

Tasar Tales

A coffee table book

Copywriting, editing, proof check, title

Featuring the stories of 75 *tasar* farmers in remote villages spread across the Indian states of Jharkhand and Bihar, this coffee table book illustrated the transformation of rural livelihoods under the Central Government's Special SGSY *Tasar* Project.

I undertook editing and rewriting of 25 of the 75 stories – working with raw data compiled by the project field staff. With the impact being similar in each story, measured against common parameters, the challenge was to create a unique flavour for each of the 25 stories so they stood out individually, while maintaining the high standards of quality and finesse expected out of a coffee table book. I also proofed the final document for print and suggested the book title, as well as selected photographs and blurbs for the page separators.



TASAR TALES

*Rural livelihoods transformed
through Special SGSY Tasar
Projects implemented by
PRADAN*



Central Silk Board
Ministry of Textiles
Government of India



Special Swarnjayanti Gram
Swarozgar Yojana
Ministry of Rural Development
Government of India

Tasar provides food security for a family

“When I was a little boy, I remember the seed cocoons hanging from the ceiling throughout our house! It used to be a yearly activity.” Mangal Singh Munda of Sigirda village of Kuchai block in Saraikella-Kharsawan district of Jharkhand is no stranger to *tasar*. His father used to rear *tasar* silkworms, along with selling timber wood, to supplement the family’s income from agriculture.

‘We’d have enough food for just two months!’

Mangal’s father owned six acres of land of which four were arable, but several drought years between 1979 to 1985 brought down the productivity of the land to just five quintals of paddy. This provided the family of five enough food for just two months in a year.

The family pitched in every way they could. As soon as they reached adolescence, Mangal’s older sisters started working on farms and at construction sites. The family faced the worst for five months of the year and resorted to borrowing at least five quintals of foodgrain from the moneylender. Occasionally, they were also forced to sell livestock.

Tasar silkworm rearing helped Mangal’s father provide food for his family for about two months in a year. He used to produce 6,400 cocoons from 400 seed cocoons, procured from the distant Bharbharia village, in a good year. But in 1976, after a series of bad years, he gave it up. Mangal himself never considered taking up *tasar* – until 2004 when PRADAN came to Sigirda.



Benefits of tasar and agriculture have ensured Mangal Singh Munda’s family will never go hungry again

A new man today with tasar, Mangal has started a village surveillance committee to safeguard the farmers’ interests and help them in need

By then, Mangal and his family had had a difficult life. While his two older sisters never went to school, Mangal dropped out after Class X after his parents fell ill, his father from excessive labour. His younger sister studied till Class IV.

After clearing his Class X exams in 1989, Mangal sold some of their older livestock and bought a couple of goats. In 1994, the year Mangal got married, the *mahua* (*Madhuca latifolia*) production boomed in the village, helping the family earn Rs 11,000. Mangal invested the money on his farm and also bought a pair of buffaloes. By 2003, Mangal had two children, but his second born lived only till age six. Mangal mortgaged an acre of his land for Rs 11,000 to pay for the treatment, but he was unable to save his child.

Tasar brings back old memories, new hopes

When PRADAN convinced a group of 20 people in Sigirda to take up *tasar* silkworm rearing with the introduction of disease-free layings (DFLs), Mangal was one of them. PRADAN approached Sigirda based upon the availability of *tasar* host trees and existing skills on *tasar* sericulture in the village, like Mangal's family.

While most of his fellow villagers were hesitant, Mangal was ready to try something that held possibilities of changing his family's life for the better. The 20 formed a Tasar Vikas Samiti (TVS) and started off with 150 seed DFLs each in the first year. Mangal was able to produce 10,000 cocoons and earned Rs 10,000 from their sale!

By the following year, the benefits of *tasar* had convinced more people in Sigirda. A total of 37 farmers formed two TVS. With his entrepreneurial and leadership qualities, Mangal was chosen as the grainage owner. PRADAN also sponsored his training at the Basic Seed Multiplication and Training Centres (BSM&TC) in Kathikund.

With help of the grant from the Special SGSY Tasar project, Mangal and his fellow rearers built a grainage house. They received 1,400 seed DFLs which were reared by nine of them. That year, the grainage produced 6,500 DFLs. However, the quality of the DFLs fell short and the output was not commercially viable.

Determined to make it work, the following year, Mangal bought 1,200 basic seed DFLs on his own and distributed them among six rearers. They produce 32,000 seed cocoons, of which Mangal had produced 7,000! Inspired by Mangal's success, people in Sigirda and from outside started procuring seed cocoons from him for their higher productivity. In 2013, Mangal was able to produce 4,800 good cocoons from just 100 DFLs, earning a gross income of Rs 9,000.

Despite the success from *tasar*, Mangal eventually discontinued the grainage, mostly because his fellow villagers started blaming him every time their production dipped but also since the rearers began to receive DFLs from the BSM&TC. They continue to do so till date.

Food for the whole year now!

Nonetheless, the change that Mangal had been waiting for had been put into motion the day he said yes to *tasar*. In 2006, Mangal worked as a PRADAN-promoted community resource person (CRP). With PRADAN's support, he also constructed a water harvesting tank and an irrigation well with a pump-set.

With the newly constructed irrigation structures, Mangal started cultivating five acres of land and for the first time, his family had enough food for the whole year! Mangal also started farming cash crops like tomato, chilli and other vegetables.

In 2012, he purchased an additional pump-set under government subsidy, contributing Rs 7,000 from his own pocket. Mangal now earns Rs 40,000 in profits with a yearlong supply of food from agriculture, from an investment of Rs 12,000. His family no longer has to worry about food.

'My children will go to college.'

While he could never finish school, Mangal is determined to see his three children go to college. They are in school currently – Mangal spends Rs 12,000 annually on their education.

Mangal's success as a farmer has earned him the respect of the people of Sigirda. He is socially active and he has even initiated a village level surveillance committee which has 18 members.

“Since the inception of the committee, the liquor addiction rate in our village has gone down significantly. We've also imposed a penalty in place for open grazing, to safeguard our crops. Every member makes a weekly contribution of Rs 5 towards an emergency fund to help any family in need. We are now planning initiatives to protect the forest,” says Mangal.

The 45-year-old, along with others from Sigirda, is currently in the process of approaching the District Collector to bring a road into his village.

-Ashis Chakraborty, PRADAN

Reeling in a better life

A 36-year-old resident of Ranabandh village in Poraiyahaat block in Godda district of Jharkhand, Prava Devi started working at a very young age, helping her father collect and sell fuel wood and charcoal to make ends meet.

A family burdened by hardships

Prava Devi's family's 0.9 acres of land yielded enough food for just six months in a year – the rest of the time, her father worked as a daily wage labourer and also migrated in search of work. Even then, the family who lived in a single-room mud house was often dependent on the local moneylender. Prava Devi could study only till Class II, while her brother studied till Class V. Her younger sister never went to school.

Prava Devi married at 15. Her hardships continued. She and her husband had no livestock. A mere 0.45 acres of land yielded 2.5 quintals of paddy in a year which provided food for just four months, but even this required an investment of Rs 1,000 that had to be borrowed.

Like her father, her husband migrated frequently to cities like Delhi and Mumbai for work. Prava Devi pitched in working as an agriculture labourer and any odd job she could find such as thatching people's roofs. Prava Devi lost her first-born due to medical complications and she had her second child after 15 long years.



Today, Prava Devi heads Ranabandh's Village Organisation for seven SHGs

A natural at yarn reeling, Prava Devi was ranked 2nd for her performance during her training

Tasar shines a ray of hope

So when in 1999, Sanchariya Devi, a resource person promoted by PRADAN from nearby Danidih village, came to Ranabandh, Prava Devi was more than ready for change. It took PRADAN some time and four to five meetings to assure the village about the benefits of setting up a self-help group (SHG). Eventually, 40 women, including Prava Devi, came together to form two SHGs – Ma Sarada Mahila Mandal and Ma Manasa Mahila Mandal with 20 members in each. Prava Devi joined the latter. Within a year, the SHG had secured a grant of Rs 10,000 under the SGSY project and an additional Rs 15,000 loan for agricultural activities. By the next two years, the members' dependency on the moneylender had decreased significantly and even stopped completely in most cases. However, it wasn't until five years since its formation that the members realised the SHG's full potential. While the funds were no longer the problem, the women still needed more means than just agriculture. Prava Devi says, "We approached PRADAN to help us with income generating activities. They proposed *tasar* silk reeling."

A natural at reeling

While some of the members were apprehensive, after much discussion, 30 members led by Prava Devi signed up. With PRADAN's help, they set up a reeling centre and the women trained for a month at the centre. The SHG also received grant for purchasing reeling machines, generator, solar plates, cupboards for storage, instruments for boiling the cocoons, etc. Hardworking and enterprising, Prava Devi shone right from the start. During the training, she was ranked 2nd for her performance, reeling 3 kg of silk yarn from 3,000 cocoons! While 10 of the members dropped out owing to reasons of low performance and inability to devote time, Prava Devi and the rest were ready to get started by the end of the training. Prava Devi was initially discouraged by her husband who felt her earnings - of Rs 500 during the training period - was too little. She won him over by earning Rs 1,500 within a month! Her husband went on to help her prepare the yarn bundles and with the packaging. The reeling centre assured eight months of income in a year. For the next eight years, Prava Devi turned *tasar* yarn reeling into a profitable venture, spinning 5 kg of yarn from 5,000 cocoons in a single month!

A leader of the community

In 2004, she made her first business investment – a goat she purchased for Rs 1,000. Two years later, she bought a cow for Rs 4,000. Then, in 2007, she repaired her house for Rs 15,000, and subsequently, bought jewellery worth Rs 6,000. In 2013, Prava Devi leased in 0.3 acres of land for Rs 10,000. She also paid Rs 10,000 for her husband's treatment for tuberculosis. Over the years, she has contributed Rs 40,000 towards the marriage of her relatives. While the reeling centre closed down in 2012 after disagreements between the members and the manager, Prava Devi had built enough skill, capability and confidence to create a better life for her and her family. Today, she is the elected president of Ranabandh's Village Organisation, the umbrella organisation for seven SHGs (under National Rural Livelihood Mission). She now wants to build a new house and send her children to college. Prava Devi is currently working towards reopening the place that changed her life – the reeling centre in Ranabandh.

-Binod Raj Dahal, PRADAN

Dumnahi's *tasar* hero

The last decade of this 28-year-old's life immediately rings in an overwhelming sense of achievement, an achievement that he attributes to *tasar* sericulture.

Since 2006, Rameshwar Dehri of Dumnahi village under Kathikund block in Dumka district of Jharkhand has been actively engaged in *tasar*, earnings from which comprise 80% of his cash income today. Profits from *tasar* have also given a fillip to his agricultural income.

Today, he earns much more than his annual expenditure and saves Rs 10,000 every year. Rameshwar has also trained 125 rearers from nearby villages and has been an accomplished resource person with PRADAN. All this is indeed a huge achievement for Rameshwar who started off with very little.

School to stone-crushing to tasar

Rameshwar's father had seven acres of land which produced 15-16 quintals of paddy. However, this could sustain his family of 10 for just six months of the year. While shifting cultivation provided food for three more months, half of the produce was spent on paying back the moneylender. His father curved out wood logs additionally which earned him less than Rs 20 a day back then. In 1995, when Rameshwar had just started school, his father was taken seriously ill. For the next 10 years, his father was bed-ridden and the family spent the little saving they had on medical expenses.



Rameshwar Dehri is not only one of our most successful tasar farmers but he has also trained 125 rearers in the area

In 2005, Rameshwar dropped out of school when he was in Class X. By 2006, Rameshwar had taken up stone crushing, earning Rs 200 a day. Around that time, a friend told Rameshwar about PRADAN. He subsequently went to a grainage owner's meeting in his village.

“Some people were already engaged successfully in *tasar* in our area so I didn't need much convincing, but with the support PRADAN was offering, it seemed more attractive. Since I had been to school, I was chosen to supply good quality disease-free layings (DFLs),” says Rameshwar.

Subsequently, he trained for nine days, sponsored by PRADAN, at the Basic Seed Multiplication and Training Centres (BSM&TC) in Kathikund. He also received 400 seed DFLs from PRADAN, which he distributed among five first-time seed rearers. He got back 15,000 cocoons for his grainage from it.

With support from PRADAN, Rameshwar produced 3,500 DFLs in the first year, earning a handsome profit of Rs 15,000. That same year, he also started commercial rearing after a PRADAN training session. He went on to rear 120 DFLs and produced a whopping 14,000 cocoons, earning Rs 17,500.

“At a time when the selling price for the cocoons was 53 paise each, mine fetched Rs 1.25 because they were bigger and better in quality!” says Rameshwar happily.

A new, better life with *tasar*

In 2007, Rameshwar got married and by 2009, his *tasar* earnings helped him move into a place of his own with his wife and their newly born son. Rameshwar also secured a brick house under the Birsa Awas scheme. Rameshwar's wife joined him fulltime with the *tasar* activities.

In 2014, Rameshwar recorded his highest production in commercial rearing, when he produced 9,500 good cocoons from 200 DFLs and earned Rs 28,600! His grainage operations added to his earnings – in 2011, he produced 7,847 DFLs from 35,313 cocoons procured and made a net income of Rs 18,000. He also built a new house that year and converted his old house into the new grainage centre.

Rameshwar also started seed rearing in 2012, producing 5,896 seed cocoons from 250 DFLs. In 2014, he doubled his earning at Rs 9,200 by maximising productivity (7,456 seed cocoons) from lesser investment (200 DFLs).

