about minor irrigation structures as effective water management methods.

Under NABARD water management scheme I have applied for rain water harvesting by bund construction as a minor irrigation method in my land. Around 20 farmers have adopted the method of bund structures for storing water for irrigation. We have 100 households in our village. Only 10 % own lands. They hesitate to have this structure as they fear they would lose area for cultivation. Gradually, people are getting aware of its benefits and showing interest to have such water saving structures. They will realise the benefits and usefulness of it only next year. A pit can save 50 litres of water, we were told. NABARD is also distributing tree saplings to the farmers.

The office organises meetings where we have learnt about crop insurance and climate change issues. *Seidhi Solai* also carried this information. 10 % have done crop insurance. I took last year (2020). I have not yet got the insurance amount. When enquired AD from agricultural department he said that it would be soon given.

During a meeting held recently (October, 2021) MSSRF staff said that cultivating *karu murungai* (a variety of moringa) would be profitable for a farmer. I normally cultivate vegetables after January. This time I am planning to cultivate *karu murungai* in one acre after January. It would withstand heavy rain also, I heard. I am going to get the guidance for the same. We were told that it has good market potential.

Women groups in our village function well. Men groups are not functioning effectively. Some of the members have left the group because they are more than 50 years of age. 90 % bought cows using bank loan. Men farmers also got cattle loan and they repaid it. Cows bought with bank loan get insurance but insurance cover is not given for others. Only for 8-10 persons in an area would be given insurance cover, we were told. It would be helpful to farmers if MSSRF can organise insurance cover for our cows.

I am selling milk to a milk centre in our neighbouring village. We thought we can set up one milk centre in our village with the help of our office. But could not be done because of the problems in the group functioning. The buyers do not pay the farmers right rate and full payment cannot be expected. The milk buyer gives loan to the farmer to buy a cow.

Similar to crop cultivation advisories, *Seidhi Solai* also gives exhaustive information for preventing and managing disease in the livestock. We are able to treat udder disease in cows on time and safe guard out goats. We do not have to go in search of a veterinary doctor. The prescriptions given in the *Seidhi Solai* are very effective in preventing and controlling diseases. *Noi varuvadarku munbu kaapparru girom* meaning we are safeguarding our livestock from disease attack.

I share the information with my fellow farmers. I tell them about seed treatment. They used to wonder why they should do it again when the seeds are already treated. I tell them that if proper seed treatment is done we can prevent *ver azhugal noi* (root rot) and fungal attack. I tell them that I learnt this from *Seidhi Solai* only. Now, many of them realised the importance of seed treatment and they are doing. I distribute *Seidhi Solai* to 10-15 farmers.

We are also getting voice mail from the office. Like *Seidhi Solai* we also come to know about agriculture and livestock management and other information like nursery distribution from the horticultural department. The climate message is useful in planning our farm activities. Based on the weather information we carry out planting and apply chemicals. Sometimes we are not able to take steps based on the weather information. It will warn us in advance to carry out weeding operation in the field before the rains! We won't be able to do it because of labour shortage. We cannot stop the rains! Labour is a big problem.

I have been reading *Seidhi Solai* regularly. I have become aware of many aspects related to agriculture and cattle care and management. In spite of following the crop advisories we are not able to increase our income. It is mainly because of the market. Farmers are not getting the right rate for their product. We sold maize for Rs 1950 per bag three years ago; now it is not fetching Rs 1500/- also. We are not able to stock it. Rates of fertilisers have increased. Though we are getting farm inputs for much lesser rate than outside we are finding it difficult. But for the company, I would have given up agriculture and gone as a watchman somewhere. If farmers in this area are able to cope up with difficulties and carry out agriculture without losing interest, it is mainly because of the functioning of the company to improve the lives of farmers!

**Name: Mr S David Mariadoss**

Age: 42 Years

Education: Class 7

Village: Karisal patti

I, David Mariyadoss reside with my mother, wife and son in Karisal patti. We live near our fields. We have four acres of land. We have a well with pump set. We also have six cows and three calves. I also have 10 chickens. I also undertake catering work to substitute household income. I am one of the members in Thottakalai group. We conduct monthly group meeting without fail. Being member of a group is useful in getting farm subsidy or avail any other government schemes.

Only for the past four years I have been fully concentrating on agriculture. Earlier I was working in a banyan company in Erode for 15 years. I had to leave because of a strike by the workers. In my absence my mother used to take care of the lands. In two acres of land I have fodder crop which does not require much care; in one acre I have *sampangi* (tuberos) flower crop and in another one acre we have Ross crop. Two years earlier we cultivated vegetables. We had to change over to flori culture because of shortage of water. And, market rate was also less for vegetables. To substitute household income I take up catering service for social and religious function.

We have cultivated *sampangi* based on the details given in *Seidhi Solai*. We are happy with the crop yield. We have cultivated Ross on our own. MSSRF has collected data on both Ross and *sampangi* cultivation in our land to publish the same in the *Seidhi Solai*. I have used pest control methods in our vegetable crops as suggested in the newsletter. I had kept pheromone trap in my *pudalai* (snake gourd) field. It was effective in controlling the pest. I have not kept yellow sticky card so far. If there is a need I will in my field.

*Seidhi Solai* keeps reminding the farmers to do soil test. It really helps us to know the requirements of the soil health maintenance. I was told to apply only DAP. I regularly carry out soil testing. Since I have cattle I use farm yard manure. This year I have also applied *kulathu mann* (pond mud) which will enhance dampness of the soil and in providing *thazhai chathu* (Nitrogen). The staff from MSSRF tell us to collect cows' urine in a pit so that it can be used to the crops in the field. We do not have time to do that.

MSSRF and NABARD suggested us to have a farm pond so that we can handle shortage of water. But I could not do it. But I am adopting drip irrigation technology. I got full subsidy for that. Mr Royappan from MSSRF told me about that scheme from Horticulture department and encouraged me to install the same in my field which will help in managing water efficiently.



For a *vivasayi* (farmer) getting a right market rate is problem. If market rate is Rs 40/- and if we get Rs 15 that is sufficient. But we are getting only Rs 4/- Profit is not for a farmer but to the merchant.

We get information through *Seidhi Solai* and also voice mail on fertiliser management, importance of bio fertilisers and ploughing methods. Sometimes, due to work pressure and lack of time I am not able to do on time of what is said in *Seidhi Solai* and Voice mail.

I am the only person near my house going often to MSSRF office. So, I share information with my fellow farmers. I tell them to prepare the land and use bio fertilisers. I do not know whether they adopt them or not. When I get voice mail from Kannivadi, I warn the neighbours to plan their planting activity; similarly I tell them for fertiliser application. If rain is predicated they can avoid fertiliser application.

*Seidhi Solai* does a great service in cattle care and management. It will tell us the possible disease attack during summer and rainy season. It also provides prescriptions to treat the diseases. So it is helpful for the farmers to safe guard their livestock. I take good care of my cattle. I make sure that wherever they are tied that particular area is clean and dry. I have helped my fellow farmers in treating their cattle when affected by udder disease by using the grounded paste of Aloe vera, turmeric, lime kiln, and lemon. I prepare the paste myself and take it to the household with affected cow. I tell the owner to milk the cow once in two hours. In my experience within two days the disease gets cured. It is simple prescription but effective in treating udder disease. We do not have to go to a doctor. We are able to save money and time.

