



# AN AGRICULTURAL PROFILE

OF THE PAHARIAS OF SUNDAR PAHARI, GODDA DISTRICT, JHARKHAND



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## NOTE FROM THE AUTHOR

The food systems of indigenous communities across the world have historically been characterised by a high degree of self sufficiency with regards to procuring and/or producing food in the regions that they inhabit. In India, many indigenous communities across the country continue to have a rich and diverse diet. They procure a variety of wild and uncultivated food from the forest and other ecosystems in which they live. Several of these communities still carry out a variety of traditional agricultural practices, uniquely attuned to their environments, which provide them with a rich diversity of crops. This diverse diet has helped ensure the health and nutritional security of these communities. The traditional food systems and traditional knowledge of the forest and other ecosystems they live in, has enabled many indigenous communities to overcome, cope with and adapt to harsh and challenging environmental and climatic conditions and events.

The Using Diversity (UD) Network was established in 1996 to promote agricultural biodiversity and stress the importance of uncultivated foods for Adivasi people. The UD network enables civil society groups and community leaders to revive and promote uncultivated foods and traditional mixed cropping systems in different parts of India. The UD Project (2017-20) was aimed at promotion, conservation and sustainable use of traditional agriculture, indigenous crops, crop genetic

resources and uncultivated foods for enhanced food and nutritional security of marginalised Adivasi communities across India. The project was implemented through partner NGOs, CBOs and individuals in different parts of India.

Alongside implementation of a variety of different initiatives like the promotion and establishment of community seed banks, revival of cultivation of traditional crops and planting of uncultivated food plant and trees; the project has undertaken participatory research focussing on the principal thematic areas of the UD network. This series of papers is aimed at sharing the findings of the research carried out in different areas, long term research of partners and experiences working and learning from these indigenous communities.

The traditional shifting cultivation based agricultural system of Kurwa is still the cornerstone of the lives of a majority of Paharia families in the hills of Sundar Pahari. However, this traditional system has undergone much change especially in the last 100 years. This Agricultural Profile provides a detailed investigation of the current agricultural practices of the Paharia alongside historical developments in this regard. It was developed based on experiences working with the Paharia people of 20 villages of Sundar Pahari Block, Godda District, Jharkhand; interactions and discussions with farmers and village elders; observing the variety

of agricultural activities carried out throughout the year; participatory research carried out by me and community fellow Surja Paharia; the knowledge and experience of Soumik Banerjee (UD partner), an independent researcher who has been working with the Paharia for over 20 years.

The aim of this Agricultural Profile is to provide an insight into the traditional agricultural practices of the Paharia, how they have evolved to meet the demands of current times, the multitude of benefits these practices still provide indigenous communities like the Paharia and their continued significance especially in the wake of Climate Change. The paper also explores the various challenges being experienced by the Paharia and presents and encourages discussion on potential mitigation strategies and initiatives to address issues being faced. Most of the themes covered here are applicable to many other indigenous communities who still carry out similar agricultural practices. Our objective is to highlight the benefits of traditional agricultural systems to the communities engaged in them, as well as the larger ecological and environmental benefits in terms of their sustainability and ability to help communities cope with Climate Change; and promote safeguarding, revival and adaptation of these practices in the face of modern challenges.

**Rohan Mukerjee**



## Introduction

The Paharia people probably originated from the present-day regions of North Karnataka (Belgaum, Dharwar and Bijapur) and South Maharashtra (Kolhapur) region and settled in the Rajmahal Hills, currently the Santhal Pargana region of Jharkhand, around 3000 years ago. The Paharias call themselves Male (plural Maler) coming from the Dravidian word meaning mountain, thus the name means hill men.

Paharia legends tell us that they were distributed on all hills of the Rajmahal and were exclusive owners of the land. There are references to Paharia forts and kings. Kachna Surajbera (Litipara block, Pakur) has ruins of such a fort. The Paharia practiced a traditional form of shifting cultivation known as Kurwa on the hill slopes which largely met their food needs; and this was supplemented especially in bad years by wild produce from their forests or through obtaining food from the plains through barter trade on NTFPs, minerals, wood products, cotton and grains.