However, that same year, grainage operation had to be halted for the first time, owing to a high prevalence of disease in the layings. “I knew something was wrong when I saw the moths in the first 5-6 moths. Their wings were malformed and the body smaller. Some started to die. Microscope testing confirmed 86% prevalence of the disease. I immediately stopped all operations,” Rameshwar says.

Luckily, he did not incur any loss. “All of the 42,000 cocoons I had procured at Rs 1.33 each sold at Rs 1.50 each, thanks to PRADAN’s timely intervention. I actually made a profit of Rs 7,000!” he grins.

‘No other activity can generate income like tasar can’

Rameshwar adds, “No other activity can generate income like *tasar* does. While the commercial rearing takes about 70 days of work each year for me and my wife, the grainage operations takes around 20, but the income is substantial.”

Alongside *tasar*, Rameshwar has also take up agriculture at a bigger scale. In 2010, he bought a pair of bullocks and three goats for Rs 9,500. By 2011, he had received his share of the family agricultural land – 1.2 acres of lowland and 0.2 acres of homestead land.

Production of monsoon paddy from the land is 12 quintals, of which seven feeds the family for the year and rest is sold in the market for Rs 5,000. Rameshwar bought a motorcycle in 2014. He spends Rs 4,000 annually on his son’s education.

Always enterprising, Rameshwar is already thinking of his next business venture: “After I learned about the Forest Rights Act (FRA), I am now planning to convert a barren piece of forest land into agricultural land with an investment of Rs 10,000. This will help me see my son through college.”

“When the selling price for the cocoons was 53 paise, mine fetched Rs 1.25 because they were bigger and better in quality,” says Rameshwar

Spinning bigger dreams

Migration or nothing

Hailing from a family of landless labourers, Sarada Devi of Rajdah village under Bounsi block in Banka district of Bihar is no stranger to migration labour. Her father often migrated to Patna for work. He once spent seven years at a stretch working there to support his wife and five children back in Rajdah. Sarada's older brother did the same after completing Class X but never returned from Patna.

When she was a young girl, Sarada went to live with her uncle and she attended school and completed Class IX. Her two sisters never went to school, while her younger brother found a job in a private company where her uncle worked.

After she married at age 15, in 1979, Sarada helped her husband farm his family's 1.12 acres of land which provided five months of food in a year. Along with growing chilli, garlic and tobacco, her husband also started to run a small grocery shop.

When PRADAN came to Rajdah

In 1988, PRADAN helped start a self-help group (SHG), Poonam Mahila Mandal in Rajdah which was also the first SHG promoted by PRADAN in Bihar. Encouraging members to voluntarily have weekly savings – at 50 paise to Re 1 – for three to four months which would then be collected as a substantial seed fund, the concept of the SHG was unique.



While silk spinning gave Sarada Devi financial independence, her husband Janardan found a new role as an accountant to 150 SHGs

Fifteen women in the village immediately took to it. Sarada's mother-in-law was one of them. So when a second SHG, Kiran Mahila Mandal was formed three years later, Sarada joined as one of its 20 members. Her life was about to change.

With a knack for organisation equipped with her school education, Sarada quickly moved to the fore of managing the SHG's affairs. She not only went on to promote the formation of Rajdah's third SHG, Rakhi Mahila Mandal in 1993, but was also appointed as accountant for all three SHGs for eight months.

The spin sisters!

In the year 1992, Sarada's SHG started looking for ideas for income generation to help the members increase their savings. One of the ideas was *tasar* host tree plantation, but the members could not identify with the activity.

Another was making puffed rice, but this one too did not stick at the prospect of low profits if all the women got engaged simultaneously – the marketing would be limited to the local markets.

The members approached PRADAN for help with an idea that had scope beyond the village, the district and even the state. PRADAN proposed *tasar* silk yarn spinning.

Four members including Sarada went for a month-long training organised by PRADAN in nearby Andrisot village, with resource persons from Bhagalpur. The following year, more members came on board when the spinning centre was set up.

They received 35 spinning machines under the Special SGSY *Tasar* project and PRADAN also provided the cocoons. They brought in a qualified person from Andrisot to manage the centre.

Income during the first couple of years was lower than expected, causing some of the members to opt out. PRADAN intervened and discovered a technical misunderstanding regarding the boiling of the cocoons. The error was rectified and soon the members were spinning at a monthly individual output of 3 kg of silk yarn from 3,000 cocoons and an income of Rs 1,400 to Rs 1,500.

Secure income, a better life

Sarada says, "I was earning Rs 1,400 a month for eight months in a year, that's Rs 10,400 a year – a handsome amount compared to daily wage labouring. Also, the women preferred silk spinning because it let us work from home alongside our chores and our children. We could educate our children with this money and it gave us a financial independence we'd never known before."

For over a decade, the centre functioned smoothly. In 2009, the Masuta producers' company was formed, but it shut down within three years.

According to Sarada, the company's closure was due to the shift in focus from quality to quantity: "Initially, the quality of the spun silk was highly valued. Even during the training period, people who produced A-grade silks were recognised. But gradually, the focus shifted. The company constantly praised members with the maximum output. This spurred on a competition to produce more, spelling a disastrous effect on the quality of the silk. Moreover, the quality of the cocoons was not closely monitored. All this led to losses and consequent disinterest among the reelers."

Working together

Sarada's work with the SHGs was not only beneficial to her but also for her husband, Janardan Gandharv. After attending a village level meeting conducted by PRADAN, Janardan worked as a community resource person with PRADAN to promote new SHGs. Together, Sarada and Janardan have promoted over 40 SHGs in the area.

Janardan was also appointed by a number of SHGs to manage their finances. At present, Janardan is accountant-cum-auditor for 150 of PRADAN-promoted SHGs across Banka district as well the Godda and Dumka districts in Jharkhand. He makes Rs 2,250 a month from this role and an additional Rs 4,500 a year auditing the SHGs' accounts.

As for Sarada, she continues to be a foremost member of her SHG and she hopes that the spinning activity in the village will be restarted one day.

"With silk yarn spinning, I was earning Rs 10,400 a year – a handsome amount compared to daily wage labouring," says Sarada

Leading the rights movement in Badgunda

Her refusal to limit herself to being a homemaker has taken mother-of-five Shanti Hansda to new heights of leading the rights movement in her village, Badgunda under Chakai block in Jamui district of Bihar.

In 2010, when PRADAN launched a joint project of *tasar* host tree (*Terminalia arjuna*) plantation in a 92-acre plot with the National Bank for Agriculture and Rural Development (NABARD) and the Central Silk Board project called TDF-WADI in Badgunda, Shanti approached the WADI Samiti of Badgunda with her offer to manage the project on a voluntary basis.

Shanti's experience as a member of the Kamal Phool Mahila Mandal self-help group (SHG) had made her keen to work in a bigger capacity to help others.

Shanti's offer was initially met with scepticism from the people of Badgunda. The primary reason was that she was not from Badgunda but from the adjacent village of Jamua where she had moved 15 years ago when her husband was posted there. The other reason was apprehensions that she might 'manipulate' the funds since her husband was a bank employee.

But her diligence in helping the villagers open bank accounts and attending the WADI Samiti meetings regularly, dispelled such apprehensions and soon, she was appointed as the community service provider.



Shanti Hansda (center) is respected and admired not only in Badgunda but in all the panchayats under the Jivan Marshal Mahila Sangh SHG federation

Shanti took on the charge of managing the project's numerous tasks such as pit digging, transplantation of seedlings with compost, soil conservation, hoeing, weeding, pesticide spray, urea & nutrient application, etc.

During the project period, she earned Rs 2,000 to Rs 4,000 a month based on the tasks performed. After the project's successful implementation, eight farmers started by rearing 100 disease-free layings (DFLs) each and recorded a combined production of cocoons worth Rs 1.54 lakh in 2013.

In February 2014, Shanti was selected as a potential trainer for SHG membership training and trained 28 SHGs for two days. Alongside, she also played a crucial role in formation of SHG federations and volunteered during the formation of the first Gram Panchayat level federation of SHGs in Dulampur Panchayat in Chakai block.

Shanti volunteered in four Krishi Melas (awareness campaign on agriculture practices) and three Rozgar Melas (awareness campaign on Mahatma Gandhi National Rural Employment Guarantee Act [MGNREGA]). She was also part of the Mahila Maha Adiveshan (annual functional meet of the general body of SHG federation) in April 2014 as well as the awareness campaign on integrated pest management of winter agriculture in Chakai block.

Over the years, Shanti has gained the respect and admiration of the people not only in Badgunda but in all the panchayats covered by the Jivan Marshal Mahila Sangh (SHG federation) which she heads as president.

As Shanti continues her journey towards securing the rights of rural communities and fighting corruption in public schemes such as MGNREGA and Public Distribution System (PDS), she is moving closer to her vision of helping people in need.

*Heading the Jivan
Marshal Mahila Sangh
SHG federation, Shanti
Hansda has emerged as a
crusader of rural rights in
Chakai block*

Traditional rearing to a profitable one

This 58-year-old farmer from Dharampur village under Shikaripara block in Dumka district of Jharkhand is no stranger to silkworm rearing. But while in the 80s, Shiv Hembrom was earning 15 paise per cocoon, he makes over 15 times that now.

Shiv, who comes from a family of agriculturists, took up traditional silkworm rearing to supplement his income from his land.

With his share of 3.2 acres of land, Shiv used to produce 25 quintals of food which was enough to feed his family – comprising his wife, his mother and his younger sister – for about 10 months. He borrowed from the moneylender to tide over the rest of the year. This meant that there was no savings since any extra income was spent in paying off the loans.

To rear silkworms, Shiv would go to Masaliya in search for seed cocoons from young shepherds who collected them from the forests. He would buy the cocoons for 20 paise a piece (in 1990s) to 50 paise (in 2000s).

From 80-90 seed cocoons, Shiv produced 3,200 cocoons in a good year and as low as 800 cocoons in a bad year. He sold them for an average of 15 paise per cocoon. About 20-25 farmers in Dharampur were engaged in a similar venture.



Tasar has not only helped Shiv Hembrom ensure food security for his family but also save Rs 15,000 every year

With the advent of PRADAN in 2000, Shiv was among the 20-25 farmers who stepped up to rear the disease-free layings (DFLs) provided by PRADAN.

A significantly higher productivity saw the number of rearers go up to 50 the following year. The table below shows the steady rise in Shiv's cocoon productivity and income with PRADAN's *tasar* project in Dharampur.

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2012 | 200 | 6,400 | 9,920 |
| 2013 | 200 | 6,400 | 10,560 |
| 2014 | 300 | 7,560 | 18,000 |

His profits from *tasar* have helped Shiv increase his agricultural productivity as well. He has bought a pair of bullocks and irrigation pump-set. He employs about eight labourers for three to four days in a year and an investment of Rs 15,000 annually earns him a cash income of Rs 12,000.

This coupled with his income from *tasar* not only provides year-round food supply and covers household expenditure but also helps Shiv save Rs 15,000 annually in the bank. Over 40% of Shiv's cash income comes from *tasar*.

In the 80s, Shiv was earning 15 paise per cocoon. Today, he makes over 15 times more using PRADAN-promoted better practices

-Rajendra Kumar Khandai, PRADAN

Reviving a family's *tasar* legacy

Tala Kisku's family from Tilabad village under Sunderpahari block in Godda district of Jharkhand have been *tasar* silkworm rearers for four generations. It was taken up as a means to supplement the family's income from agriculture which was uncertain and often fell short of providing the family with food and financial security for the whole year. Tala's father could afford the education of only two of his five sons. By the time his older brother had completed Class X, Tala was already helping his father cultivate their 0.6 acres of land.

DFLs win over traditional rearing

With traditional methods of rearing often seeing a high mortality rate of the silkworms, *tasar* failed to become a dependable source of income for the Kisku family. In the mid-90s, Samuel Kisku, Tala's father, heard about the PRADAN-promoted Mohanpur grainage and its good quality eggs with a production of 80 cocoons per disease-free laying (DFL).

Eager to augment his own *tasar* venture, Samuel attended the commercial rearing training organised by PRADAN in nearby village of Domdih. He took up rearing with 120 DFLs in 1996 and was able to produce 6,400 cocoons! The cocoons were also bigger and better in quality. He sold them to the local trader for double of what he used to earn (50 paise per cocoon compared to the earlier rate of 25 paise).

Some years later, Tala's oldest brother, Motisingh was selected by the community as a grainage entrepreneur and trained at the Basic Seed Multiplication & Training Centres (BSM & TC) in Kathikund, sponsored by PRADAN.



While Tala never went to school, he wants his children to have the best education – he spends Rs 48,000 annually on their education

*The Kisku family's success with *tasar* has inspired other families.*

Motisingh also received a grant under the Special SGSY *Tasar* project to set up infrastructure for the grainage such as microscopes, chairs, tables, buckets, measuring beakers and spraying machines as well as insurance for the crop. The Kisku family has been running the grainage ever since. They currently supply DFLs to 20-25 families while keeping about 200 DFLs for their own rearing. Tala explains, “Commercial cocoon production is unpredictable. It requires special attention especially during the hatching period of 15 days, when the newly hatched silkworms need to be protected from predators.”

The two tables below show the grainage and commercial rearing performance by the Kisku family in 2011.

| Year | Cocoons procured | DFLs produced | Gross income <i>Rupees</i> |
|------|------------------|---------------|-------------------------------|
| 2011 | 26,000 | 7,250 | 19,102 |

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2011 | 200 | 6,400 | 14,500 |

The Kisku family inspires others too!