I have attended some training programmes in Theni (Moringa value addition), and Palani (Guava cultivation).

On the whole, the *niruvanam* (RSGA) is doing a great service to the farming community for improving our income.

**Name: Ms Priya**

*Age: 28 Years*

*Education: Class 12*

*Village: Karattu patti*

I, Priya come from Karattu patti village. I am 28 years old. I have completed my higher secondary school education. I was born in an agricultural family and got married to a person who is also from similar background. My husband, I and mother-in-law work on our three acre land. We mainly focus on *pandal vivasayam* ie cultivating creeper vegetables such as *paavai* (bitter gourd), *peerkan* (ridge gourd), *pudalai* (snake gourd) and *kovai* (ivy gourd). We are thinking of cultivating *paavai* and *peerkai* after the rains.

Because, after the rains it will be cool and pleasant; virus won't attack the crop. *Soraikai* (bottle gourd) can be cultivated throughout the year. Aavani (August-September) is generally rest period for us. We will begin our work in the coming month, Purattasi (September-October)) for the above mentioned crops. If the cultivable land is free and vacant we will cultivate maize in one acre and jasmine in some area. During rainy season we cultivate maize, *thitta payir* (chic pea) and *ulundhu* (black gram). We have a well and a tractor. We have also bought a weeding machine with 60 % subsidy. Traders from Oddanchathiram market visit our village for buying the vegetables which they sell it in Madurai and Dindigul. We have a cow.

I know about MSSRF ever since it was set up at Kittampatti which is near our village. It is six years since I knew about it. My husband is in contact with MSSRF for the past 12 years. He used to visit the office at Kannivadi. A year after the office was set up near our village I joined as a member of *kuzhumai*. Our monthly savings helps a member to borrow money on lower interest. Our monthly savings are very helpful. In times of emergency we can borrow from group's saving. We can get cattle loan from the bank through our group. Most of us have benefitted by it. I participate in our *kuzhumai* meetings.

I listen to the voice mail and read *Seidhi Solai*. The staff from the office also guide us on many aspects related to agriculture. They also conduct training such as on using the *manjal attai* (yellow sticky card) and *inakavarchi pori* (pheromone trap). I came to know about the yellow sticky card only after I joined the *kuzhumai*. We also prepare *panchakavya* for our use.

I have been reading *Seidhi Solai* and find it useful. I gained some knowledge on organic farming and its benefits after reading the newsletter. As per the instructions given in the *Seidhi Solai* we carry out our last ploughing using 12 kilos of neem cake. If we do like this it helps in pest control. We have been following this for the past two-three years and we see good results. *Seidhi Solai* also carries useful and timely information on pest prevention and control methods. We find using yellow sticky card very effective in controlling pest/ disease in the crop. We could see great difference now. (Arokiya Mary akka (MSSRF staff) gave a training on this). We are advised to use 50 yellow sticky cards per acre. In *kovakkai* (Ivy gourd) *kulavi* (wasp) attack is common which causes damage to the vegetable. Pests from neighbouring fields come to our fields. Based on our experience I can say Pheromone trap is an effective pest control method. We have to use at least 25 such traps for a good result.

After reading *Seidhi Solai* we were encouraged to prepare and use vermin compost. We have to dig a pit measuring 3x3 feet. We got a tractor load of vermin compost. We have

a cow. Expenses get reduced when we prepare it ourselves; we do not have to spend on buying chemical fertilisers. Now the expenses related to fertiliser and manure have come down by Rs 10000/- per acre.

I gained knowledge on the utility of alternative cropping (or crop rotation) with cotton and maize after harvesting of vegetable crops. After cotton and maize we should cultivate vegetables. Otherwise possibility of pest attack will be more. I became aware of the purpose of seed treatment with bio inputs and what chemical or organic input should be sprayed or applied after planting. I learnt about leaving sufficient space between two maize plants; this will produce good round shaped healthy grains and the *kadir* (pods) will be healthy, attractive and strong. Because of sufficient space gap between two plants it will take time for the pest to travel from one to another. Before that we can take precaution to control the pest by spraying the right harmless chemical.

We were able to control *andhu poochi* (Melon fly) in our *pudalai* crop by reading *Seidhi Solai*. *Andhu poochi* attacks all the crops. It flies. It was advised to keep 10 Pheromone trap per acre. It was effective; within two days the pest disappeared. We also came to know that by keeping the trap we can control *pazha iee* (fruit fly) which attacks largely *pudalai* and *kovai* plant. The tablet is effective for two months. We can change the location of the trap also. Video was taken in our *Pudalai* crop field and was uploaded in the RSGA Facebook; it was viewed by more than 50000 persons.

We have built a *sippam kattum goodaram* (Grading and packing tent) near our house in 2017. We learnt about it from *Seidhi Solai* about getting a subsidy for constructing this. We got a subsidy of 4 lakhs from the horticultural department. The office (RSGA) at Kittam patti also gave us information on this and guided us in getting the subsidy. Our office connection enabled us to get the subsidy without any difficulty. We have got 2000 Lt Syntax tank, six tube lights, three fans and a big grader box. We have entered into an agreement with Reliance to sell our *kovakka* (ivy gourd). Reliance conducted a meeting in the office (RSGA office) regarding this. We participated in that meeting. After this we entered into an agreement with them. Grading is done based on the *tharam* (quality) of the vegetables. Since then Reliance continues to buy from us. They come and collect the product and the amount is credited into our bank account. It has simplified our work. It is easy now; we do not incur expenses in marketing the vegetable. We sell other vegetables such as *soraikai* (bottle gourd) and tomato in the Oddanchathiram market. My husband sells the remaining vegetables in our village and surrounding villages.

I have learnt about preparing *Panchkavya* through a training organised by the office. It is only after we got in contact with the office did we come to know about bio fertilisers and bio pesticides. We have started using farm yard mixed with bio fertiliser to our land. It has reduced our expenses and saves our soil from getting affected by chemicals.

*Seidhi Solai* (also, voice mail/message alerts us about the cattle disease and preventive/management/treatment measures) carries information on livestock management. The information warns us about possible disease attack on cattle and other livestock. We are advised to maintain the cattle shed clean and neat which will help in preventing spread of diseases; and to avoid keeping the cattle in the hot sun. Also, it cautions us to take preventive measures to safe guard the cattle from diseases such as *madi veekkam* (udder edima), *madi ammai noi* (cow pox) and skin related problem and so on by vaccinating them in advance . As per the instructions given in the newsletter and the voicemail we have vaccinated our cattle, we keep the cattle in clean and cool place. If we observe slight swelling in the udder we immediately treat the cow by giving lime orally. This will act as a curative and preventive treatment. We cultivate azolla for feeding cattle.

By reading *Seidhi Solai* we come to know a lot of valuable and useful information for doing agriculture in an efficient and profitable manner. We use this newsletter as reference material. For example, if we forget any ingredient name and proportion to be used while preparing *panchakavya* we refer this. We read the back issues when we are free. It refreshes our mind. In general, we have experienced reduction in using pesticides and other chemical inputs. If we apply chemical pesticides the problem will crop up after a brief interval. So there is overall decrease in our expenditure. We feel confident and reassured because of the information we get from the office through different channels and also through personal interaction/guidance with the staff.