The dense forests, hills and overall inaccessibility of the region enabled the Paharias to remain isolated and independent from external influence for a considerable period. Even during the Mughal period, the Paharia people were largely independent and were on friendly terms with the rulers.

The arrival of the British posed the first major threat to the self-rule and independence of the Paharias. In the 1770s the Paharia carried out

one of the earliest Adivasi rebellions against the East India company and the British. Despite this resistance being crushed, the Paharia people refused to accept defeat and continued to engage in guerrilla warfare. This continued resistance motivated the British to devise an elaborate scheme for the pacification of the Paharia people which was characterised by the recognition of the Pahariya Governance System. Some remnants of the Paharia governance system that the scheme recognised can still be found in areas that are still inhabited by the Paharia people in Godda, Sahibgunj, Pakur and Dumka districts.

The British tried to administer a revenue system in the region but since there was no settled mode of farming, they found it very difficult. They made considerable efforts to persuade the Paharias to adopt a settled mode of farming, but they refused to do so and continued to pursue their traditional systems that revolved around Kurwa.

With an aim to increase their control over the region in the face of Paharia resistance to the imposition of a revenue system the British turned their attention to the plains, as they had observed that the Paharia people did not



*A view from Kachna Surajbera in Littipara Block, Pakur District, Jharkhand*



leave their hills to occupy the plains below. These lands were cleared and brought under cultivation by the Santhals who the British were encouraging to immigrate to the area. The Santhals from Birbhum were escaping the tyranny of Zamindars in the wake of the Permanent Settlement Act of 1793. The Santhals were given every encouragement to clear the forests and settle in order to make the Damini estate more productive as the Paharia would not take to settled cultivation. The area was opened up by establishing haats, roads, bazaars and inspection bungalows. By 1851, the Santhal population at 82795 comprised 71% of the total population, which not only transformed the population of the region but also altered the resource balance leading to deforestation and completely changed the political scenario of the area.

With increasing encroachment of Santhals into Paharia areas the Paharia people were left with no option but to accept the legal method of revenue demarcation and settlement put forth by the British. By 1916 all the hill areas were settled and brought under private property which was in marked contrast to the earlier custom where land was used based on the needs of domestic groups and the rights enjoyed based on the same. Even today, the forests of Sundar Pahari are privately owned with villagers possessing documents dating back to British rule. The inequality of land divisions and preferences given to headmen had disastrous consequences on Shifting Cultivation which was the primary livelihood of the Paharia people. With reduced acre age,



*A statue of Johra Paharia alias Tilka Manjhi at Gadgamma village. Johra Paharia led one of the earliest rebellions against the British East India Company in the 1770s*

the very nature of shifting cultivation gradually changed from long rotational tree-based fallows to bush fallows with very short fallow periods. This gradual decline in shifting cultivation had serious impacts on the forest ecosystems of the area resulting in their deforestation and decline in their quality. This further impacted the Paharia people as they depended on these forest ecosystems, that had been sustained by

long fallow periods, for a variety of wild food and NTFP both for subsistence and sale.

The 20th Century witnessed the ever-increasing control of markets in the plains over cultivation in the hills which brought with it an increased intensification of resource use, appropriation of products from Paharias at throwaway prices and the subsequent degradation of natural resources and marginalisation of the Paharias.



The post-independence period has seen the ever-increasing influence of traders, middlemen and money lenders in the hills inhabited by the Paharia people, resulting in increasing indebtedness with villagers often being forced to mortgage their land for loans. The market also exerted its influence on the agricultural practices of the Paharia people as well as collection of NTFPs that had commercial value.