Today, Tala and his brother Sanjay run the *tasar* commercial cocoon production with the family members, including his aging parents, helping in every way. Sanjay has even trained farmers in Mahulbona in Saraiyahat block in Dumka district. Families in villages nearby have taken up *tasar* inspired by the Kisku family’s success. Around 40% of the family’s annual cash income is from commercial *tasar* activities. The rising profits have also helped the family increase agriculture productivity, with the purchase of irrigation pump-set. They have also invested in livestock which adds Rs 6,000 annually to their earnings.

While Tala never went to school, he wants the best education he can afford for his children. The family spend Rs 48,000 annually on the education of three children. “My duty is to support their education, but they are free to decide what they want to do with their life,” says Tala. Tala is now exploring ways to augment the *tasar* rearing to increase productivity: “The forest area is decreasing and we are thinking of planting more host trees but we also fear the forest area may be claimed back by the authorities anytime in the future.”

-Sanjay Prasad, PRADAN

Inspiring communities towards *tasar*

With a booming *tasar* business which earns him Rs 1 lakh annually, Umakant Rai has become a veritable figure of success not only in his village Bhorsar, under Katoriya block in Banka district of Bihar, but outside too. Over the years, Umakant has inspired many farmers to take up *tasar*. Almost every year, PRADAN organises exposure training for other farmers in his plot and grainage. Rearers come to learn from him from as far as Odisha. But like most of *tasar* farmers supported by PRADAN, Umakant started off with very little and worked hard to achieve his present fortunes.

Driving taxis in Kolkata

Growing up, Umakant saw his father struggle to support the family. Due to lack of irrigation infrastructure, even five acres of land could not provide food security for the family. With enough food for just seven to eight months, Umakant's father took up tailoring and selling wood logs alongside agriculture to support his wife and four children.

Things took a turn for the worse with the sudden demise of Umakant's father. Umakant and his siblings dropped out of school. At 20, Umakant migrated to Kolkata where he worked for 15 years as a taxi driver. He got married at 24 but his wife stayed back in Bhorsar while he continued to work in Kolkata, where he earned Rs 600 to Rs 2,000 a month. At the age of 35, he was taken ill and consequently, he returned to Bhorsar where he had no work for almost two years.

One day, he met the manager of a local bank at a tea-stall. After Umamkant's expressed interest in starting a small enterprise, the manager agreed to give him a loan with which Umakant opened a grocery shop. He made a small but steady income of Rs 1,500 to Rs 2,000 a month.



Umakant Rai's current earnings from tasar help him save Rs 35,000 in the bank

Lives transformed by tasar

Alongside, Umakant also took up *tasar* rearing following the traditional methods used in his village, for the next seven years. When PRADAN came to Bhorsar in 2002, it promoted two groups of 14 rearers each with a grainage owner for each group. Umakant was chosen as one of them and he trained at the Basic Seed Multiplication & Training Centres (BSM&TC) in Lakha (Chhattisgarh).

Umakant started seed rearing, grainage operations and commercial rearing with disease-free layings (DFLs) and over the next few years, his earnings went up significantly. The following tables present the sharp rise in his income and productivity over the years in seed rearing, grainage and commercial rearing, respectively.

| Year | DFLs reared | Seed cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2011 | 300 | 19,000 | 19,000 |
| 2012 | 300 | 26,000 | 26,000 |

| Year | Cocoons procured | DFLs produced | Gross income <i>Rupees</i> |
|------|------------------|---------------|-------------------------------|
| 2011 | 42,000 | 12,500 | 31,250 |
| 2012 | 52,000 | 13,500 | 33,700 |

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2010 | 300 | 18,000 | 25,000 |
| 2011 | 300 | 24,700 | 38,000 |
| 2012 | 300 | 27,300 | 42,000 |

With an annual turnover of Rs 1 lakh, Umakant Rai has inspired people from as far as Odisha to take up tasar.

Tasar rearing transformed Umakant and his family's lives and improved his agricultural land productivity as well. The table below lists Umakant's investments and expenses made in the last decade, with help of his earnings from PRADAN-promoted *tasar* project.

| Year | Assets & investments | Amount <i>Rupees</i> |
|------|---|-------------------------|
| 2004 | Marriage of oldest daughter | 50,000 |
| 2005 | Land levelling of 0.3 acres | 12,000 |
| 2005 | Wife's medical expenses | 20,000 |
| 2006 | Purchase of new house | 25,000 |
| 2007 | Setting up a separate grainage (with assistance of Rs 22,000 from PRADAN) | 23,000 |
| 2008 | Marriage of second daughter | 80,000 |
| 2009 | Purchase of irrigation pump-set | 22,000 |
| 2009 | Purchase of 0.6 acres of land | 20,000 |
| 2010 | Purchase of a motorcycle | 45,000 |
| 2011 | Marriage of youngest daughter | 100,000 |
| 2012 | Medical treatment for himself | 20,000 |
| 2013 | Purchase of 0.5 acres of land in Deoghar to build a new house | 80,000 |

While his *tasar* business was booming, on the personal front, Umakant suffered a massive tragedy when he lost his wife to accidental drowning.

Umakant's plans now are to fund the education of his grandchildren and build a bigger grainage for his *tasar* enterprise. However, with age catching up, he often faces difficulty conducting field activities and has started hiring people to do the work. Umakant continues to be engaged in all three *tasar* activities.

A far cry from his taxi driving days in Kolkata, Umakant current earnings from *tasar* allow him to save Rs 35,000 in the bank every year.

-Md. Shamshad Alam, PRADAN

A better life with *tasar*

After being forced to spend most of his childhood and youth away from home in search of a livelihood, Babulal Murmu was determined not to let his children go through the same fate.

It was this determination that opened up unlimited opportunities for Babulal in the PRADAN-promoted *tasar* project in his village, Siktiya under Poraiyahaat block in Godda district of Jharkhand. These opportunities not only ensured that he stayed back in his village with his family, but also sent his children to college and established Babulal as one of Poraiyahaat's best *tasar* rearers.

Migration the only option

Life started out with hardships for Babulal and his family. While they had about seven acres of land, only about two were under cultivation – rest had been mortgaged by the time Babulal was 10. The produce from the cultivated land was barely enough to feed the family for five months in a year.

Daily wage labour brought in a small amount. His father sent young Babulal to work as a shepherd in nearby Kathibari for a year, in exchange for two square meals a day and a tiny remuneration. From Kathibari, Babulal went to another village for two years, and from there to another. By adolescence, Babulal was travelling to distant cities, stopping wherever he could find work.



*A pioneer in *tasar* in Poraiyahaat, Babulal Murmu's success has inspired many others to take it up*

By the 90s, Babulal had worked in a variety of jobs, including lifting iron bars in Kolkata, stone quarrying in Mizoram, excavation work in Delhi and paddy harvesting in Bardhaman. With income from these jobs, Babulal was gradually able to free his lands out of mortgage.

In the late 90s, after the birth of his first child, Babulal decided to stop migrating and stay in his village. However, with lack of irrigation facilities, 'monsoon only' cultivation was not enough to support his family through the year. So in despair, Babulal once again set out to work in Bhagalpur in Bihar and in Bardhaman in West Bengal.

Planting a new life

By then, PRADAN had already started working in Godda district, exploring commercial *tasar* silkworm rearing with disease-free layings (DFLs) as a sustainable livelihood. While blocks like Sunderpahari already had traditional *tasar* farmers, villages like Siktiya were new to it.

In 2003, PRADAN arrived in Siktiya, ready to mobilise the people towards plantation of the *tasar* host trees on unused uplands. Babulal recalls the village meeting where he decided to join the project: "Initially, the people were apprehensive, thinking the project was a ploy to take away their lands. They found the prospects hard to believe."

Having worked outside, Babulal was more open to the idea. He says, "I had already taken many risks in my life by then, and I didn't have much to lose. I was also more keen because the project was in my village and not outside."

In 2003, Babulal started raising 60,000 *tasar* host tree (*Terminalia arjuna*) seedlings with PRADAN's support. Babulal was also appointed by PRADAN to manage all plantation activities. Additionally, he guarded the plantation, and during this time, he earned enough to support his family.

The plantation was meant to be used by 15 to 16 rearers in Siktiya. When it was ready in 2006, Babulal was the only willing one. He subsequently trained for eight days on improved rearing practices organised by PRADAN in Sunderpahari.

Babulal had initially planned to start off with 300 DFLs, but upon PRADAN's request, he took on 300 more after a rearer from another village dropped out. While the work rearing the 600 DFLs was overwhelming, despite assistance from his cousin, Babulal managed to make a gross income of Rs 42,000! This number could have been higher had he not incurred loss during transportation of the silkworms. There was no looking back for Babulal then onwards.

Security & savings with tasar

With his profits from *tasar* and support under Indira Awas Yojana, he expanded his one-room home to a four-room house. He also invested Rs 10,000 into an irrigation well sanctioned under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), to revive his agricultural productivity. He bought a pump-set as well.

Today, Babulal cultivates his land in multiple seasons, securing food security for his family for the entire year. He says proudly, “Apart from salt, spices, biscuits and few other items, we do not have to buy anything as we grow everything on our land.”

His oldest child is ready to graduate college and is preparing for competitive government service examinations, while two others are in school.

Leading rearer of Poraiyahaat

In 2010, Babulal was felicitated by the Block Development Officer of Poraiyahaat as one of the best commercial *tasar* silkworm rearers in the block.

A pioneer in *tasar* in the area, Babulal’s success has inspired many others to take it up. PRADAN has helped set up a *tasar* rearers’ co-operative building in Siktiya to ensure timely input and technical support to rearers like Babulal in the block.

“*Tasar* continues to be my biggest source of income – I’ve not earned anything less than Rs 35,000 from a rearing cycle in the last eight years. I am now focusing on building my savings in the bank,” he says.

As Babulal prepares for this year’s rearing, he says, “*Tasar* has given my children a better life than I had. My greatest joy has been to watch my children grow and never have to leave my village again.”

“Tasar continues to be my biggest source of income – I’ve not earned anything less than Rs 35,000 per cycle in the last eight years,” says Babulal

Tasar brings in savings & security

For nearly three decades, Baburam Tudu and his family barely had two square meals a day with practically no savings and heavy debt with the moneylender.

'We never had enough to eat.'

Resident of Donwakuda village under Katoriya block in Banka district of Bihar, Baburam's family owned 0.4 acres of arable land. This gave them enough millet to last for just two months. Baburam's father frequently migrated to West Bengal and Jharkhand to work on farms and in mines. Baburam and his three siblings never went to school. "We never had enough to eat. School was a distant dream," he says.

The family lived in a single-room mud hut and collected firewood for additional income. The wood was sold in a market 11 km away, where they got about 2 kg of millet for a bundle of firewood. "For most of the year, we just filled out stomachs with boiled millet," recalls Baburam.

During April-May, boiled *mahua* (*Madhuca latifolia*) flowers collected from the forest featured in their diet. Excess flowers after consumption were sold to buy clothes. When his sisters got married, Baburam's family had to borrow heavily. When Baburam got married in 1978, selling firewood became his main income source. He was able to buy about 3 kg of maize for with three bundles of wood sold.



Baburam Tudu's work in tasar has provided a comfortable and secure life for his family – he has over Rs 50,000 in savings

“Our daily subsistence depended on firewood, but we often ran into trouble with the forest department. Once, I got arrested and we had to mortgage 0.15 acres of our land for my bail,” he says. Within five years, Baburam lost his mother to a prolonged illness.

Frustrated, he left Donwakuda with his wife, daughter and father and worked at a paddy husking mill in Deoghar for a year. Upon their return, the family was forced to move into a bamboo-and-straw hut on his brother-in-law’s land, after the wooden door to their old house was stolen and everything within it. Subsequently, Baburam lost his father too. He moved into his wife’s parents’ house where they lived for five years. For a substantial period, he worked in a paddy mill in Dumka. “It pained me that I, like my parents, couldn’t afford to send my children to school.”

No more debts

When PRADAN came to Donwakuda in 1988, Baburam was already familiar with *tasar* silkworm rearing which he undertook with his father. However, the activity required the family to borrow more money (Rs 30 in 1970) to procure around 400 seed cocoons all the way from Giridih. With two cycles of bad production every three cycles, instead of generating more income, the money from *tasar* put the family in more debt – they had to sell their livestock to pay it back.

The PRADAN project’s technical methods and improved practices in *tasar* made the prospect appealing to Baburam who already had *tasar* host trees on his land. By 1992, the host plants were ready. Baburam was the only rearer in his village that year. He started off with 200 disease-free layings (DFLs) and never looked back. By 2002, Baburam was earning over Rs 15,000 for every 200 DFLs reared. This income shot up to Rs 1.16 lakh for every 600 DFLs reared, in 2014.

The following table presents the rise in Baburam’s income and productivity from *tasar* commercial rearing over the years.

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2002 | 200 | 14,000 | 15,400 |
| 2003 | 200 | 16,000 | 20,800 |
| 2004 | 200 | 11,000 | 14,300 |
| 2005 | 200 | 9,300 | 13,950 |
| 2013 | 600 | 40,000 | 80,000 |
| 2014 | 600 | 29,000 | 116,500 |

In 2002, Baburam also started seed rearing, which was earning him an additional Rs 20,000 to Rs 30,000 by 2013. The following table presents Baburam's performance in seed rearing.

| Year | Seed DFLs reared | Seed cocoons produced | Gross income <i>Rupees</i> |
|------|------------------|-----------------------|-------------------------------|
| 2013 | 400 | 25,000 | 32,500 |
| 2014 | 400 | 18,600 | 27,900 |

His success inspired more people in his village and outside to take up *tasar* every year. By then, PRADAN had also helped set up various *Tasar Vikas Samitis* in different villages as well as a district-level co-operative to help rearers like Baburam with inputs and technical support.