**Name: Mr S Selvaraj**

*Age: 50 Years*

*Education: Class 9*

*Village: Karisal patti*

My name is Selvaraj aged 50 years. I come from a village namely Karisal patti. I have studied up to Class 9. I have six acres of land which used to be irrigated land but now it has become dry land. In one acre only I can cultivate crops in two seasons. I have a well and a pump set. My main source of income used to be milking cows. I have four cows. Only from last year I started concentrating on doing agriculture. I have maize, cotton and *kovai kodi* (ivy gourd) in my field now.

I know MSSRF from late 1990s. I was a member in a farmers' group. Now I am leader of a Horticultural group. Our group is known as Thottakalai Urpathiyalar Kuzhu, Reddiyar Sathiram.

*Seidhi Solai*, the newsletter from RSGA is a useful one. I read it regularly. It covers almost all possible diseases that affect our livestock in our locality. Whenever there is a need for me I refer it In advance it cautions us about the outbreak of cattle disease particularly

during summer and winter. I have safeguarded my cows on many occasions from *madi noi* (udder disease) by using the prescription given in *Seidhi Solai*. It is a simple one and can be prepared using *sothu kathazhai* (Aloe vera), *elumichai* (lime), *sunnambu* (slaked lime) and *manjal* (turmeric). The paste should be applied three times a day for three to four days. I also give two limes orally. On few occasions I did not pay much attention when I saw the symptoms and I paid heavily for it. During rainy season, the newsletter tells us in detail as to how one should maintain the cow shed without dampness and in hygienic manner. I learnt that spraying Potassium permanganate on the udders during rainy season is good for cattle health. We are told that tying the cow or keeping the cow in a damped place will affect the cow with foot disease. It is also suggested as to what type of feed can be given to the cattle and to feed the cows with *ootta chathu* (nutrients). Once one of my cows broke its *kombu* (horn). I treated it based on a prescription (*sothu kathazhai* (Aloevera), turmeric and neem paste) for treating wounds. It had a good effect.

I am benefitting a lot by using the prescriptions given in the *Seidhi Solai*. So I used to share it with cattle owners where I used to go for milking their cows. I would tell them that I am benefitting a lot and they can also use it for their cows. Without going to a veterinary doctor we can treat most of the diseases that affect the cows. We are saving money and the time. The ingredients prescribed are easily available; no need to go to a shop also.

*Seidhi Solai* has exhaustively dealt with water management and recommended digging farm ponds in the farmers' field. It gives crop advisories based on season- right from land preparation to harvest of the crop. I have come to know about *vellai iee* (white fly) on a crop and how to control it. I have tied yellow sticky card. I have kept *vilakku pori* (light trap) also. I could control the pest attack to a great extent. Virus is controlled to a larger extent.

*Seidhi Solai* has dealt in detail about *kova kai* (Ivy gourd) cultivation and how the planting should be done on different soils – *karisal kadu* (alkaline soil) and *seva kadu* (red soil) How to prepare a pit and maintaining proper distance are given in the newsletter. I followed the instructions given in *Seidhi Solai* when I planted in my field. Details of different modes of water management are given in *Seidhi Solai* and the staff also tell us how we can save water. I have come to know that care should be taken to retain the water in the fields by forming ridges in the field and how that water can be diverted to the bore well. I have also attended NABARD meeting on water management technologies. During the meeting also the officers explained about *varappu kattudal* (farm bund) and digging farm ponds and how to manage them. I understand that water can be effectively harvested and store it in the subsurface and ground water. They have also explained how water can be stored in a low area or in a farm pit and how it can be channelised to the bore

well. I have tried to adopt water management in my field. I am planning to have farm pond after the harvest of the standing crop of maize in the month of Thai (January-February). I have a well. I can divert the water to the well. Then there is a possibility for cultivating in two seasons. Earlier I never used to pay attention to all this. I used to think they are something not relevant to me. Now I understand that simple water management techniques can help in preventing soil erosion, to retain water in our land and it will help in handling drought.

I am also getting voice mail (mobi mook). It is something like *Seidhi Solai*. Like the newsletter the information is given in *pada thottam madhiri* ie structured manner. Sometimes I feel listening to the details through voice mail is better than reading the newsletter. Many of our group members pay attention to Voice mail and use the information. I have listen to information on cotton and maize cultivation, and water management.

Staff from MSSRF visit our fields once a week and offer their guidance in handling pest/disease attack and for healthy growth of the crops. We also call them over the phone in case we need their guidance or help. Last week Siva Sir visited my neighbour's field and gave his suggestions and guidance to prevent and control pest problem in *nandia vattai* (pin wheel flower) and *kova kai* in his field. My neighbour who was in Coimbatore earlier is new to farming; he returned last year to do agriculture in his lands. For such persons it is a great help, isn't it?!

**Name: Ms Selvi**

*Age: 44 years*

*Education: Class 4*

*Village: Manayakkaran patti*

I, Selvi hail from Manayakkaran patti from Dindigul district. Our family is engaged in farming. I have two daughters. We have 21/2 acres of land where we normally cultivate *malli poo* (jasmine) and *makka cholam* (maize). Jasmine is cultivated in 1 acre; we are waiting for the rains to sow maize. Under normal circumstances by this time (September) we should be engaged in weeding the maize field. The field is ready but no rain. The uncertainty in the rainfall discourages to get involved totally in the farming. So, I have started going for company work since the last three years which involves working in shifts.

Office of the M S Swaminathan Foundation is located near our fields only. So I know the organisation for a long time. I was a leader of a Women Farmers group for five years; after I started going for company work I resigned as the group leader but I continue to be a member in the same group (*Iyarkai* (nature) group). Once a month we

conduct group meeting where we discuss and share about agri related information from *Seidhi Solai* and through other information channels such as voice message/mail through mobile phone. I have participated in agriculture and allied trainings / meetings (*kaal nadai* (cattle) training, *sottu neer passanam* (drip irrigation), field training on *padai puzhu* (Army worm) attack and so on) organised by the Reddiyar Sathiram Farmers Association and MSSRF. Our field is often used as demo plot for carrying out certain training such as *padai puzhu thaakudal*.

Monthly savings of Rs 200 from group members help us in taking *ulkadan* (loan taken within the group). The balance money is deposited in our saving bank account. We also take loan from *vidai* (seed) company to meet our agri related expenses. We also purchase agri inputs from the seed company. Earlier we used to buy inputs from agro input dealers on credit for heavy interest. We do not have to pay heavy interest and time is also saved; we do not have to travel to the input dealers shop. Before the groups were formed and started functioning we used pay 5 % *kandhu vaddi*; now we pay 2 % interest when we borrow from our group savings. Our group functions well. So the *vidai* company recommended our group to the cooperative society to provide loan to us. Our group got a loan of Rs 80000/ *maattu* (milch cow) loan from the bank to be repaid in 3 years. We were very regular in paying our monthly dues and also maintained the group accounts well. The lending bank appreciating our sincerity in repayment waived Rs 25000/- I bought 2 cows using the loan amount; we sell the milk to the milk society. We were also encouraged to participate *kaal nadai paramarippu* (cattle management) training. This training is useful to take preventive measures to safe guard my cows from getting affected by *madi noi* (Udder disease) , *komaari noi* (foot and mouth disease) and etc. I also know how to treat the cow if it is affected by *madi noi* or any other disease. We also get advisories regarding cattle disease preventive and management practices in *Seidhi Solai* (a monthly newsletter in vernacular) and we can contact the veterinary doctor through the phone. .