The Paharia people currently comprise of three groups – the Sauriya and Mal Paharia which are Scheduled Tribes (STs) and notified as Particularly Vulnerable Tribal Groups (PVTGs) and the Kumarbhag Paharia. As the Kumarbhag Paharia do not have ST or PVTG status they tend to identify themselves as Mal Paharia for government purposes in order to avail benefits available to Mal and Sauriya Pahariya. The fact that currently Godda District is home to only 29871 Paharia people (all three groups) while the Santhal population is 2,24,068 (2011, Census) is evidence that Paharia have been reduced to



*Distribution of seeds for Kurwa sowing in Tattakpara village*



*An abandoned British inspection bungalow at Chandana, Sundar Pahari Block, Godda District, Jharkhand*

a minority in lands that they once called their own. The current Paharia population of Godda district is mostly restricted to relatively isolated hill villages in Sundar Pahari Block where the research for this Agricultural Profile was carried out.

Kurwa still forms the backbone of the Paharia economy; however, it has been modified considerably. It no longer caters solely to subsistence needs, but also to the market in order to generate much needed cash income for the Paharia landowners. The Paharia also practice sedentary agriculture in their Potio Keta/ Badi (homestead plots). As in the past

the Paharia continue to depend on a variety of forest produce for self-consumption needs as well as to provide a valuable additional income. They collect and consume a variety of wild leafy vegetables, fruits, flowers, seeds, tubers, and mushrooms from their forests. They also sell several NTFPs like Mahua flowers for alcohol preparation, Mahua and Kusum seeds for oil extraction, datun and bamboo. They also carry out fishing of a variety of local fish species on a small scale from their hill streams. Livestock rearing on a small scale, comprising mostly cows, bullocks, goats, pigs and chickens, is also practiced by most Paharia families.



## Methodology

This Agricultural Profile was developed based on participatory research carried out in 20 villages in Sundar Pahari Block of Godda District, Jharkhand . The research involved interviews with Soumik Banerjee, a Using Diversity network partner and independent researcher who has worked in Sundar Pahari for over 20 years; review of reports and documents shared by Soumik Banerjee, field visits to the villages in different seasons; community consultations; informal interviews with village elders and men and women farmers; surveys and questionnaires on different aspects of the agricultural practices of the Paharia people, current status of these practices, crop diversity and challenges being faced.

The Agricultural Profile will provide a detailed overview of the major cultivation practices of the Paharia people – the interconnected practices of Jara and Kurwa; and Poti Keta/Badi (homestead plot) cultivation. The overviews are accompanied by Seasonal Activity Calendars of the respective practice. Details of principal crops cultivated by the Paharia is provided in Annexure 2. After an overview of the festivals of the Paharia people associated with Agriculture the profile explores the challenges currently being faced by Paharia households with regards to their agricultural practices. In conclusion we explore current interventions aimed at mitigating the challenges and the way forward.



*Collection of Komo leaves in Ghagri village*



## Agricultural Practices of the Paharia

The Paharia have been practicing Kurwa, their traditional form of shifting cultivation, on the hills of Sundar Pahari even before the first colonisers set foot into these hills. Traditionally they have cultivated a rich mix of crops comprising maize (which is the traditional staple of the Paharia diet), pulses, beans, millets and a variety of vegetables. In the past they used to carry out 1-2 years of mixed cropping known as Kurwa after which the plot was left fallow for the vegetation to regenerate.

In the 1960s Barbatti (Cowpea) became commercially important and traders from the

plains encouraged the Paharia to cultivate this crop on a commercial scale. This brought about a major modification in the shifting cultivation practices of the Paharia people. They started the practice of Jara which involved monocropping of Barbatti, to meet market demand, for one year followed by the traditional mixed cropping Kurwa cultivation for their subsistence requirements, after which the land was left fallow. In Sundar Pahari Block of Godda District, Jharkhand Jara and Kurwa is primarily carried out by Paharia households residing in the hills as depicted in brown in the map on the right.