Lives transformed

Baburam's four sons and their families help him in the rearing activities. Currently, Baburam's annual income from *tasar* is over Rs 1 lakh.

Today, Baburam owns two bullocks and two cows. He has built a new, bigger house for his family, and he didn't have to borrow a single rupee for his children's marriages. In 2012, he invested Rs 30,000 to level two acres of land that he received after a legal settlement from the Forest Department. His family of nine has yearlong food sufficiency from 40 quintals of paddy from their farm. In 2014, he opened a bank account where he now has over Rs 50,000 in savings.

"With just couple of months' labour and substantial income, *tasar* has enormous potential in villages like ours where agriculture productivity is never certain. We must now try to build this trend so young people no longer have to migrate in search of work. One of the ways we need support is to reduce the prevalence of diseases for higher output," says the 56-year-old rearer.

"With just couple of months' labour for a substantial income, tasar has enormous potential in villages like ours where agriculture productivity is never certain," says Baburam

-Sachin Pathania, PRADAN

Bablu finds dignity with *tasar*

Originally from Balkudi village in Bihar's Banka district, Bablu Hansda moved to Beldang village under Poraiyahaat block in Godda district of Jharkhand after his marriage to Sonam who he met in Beldang.

A high-school graduate, Bablu found no job in his village 'dignified enough' for him. For a short while, he helped his father at his grocery store. After his marriage, he approached his wife's uncle, Churka to help him find a suitable livelihood.

Churka suggested *tasar* silkworm rearing to Bablu. *Tasar* was Churka's main livelihood and he had been working with PRADAN for a long time. Sonam, who Churka had adopted as his daughter, too was familiar with *tasar*, helping her uncle since 2007.

Bablu was apprehensive as he saw *tasar* as an insignificant and 'undignified' form of work. He reluctantly started helping Churka with the work, from the hatching to the harvesting of the cocoons.

"I found the work very hard at first. You had to be extremely watchful of each silkworm and move them from one tree to another with great care. I remained doubtful about the returns until I actually saw the sale of the cocoons. I knew nothing could give me such returns against the time and labour I put in," recalls Bablu.



Bablu Hansda runs a successful tasar enterprise with wife Sonam, alongside a rice mill - they have a combined annual turnover of over Rs 40,000

Buoyed by his debut performance, Bablu and Sonam decided to start their own venture. In 2013, Bablu leased in *tasar* host plants and reared 300 disease-free layings (DFLs). He produced 18,000 cocoons which fetched Rs 35,000! The following year, he managed to earn more with less DFLs reared (see the following table).

| Year | Seed DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|------------------|-----------------------|-------------------------------|
| 2013 | 300 | 18,000 | 35,000 |
| 2014 | 200 | 13,700 | 37,675 |

Bablu also decided to learn more about *tasar* and attended several training sessions organised by PRADAN on scientific rearing practices and grainage management. He realised the benefits of engaging in the pre-cocoon activities such as seed rearing and grainage operations, to optimise his output.

Subsequently, Bablu started seed rearing with 500 seed DFLs, producing 23,000 seed cocoons from them. These were further processed in the grainage to finally give him 6,700 DFLs. Bablu earned Rs 28,300 from this.

Alongside *tasar*, Bablu has also set up a rice mill with an investment of Rs 10,000 and an additional Rs 4,000 for a paddy thresher. The rice mill adds Rs 7,000 to his annual income. With his child enrolled in an English medium school, Bablu has found much more than just dignity in his *tasar* venture. He is a happy man today.

*“I was sceptical of *tasar* at first. After my first sale of the cocoons, I knew nothing could give me better returns than this,” says Bablu*

Leading *tasar* rearers in Banka

Despite starting off with little, 49-year-old Avimanyu Singh's enterprising nature and willingness to work hard has helped him establish a successful *tasar* venture with an annual average turnover of Rs 2 lakh and lead over 2,200 *tasar* rearers as secretary of the Banka district co-operative today.

Reeling under debt

Resident of Murliken village under Katoriya block in Bihar's Banka district, Avimanyu's family originally owned 48 acres of land. But family conflicts and legal disputes for 14 long years not only kept the family from cultivating it but also pushed them into heavy debts.

"Sometimes, we had to borrow grains from the neighbours to feed the family," Avimanyu recalls. When the family finally got their land back and started farming, produce from the first four years went in paying off debts, interest and lawyer's fees.

"By 1986, we had paid double the amount we'd borrowed from the moneylender, while cumulative interests had grown nearly five times the original loan," adds Avimanyu. Helpless, the family approached the *gram sabha* which ruled in their favour and the family paid no more after that.

Of the 48 acres, nine were under cultivation which provided enough food for the family of seven and two fulltime agricultural workers. However, there was no saving left after household expenditure.



*With an annual turnover of Rs 2 lakh, *tasar* rearer Avimanyu Singh is also secretary of Banka district's *tasar* co-operative with over 2,200 members*

Enterprising & efficient

Avimanyu who studied till Class X started looking for alternative ways to earn income. His entrepreneurial skills got him a Public Distribution System dealership in 1986. This lasted for four years. Avimanyu explains the reason for his short-lived tenure: “One time, I had to sell off some of the stock to avoid loss. My father was furious when I told him. I too felt ashamed of what I’d done. In 2000, I resigned.”

He then went to Delhi, where he started working as a telephone operator for Rs 1,300 a month. When Avimanyu told his employer that he had nearly 40 acres of land lying unused back home, he advised Avimanyu to use the land for plantation. Avimanyu returned home after three months.

By then, PRADAN was already working in Murliken, exploring possibilities for *tasar* host tree plantation. Avimanyu approached PRADAN and the villagers selected him as a potential grainage owner. Avimanyu decided to start with seed rearing for which he scouted a 14-year-old plantation, once part of PRADAN-promoted *tasar* in another village. Avimanyu roped in a seasoned rearer, Jugal Marandi to help him with various aspects of seed rearing which he was new to.

Best DFLs in the area!

After tireless work over 90 days, Avimanyu reared 24,000 cocoons from 400 seed disease-free layings (DFLs) supplied by PRADAN. From his grainage, he was able to supply DFLs to 30 other farmers. “I was new so I wanted to get it right. I followed every instruction from PRADAN ritually and it paid off. Not only was my productivity high, but rearers who I supplied produced 6,000 to 7,000 cocoons per 100 DFLs. Twelve rearers from Kushborna village did so well that they all had enough money to buy irrigation pump-sets!” says Avimanyu.

The quality of DFLs from his grainage saw people queue up to buy from him the following year. “Some of them were so adamant that they refused to go away until they had procured DFLs from my grainage,” he adds happily. Avimanyu continued to rear seed cocoons in unused plantations in other villages and forest areas until his own plantation was set up.

Innovation goes a long way

In 2003, he started work on his own plantation with grant from the Special SGSY *Tasar* project. Avimanyu literally moved into his plantation to keep a close watch day and night, and found a unique solution to safeguard his plantation from open grazing. “The threat of open grazing was mostly from a particular group of people in the village. I made friends with some of them and sought their help. I also announced a fine for open grazing which would be handed over to my new friends for their help. Though many people challenged the fine, it worked! I had one of the best plantations in the area,” says Avimanyu.

PRADAN also organised exposure visits to Avimanyu's plantation almost every week for other farmers who went on to set up successful plantations of their own.

In 2006, Avimanyu's plantation was ready for seed rearing. With all commercial rearers in the area dependent on Avimanyu for DFLs, he decided to invest his time and resources into seed rearing and grainage and never took up commercial rearing himself. Since his plantation was also close to his agricultural land, he was able to manage both, with help from his father and hired help.

By 2009, Avimanyu had also started basic seed grainage operations with Jitu Tanti in Salaiya. He exceeded the standard production of 70 cocoons per DFL in seed rearing by producing 90-100 cocoons per DFL! Alongside, Avimanyu has also started nucleus seed rearing.

The following tables show his production from the three different activities in 2014, when his cumulative income was more than Rs 3 lakh. In an average year, Avimanyu earns around Rs 2 lakh from *tasar* activities.

| Year | Nucleus DFLs reared | Nucleus cocoons produced | Gross income <i>Rupees</i> |
|-------------|----------------------------|---------------------------------|---------------------------------------|
| 2014 | 800 | 70,000 | 260,000 |

| Year | Seed DFLs reared | Seed cocoons produced | Gross income <i>Rupees</i> |
|-------------|-------------------------|------------------------------|---------------------------------------|
| 2014 | 500 | 40,000 | 60,000 |

| Year | Cocoons procured | DFLs produced | Gross income <i>Rupees</i> |
|-------------|-------------------------|----------------------|---------------------------------------|
| 2014 | 40,000 | 11,000 | 22,000 |

Leading tasar rearers of Banka

In 2009, over 1,000 rearers from the Tasar Vikas Samitis (TVS) of Bounsi, Katoria and Chandan blocks in Banka came together to form a district level co-operative. After the first annual general meeting (AGM), PRADAN organised a seven-day workshop for 20 representatives from each TVS, where Avimanyu was selected as secretary of the co-operative.

Later, Avimanyu played a crucial role in formation of a new TVS, while mobilising more rearers to join the co-operative which grew to 2,200 members by end of 2011.

“We opened the co-operative’s bank account with Rs 500 that I contributed, in 2010. In the next three years, the amount had grown to Rs 12 lakh!” exclaims Avimanyu. With two more AGMs since its formation, the co-operative has unanimously re-elected Avimanyu as secretary. Under his supervision, the co-operative has a DFL production of 5:1.

Aware of low commercial production in some areas, Avimanyu suggests using different varieties of seeds other than bivoltine, such as trivoltine which he says has good potential but is no longer promoted by the government.

“I am 48 now. I have many responsibilities and there are over 2,200 rearers with the co-operative who are depending on my performance. I cannot afford to let them down,” says Avimanyu, a true leader.

“There are over 2,200 rearers who rely on me. I have a big responsibility towards them,” says Avimanyu

Accounting to *tasar* rearing

In 2002, Bhola Yadav's mother, Savitri Devi was one of the first women to join her village's first self-help group (SHG) promoted by PRADAN, in Jorlikurum under Katoriya block in Bihar's Banka district.

Educated till Class VII, Bhola was appointed by his mother's SHG, Asha Mahila Mandal as accountant. His skill with numbers and his diligence got two other SHGs formed later to hire Bhola's services as well. He was paid Rs 40 by each group. Bhola also acquired auditing skills subsequently and he was soon auditing the accounts of 11 SHGs in the area.

Before the advent in PRADAN in the village, Bhola and his family had struggled to make ends meet. With only one of their three-acre land arable, they had enough food for just six months. Bhola used to work in a fruit shop, earning Rs 300 a month.

During Bhola's sisters' wedding, the family invested most of their savings as well as livestock and three *mahua* (*Madhuca latifolia*) trees along with a hefty loan of Rs 7,000 which took them three long years to pay back.

Having known no better job before this, Bhola was content auditing the accounts of the SHGs until 2003, when PRADAN proposed *tasar* host tree plantation in Jorlikurum under the Special SGSY *Tasar* project. Bhola decided to take it up on his two acres of land lying unused and planted 3,000 host trees.

By 2007, the plantation was helping Bhola earn Rs 15,000 to Rs 20,000 annually and it continues to do so today (see table for productivity and income over the years).



Bhola Yadav earns Rs 60,000 in cash income, of which Rs 20,000 is from tasar alone

Former accountant for SHGs in his area, Bhola Yadav is an expert in tasar host tree plantation today

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2007 | 200 | 18,500 | 23,000 |
| 2008 | 150 | 8,000 | 12,000 |
| 2009 | 150 | 9,000 | 14,000 |

In 2010, Bhola was chosen by PRADAN as community resource person (CRP) under the National Bank for Agriculture and Rural Development (NABARD) and the Central Silk Board *tasar* host tree plantation project in Chakai block of Jamui district. He was paid Rs 5,000 as remuneration. That year, Bhola supervised and monitored nearly 300 acre of plantation.

The following year, he prepared a nursery of 60,000 host plants himself and made a profit of Rs 60,000. In 2015, he took on a target of nursing one lakh host plants. The table below presents his performance and income between 2010 and 2012.

| Year | Total host plants in nursery | Gross profit <i>Rupees</i> | Remuneration for providing service <i>Rupees</i> | Total income <i>Rupees</i> |
|------|------------------------------|-------------------------------|---|-------------------------------|
| 2010 | 20,000 | 20,000 | 60,000 | 80,000 |
| 2011 | 60,000 | 60,000 | 60,000 | 120,000 |
| 2012 | 40,000 | 40,000 | 60,000 | 100,000 |

His profitable *tasar* venture has transformed the quality of living for 35-year-old Bhola and his family. In 2007, he purchased a motorcycle worth Rs 23,000. In 2011, he bought an irrigation pump set for Rs 17,000. By 2013, he had saved enough money to buy a tractor on an EMI of Rs 10,000 with a down payment of 1.3 lakh. He also started a brick kiln and used earnings from this to buy a paddy husking machine worth Rs 40,000 in 2012. In 2015, he bought a paddy thresher for Rs 25,000.

Bhola currently earns Rs 60,000 in cash income, of which Rs 20,000 is from *tasar* alone. His plan now is to invest about Rs 15,000 to cultivate vegetables on 0.15 acres of land. He also wants to finish paying off the EMI on his tractor and buy a four-wheeler.

-Arun Kumar, PRADAN

The *tasar* effect

“I used to wear the same clothes year after year until they were in tatters. Now, every member of my family gets new sets of clothes every year!”