Contact and regular interactions with MSSRF/company has brought lot of positive changes in our day today farming activities. We get information related to farming through mobile phone and *Seidhi Solai* throughout the agricultural cycle. It helps us in selecting a suitable variety of crop and we follow the appropriate practices. Staff from MSSRF also visit our fields regularly and provide guidance and advice about the standing crop. *Idhu engalakku sowgariyamaga irukku; parindhurai seigirargal* (It is very convenient for us because they (staff from MSSRF) recommend appropriate measures to be taken). This helps us to take right measures to safe guard the plants and follow methods that will promote healthy growth. They tell us the details of proportion of inputs that should be used for pest/disease management and also increase the yield. We used to get 10-12 bags (100 kg /bag) of *makka cholam*; now we easily get 17 bags. This

is possible because of time to time guidance and instruction provided to safe guard the crop from pests/disease and to increase the yield.

Presently we are cultivating jasmine in one acre of our land. Best season for jasmine is Thai (December-January), Vaigasi (May –June) and Aani (June-July). Based on the recommendation given in *Seidhi Solai* and also through voice mail we were encouraged to adopt drip irrigation. We irrigate the crop for 15 days a month. During rainy season we save water (*mazhai neer thekkam*) by forming *varappu* (bunds). The stored water can be used for irrigation. We got *maniyam* (subsidy) for this with the help of the company. We are also using mulching sheet in our jasmine field which prevents weed growth and preserves water in the soil and regulates soil temperature. There is yield increase. We are getting big and well formed flowers now which enhance its market value. Cultivation expenses have come down now. We have reduced the use and application of inputs to the jasmine plot. Earlier we used to spray *marundhu* (chemicals) twice a week; now we spray 4-5 times a month. Earlier we spent Rs 1000 a week; now it is Rs 500/. *Paadikkumel selavu kuraiyudu* meaning expenses have reduced by 50 %. Likewise, we are able to save money and reduce excessive application of inputs to the crop.

We have been able to prevent pest and disease attack on *paruthi* (cotton) because along with it we cultivate many other crops as *oodhu payir* (inter crop) such as *ulundhu* (black gram), *paasi payaru* (green gram) and *thatta payaru* (cow pea ). *Kottai muthu* (castor) is cultivated as a border crop. These crops attract the pest that normally attacks the cotton. By following this *oodu payir* method the cotton crop is saved from the pest attack of *vellai iee* (White fly) and *saar urinji poochi* (Aphids); pest population is reduced. We were introduced to this method of *pala payir* (several crops) cultivation by MSSRF. Since then we have been following this and we experience good result. Earlier, we only used to cultivate *kottai muthu* as a border crop in the traditional cotton crop field.

On the whole we have benefitted a lot because of our association with MSSRF office and the company. Our agricultural expenses have come down because we use only the required seeds these days. We are able to control weeds in the field. We benefit a lot through government/agri department/ union office training programmes like preventing and controlling *padai puzhu* attack, *sottu neer paasanam*. We also get subsidy for seeds. Our land is located near the office. So our land is used as demo plot. So we get maize seeds (31/2 kilo ) free of cost. So we save nearly Rs 3000-3500. I am not able to tell you precisely the profit in monetary terms; but I can tell you we are benefitting a lot because there is reduction in our expenses. Our time is also saved. We do not have to travel to procure agri inputs; now we get it from the *vidai* company. We also get updated information from the staff. The staff does not get tired of repeating the recommendations and clear our doubts. The cows which we bought using the cattle loan give us regular income. It helps us a lot in managing our day today expenses.



We have been able to educate our daughters without much difficulty. We have also renovated our house.

In general, farming families in our locality are benefitting a lot by using the timely local specific information from *Seidhi Solai*, through agri and related training programmes and by availing government schemes. The farming households buy the necessary inputs from the *vidai* company. Along with inputs we also get to see the staff and get our doubts clarified and get updated information.

**Name: Mr V Natarajan**

Age: 62 Years

Education: S.S.L.C

Village: Manayakaran patti

I am Natarajan aged 62 years. I hail from Manayakaran patti village. I have completed my Higher Secondary schooling. We own 15 acres. Ten years ago we cultivated small onions and sugar cane on a larger scale. Insufficient and uncertain rain fall has forced us to change our crops to cotton and maize. We also cultivate vegetables both for household consumption and market. We have three wells with pump set but no use. There is no water in the wells. Ours is no longer irrigated land, it is dry land now-depend on rains totally. It is since 10 years we cultivated crops in two seasons. We have five cows which are helping us in meeting our day today household expenditure.

With all the adverse conditions farmers in our area are fortunate, we must say. The presence of MSSRF and the company (RSGA) have been rendering yeoman service to the farmers by way dissemination of information related to agriculture and allied activities through meetings, phones, print media-*Seidhi Solai* and field visits of MSSRF staff ; the farmers are helped by giving them right information at right time as to what crops could be grown in a season, what are the agricultural practices to be adopted, preventive and controlling measure of pest/ disease attack and so on; also, the company (RSGA) is giving its members seed material and other farm inputs on credit which the farmers are able to clear it with the harvest of their crops. For the past four to five years the company is buying maize and cotton from the farmers and they are paid correctly. Thus they are prevented from unnecessary hassle of marketing their farm product to the outside merchants Group members formed under the banner of RSGA are able to save and take loan from their group saving for nominal interest. Group members get cattle loan from the bank. After clearing their loan they can take second loan also. This has been a great source of income to the farm households.

The staff also visits our fields. My short duration coconut tree is affected by some disease. I came to know that it is white fly attack and that it can be controlled by watering with force on the affected portion.

The staff of MSSRF help the farmers to get subsidies from the department and institutions like NABARD. Farm women and men have been to places like Coimbatore and Bangalore to visit sugar cane fields. We learnt about drip irrigation and other water management practices in a meeting organised in Siva Ganga. I installed drip irrigation in four acres of my land; it was very useful in saving water and also labour. I found it beneficial. However, I had to remove the pipes because of shortage of water even for drip irrigation.

The company which had a small beginning has grown to greater heights. As members increased our subscription for becoming a member has been reduced to Rs 1000 from Rs 2000. The members also help their friends and relatives to make use of the services and facilities available in the company by giving surety. This way the services expand to a larger population.

*Seidhi Solai*, the newsletter from the company focuses on providing farming related information-the crops to be cultivated in a season, land preparation, basal application of fertilisers, spraying of inputs on right time, pest/disease preventive/control measures to be taken within a prescribed period and so on. Crop wise content covering the aspects is provided. For example content on cotton and maize is given during August-September.