The Paharia people supplement their production from shifting cultivation by cultivating small



Winnowing of Barbatti in Chamdade village





Jara	Pu-Ma	Ma-Ph	Ph-Ch	Ch-Ba	Ba-Je	Je-As	As-Sa	Sa-Bh	Bh-Ku	Ku-Ka	Ka-Ag	Ag-Pu	Notes
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
<b>Land preparation</b>													
Felling of trees													One or two days after the sowing men fell the large trees using Masdu (Axe), which are left in the plot for the climbers to climb on.
Clearing with fire													
Clearing with tools													Where dibbling of seeds is still carried out, clearing of vegetation is done, by both men and women, a few days prior to sowing using <i>Dawa</i> a sickle for clearing. Where households have switched to broadcasting of seeds clearing is increasingly being carried out on the same day as sowing.
Ploughing													
<b>Seeds</b>													
Sowing													Sowing – From around mid August onwards cowpea, rice bean and velvet bean seeds are sown by men and women who use wooden stakes called <i>Jogi</i> and dibble the seeds. Dibbling is mostly carried out by women. Some farmers have started broadcasting of seeds across their plots.
Seed collection													Around 20% of the crop is set aside for sowing in the next year.
Seed drying and storing													
Weeding													Around 20 days after sowing, when the climbers are around knee height, weeding of the plot is carried out by men and women. They use <i>Kamkudo</i> - weeding sickle.
Harvesting													The crops are jointly harvested by men and women using hands and <i>Kachio</i> - a harvesting sickle.
Processing													
Sorting, winnowing, threshing													They beat the pods and remove the beans using a threshing stick and bamboo winnowing baskets. Mostly women are involved in beating pods and removing seeds.
Storing													<i>Osrá</i> /cowpea is not a major part of their diet so they retain very little for consumption. The portion of the crops retained for consumption are mostly stored in <i>boro</i> (sacks).
Sale													They sell around 80% of the cowpea crop. Rice bean and velvet bean are also mostly sold and their cultivation is expanding as demand is increasing.

Seasonal Activity Calendar for Jara Cultivation



Jara sowing being carried out in Chamdade village

habitation plots known locally as Potio Keta/ Badi where they cultivate mostly Maize and a few other crops including vegetables. They also cultivate a variety of vegetables and horticultural species in and around their habitation.

**Jara Cultivation** - Jara involves of the cultivation of legumes in the first year of the shifting cultivation cycle. While Osrá/Cowpea has been the primary crop, the Paharia people are now also cultivating Kakro/Rice bean and Kursá/Velvet bean as commercial demand for these crops has been increasing. Cowpea, Rice bean

and Velvet bean are primarily a commercial crop, and the Paharia people sell a majority of the production and keep only a small portion for self-consumption and for sowing in the next year. Unlike most forms of shifting cultivation Jara does not involve any burning of the cleared vegetation which is used as mulch and manure for the barbatti crop. Paharias use *Jogi* – a long wooden stake usually made from *Gurso* *Caeseria elliptica*; to dibble the barbatti seeds. *Gurso* wood is preferred as it does not lose its sharpness during dibbling. A day or two after



the sowing the men fell the large trees in the plot. Some valuable trees like Sal and Semul are left to be harvested later. The fallen trees are left in the plot for the plants to climb on. As rain comes the climbers' twine over the fallen wood and undergrowth and spreads over them. Jara is followed by the traditional mixed cropping practice of Kurwa.

**Kurwa Cultivation** - After one year of Jara the Paharia people carry out the traditional mixed cropping cultivation practice of Kurwa in the same plot. Around March the fallen trees of the previous year's Jara are collected in clusters and burnt. However, this burning is very limited and much less than the burning carried out after felling of trees for stand-alone Kurwa which is carried out without one year of Jara. Prior to the arrival of the monsoons the undergrowth