That is but a small instance of the massive transformation that *tasar* has brought about in the lives of Nilu Hembrom and his family in Domdih village under Sunderpahari block in Godda district of Jharkhand. Apart from clothes, the family also has food year-round food supply. Nilu’s child is in school, while he travels around on a motorcycle.

But life before Nilu joined PRADAN’s *tasar* project in Domdih was different.

Early struggles

When he was just two, Nilu lost his father to tuberculosis. His mother struggled to manage the agriculture activities, though they had adequate land and cattle, as well as bring up five children on her own. When Nilu turned eight, his mother passed away. His older sister who was married to the village school headmaster of Rampur nearby took Nilu to live with her. She enrolled him in school but he dropped out in Class IV when she could no longer afford it.

After his two sisters got married, Nilu returned home at the age of 12 to help his older brother run the farm. The brothers also started traditional *tasar* cocoon production alongside farming. With around 150 plants in 10,000 sq ft of area, they managed to produce just 800-1,000 cocoons a year.



Nilu Hembrom’s foray into tasar has transformed his life and his family’s – he has also trained around 25 rearers at the Sundermore Co-operative

From supply to production

When he was 18, Nilu was desperate for work that gave him better returns. That's when a friend from a nearby hamlet told him about Mohanpur grainage looking for people to help with disease-free layings (DFLs) supply operations. He also learned about the higher productivity of the DFLs in Mohanpur. Nilu signed up and started working as an agent between the PRADAN-promoted grainage and the cocoon rearers, collecting cocoons from the former and supplying them to the latter.

In 1996, he attended a weeklong training on grainage operations at the Basic Seed Multiplication & Training Centres (BSM&TC) in Kathikund, sponsored by PRADAN. After the training, with PRADAN's support, he set up a small grainage centre at his home. In the very first year, Nilu produced 1,300 DFLs from 8,000 cocoons provided by PRADAN.

By 1999, he was selected by the village as grainage entrepreneur to set up a separate grainage centre supported by United Nations Development Programme and Central Silk Board. It was the first initiative in *tasar* in the area supported by collaboration between a government and a non-government organisation.

In an average year, Nilu invests Rs 25,500 to procure cocoons, manage labour and other materials for his grainage. In 2013, with 25 days of work, he earned Rs 24,000 from selling DFLs and Rs 11,000 from selling pierced cocoons. After the procurement cost of Rs 22,000 for 17,600 cocoons and Rs 1,650 for maintenance, he still made a profit of Rs 11,350! He earns additional Rs 20,000-30,000 from commercial rearing. The following tables show Nilu's productivity and income as a *tasar* rearer in 2012 and 2013.

| Year | Cocoons procured | DFLs produced | Gross income <i>Rupees</i> |
|------|------------------|---------------|-------------------------------|
| 2012 | 17,360 | 3,400 | 7,254 |
| 2013 | 17,600 | 4,000 | 11,350 |

| Year | DFLs reared | Good cocoons produced | Flimsy cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------|-------------------------------|
| 2012 | 250 | 13,120 | 0 | 21,070 |
| 2013 | 350 | 12,000 | 4,000 | 30,000 |

Tasar transforms lives

From his annual earnings, Nilu keeps Rs 10,000 as working capital for the coming year. Currently, around 60% of his annual cash income is from *tasar*. Nilu also invests Rs 13,000 annually on agriculture which ensures year-round food supply for the family and an additional cash income of Rs 7,000.

“People recognise me as the oldest grainage owner in this area. About four people in Dighibathan village and around three more in Kusumghati village have started commercial *tasar* silkworm rearing after me. In 2005, I even trained around 25 farmers at the Sundermore Co-operative,” says Nilu who has a life insurance policy now.

Explaining the advantages and risks in *tasar*, Nilu says, “The good thing is the returns are very high for the investment, and it is a great alternative during the lean period between transplantation and harvesting of paddy. But there are risks with *tasar* – if a crop fails, it may do so partially or entirely. Though the chances for such risk have decreased with better practices now, we are yet to achieve 100% production without any risk.”

He adds, “There is a fear of future restriction regarding access over common forest area. Private plantations would safeguard the farmers. Additionally, reeling activity (for the silk yarn) can also be started alongside the rearing so a chain is created between the primary producers and the families, generating livelihoods for both.”

“I used to wear the same clothes year after year until they were in tatters. Now, every member of my family gets new clothes every year,” says Nilu

Enterprising with *tasar*

Growing up

Hardworking and enterprising since a boy, Maitru Samad refused to be defeated by the surmounting challenges his family faced growing up.

Resident of Dango village under Kuchai block in Saraikella- Kharsawan district of Jharkhand, Maitru's family used to have nine acres of land which they later had to give away to sharecropping, losing with it, eight months of food sufficiency. While his father passed away when he was just three, Maitru's mother worked hard as a daily wage worker to support her three sons.

"Our diet mostly comprised of boiled rice sometimes supplemented by wild tubers and boiled *mahua* (*Madhuca latifolia*) flowers. We'd have to borrow for two months in a year. But my mother would still save up so we could have new clothes during the Maghi festival," Maitru recalls.

While his two brothers never went to school, Maitru, the youngest, studied in the village school till Class VI. He worked hard and got admission at the Saraikela government residential school which provided free education with boarding. He completed his Class X here.

In 1985, Maitru got married. His in-laws helped him purchase a pair of bullocks under a government subsidy and, along with his wife, Maitru became engaged in agriculture.



Maitru Samad's annual earning of Rs 90,000 from tasar comprise 80% of his cash income, of which he saves Rs 25,000

Learning about tasar

Around this time, Maitru learned of his father's *tasar* practice from his mother. His father used to procure around 150 disease-free layings (DFLs) from Chaibasa and produce 5,000 cocoons.

Maitru started learning about the various aspects of *tasar* rearing from his mother who used to help his father. He also visited Chaibasa and met the rearers there to understand the activity better. Interestingly, while most people start with commercial rearing, Maitru chose to start with seed rearing.

Maitru teamed up with his brother – while his brother looked after agriculture, Maitru focused on *tasar*. His earning from *tasar* even helped him fund his brother's marriage. "Our families lived together back then. When we started living apart later, we continued our partnership. My brother and I have a good understanding," says Maitru.

Maitru's tasar venture gets a boost

When PRADAN came to Dango in 2004, 25 families, including Maitru's, came together to form the Tasar Vikas Samiti (TVS) and were taken to Godda district for exposure training.

Maitru was chosen by his village as a potential grainage owner and he trained at the Basic Seed Multiplication & Training Centres (BSM&TC) in Kathikund sponsored by PRADAN in 2006. Maitru was ranked 2nd for his performance during the training.

The Samiti led by him set up a separate grainage centre with PRADAN's support under the Special SGSY Tasar project. PRADAN also supplied Maitru with 600 DFLs which he shared with two more rearers. Together, the three produced 22,000 cocoons and 8,000 commercial DFLs, making a profit of Rs 36,000 which they shared.

That year, Maitru was also promoted by PRADAN as a community resource person (CRP) and he helped seed rearers as well as 300 commercial rearers in six villages. He worked as CRP for five years until the end of the project.

Maitru also continued the grainage operation with his old partnership for two years after which he managed it independently. His wife and three sons help him run it currently. Maitru earns Rs 90,000 annually on an average from *tasar* which comprise 80% of his cash income. He saves a substantial amount of Rs 25,000 every year.

| Year | Seed DFLs reared | Seed cocoons produced | Cocoons in grainage | DFLs produced | Gross income <i>Rupees</i> |
|------|------------------|-----------------------|---------------------|---------------|-------------------------------|
| 2012 | 600 | 45,000 | 45,000 | 9,000 | 65,000 |
| 2013 | 600 | 17,000 | 17,000 | 4,000 | 45,000 |
| 2014 | 600 | 20,500 | 20,500 | 7,000 | 50,000 |

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2012 | 300 | 8,600 | 13,000 |
| 2013 | 300 | 28,500 | 50,000 |
| 2014 | 300 | 21,300 | 40,000 |

The tables above present Maitru's income and productivity in seed rearing, grainage and commercial rearing between 2012 and 2014.

Better lives

With his earnings from *tasar*, Maitru not only bought a motorcycle for himself but also one for his son. In 2012, he repaired his house for Rs 12,000. The following year, he purchased a pair of bullocks for Rs 50,000, and bought another pair the next year for Rs 84,000, for his sons to help him farm.

In 2015, Maitru was invited by PRADAN to provide technical training to rearers in Chhattisgarh. He earned Rs 20,000 as remuneration for the 20-day training.

Apart from construction of a bathroom and other amenities to make life comfortable in old age, the 48-year-old also wants to install a deep boring along with a lift irrigation system to aid agriculture.

Dango's grainage owner, Maitru has also helped over 300 tasar rearers as PRADAN's community resource person for five years

-Subhodh Kumar, PRADAN

A rearer worth his silk

Jalsingh Samad of Dango village under Kuchai block in Saraikella- Kharsawan district of Jharkhand was not new to *tasar* when PRADAN came here in 2004. *Tasar* used to be his father's secondary livelihood, agriculture being the primary. Though a small amount, earnings from *tasar* helped his father pay off the loan he had to borrow each year for agriculture. His production was 8,000 cocoons annually on an average, from 400 seed cocoons.

Against the odds

Despite his hard work, the family still didn't have enough to eat. "Our diet was just boiled rice, occasionally with leafy vegetables. We ate pulses may be one or two days in a month," Jalsingh recalls. His youngest sibling couldn't survive beyond his infant years because the family didn't have enough money to even buy milk for him.

Jalsingh's two sisters never went to school. They started working as daily wage workers at a young age, helping Jalsingh finish school and even join college (Bachelor of Arts). But following a prolonged bout of tuberculosis during which his father mortgaged one acre of land to pay for his medical expenses, Jalsingh dropped out of college.

By then, both his sisters had married and Jalsingh started helping his father with agriculture. He married in 1995. With help of a friend, Jalsingh also started taking up village level developmental work on contractual basis with the block office.



His annual income of over Rs 35,000 from tasar has helped Jalsingh Samad provide a better life for his family and send his children to school

Tasar in a new avatar

PRADAN had to work hard to convince the people of Dango to take up *tasar* with the disease-free laying (DFL) technology. Back then, most families, like Jalsingh's, associated *tasar* rearing with low production and heavy losses. Eventually, PRADAN's efforts paid off and a Tasar Vikas Samiti (TVS) was formed with 10 members. Jalsingh was one of them.

With PRADAN's help, Jalsingh reared 150 DFLs and produced 4,800 cocoons. The following year, PRADAN supplied the TVS members with 300 basic seed DFLs. Though the number of DFLs were low in the first year, production per DFL was good enough to convince them that producing commercial DFLs in their own grainage was better than procuring them externally.

Till 2009, PRADAN supplied the rearers with good quality seed DFLs. After that, they procured them from private grainages in places like Deoghar and continued to do so till 2013. In 2014, following a shortage of seed DFLs among their suppliers, the Dango rearers procured them from Jharcraft, a state government agency.

Trained to rear

In 2010, Jalsingh trained at the Basic Seed Multiplication and Training Centres (BSM&TC) in Kharsawan where he was hired as a microscopist. The BSM&TC also provided him with seed DFLs in return for Jalsingh's help in rearing and selling the cocoons back to them. Jalsingh also started seed rearing. He says, "With decreasing forest areas, people are more and more reluctant towards taking up seed rearing. Right now, I am the only seed rearer in the entire hamlet."

Currently, Jalsingh is involved in both seed rearing and commercial rearing. His combined average annual income from the two is around Rs 35,000. The following tables present Jalsingh's income and production from seed rearing and commercial rearing, respectively.

| Year | Seed DFLs reared | Seed cocoons produced | Gross income <i>Rupees</i> |
|------|------------------|-----------------------|-------------------------------|
| 2011 | 100 | 11,000 | 7,700 |
| 2012 | 100 | 9,000 | 9,000 |
| 2013 | 150 | 9,000 | 11,000 |

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|-----------|-------------|-----------------------|-------------------------------|
| 2009 | 200 | 17,000 | 23,800 |
| 2010-2014 | 200 yearly | Over 12,000 yearly | 26,000 - 30,000 |

Lives transformed

Jalsingh's *tasar* activities have enabled him to provide a better life for his family. All his five children are in school – he spends Rs 12,000 a year on their education. He says, “Instead of spending money on costly schools which won't ensure them good jobs, my commitment is fund their education in government institutions and instead save money enough for them to invest in a job or business of their choice later.”

In 2007, he purchased a motorcycle. By 2009, he had bought two insurance policies for a combined annual premium of Rs 27,000.

In 2013, he set up a fixed deposit of Rs 40,000. He invests Rs 15,000 in agriculture every year, earning back Rs 30,000 cash income and yearlong food security for his family. After all expenses, he still saves Rs 25,000 every year now. Over 40% of his cash income is from *tasar*.

Jalsingh has also acquired rural veterinary practices and in the future, plans to help the community with his knowledge. On the future of *tasar* in his village, the 46-year-old says, “The government and the NGO have helped us a lot. However, rearers are still reluctant about some of the better practices – for instance, some of them never use the free medicines we get! I think they need constant motivation to adopt the new practices as their own. Only then can we realise the full potential of *tasar*.”

“While the government and the NGO have helped us a lot, the rearers still need constant motivation to adopt the new practices as their own,” says Jalsingh

Hathgarh's one-stop *tasar* rearer

"I used to be terrified of silkworms as a child," laughs Gyan Kisku, a prize-winning *tasar* rearer with an annual income of over Rs 50,000 from Hathgarh village under Katoriya block in Banka district of Bihar. Gyan is successfully engaged in all three *tasar* activities – seed rearing, grainage and commercial rearing. But before the 51-year-old became one of PRADAN's success stories, Gyan and his family had struggled to make a daily living for nearly 40 years.