We also came to know that we should apply fertilisers based on the soil type or quality such as *karisal man* (black soil), *kalar kalanda man* ((alkaline soil), *vandal man* (alluvial soil) and *semman* (red soil). *Seidhi Solai* reminds us about soil test. Most of us have to come to know about the importance of soil test. Based on soil test result I was advised to apply farm yard manure and Zypsum. *Kaarathanmai* (alkalinity) level was satisfactory.

*Seidhi Solai* created awareness on the benefits of applying micronutrients to the crops. Most of us now apply micronutrients as basal application or we mix it with sand and broadcast it. We have come to know that we can prevent certain pest/disease attack. For example, *kanu puzhu* (stem borer) attack in cotton which causes knots in the stems. This attack has come down for the past few years. *Panchayat* Union office gives micro nutrients yearly. We make use of it. Earlier the farmers were not aware of it. So they never used it when it was supplied free of cost from the department.

*Panchayat* Union office gives Rs 2400 to a farmer for the past three years. Farmers are getting benefitted by it. This we came to know during a meeting organised by MSSRF. AEO from Agricultural department shared the information with the farmers in that meeting.

NABARD, under its planting of tree sapling scheme is distributing four - five tree species to the farmers for cultivation in their land. I have taken 150 tree saplings such

as *malai vembu* (*Melia dubia*) and *thekku* (teak). To start with I am going to plant in half an acre. Then I will decide whether to increase the land under tree cultivation. Under present water shortage condition this is a best option. It does not require much labour and it is like an investment for the coming generation. Continuous loss in agriculture disheartens the farmer.

Akin to agricultural advisories, the newsletter carries advisories in detail for livestock rearing, care and management. It warns the cattle owners to vaccinate their cattle on time. The treatment prescribed in the newsletter are simple which can be prepared with natural ingredients available in the house itself and they are very effective in treating and controlling the diseases.

Similar to *Seidhi Solai*, we also get useful information through voice mail such as climatic condition, livestock rearing and maintenance, native chicken rearing and the precautions to be taken to avoid disease attack in chickens; cattle feed and cattle diseases such as udder disease and management and so on. From November 6, 2021 we were informed through voice mail that structured lesson like information will be given on fertiliser management. MSSRF and our company (RESAPCOL) are trying their best to improve agriculture and help to increase income of the farmers.

**Name: Mr Velankanni**

Age: 32 Years

Education: Diploma in Mechanical Engineering

Village: Karisalpatti

I, Velankanni hail from Karisal patti, a village in Dindigul district. I have a diploma in Mechanical Engineering. I live with my parents. I have three sisters. We have four acres of land. We have irrigation facility for 11/2 of acres. The rest is *maanavari* (rain fed) land. My mother works hard on our land; my father is a sick person. I was working in Singapore for few years. I was earning well. Since my parents are getting old I decided to return to my village and help my mother in carrying out our agricultural activities.

We normally cultivate cotton, *sundal* (chickpea) and *malli* (coriander) as *manaavari* (as rain fed) crops. These are the major crops cultivated in this area. For the past two years we are cultivating *makka cholam* (maize) instead of *sundal* crop. Because of insufficient rainfall we did not get desired yield in *sundal*. We faced losses. Most of the villagers have started cultivating maize. Coriander grown in our area is very famous for its aroma and quality. It is sensitive crop. We cannot spray *marundhu* (chemicals) on this crop. We have 10 coconut trees and I have planted *agathi* (*Sesbania* sp) as border crop. I am planning to plant *mahogany* as border tree. I am waiting for the rains for planting this.

I came to know about MSSRF six-seven years ago. My *chithappa* (Father's younger brother) was a member of a farmers' group associated with *vidai* company (RSGA) supported my MSSRF. Through him I also became a group member. I am a member of *thotta kalai* (horticulture) group. However, I was only a name sake member and did not pay much attention to it. Only during the last two years I am in constant touch with MSSRF and started benefitting a lot.

MSSRF and the *vidai* company take great efforts to help people by disseminating information through various modes and channels such as *Seidhi Solai*, a monthly newsletter for the farmers and voice mail through mobile phone (Mobi Mook). Training programmes on agri and allied activities and conducting demo on cultivation of a crop (for example cultivation of maize in a farmer's field ) also help the farmers to gain knowledge and practice it. The services of MSSRF though *payir maruthva kalvi* (plant clinic) is excellent. So a farmer is guided and supported in his farming through the multiple channels. If we miss one, we will get similar information from other source.

A 40 day course on *neer melanmai* (water management) was given to the farmers as voice mail through mobile phones. Every day at 7.50 AM we get the message. The following are some of the aspects covered in the course:

- 1 Improving quality of the soil (*nilathai mempaduthuvadhu*). We learnt that by applying neem cake we can kill the pests
- 2 Economical use of water (*thanner sikkanam*). It was pointed out that drip irrigation is the method which helps in using water economically because in this system of irrigation water is supplied drop by drop to plants as per its needs and thus avoid wastage of water.
- 3 Digging farm pond (*pannai kuttai*) would increase the water level in the bore well
4. When cultivating vegetables like egg plant and ladies finger one can increase moisture content of the soil by using mulching sheet. Leaf foliage would help in water retention in the soil and serve as manure to the crop.

The information disseminated in a structured manner gave me knowledge on water saving in farming by using simple methods/technologies. I am using drip irrigation method for my jasmine plants in a small piece of land. I find that with minimum water supply I could water many plants. Similarly, I have also dug a pit to collect rain water to irrigate my *kozhi kondai poo* (a ornamental flower) which I have in a small area of land. It is not a farm pond; it has certain specifications. However, the water collected in the pit was very useful in watering the flower plants. The plants yielded good flowers. I also participated in the farm pond training.

*Seidhi Solai* carries information relevant to a season such as what crop can be cultivated, the age of the crop, when to plough the land, the method and time of application of fertiliser, pest and disease prevention and management, right time of spraying inputs and in what interval it should be done and when to apply growth promoters and the importance of soil testing and so on. It is something like a guide and constant reminder for me. One has to just follow the instructions carefully. That is enough. One can benefit a lot by saving time and money. *Seidhi Solai* also provided useful information on water management by way of digging farm ponds and by digging grooves in the groves to collect and save rain water.

In a recent issue of *Seidhi Solai* detailed information was given for cotton and maize cultivation. As I told you I started cultivating maize for the past two years. I made use of the information given in the newsletter. I carried out ploughing operation and I applied basal application of fertiliser. Last year I did not carry out basal application. I am changing because of MSSRF reference. Earlier I used to apply after the 50<sup>th</sup> day of planting the crop. It was mentioned that after 20-25 days of planting one can expect the attack of *padai puzhu* (Army worm) on the crop. I applied the input recommended in the newsletter to prevent pest attack. After the 30<sup>th</sup> day, it was prescribed to spray growth promoter (PGPR) and instructed to repeat it between 40 - 45 days. All these timely details aid in healthy growth of the crop and development of good pods. It will tolerate drought. Since last year I have started using farm yard manure mixed with vermin compost. Earlier, I used to apply Urea, DAP and farm yard manure.