Harvesting of Tialo/Sorghum from a Kurwa plot in Gargama village

	Pu- Ma Jan	Ma- Ph Feb	Ph- Ch Mar	Ch- Ba Apr	Ba- Je May	Je- As Jun	As- Sa Jul	Sa- Bh Aug	Bh- Ku Sep	Ku- Ka Oct	Ka- Ag Nov	Ag- Pu Dec	Notes
<b>Kurwa</b>													
<b>Land preparation</b>													
<i>Felling of trees</i>													Felling of trees for stand alone Kurwa is carried out mostly by men using <i>Masdu</i> (Axe).
<i>Clearing with fire</i>													Fallen trees from previous year's Jara are collected and burnt in March but this burning is very limited. Burning for stand alone Kurwa is carried out in April, though this is rare. Burning of vegetation cleared in May and June is done in June.
<i>Clearing with tools</i>													Towards the end of May, men and women, commence clearing the undergrowth and small shrubs which continues in June. They use <i>Dawa</i> - a sickle for clearing vegetation.
<i>Ploughing</i>													This does not happen in Kurwa
<b>Seeds</b>													
<i>Sowing</i>													With the arrival of the monsoons sowing commences. Sowing is carried out jointly by men and women. The primary seeds are Maize, Pigeon Pea, Sorghum and Rice bean which are dibbled. Dibbling is done with wood stakes known as <i>Jogi</i> . Millets are scattered across the plot. Some vegetables are sown in a separate part of the plot. Sowing is carried out jointly by men and women.
<i>Seed collection</i>													
<i>Seed drying and storing</i>													
<b>Weeding</b>													Men and women jointly carry out weeding using <i>Kankuda</i> - weeding sickle.
<b>Harvesting</b>													They first harvest Maize followed by other crops with Sorghum being one of the last crops to be harvested. Harvesting is mostly carried out by women using hands and <i>Kachia</i> - harvesting sickle.
<b>Processing</b>													
<i>Sorting, winnowing, threshing</i>													Sorting, extracting beans from pods, winnowing, threshing is carried out primarily by women. While for <i>Tialo</i> /Sorghum they use a threshing stick, for other crops they mostly use their feet for threshing. It is pounded with a mortar and pestle
<i>Storing</i>													While ears of <i>Gangi</i> /Maize are hung indoors other crops are mostly stored in <i>bora</i> (sack) for future consumption.
<i>Sale</i>													Sorghum, Pigeon pea and rice bean are also sold in addition to meeting self consumption needs. Maize was primarily for self consumption but is also being sold or bartered for rice.

Seasonal Activity Calendar for Kurwa Cultivation



and shrubs are cleared and burnt in small heaps. The burning for Kurwa is very controlled and is not allowed to spread beyond the plot. Once the Monsoons are in full swing, the Paharias sow a variety of seeds on the cleared hill slopes. Currently the principal seeds sown under Kurwa are Gangi/Maize, Ture/Pigeon pea, Tialo/Sorghum and Kakro/Rice bean. The men and women carry the seeds in gamchas tied around their waist and dibble the seeds using the Jogi. They use one hand to sow Gangi/Maize and Ture/Pigeon pea seeds and the other to sow Tialo/Sorghum and Kakro/Rice bean seeds. The minor millets like Petge/Foxtail Millet, Batwa/Little Millet, Muto/Pearl Millet, and Kodme/Finger Millet are scattered across the plot. They also cultivate a variety of vegetables, other pulses and oil seeds. The crops are then harvested as and when they ripen, usually from end of October to December. After Kurwa the land is left fallow for the re-growth of vegetation and trees. While the fallow period varies, on average it tends to be 3 to 4 years. However, villagers observed that the fallow period has been steadily declining.

**ocial Organisation around Jara and Kurwa Cultivation** - The Paharia people still collaborate with their neighbours to jointly carry out a variety of labour-intensive activities associated with Jara and Kurwa like clearing the plots, sowing, weeding and harvesting. If the plot is small the concerned households carry out cultivation activities themselves with just a few close relatives helping out. If the plot is very large, then community work is carried out for the different activities. The Paharia still follow

the traditional practice of providing meat in return for community labour provided. In return for the labour the villagers get equal portions of meat from a pig or goat that is slaughtered for the occasion by the landowner. Each worker gets roughly 330 gms of meat along with hot broth made from the entrails of the slaughtered animal. Traditionally one member from each village household participates in the community work. There is an egalitarian approach to the community work carried out with it being jointly done by men, women and children. The person who gets everyone together and supervises the work and distributes the meat is called Laga (who is usually a relative of the landowner) and he gets double share for his work. There

is a gradual shift in terms of payment to cash for labour provided though this is still largely restricted to smaller activities, usually when the plot concerned is small and fewer workers are needed.