Four decades of struggle

Oldest of three brothers, Gyan went to school till Class X, while his brothers dropped out much earlier. Gyan's father earned enough to feed the family for just four months, working as an agricultural labourer and cultivating his own 0.20 acres of land. The family additionally collected and sold *mahua* (*Madhuca latifolia*) and *tendu* leaves which brought in food for another two months. His mother also made leaf plates to earn Rs 15 per day.

Alongside farming, Gyan's father also took up *tasar* silkworm rearing, collecting 640 seed cocoons and producing 10,000 cocoons from them in a good year and almost nothing during a bad one.

After Class X, Gyan started working in roadside eateries and hotels during the month-long Sarawani festival. His daily wages, combined with tips from the visiting pilgrims, helped him support his family for about three months.



*Gyan Kisku has a successful business of *tasar* seed rearing, grainage and commercial rearing, turning in an annual cumulative income of over Rs 50,000*

In 1980, Gyan married and subsequently moved out from his family home. For the next five years, he took up job as a helper at a friend's grocery shop where he would borrow grains for eight months in a year. He also started a liquor-making venture with a weekly profit of Rs 700 which he used to pay back his friend. During the Sarwani festival, he continued to work at the roadside hotels in Deoghar, making Rs 70 a day, and also collected and sold *tendu* leaves.

Later, for about two years, he worked with his father-in-law in *tasar* rearing and invested his earnings from that to secure a job with a private security firm. But he quit after five days of service, disheartened by the pay. His father-in-law encouraged him to stay back in his village.

Tasar shines a light

When PRADAN came to Hathgarh in 2003, Gyan didn't think twice about attending their training on *tasar*. For his past experiences and skills, the village chose him as a potential grainage owner and he subsequently trained at the Basic Seed Multiplication and Training Centres (BSM&TC) in Kathikund. After the training, Gyan convinced 20 farmers in Hathgarh to rear disease-free layings (DFLs).

PRADAN supplied him with 200 basic seed DFLs which he, with help from a few others, reared to produce 9,000 seed cocoons. Gyan set up a grainage with the seed cocoons in a building constructed under Indira Awas and went on to produce 1,700 DFLs, making a profit of Rs 5,100.

Gyan distributed the DFLs among the 22 farmers he'd convinced earlier. Recalling the output from that year, he says, "Everyone made a profit! Some purchased livestock, some cycles and some got back their mortgaged land back. It was a momentous occasion for all of us."

Master of all!

In 2007, Gyan set up his own grainage with financial assistance from the Special SGSY *Tasar* project. He took up seed rearing alongside, two years later.

"There was scarcity of host trees due to rampant clearing of the forest in our area. I had to go to distant forests for commercial rearing. But later on, the government set up plantations nearby and that encouraged me to start seed rearing," he explains. Engaged in all three *tasar* activities today, Gyan works hard to maximise their output each year.

The following tables present his 2013 production and income from seed rearing, grainage and commercial rearing, respectively.

| Year | Seed DFLs reared | Seed cocoons produced | Gross income <i>Rupees</i> |
|------|------------------|-----------------------|-------------------------------|
| 2013 | 200 | 13,000 | 16,250 |

| Year | Cocoons procured | DFLs produced | Gross income <i>Rupees</i> |
|------|------------------|---------------|-------------------------------|
| 2013 | 17,400 | 5,700 | 14,500 |

| Year | DFLs reared | Good cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------------|
| 2013 | 200 | 12,000 | 22,000 |

“Everyone made a profit with our first DFL rearing! Some purchased livestock, some cycles and some got their mortgaged land back,” says Gyan

Prize-winning performance

While 80% of his cash income continues to come from *tasar*, Gyan is also engaged in agriculture which has received a fillip from his *tasar* profits. He cultivates five quintals of paddy, maize and wheat from his 0.20 acres of land, which sustains his family for seven to eight months. He recently bought 0.15 acres more for Rs 22,000.

Gyan has paid off the Rs 40,000 that he borrowed during his daughter’s marriage. While his oldest daughter dropped out of school in Class VIII, his two other daughters and son are in school. He spends Rs 10,000 annually on their education. He also saves Rs 10,000-15,000 every year. In 2014, Gyan was awarded a prize by the BSM & TC in Deoghar for his performance in basic seed rearing.

-Md. Shamshad Alam, PRADAN

Salpatra's *tasar* expert

With agriculture providing enough food for barely eight months in a year, Jitlal Tudu's father, Mandal used to rear *tasar* silkworms as an alternate livelihood in his village, Salpatra under Sunderpahari block in Godda district of Jharkhand.

Back then, Mandal was among two or three *tasar* rearers in the village. But good quality seed cocoons were hard to come by and Mandal and his sons often spent days in the forest scouring for cocoons.

Even then, in the absence of technical knowhow, production was dismal and the losses huge. After his father's death, the family stopped enagaging in *tasar*, focusing on agriculture and daily wage labour instead. Jitlal dropped out of school after Class VIII.

In 2000, PRADAN introduced commercial seed cocoon production with disease-free layings (DFLs) in Salpatra. Many farmers, including Jitlal, came forward to adopt the technology. By then, PRADAN had already set up self-help groups (SHGs) in the village so the people were more forthcoming.

Subsequently, PRADAN proposed the idea of starting a grainage in the village so the rearers no longer had to depend on external supplies. Based on their performance and sincerity, the people chose Jitlal and two others, Bijay and Motilal as potential grainage owners for Salpatra.

Eventually, Bijay became the first grainage owner. In two years, Jitlal was ready to set up his own grainage. By then, he and his brother had two cycles of commercial rearing under their belt.



*With Rs 50,000 annual income from *tasar*, Jitlal Tudu also heads the *Tasar Farmer's Association* in Sunderpahari block*

*“Seed rearing is the backbone of *tasar*. Quality of the seed cocoons is critical to production and this should be of utmost priority,” says Jitlal*

| Year | DFLs reared | Good seed cocoons produced | DFL production |
|------|-------------|----------------------------|----------------|
| 2007 | 300 | 19,200 | 4,266 |
| 2008 | 300 | 17,500 | 4,375 |
| 2009 | 300 | 12,300 | 4,100 |
| 2010 | 400 | 18,000 | 5,200 |

Sponsored by PRADAN, Jitlal trained for 10 days in grainage operations at the Basic Seed Multiplication and Training Centres (BSM&TC) in Kathikund. From then on, he never looked back. His two brothers and sisters joined him in running the grainage and commercial rearing activities.

Jitlal now earns no less than Rs 50,000 annually from *tasar*. He funded the marriages of both his sisters, while he himself married Laxmi Hansda in 2012. Laxmi helps him run the business. The table above presents Jitlal's *tasar* production between 2007 and 2010.

Jitlal has inspired many people in his area to take up *tasar*. In 2009, he was felicitated for his performance and for helping others. He quickly became Salpatra's go-to person for *tasar* related issues, even helping resolve conflicts between rearers.

His confidence has been further boosted by frequent exposure visits to his work by farmers from within the block and outside. Jitlal is one of the few in Sunderpahari who has taken on seed crop rearing as well.

He says, "Seed crop is the backbone of *tasar*. Quality of the seed cocoons is critical to production and this should be of utmost priority. With hard work and sincerity, *tasar* can become a major and sustainable source of income."

Jitlal currently heads the *Tasar Farmer's Association* in Sunderpahari, with over 1,300 members.

-Uttam Kumar, PRADAN

Resourceful with *tasar*

Tasar since 10

Joka Soy was 10 when he started helping his father rear *tasar* silkworms. For the next 32 years, he continued *tasar* as a livelihood alongside agriculture, stopping only to switch over from traditional rearing to better practices with PRADAN-promoted disease-free layings (DFLs) in 2004 under Special SGSY Project. “We used to rear trivoltine varieties which would fetch 12 paise per cocoon in 1986. My father would procure 700 seed cocoons from Chaibasa and rear them with two hired help, to produce 13,000 cocoons in a good year. He would rub turmeric over the female layings to separate and dry them out,” recalls Joka.

The 43-year-old lives in Punibudi village under Kuchai block in Saraikella- Kharsawan district. With 20 acres of land, hired help and two pairs of bullocks and two pairs of buffaloes, Joka’s family cultivated enough food to sustain for the year. His enterprising father also earned substantially from *tasar*, lac cultivation and collection and sale of *mahua* (*Madhuca latifolia*) flowers and *kusum* seeds. However, after expenses, the family had little left over as savings – a substantial amount was spent on the education of Joka’s three brothers in a residential school outside. As for Joka, he got married at 17 after Class X and continued to help his father with farming and *tasar*.

Traditional to technology

In 2004, Joka was an active participant in PRADAN’s meetings on improved *tasar* practices in Punibudi. PRADAN helped set up three *Tasar Vikas Samiti* (TVS), followed by a three-day long orientation. All members were given 150 DFLs each. Joka produced 6,400 cocoons. In fact, 75% of the rearers performed satisfactorily that year.



*Apart from earning over Rs 50,000 from *tasar* annually, Joka Soy is also PRADAN’s community resource person in 18 villages*

*“*Tasar* is a great opportunity to make substantial income within a short time, but rearers cannot afford to be careless about the quality of DFLs,” says Joka*

In 2005, Punibudi village started grainage operation and the three TVS were supplied with 1,500 basic seed DFLs. These were reared by nine people to produce 60,000 cocoons and eventually, 10,000 DFLs were produced from this. This impressive track performance and self-sufficiency continued till 2007.

In 2008, seed rearers started becoming reluctant to rear seed DFLs on their own after the government initiated input support at subsidised rates. Consequently, the grainage operation closed down. However, the subsidy was not meant forever. Currently, the rearers rely on PRADAN-promoted grainage owners in districts like Deoghar for commercial DFLs. Meanwhile, Joka impressed all with his diligence and care in *tasar* rearing. In 2012, Joka reared 500 DFLs to produce 17,600 cocoons and earned Rs 50,000!

Guiding 700 *tasar* rearers

Looking at his performance and sincerity, PRADAN promoted Joka as a community resource person (CRP) to guide and support 700 farmers in 18 villages. Joka continued in this role for the next 10 years and remains so today. Joka has also taken on the responsibility of arranging and supplying adequate and good quality DFLs to the rearers of Kuchai block.

Joka's annual income from commercial rearing comprises over 35% of his total cash income, apart from the annual remuneration of Rs 60,000 as CRP. While Joka's wife helps him during the first 20 days of commercial rearing (after hatching), he employs two workers to help them for the remaining 70.

Savings & security for life

Joka's two daughters are married and his son is in school today. He funded Rs 1.5 lakh during his daughter's marriage in 2011. The same year, he bought a life insurance policy for a premium of Rs 20,000. In 2015, he repaired his house for Rs 15,000. In 2008, Joka invested Rs 30,000 to lease in five acres of land to add to his own five. He has a fixed deposit of Rs 2 lakh saved in four instalments over three years. Every year, Joka saves Rs 12,000 in cash.

Sharing his future plans, Joka says, "I am planning to set up a grocery store to secure my son's future, in case he doesn't get a job elsewhere. I also want to invest in a paddy husking mill. I've also always dreamt of driving a four-wheeler!"

Stressing on the need for rearers to realise the full potential of *tasar* as a sustainable livelihood, he says, "Every rearer knows that *tasar* is a great opportunity to make substantial money within a short time, but they still get careless while procuring DFLs from outside. They need to understand that every packed layings is not necessarily DFL and that diseased ones may be mixed in. The rearers need to be diligent about checking the samples. In *tasar*, one person's mistake can cost everyone."

-Ashis Chakraborty, PRADAN

A tale of two villages

The *tasar* story of Dhaka and Digalpahari villages stands testament to what hard work, will and a helping hand can achieve. What used to lie as 173 acres (70 hectares) of barren land for years before PRADAN's advent, are now reaping Rs 3.4 lakh to Rs 16.50 lakh annually for *tasar* rearers in the two villages under Shikaripara block in Dumka district of Jharkhand.

Barren to bountiful

Before 2006, the said land in the two villages was perceived so useless that the villagers didn't even want to grow food crop like maize on it, let alone the cash crops. When the Jharkhand Department of Welfare launched a *tasar* host tree plantation scheme for privately owned tribal lands under the Micro Economic Social Organisation (MESO) project, it partnered with PRADAN to implement two plantations of 210 acres (85) each.

It was while PRADAN was in the process of identifying villages in Kathikund and Shikaripara blocks that it learned of the 111 acres (45 hectares) of unused land in Dhaka. But convincing the people of Dhaka to even consider the possibilities of putting the land to use was not so easy. The people couldn't comprehend that the land could be productive for anything. Not being familiar with PRADAN's work, some perceived the proposal as a ploy to take away their lands from them.

After much efforts and time talking to the people, PRADAN finally got about seven people to agree to discuss the prospects. They found that the said land belonged to about 60 tribal families who used to cultivate maize and some millet on the uplands till about 1990.



Tasar has transformed life in Dhaka and Digalpahari – migration is a thing of the past and women are building their own identities with PRADAN-promoted SHGs

Continuing its efforts to reassure the people, PRADAN offered to arrange exposure visits to places where PRADAN had worked so that the community could take a decision after they had seen and were convinced of PRADAN's work and credibility. The people agreed and, subsequently, visited PRADAN's work in Chandubathan village of Godda district. They talked to the people there about their experience with *tasar* and with PRADAN.