I would like to point out here that I carried out soil testing eight months ago (early 2021). The importance of soil testing was given in detail in the newsletter and the staff also recommended. It was found that alkaline content was more in the soil. So I am applying inputs as per the recommendation of the MSSRF staff. I applied two bags of Zypsum mixed with 24 kilos of bio fertiliser per acre. Earlier I applied 15 bags of Zypsum for four acres. This knowledge helped me to use only *the thevaiyana uram* (necessary fertiliser) and avoid the *thevaiyarra uram* (unnecessary fertiliser). Last year I applied DAP. Now I am applying vermin compost. I can see the difference. The soil is soft and the plant growth (green in colour) is good. I also learnt from *Seidhi Solai* about Pheromone trap as a pest control measure. I am using it. It is effective in controlling the attack of pest.

MSSRF also give us weather information as voice message and also in *Seidhi Solai* which is very crucial for a farmer to carry out his/her agricultural activities. In my opinion the weather forecast is 80 % correct. We can take precautions and postpone a particular activity or make preparations in advance. When a farmer is not sure how the weather is going to be the timely weather forecast comes to the aid of the farmer. If rain is predicted we can postpone the idea of watering the crop and thereby save water and time and energy. One can also avoid pesticide application during the rains. In case we

are planning to plant some crop and if the weather forecast indicates less prospects of rain the farmer can wait for another week or so. So that he can avoid seed wastage because lack of water may affect the sprouting efficiency of the seed. I am using the weather forecast information and I am benefiting a lot by way of saving my energy and saving money. We can also make bunds to harvest the rain water; by doing this the nutrients stay in our land only. Water holding capacity of the soil is enhanced; the rain water will help to increase the bore well water. By storing the water in small pits it can be used for mixing with fertiliser for applying to the crop.

I am inspired to prepare *pancha kavya* and *Jeevamrutham* in limited quantity for our use after I participated in a training on eco veg cultivation (*marundhu illa kaigari saagupadi*) conducted by MSSRF in association with NABARD. I am planning to prepare *Meen Amino Amilam* for my use. If there is excess I will sell it to my fellow farmers. I am thinking of recommending this to my group members. After the rains, I am thinking of getting vermin compost to mix with 16 types of micronutrients and *thazhai chathu* (N) and applying to each plant. There won't be chaffy grains and the cobs would be well formed with good weight. Siva sir (a staff from MSSRF) has said that 22 days after planting the maize crop, we should spray PGPR in the early morning. Like this at various stages of crop growth we get guidance. I do not hesitate to contact them for any help or guidance. I learnt from RSGA face book that spraying of PGPR on the rice crop in Tanjavur district gave good yield to the farmers. I also watch YouTube for agri related posts.

As regards our village no one prepared *panchakavya* before. *Panchakavya* should be sprayed 21 days after planting. I tested using *Jeevamrutham* on my *malli* (jasmine) and *jaadhi* (pink jasmine) flower crop. The plant looks healthy and the flower is big and round shaped. Before the application of *Jeevamrutham* the flowers were small and unevenly formed.

MSSRF took us to Periyakulam by arranging a van. We came to know about many value added products from moringa and marketing the same. When I was in Singapore I came to know about value addition. Horticultural department has given me 10 honey bee boxes; the officials feel that if it is given to me others will show interest and I will also encourage others in this activity. Bees will prevent pest attack on lime and help in pollination activity in the crops. It is through MSSRF contact I came to know about planting of Maha kani trees by getting saplings from another non-profit organisation. I am waiting for the rains for planting this tree crop.

Our land was ploughed free of cost by TAFE through MSSRF help. At least 50 farmers got benefitted by TAFE ploughing. We saved Rs 2000/- My land is used as a demo

plot<sup>15</sup> for maize cultivation by the Advanta seed company on MSSRF recommendation. We have got four kilos of maize (BC 751 Elite) free of cost as our land is used for demo purpose. They give me necessary inputs (fertilisers and pesticides) to be used in the demo plot. Other farmers visit the demo plot and they get to know the details of cultivating maize in a proper manner.

I am getting seeds and other inputs from the office (RSGA ) for the past one year. We can get the required quantity of the seeds. (In the shops we have to get the whole packet; we may not require that much quantity). Credit facility is also there. We are given time to repay. MSSRF supports the farmer in getting benefits from agricultural/horticultural/government schemes and subsidies. There are practical difficulties in getting loan and subsidies from the departments if farmers approach on their own; so most of the farmers will give up after trying to avail the benefits. Our contact and association with MSSRF and vidai company, helps in availing the schemes from the horticultural and agricultural departments; they extend all help and assistance to the farmers.

After participating in the water management training and getting to learn from Voice Mail, I applied for drip irrigation. They agricultural department people have come and verified our field .We will get 100 % subsidy for this. I am expecting that it would be done soon. The staff in the office are very kind, simple and accessible for guidance. They have told us that if anyone is interested in allied activities they can be given training in that. I have told Srinivasan sir (MSSRF staff) that I am interested in learning about diary farm. This will help me earn Rs 200/- daily.

Looking at me doing things differently, my other fellow farmers show interest in enrolling as a member of group. I also help my relatives and friends to get inputs from the company. My brother did not have money to get some inputs from the company. I gave him money for him to purchase so that he can use it in the right time. My fellow farmers after seeing me using yellow sticky card and Pheromone trap, they have started using it in their fields now to safe guard their crop form pests.

I want to become a *munodi vivasayi* (a progressive farmer). My friends in Singapore have lands in their native villages in Tamil Nadu, India. They ask me for suggestions to do farming in their respective lands. Whatever I know for sure I share with them. I have told them about value addition of *moringa*.

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15. I am happy to share with you that company people are very happy about maize crop cultivation in my field. The credit goes to the various sources of information (Voice Mail, *Seidhi Solai* , trainings and personal visits of the staff) from MSSRF. During the rainy season I was very careful in draining the excess water from the field. Otherwise the crop growth and yield would have been affected. Some farmers' field were affected due to the rain. They were impressed with the healthy well formed pods in bright colour (Out of 100kgs only 4kgs are not of good quality). They are going to conduct *vayal vizha* (field festival) in my field next week (3<sup>rd</sup> week of December, 2021) .

On the whole, the association with MSSRF and the *vidai* company have created awareness on the efficient management of soil, fertiliser and water. We are able to correct the defects in the soil by using the recommended inputs; we are avoiding unnecessary usage of fertiliser; we are using inputs that are not harmful to the environment and try to augment the water storage. We are using micronutrients and bio fertilisers which enhance the yield of the crop. Now I know that I should see the label when I buy a chemical input. If it is red labelled one we should avoid it (for example, Monocrotophos). Earlier, I used to apply this chemical a lot. The input dealer would generally give one tonic, one pesticide and *ottu pasai* (sticky glue paste). Now I know *thevai arra uram* and *thevaiyana uram* (The fertiliser to be used and the fertiliser to be avoided). Dissemination of weather forecast helps the farmer to plan his agricultural activities. All this minimise the expenditure, save time and increase the crop yield.