**Potio Keta or Badi Cultivation and habitation crops**-ThePahariaalsocultivatesmallhomestead plots known as Potio Keta or Badi. These plots are usually plain lands near habitation areas. The Paharia carry out mixed cropping in Badi land after ploughing the land. The land is ploughed three times and then sown with a variety of seeds which usually include Gangi/Maize, Kudrum/Kenaf, Palonje/Cucumber and Ghangri/Small cowpea. The men are responsible for the



*Meat distribution after Kurwa sowing in Nathgoda village*



ploughing which is carried out using bullocks and the women sow the seeds behind the plough when the land is sown for the third time. After the first set of crops are harvested, they cultivate Sarso/Mustard for oil which is used for subsistence and sold commercially as well. The only input used in badis is gobar which is put in the plots all the year around. The Paharia also cultivate a number of supplementary vegetable crops near their habitation, in kitchen gardens and even on their roofs. In addition, they also grow a variety of horticultural tree species like drumstick, jackfruit, mango, tamarind and papaya near their habitation and in and around villages.



Kohonda/Pumpkin growing on a roof in Tatakpara village

	Pu-Ma	Ma-Ph	Ph-Ch	Ch-Ba	Ba-Je	Je-As	As-Sa	Sa-Bh	Bh-Ku	Ku-Ka	Ka-Ag	Ag-Pu	
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Notes
<b>Badi Cultivation</b>													
Land preparation													
Felling of trees													This does not happen in Badi cultivation.
Clearing with fire													This does not happen in Badi cultivation
Clearing with tools													Men and women jointly clear the plot of undergrowth and shrubs using <i>Dawa</i> - a sickle for clearing vegetation.
Ploughing													Ploughing using bullocks is carried out by men and starts before the monsoon. The plots are ploughed three times. A second round of ploughing is carried out for Sarso cultivation in November.
Seeds													
Sowing													Sowing is mostly carried out by women. The first sowing principally involves <i>Gangi</i> /Maize, <i>Ghangri</i> /Small cowpea and <i>Palanje</i> /cucumber. The women drop Maize seeds one at a time behind the plough during the third ploughing. <i>Ghangri</i> and <i>Palanje</i> seeds are broadcast. The second sowing involves broadcasting of mustard seeds.
Seed collection													Some of the small cowpea and cucumber are left to grow old on the plant for seeds for planting in the next year.
Seed drying and storing													
Weeding													and women carry out weeding using <i>Kamkuda</i> - weeding sickle, and collect mud using a spade around the plants. If grass or weeds come up again they are removed by hand or allowed to remain.
Harvesting													Harvesting is jointly carried out by men and women using hands and <i>Kachia</i> - harvesting sickle.
Processing													
Sorting,winnowing, threshing													Mostly women carry out sorting, threshing and cleaning of the crops. Harvested mustard after threshing with a stick is divided into 3 parts – one is for sale, one is for oil extraction by machine for domestic needs and the third portion is dried for 1-2 days and stored for sowing in the next year.
Storing													They mostly use <i>bora</i> (sack) to store produce for future consumption.
Sale													Most of the produce is used to meet subsistence needs. Excess production of Maize and small cowpea are sold. Maize is increasingly being bartered for rice. Cucumber is also sold after meeting subsistence needs. Around 1/3 of mustard seeds production is sold.

Seasonal Activity Calendar for Potio Keta or Badi Cultivation



## Traditional Festivals of the Paharias associated with Agriculture

While a majority of Paharias have converted to Christianity, some households still follow the traditional Paharia religion which involves the celebration of different festivals associated with agriculture.

**Gangi Adiyé** – This is a festival that celebrates Gangi / Maize and it includes pumpkin, banana and cucumber. In October when the maize ripens, they perform the puja. Only after performing the puja do they eat the new Maize and other crops.