It worked! Upon their return, the people of Dhaka agreed to the plantation proposal and formed the Aatu Utnao Tasar Vikas Samiti. About 60 of them worked hard to prepare a nursery of 1.48 lakh host plants under PRADAN's guidance. The surplus money from the nursery preparation was used to create uniforms for people assigned to guard the plantation. Staggered trenches were dug as land development measures.

People also started cultivating vegetables such as bottle-gourd, bitter-gourd, cucumber and pigeon-pea on the soil deposits from the trenches around the plantation. Within a year, the erstwhile barren land was covered in green under the Arjuna (*Terminalia arjuna*) *tasar* host tree plantation.

Dhaka inspires Digalpahari

Meanwhile, news of the events in Dhaka reached nearby Digalpahari. The people there wrote to PRADAN, expressing their intent to work with PRADAN on converting the 61 acres (25 hectares) of barren land in their village into a *tasar* host tree plantation as well.

PRADAN promptly responded and the Lahanti Tasar Vikas Samiti was formed in Digalpahari. The plantation here was completed by 2007. Taking cue from Dhaka, Digarpahari set the norms for maintenance and protection of the plantation. By 2009, the barren land in both the two villages had been completely transformed.

The next challenge now was to initiate commercial *tasar* rearing which the people of Dhaka were new to.

PRADAN organised a two-day inception training for them and brought in an experienced commercial rearer for two month to guide the people. The first year, 20 people started commercial rearing with 100 disease-free layings (DFLs) each. They collectively produced 223,360 cocoons with the average as high as 110 cocoons per DFL.

Each rearer invested Rs 1,000 and earned back Rs 17,000 within 60-65 days! The cocoons they produced were of such high quality that the whole lot was procured by the Aven Tasar Kitpalak Samiti of Kathikund as seed cocoons for DFLs.

In 2010, 50 commercial *tasar* rearers produced 3.84 lakh cocoons from 5,000 DFLs, averaging over 75 cocoons per DFL. This time, the average earning per rearer was Rs 11,000 to Rs 12,000. About 3.54 lakh cocoons were procured for DFL production and 30,000 cocoons supplied for reeling.

| Year | Number of rearers | DFLs reared | Cocoons produced | Average per DFL | Gross income <i>Rupees</i> | Average income per rearers <i>Rupees</i> |
|------|-------------------|-------------|------------------|-----------------|-------------------------------|---|
| 2009 | 20 | 2,000 | 223,360 | 111 | 3.4 lakh | 17,000 |
| 2010 | 50 | 5,000 | 384,000 | 76 | 5.86 lakh | 11,720 |
| 2011 | 55 | 6,500 | 490,000 | 75 | 8.9 lakh | 16,180 |
| 2012 | 72 | 7,548 | 603,870 | 80 | 9.36 lakh | 13,000 |
| 2013 | 85 | 11,418 | 970,588 | 85 | 16.50 lakh | 19,410 |

The table above presents the collective production and income of the two villages between 2009 and 2014.

Together, they inspire more villages!

News of their success spread fast. Dhaka and Digalpahari were flooded with congratulatory visits from senior government officials, including the Block Development Officer, District Collector, MESO officials, members of the National Advisory Committee and even the then Union Minister for Rural Development, Jairam Ramesh who lauded the two villages on their success.

The then District Collector, Mastram Meena even replicated PRADAN's model to implement *tasar* host tree plantations in three villages in Kathikund that same year.

Hundreds of exposure visits have been arranged in the two villages which have inspired almost 1,200 rearers in Kathikund and Shikaripara to take up *tasar* host tree plantation on 18,000 acres of land collectively.

Two villages transformed

The impact of *tasar* on the lives of people in Dhaka and Digalpahari was visible right from the first year. There was a marked decrease in distress migration. Children went to school instead of engaging in agricultural work.

Many people in the community had never earned what they were earning now – Rs 15,000 to Rs 20,000. While Stephen Marandi invested in an insurance policy, Jetha Murmu purchased home-stead land for agricultural expansion and Jewel Hansda and Prem Murmu replaced the straw thatch on their roofs with earthen tiles! Then there were people like Agnes Marandi, Manuel Tudu, Sushil Soren and Parmeshwar Tudu who bought irrigation pump sets, while Usha Kiran Murmu and Budin Hembrom opened their first bank accounts to save for the future.

Life in Dhaka and Digalpahari is different now. Migration is a thing of the past. The young people are confident that the resources created under the project will help them earn for the next 50 years. One also hears that the two villages are receiving more marriage proposals from other villages than ever before!

The people no longer feel the need to collect firewood from the forest or even charcoal – the wood from pruning of the *tasar* host trees are not only enough to meet their fuel needs but help other families too. The plantation guards are regarded highly for their role and contribution in safeguarding the heart of the community's new livelihood.

With PRADAN-promoted self-help groups, the women have found a new voice and are building their own identities. They happily share that they now feel that they are equal members of their community. One of them is Panchayat member Usha Kiran Murmu from Dhaka who is also a proud *tasar* silkworm rearer.

*About 170 acres of land
that used to be barren
are now bringing in
Rs 3.4 lakh to
Rs 16.50 lakh annually
for tasar rearers in Dhaka
and Digalpahari villages*

No more migration & mortgages

For a long time before he took up *tasar*, Nakul Rai of Sadalpur village under Saraiyahaat block in Dumka district of Jharkhand used to frequently migrate for work.

Reeling under debt

With half of his father's seven acres of land either mortgaged or under sharecropping, Nakul and his family had food for just eight months in a year, including food grain from the sharecropping.

After Class V, Nakul quit school (in 1987) and started working at a rice mill in a town nearby, earning Rs 30 along with a small portion of rice from the leftover stock after milling.

Meanwhile, his mother and three sisters worked as agricultural workers for a daily wage of Rs 20. Despite all this, their earnings still fell short and the family had to frequently borrow to make ends meet.

In 2000, Nakul's oldest sister got married and the family funded the wedding by selling trees worth Rs 2,500, mortgaging land for Rs 5,000 and borrowing Rs 8,000 from relatives.

After the wedding, Nakul migrated to Delhi where he worked for two years and saved Rs 10,000 to pay back the money they'd borrowed.



Tasar has helped Nakul Rai invest and increase productivity from agriculture – he has diversified into winter crops which brings in Rs 10,000 annually

Tasar provides respite

After his return, Nakul desperately searched for work and took on any job he could find, from making bricks at kilns to construction labour. Then, in 2004, he learned about PRADAN's work in *tasar* from a rearer, Budhinath of nearby Dhoberna village.

Upon his request, Budhinath arranged a meeting between the people of Sadalpur and PRADAN. Nakul and fellow villagers were eager to take up *tasar*. PRADAN helped them plant *tasar* host trees (*Terminalia arjuna*) on 75 acres of barren land in the village.

During the plantation period, Nakul earned a handsome sum of Rs 10,000 for nursery operation and an additional Rs 5,000 for helping out with other aspects. He was able to pay back the loans and secured his mortgaged land back where he started cultivating paddy, pulses and vegetables during the monsoon season. The same year, he migrated to Delhi once again for four months to earn more money.

With the earnings, he not only got married but also funded his sister's marriage the same year. However, he had spent most of his savings on the two weddings and he started working in brick kilns and as agriculture worker, but not for long.

It was three years since the plantation and the host trees were ready for rearing. Nakul trained with PRADAN and reared 200 disease-free layings (DFLs) to produce 18,000 good quality cocoons, earning Rs 22,000.

Nakul was delighted! He used the money to purchase a pair of bullocks worth Rs 18,000 and pay back a loan of Rs 4,000 that was borrowed during his sister's wedding.

The next year, 2008 onwards, he started rearing 300 DFLs to earn an average of Rs 30,000 per cycle. The table below shows his yearly income and productivity in 2012 and 2013.

| Year | DFLs reared | Good cocoons produced | Flimsy cocoons produced | Gross income <i>Rupees</i> |
|------|-------------|-----------------------|-------------------------|-------------------------------|
| 2012 | 300 | 19,000 | - | 33,000 |
| 2013 | 300 | 20,000 | 2,000 | 37,000 |

Plenty to live on and save too!

With the profits from *tasar*, Nakul was able to buy an irrigation pump-set worth Rs 10,000 and was able to move from the 'monsoon only' cultivation. He started farming wheat, potato, chilli, tomato and brinjal for consumption at home and sale in the local market. Selling of winter crops earned him Rs 10,000 annually.

By 2010, agriculture and *tasar* had become Nakul's main sources of income. Before his youngest sister's wedding, Nakul migrated for a brief three-month period to earn Rs 9,000 for the wedding – he was determined not to mortgage any more land. This was the last time he ever had to migrate.

He combined this earning with his income from *tasar* and agriculture. Nakul's youngest sister got married without the family borrowing a single rupee!

A new house for a new life

By 2014, Nakul had bought 0.12 acres of land worth Rs 10,000 to build a new home and spent Rs 50,000 on its construction. He also bought small livestock. He additionally invested Rs 15,000 on an irrigation well, constructed under the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). Nakul put in the money because he saw that the government funding was not enough to ensure the quality he wanted.

His current investment is large-scale tomato cultivation on 0.62 acres of land. In 2014-15, he made a net income of Rs 50,000 from it.

Apart from material gain and investment, *tasar* has helped Nakul gain skill, capacity and confidence. The 38-year-old has now created a comfortable life for him and his family. His oldest son is in Class I while his three younger children are getting ready for school.

For Nakul and his wife, the education of their children is their topmost priority.

-Md Shamshad Alam, PRADAN

*With over Rs 30,000 earnings from *tasar* alone, Nakul Rai no longer has to borrow money for food or migrate for work*

When *tasar* won over migration!

Like many of his fellow villagers in Bamerjhati under Kathikund block in Dumka district of Jharkhand, Jangli Rai had to resort to frequent migration for a livelihood before PRADAN's disease-free laying (DFL) *tasar* concept came along. From the age of 15 till he was 39, Jangli spent a considerable time working in the distant Northeast Region to support his family back home.

Migrating at 15

Jangli lost his father when he was a teen. By then, their lands had been mortgaged due to their low productivity, to sustain the family. With three sisters and his mother to look after, Jangli dropped out of school after Class III. At age 15, he migrated to Mizoram, where he worked as a road construction worker for a year, earning a measly sum of Rs 180 per month (in 1970). He returned home with a small saving of Rs 210. He combined this with his earlier saving of Rs 300 and got 0.40 acres of their land back.

Cultivating this piece of land provided the family with food for three months, and income from curving out wood logs (with a daily earning of Rs 25) for another four months. The rest of the year, he sold firewood and worked at other odd jobs. The family borrowed as well. "In those days, the moneylenders did not provide cash – they would lend food grains with a 50% annual interest!" recalls Jangli. In 1973, Jangli once again left the village and went to Nagaland this time. He joined work clearing forested areas for road construction. He worked for six months at Rs 365 a month. Afterwards, he was promoted as supervisor and also started building a rapport with the local workers.



*From working on road construction in the Northeast to running his own successful *tasar* and agriculture enterprise, Jangli Rai has come a long way*

Gradually, he invested in a livestock business for additional income. “I didn’t know the language so I would use gestures to communicate,” he says. When he returned home this time, he had a saving of Rs 4,000. He built a new mud thatched house and also purchased a pair of bullocks for Rs 240 (in 1973). He invested the rest on cultivation of paddy, maize and millet.

He wanted to get married now, but he had no money for it. In 1992, he went to Manipur and worked for nine months earning Rs 600 a month. He returned with Rs 12,000 and got married and also funded his sisters’ weddings. He built an additional room within the house, freed two more acres of land from mortgage and purchased three goats. He was able to cultivate 20 quintals of paddy which fed the family for nine months in a year. He also curved out wood logs for Rs 25 a day (in 1993).

A tryst with tasar

In 1994, Jangli tried his hand at *tasar* which was being practiced through traditional methods by two people in Bamerjhati. A major hurdle was procuring the seed cocoons. The three rearers had to travel 100 km away to the Masaliya forest. “We used to leave by midnight, reach there by 7 in the morning and search for cocoons the whole day. It was not easy to find them. We’d then leave by nightfall and be back at the village the next morning,” recalls Jangli. The three gradually scaled up their production, and by 2003, their maximum production was 8,000 cocoons a year which sold at 10 paise per cocoon.

DFL transforms tasar in Bamerjhati

PRADAN started working in Bamerjhati in 1997 with the formation of self-help groups (SHG). In 2000, many water harvesting tanks were excavated which improved the cultivation of pigeon pea, wheat, mustard and chickpea and introduced potatoes (before then, crops were limited to paddy, local mustard, horse gram and millets). In 2003, PRADAN introduced DFLs for *tasar*.

Jangli and some others came on board. After they visited Tasariya village in Godda district to see PRADAN’s work with *tasar*, 15 families signed up. Together, they cleaned the forest plot for the plantation. After being trained by PRADAN, they were supplied with 100 DFLs each, along with nets, sodium and other medicines. Jangli reared his share on 400 host trees spread over 0.8 acres of land and produced 9,000 cocoons. The size of the cocoons was much bigger compared to his earlier ones and he sold them at 60 paise per cocoon that year. The following table presents Jangli’s income and production during 2011 and 2012.

| Year | DFLs reared | Good cocoons produced | Gross income Rupees |
|------|-------------|-----------------------|------------------------|
| 2011 | 200 | 16,640 | 24,960 |
| 2012 | 200 | 14,800 | 26,640 |

Lives changed by tasar

With his income from *tasar*, Jangli freed six more acres of his land from mortgage. In 2005, he procured a pump-set worth Rs 11,000. In 2007, he purchased a pair of bullocks and a cow worth Rs 5,200. The same year, he also invested Rs 19,000 in 0.08 acres of land for horticulture of plants like litchi, banana, coconut and mehgani. Jangli hopes to create his retirement fund from this.