I try to use and apply the knowledge I gain through various sources from the office and the training programmes. I am benefitting a lot. I carry out agricultural operations with enthusiasm and confidence. Right guidance and personal interest in farming is very important for carrying out agriculture without loss particularly when the weather conditions are uncertain and unpredictable.

MSSRF functions without any profit motive. It is service oriented!

**Name: Mr Velankanni**

Age: 54 Years

Education: Class 9

Village: Karamadai

My name is Velankanni and I reside with my wife and two sons in Karamadai hamlet. I have studied up to Class 9. As you see, I live in this house surrounded by our two acre agricultural lands. There are not much agricultural lands near our fields. We were cultivating mainly creeper vegetables; only this year (2022), for a change I thought we will cultivate tomatoes and there is also water shortage. It is after 10 years I have again started tomato cultivation. Market was not good for this vegetable. During Chithirai (April-May) *pattam* we generally cultivate *pudalai* (snake gourd) and during Purattasi (October-November) *pudalai* and *paavai* (bitter gourd) with lab lab as intercrop. We also cultivate egg plant. We sell our vegetables of good quality at Oddanchathiram market; slightly less quality ones are sold at Dindigul market. *Makka cholam* (maize) cannot be cultivated here due to water shortage and the wild boar attack during the rainy season. We have three lemon trees, eight banana plants, six *nava maram* (jamun tree) and some coconut trees. We have 10 cows. So we cultivate fodder grass (*pullu karanai*) for our cattle. We also rear goats, chickens and few ducks.



I participated in a meeting in our village organised by MSSRF in 2017. I was motivated to join a group (which comes under Department of Horticulture and supported by MSSRF). I felt it would be useful for a farmer to be part of a farmer producer group. Hundred members form a Farmers Producer Organisation (FPO). Our FPO got a tractor; every group (consisting of 20 members) in the FPO got a power tiller and each individual member of the group got power sprayer from the department of horticulture. Tractor and power tiller are given for hire. We charge Rs600/- for the tractor and Rs 300 for the power tiller per day.

It is five years since I joined the horticultural group and we are benefitting a lot because of our association with it. After I became the member of the FPO I started participating in all the meetings. We get useful information and guidance about cultivating suitable crops, cropping pattern to be adopted, method of ploughing and application of inputs. I participated in a meeting held in Thoothukudi where experts from different fields were present. We learnt about agriculture, bio micro nutrients application and cattle raising and management. I participated in soil testing training. The officers from SPIC involved me in taking soil samples from others field. It was a good experience.

We were largely using chemical fertilisers and pesticides for our crop until I came into contact with MSSRF (RSGA). I started applying farmyard manure/*maattu chaanam* (cattle dung) mixed with bio fertilisers. I could see soil looking fresh and healthy; now I find a lot of earth worms in my field. You can see earth worms if you dig even in a dry area. After I started using micronutrients and organic fertilisers the expenditure has decreased. The harvest is good and I am able to sell the vegetables for higher rate in the market. For example, where I used to get Rs 10 today I am getting Rs20/-The vegetables look fresh and healthy. The farm expenses used to be around Rs 20000/ when we were applying chemical inputs; it has decreased by 50 % now. The life span of vegetable crop cultivated using chemical fertiliser is shorter and the yield will be less when compared to the crop raised using bio inputs. If a plant cultivated with chemical inputs yields six fruits, it will be 10 in the plant cultivated organically. Our banana plant raised by organic method yields 9 bunches of fruits but it will be five in a plant cultivated using chemical fertilisers.

After my association with the office (RSGA) I have come to know of water management, pest management, and fertiliser management and getting department subsidy for farmers. The importance of cultivating alternate crop is another aspect which I understood. I have participated in training for preparing moringa powder conducted in Theni.

*Seidhi Solai* published and circulated by RSGA has been a good hand book to cultivate suitable crops during a particular season. I always look forward to read *Seidhi Solai* for

any new technology. Initially it was printed in a book form now it comes as a newsletter. I have been following the guidance from the day I joined the *sangam*. *Pattathurku prakaramaga solvadhal gnajapagam paduthuvadhu pol irukkum* (The newsletter carries suitable crop information appropriate to a season. It is something like a reminder to us). It is easy to adopt in our fields. When my egg plant was attacked by *maavu poochi* (Mealy bug) it was prescribed to spray Acephate and Imidacloprid. I did as prescribed and the pest was controlled. In one issue, a whole page was covered with exhaustive information on pest control and management (for example *ilai karaugal* (leaf folder), *ilai pulli* (leaf spot) *ver azhugal* (root rot) and so on.

We were also advised to keep *manjal attai* (yellow sticky card) to prevent and control *saar orinji poochi* (Aphids), *vellai iee* (white fly) and *inakavarchi pori* (pheromone trap) to control pest on the vegetable crops. We were also told in a meeting held in Kittampatti office (RSGA) to keep yellow stick card for our *pudalai* crop. Lot of *kulavi* (wasp), *vandu* (beetle) and mosquitoes get stuck to this card. Apart from providing information on yellow sticky card, pheromone trap, the *Seidhi Solai* also covered information on *thaavara ilai chaaru* (plant extract), *panchakavya* (a bio growth promoter, disease/pest resistant), *meen amilam* (Fish amino acid) and *oota merriya thozhu uram* (enriched farm yard manure). I have prepared *thaavara ilai chaaru*, *pancha kavya* and *meen amilam* for my use. I have prepared *oota merriya thozhu uram* (enriched farmyard manure) and applied it to my field. I have learnt about fertiliser management and pest management. The information on fertile management and pest management is based on correct calculation. So it is for the farmers to adopt those advisories in the field.

I came to know about getting subsidy for planting tomato from *Seidhi Solai*. Details of procedure involved in getting the subsidy (such as for how much area the seedling is provided, what record to be submitted and so on) was clearly provided. Along with getting *thakkali naarru* (tomato seedlings) free of cost from horticultural department, the land was also ploughed for free of cost. I was given some cash and *Azospirillum* and other micro soil nutrients. I was not aware that we can get free seedlings from the department until I read it in the newsletter. As advised in the *Seidhi Solai* I have planted with three feet distance between the two *varappu* (furrow) so as to enable the plant to take the nutrients available in between the furrows. The tomato seedlings are planted in north to south direction based on the newsletter suggestion so as to get sufficient sunlight to the plants. The staff from MSSRF also give us time to time guidance about the standing crop and what crop can be cultivated in the following season.

Another important aspect I have benefitted is *neer nirvagam* (water management). The details of this were covered in *Seidhi Solai* and the MSSRF also played a major role in this. Today I have completely undertaken *sottu neer paasanam* (drip irrigation). The credit goes to the office (MSSRF). With MSSRF's support I got the necessary things

like the pipes as a subsidy from the horticultural department. I got introduced to the horticultural department through the MSSRF. Yesterday, I watered our tomato saplings just for 20 minutes using drip irrigation. I am finding drip irrigation useful and effective. We can use only the required quantity of water for the crop. I keep referring to *Seidhi Solai*.

*Seidhi Solai* also carried an article on soil testing importance and the method of soil collection. Based on the results of our soil test we were advised to apply one tonne of farm yard manure. I did not have that much quantity. We can take little more care in cultivating the crops. Instead of Urea we can use cows' urine! We are making arrangement whereby the cows' urine can be collected without going waste. We are getting ready with making small bricks by ourselves. With a mason's help we can channelise collection of the urine in a proper manner. We were encouraged to prepare *ootta merriya thozh uram* by our office at Karattu patti.

As I told you, we cultivate some vegetables such as egg plant, chilli and ladies finger in a small piece of land for household consumption. We have *agathi* as a border crop. This I have been doing even before I became the member of the farmers group. It acts a pest control for other crops. Our office also tells us the utility of having crops as border crops to minimise pest attack. And we also have fodder crop.

I purchase *punnakku* (dry groundnut/coconut cake) from RSGA to mix with DAP and apply it to my vegetable crops. The crop would yield quality vegetables. I used to do this earlier also. I buy yellow sticky card, light trap and other micro nutrients from the company. I am glad to share with you that many farmers were encouraged to use Pheromone trap in their field; I helped them getting it from the office. I also help my villagers in getting their required farm inputs from the office.

On my own, I tried out a new method for pest control which I learnt from another farmer. Only for the past six months I have been doing this ; fresh *erukkam poo* (crown flower) had to be pounded well using water (for three kilos of flowers seven-eight litres of water. It should be used after three days). This solution penetrates deep into the plant that the pest gets wiped out. We can see the result in two-three days. When on our egg plant *kondai pozhu* (stem borer) pest was more it could not be controlled. Then I thought of preparing a spray by grinding *erukkam poo*. I executed it. I sprayed one litre of *erukkam poo karaisal* mixed with one tank of water). To my relief the pest got controlled. I shared this information with one of the farmers in Salem for his *avarai* (lablab) crop. The flowers had lies. It got controlled. He mainly cultivates tapioca. The same bio control method was used in his tapioca when it got attacked by *maavu poochi* (Mealy bug). My son watches YouTube and tells me to watch important information

related to farming. We can watch any number of videos in YouTube but we have to try and use the relevant content!

Most importantly, I am getting benefitted in safe guarding our cattle and poultry from *kazhichal noi* (diarrhea). Thanks to the newsletter for presenting the information appropriate to the disease that affect the cattle and the poultry in a particular season or period. Earlier, there were occasions where we had lost our poultry in large numbers; we had lost 60 chicken during a particular time due to *kazhichal noi*. I used to treat the poultry with some tablets but it was of no use. I totally stopped treating with tablet now. Now, I follow what is prescribed in the newsletter. The disease gets controlled in the early stages itself. It is a great relief for us. I follow the newsletter prescription to treat my cows and goats. Apart from giving information on treating the livestock and poultry, it also give us useful tips to safe guard them from any disease attack. We have been told the importance of keeping the cattle shed in a hygienic manner. We follow them meticulously. Now we have 10 cows and 10 goats. We have 15 chickens and few ducks also.

When our chickens were affected with *kazhisal noi* it was the advisory in the newsletter that saved them from the disease. As mentioned in the newsletter we used plant species such as *keezha nelli* (*Phyllanthus niruri*) and *velam pattai* (babool bark), small onions in treating the fowl. It was very effective. We treated with the Juice of *keezha nelli*; also *velam pattai* was boiled in the water and the extract was given; we also gave small onion pieces mixed with kerosene to treat them. The traditional medicine worked well. Presently, we have 15 chickens.

Similarly, when my cows were affected by *madi noi* (udder disease) I applied a mixture of pastes of *manjal* (turmeric), *elumichai* (lemon) and *sothu kathazhai* (Aloe vera) and *sunnambu* (brick lime) after washing the udder with clean water. This we have to do atleast four times a day for 4 days. During September-October cows are generally affected by *kaana noi* (Anthrax). This is because of keeping the cow shed in an unhygienic manner with lot of bees infesting the shed. This results in boils in the feet of the cows. Now, we are keeping our cattle shed clean and neat. We are planning to construct a small passage to drain the cows' urine and collect it in a proper manner. We can use it for our lands. We are getting necessary things ready for this. (*Vaikka seidhu komiam pidikkanum. Adarku vendiyadai seidu kondu iruukuren. Kal vetti kondu irukkom*).

I also learnt about fertility problems of cows and how to overcome it. We also learnt that *thaadhu uppu* (mineral salt) is a good micro nutrient to increase the disease resistance level of live stock and poultry. The office got us *thaadhu uppu* from KVK, Namakkal. I feed them following the method instructed in the newsletter. We hang a block of *thaadhu uppu* from a convenient place so that the goat or the cow can comfortably lick

the block of the mineral salt on its own instinct and stay away when the animal does not require. *Seidhi Solai* also gave details about constructing shed for goats.

The cows and the hen and ducks are safe and healthy. The mortality rate of the chickens has totally come down. I must tell you that *Seidhi Solai vanda piragudhan kozhi mudaliyavarrai kaapparra mudigiradhu* (It is after getting to read *Seidhi Solai* that we are able to safe guard poultry and other household animals!)

Mealy bug is a big problem in our field. We cannot control it as there are no lands around with crops. Our crops become an easy prey to the pest. So the pest attacks our vegetable crop. I use a plant leaves locally known as *aruvamana thalai* to control the pest. One kilo of leaves is boiled in two litres of water. Then it is mixed with 10 litres of water and used as a spray to the vegetable crop. I avoid using chemical pesticides. It does not get controlled by it also. It will appear again.

In the earlier days farming was mostly done in organic manner. Now the situation has changed. We are using lot of unnecessary chemical inputs. Previously, daily we can harvest vegetables. Now, we don't get like that. There was no pest attack on egg plant. We used to apply chemical input only one time. Now, pest does not seem to get controlled. Chemical companies exploit the situation. Before coming into contact with the FPO I used chemicals indiscriminately. Once in three - four days we sprayed chemicals. Now I know the right method. Today, what is needed for the crop is applied. Once a week the necessary inputs are applied. Because of this plant health is safe guarded to an extent and our expenditure also has come down.

It will be appreciated if more information is given on vegetable cultivation. There is little difficulty in getting weather information due to the connectivity problem. Through Voicemail (Mobi mook) information on water management is delivered daily. Personally I am not for it. I feel it disturbs the farmer while working in the field. I cannot stop my work and listen to it.

When I meet my fellow farmers at a tea stall in the village I share the information that I learnt and adopted in my field. While few take it seriously and carry out as suggested there are few who would not do it. I try to tell the nearby hill people to adopt drip irrigation but they don't seem to understand. They do not listen to us! Similarly, I told one farmer in our village to keep yellow sticky card in the field. But he wouldn't listen. Our farmers are little lazy to do extra work! In another incident, I told our neighbouring village Chaanar patti farmer to mix cubic with farm yard manure and apply to his chilli plant. He did not follow the advice. His crop died after spraying of a chemical. It was utter failure. Some are hesitant to try anything new.

A farmer has to struggle a lot against many odds. We are happy at least we have

guidance through *Seidhi Solai*, mobile phone, farmers' regular meeting, participating in training programmes and so on. All these enable us to carry out agricultural activities with proper information and knowledge. The staff from MSSRF visit our fields often and provide us good inputs as to how to handle a particular crop condition. This is the type of guidance and support we need!



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