At present, Jangli cultivates SRI paddy on 16 acres of land, producing 30 quintals a year. While 20 quintals ensure food for the year, the remaining 10 are sold for Rs 15,000. With the help of a homestead well excavated under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) and with an investment of Rs 10,000, Jangli is now producing vegetables round the year. The output is enough for yearlong consumption and brings in an additional cash income of Rs 20,000. Every year, Jangli saves Rs 10,000 in the bank.

On account of his expertise and performance, PRADAN also promoted Jangli as a community resource person (CRP) for 70-80 commercial rearers from several villages.

Jangli spends 70 days on *tasar* commercial rearing, his wife helping him during 50 of them, along with 15 to 16 hired help. Jangli's wife keeps a sharp account of the production, selling rate and total income and is lauded by her husband for her accuracy with numbers. Currently, Jangli earns Rs 32,000 annually from agriculture and Rs 20,000 on an average from *tasar*.

The family now lives in a bigger, sturdy house spread over 4,000 sq ft of area. Jangli's older son studied till Class VIII and dropped out as he preferred to help his father with *tasar* and agriculture work. His other two sons, twins, are in Class V.

In the near future, 61-year-old Jangli plans to set up a co-operative with rearers from nearby villages. He says, "Together, we can create our own brand of good quality cocoons which will help us fetch a higher rate, benefitting everyone," he says.

-Brajesh Kumar Ray, PRADAN

"Together as a co-operative, we can create our own brand of good quality cocoons which will help us fetch a higher rate, benefitting everyone," says Jangli

Towards a better life

Durga Charan Sardar of Gopidihi village under Kuchai Block in Saraikella- Kharsawan district of Jharkhand is the third of five brothers. While his family has six acres of land, only three were suitable for agriculture. These three acres yielded enough paddy to sustain the family for just seven months in a year.

Farming at 17

Armed with only a basic education, Durga started farming at the age of 17. He was a natural at farming, turning a barren piece of land near his home into a flourishing vegetable patch. Within a year, he had saved a sizeable sum of Rs 10,000! This money proved very handy during his wedding in 2002 and helped him set up his nuclear family as was the tradition. He used some of his savings to lease in a two and a half acre of land where he cultivate paddy. This yielded about eight quintals – just enough for eight months of subsistence in a year. The deficit was made up by income from the vegetable cultivation. All this still meant he was just able to get by with nothing left to save.

No stranger to tasar

When PRADAN started working in Gopidihi in 2004, Durga was no stranger to *tasar* silkworm rearing. His grandfather used to be a traditional rearer – he'd procure 400 seed cocoons and produce around 2,000 cocoons from them. While Durga's father never continued the *tasar* activity, as he preferred to work in the mines, Durga got a chance to do so with PRADAN.



Tasar has made Durga Charan Sardar's most valued investment possible – his daughter's education

“An initiative to increase host trees by starting new plantations will encourage more people in my village to take up tasar and prosper,” says Durga

In 2004, traditional *tasar* was being practiced by only 10-12 families in Gopidihi. PRADAN made it easy for more people to take it up. After a two-hour training session every day for seven days by PRADAN, 40 families, including Durga, had signed up for *tasar*. They were organised into two *Tasar Vikas Samitis* (TVS). Durga and the others started with 150 disease-free layings (DFLs). Durga produced 2,500 seed cocoons from his share and sold them for Rs 2,500!

PRADAN continued support to Durga and the other rearers. In 2006, Durga was selected by his peers as potential grainage owner and he trained at the Basic Seed Multiplication & Training Centres (BSM&TC) in Kathikund, arranged by PRADAN. During his training, Durga was ranked 2nd among 25 participants for his performance.

Gopidihi's grainage owner

Upon his return, PRADAN supported Durga to set up a grainage centre with grant from the Special SGSY *Tasar* project. He also received 600 seed DFLs which he distributed among three rearers who produced 28,000 seed cocoons. Durga procured all the cocoons for his grainage and prepared 6,000 DFLs. He supplied these to 40 other rearers.

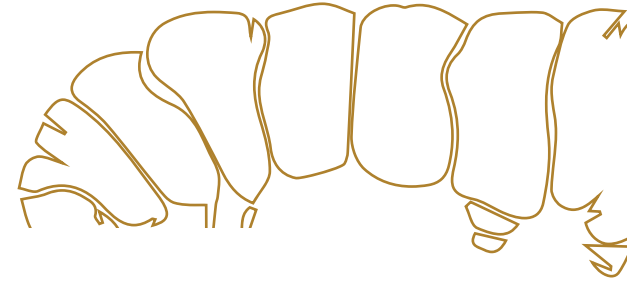
This familiar success story continued till 2011. That year, things hit a stumbling block. In the Paschimi Singhbhum region, farmers practise 'broadcast paddy' which requires constant effort by the farmers, more than in the case of transplant paddy. This, coupled with the lack of host trees in the area, made it difficult for the seed rearers to balance their time with agricultural activities. The grainage operations stopped altogether.

PRADAN quickly stepped in and helped Durga connect with Parmeshwar Marandi, a grainage owner from nearby Sahritola village. This arrangement proved beneficial for both the rearers. Durga continues to procure DFLs from Parmeshwar for himself as well as fellow rearers in the village today.

Better lives

In 2008, Durga earned an annual income of Rs 12,000 just from silkworm rearing, producing 8,000 good cocoons from 200 DFLs. His annual agricultural income from SRI farming is Rs 40,000. In 2009, Durga constructed irrigation well and received a pump set through the Special SGSY project. This has led to better yields from his paddy crop. All this has translated into financial security and a brighter tomorrow for Durga and his family. The 34-year-old now regularly invests in a life insurance policy with an annual premium of Rs 5,000. His prime investment is his daughter's education at Rs 4,000 a year, Durga says proudly. On a parting note, Durga says that an initiative to increase host trees by starting new plantations would help a lot of his fellow villagers replicate his financial prosperity.

-Santosh Kumar Jha, PRADAN



“With my income from *tasar*, I bought new clothes for the entire family – something we had not done for a very long time,” says Jiyalal





A leader of his community

When PRADAN came to his village in 2012, Kesho Rai of Dharofatta village under Poraiyahaat block in Godda district of Jharkhand had had a hard life.

While his two sons were working in Mumbai and West Bengal, respectively, he had taken up stone-crushing and soil excavation. His acre of land yielded food for about seven months in a year. The deficit was managed by the money his sons' brought home and by pawning jewellery. Kesho was 40 then.

Most people in Dharofatta were at first sceptical about PRADAN's proposal to help them take up *tasar* with disease-free layings (DFLs) under the National Bank for Agriculture and Rural Development (NABARD) funded WADI project. Some of them even suspected they were part of land acquisition project by a private company setting up a power plant in adjacent Nipaniya Panchayat.

PRADAN arranged about four meetings followed by an exposure visit to Siktiya village in the same block, where the people of Dharofatta saw PRADAN's *tasar* initiatives. Kesho was among the first few to realise the potential of *tasar* as a livelihood. He was instrumental in getting the other farmers on board.

In the meeting that followed the exposure visit, the people of Dharofatta were ready to start with plantation of the *tasar* host tree (*Terminalia arjuna*). Kesho took the lead among fellow villagers who subsequently chose him as their nursery farmer. Kesho was also appointed as PRADAN's community resource person (CRP) to guide and supervise the plantation work. By 2014, Kesho was making a net income of Rs 50,000 from the nursery.



Thanks to his earnings from tasar, Kesho Rai's agriculture yield now provides yearlong food sufficiency for his family

Managing Dharofatta's first ever tasar host tree plantation, Kesho Rai looks out for every farmer in his village

The following table gives his production and income between 2012 and 2014.

| Year | Arjuna plants supplied from nursery | Income from supply of plants <i>Rupees</i> | Total area under plantation <i>Acres</i> | Service charge & intercropping <i>Rupees</i> | Gross income <i>Rupees</i> |
|-------------|--|--|--|--|--------------------------------------|
| 2012 | 33,500 | 30,000 | 80 | 20,000 | 50,000 |
| 2013 | 90,000 | 81,000 | 188 | 50,000 | 131,000 |
| 2014 | 40,000 | 36,000 | 100 | 14,000 | 50,000 |

Assessing the load of work from *tasar*, Kesho promptly called his sons back home the following year in 2013. He also replaced his mud house with a sturdier brick-and-tiled structure, and purchased a motorcycle.

Kesho's performance with *tasar* and the confidence his community had in him boosted his own confidence. He led the construction of irrigation well and road in his village by mobilising funds under Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) project. He also helped set up water harvesting tank, pump set and sprayer under the project to benefit all farmers.

With his *tasar* earnings, Kesho rented 1.8 acres of land for agriculture and purchased three bullocks and a cow later.

Currently, his agriculture yield provides yearlong food sufficiency and 10-15 quintals of paddy in excess which is sold in the market. Kesho who is 43 today has started a savings bank account now. He is also engaged in Adopted Seed Rearing (ASR) from 200 DFLs.

-Sailender Kumar Chaubey

When the women of Malbhandaro took up spinning

Early struggles

Rekha Devi married at the young age of 15. Her husband, Dharmraj Mandal's family owned 2.4 acres of land in Malbhandaro village in Kathikund block in Jharkhand's Dumka district. They grew paddy, maize, potatoes and chilli on it. But the produce was only enough to feed the family for six months in a year.

Dharmraj migrated to places like Gujarat and Delhi for work a number of times, but always returned because of the high cost of living in the cities. He was unable to save money to send home.

The family also had to borrow heavily to make ends meet. They started to mortgage and sell what little land they owned to pay off these debts. Eventually, after losing a large chunk of their livestock and agricultural land, the family kept one cow from their livestock and gave what land they had left for sharecropping.

Tasar initiates change in the village

In 2003, PRADAN came to Malbhandaro and formed its first self-help group in the village, Laxmi Mahila Mandal. Rekha Devi was one of its 20 members, while Dharmraj who had studied till Class X, was appointed as accountant. Dharmraj migrated to Delhi once more where he earned Rs 2,000 a monthly in a cloth factory. But being taken ill, he returned after three months and decided not to migrate anymore.



With regular income from spinning silk, Rekha Devi helps fund her children's education and has a current saving of Rs 20,000

By 2007, PRADAN had started its livelihood intervention – with improved agricultural practices – with pilot project of Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) in Malbhandaro village. Groomed by PRADAN, Dharmraj worked to inform and motivate the villagers towards the employment programme, earning Rs 4,000 a month for a year from this.

“Working with PRADAN was a turning point in my life. I was motivated to try out the new concept of farming. I’d never seen crops beyond paddy, maize, potato and chili in the village before, and I started cultivating cauliflower, tomato and brinjal for the first time in my life,” says Dharmraj.

After its success with agriculture, PRADAN started talking to the women in Malbhandaro about the prospects of spinning silk yarn as a livelihood option. A number of them were eager to begin because they saw it as an opportunity to become financially independent and become an earning member in their families. By then, the village had a second SHG with another 20 members.

Over a period of 20 days, 25 women from the two SHGs trained with PRADAN in various aspects of spinning silk yarn, such as boiling cocoon, spinning thread, measuring and making bundles. It took as little as three months before all the women could spin A-grade thread!

Rekha Devi and 24 other spinners received spinning machines under the grant and started converting 1,500 cocoons into 1 kg of thread. Enhancing her skill over the years, Rekha can now spin 2-3 kg of thread from 2,000-3,000 cocoons in a month.

Looking at the income earned by Rekha and the others, 22 more women in Malbhandaro village signed up. They received a loan of Rs 5,600 each from the Masuta producers’ company to procure spinning machines. Gradually, more SHGs started coming up in the village with members from almost every household. Malbhandaro currently has eight SHGs.

The women of Malbhandaro take charge of their finances

Nothing shook the determination of these women once they started taking charge of the spinning activities in the village. After Masuta shut down in 2012, Dharmraj who used to be the manager of the village’s spinning centre, started supplying 100,000 cocoons per month to the spinners, with help of a former employee of the company.

The spinners in Malbhandaro have been producing 85 kg of A-grade thread and 5 kg of B-grade thread a month. The highest a spinner has earned in a month is Rs 2,313 from spinning 5,000 cocoons, while Dharmraj has distributed a profit of Rs 31,000 in the village in a month.

With regular income becoming a reality for many of the women in the village, they’ve started saving and are able to fund their children’s education. Rekha Devi has saved Rs 6,000 in her SHG and she received a dividend of Rs 4,000 after an annual audit. Her SHG, Laxmi Mahila Mandal, has a total voluntary saving fund of Rs 70,000.

Rekha Devi has her own bank account as well, with a current saving of Rs 20,000. Both she and Dharmraj have life insurance policies of an annual premium of Rs 3,000 each. They spend Rs 17,000 on the education of their daughter and son.

Rekha now plans to save up to buy some jewellery for her daughter. "I wish I could spend more time spinning. Right now, I manage to spin for 2-3 hours a day alongside my household work," she says.

A little apprehensive about the rising price of cocoons, 30-year-old Rekha is hopeful of support to expand marketing options for the silk yarn so she and her fellow spinners can earn more.

Malbhandaro turns towards social change

Meanwhile, with his financial troubles having eased now, Dharmraj now plans to work on creating better education opportunities for children in the village. He along with fellow villagers is also planning to work against excessive consumption of liquor in the village, while they have already set up a committee to protect the forests and their natural surroundings.

Tasar silk yarn spinning has transformed the lives of women like Rekha Devi, while helping men like her husband, Dharmraj bring about social change in Malbhandaro