**Kosre** (Barbatti) Adiyé and Tialo (Bajra) Adiyé – These pujas involve the worship Barbatti/Cow pea, Tialo/Sorghum, and also include Kakro/Rice Bean and Orho pup (a flower). The Kumar Bagh Paharia worship Kakro/Rice Bean while the Saurya Paharia worship Ture/Pigeon Pea. They commence the consumption of the new harvest only after performing the Puja. Kodme/Finger millet pochai (a form of rice beer) is prepared at the time of the Puja. These pujas are celebrated in the 2nd and 3rd week of January.

## Current Challenges

The shifting cultivation based forest ecosystem of Sundar Pahari has witnessed much change in the last century. With privatization of land, increasing population and the practice of Jara cultivation for Osra/ Cow pea cultivation the intensity of shifting



*Siam Weed*

cultivation has increased substantially, and fallow period has reduced to 3 to 5 years. This has resulted in marked reduction in the diversity and quality of the forests of the region, thereby negatively impacting the availability of different uncultivated and wild foods and NTFPs.

The incursion of an invasive weedy plant – Siam weed, which is currently widespread has had far reaching impacts. Currently the Paharia prefer to carry out Jara and Kurwa in Siam weed patches because it is easier to cut and burn, the leaves of Siam weed are a good manure for the

cow pea crop, and they are also able to reduce their fallow period. Siam weeds other benefits include its medicinal properties, the leaves are used to clot blood from wounds, biochar can be made from it. However, the negatives include its allelopathic effects which prevent other native trees and plants from growing, thereby contributing to forest degradation and loss a variety of local plant and tree species. Siam weed patches are also an excellent hiding place for wild boar which are responsible for considerable crop depredation.



Moreover, the profusion of Siam weed has also impacted the balance of the different agricultural practices of the Paharia. The Paharia people have gradually been reducing Badi (homestead plots) cultivation in favour of increased dependence on Jara and Kurwa. Badis where mixed crops were cultivated on plain lands have become unproductive due to insufficient inputs (chiefly gobar/cow dung) which are essential for good crops. Reduction in livestock, cows and goats, compared to earlier times is resulting in less availability of gobar for the Badis. Increase in invasive species, principally Siam weed, has resulted in reduction in grass and fodder for livestock. Therefore, the villagers cannot support more livestock. The interconnectivity of different activities has meant that an increase in Siam weed which resulted in reduction in grass and fodder for livestock forced villagers to reduce the number of livestock, which reduced availability of gobar for Badi cultivation, which made Badi cultivation unproductive thereby forcing greater reliance on Jara and Kurwa. This forced a reduction in fallow period as land available for Kurwa was fixed. The reduced fallow period resulted in less forest regeneration, less big trees and more Siam weed. Consequently, the availability of several species of uncultivated food plants has reduced substantially. The impact on the availability of a variety of wild tubers, which constituted a vital part of the Paharia diet, has been particularly severe. Since most tubers are climbers, they tend to have a higher yield with the presence of support trees and perform poorly in Siam weed areas, thus the reduction in fallow period and

subsequent spread of Siam weed has resulted in low availability of most wild tubers.

With a shift from a subsistence driven system to one with increasing market dependence, the shifting cultivation system of the Paharia people has undergone much change. As the Paharia have started catering to the needs of the market there has been a reduction in crop diversity with purely subsistence-oriented crops like the minor millets making way for crops with more commercial value like cowpea, pigeon pea and rice bean. Currently, only a hand full of crops are cultivated in Kurwa compared to the large number cultivated in the past. The minor millets like Muto, Batwa, Kodme and Petge have become extremely rare and many families no longer have access to these seeds. In fact, as pointed out by village elder Rameshwar Paharia from Gadsingla village Gundli (a short duration variety of Little Millet) has completely disappeared from the area and other millets are also under serious threat. Also, with rice being made available to Paharia families, through PDS, there has been a sudden shift in their diet away from the traditional staple of Maize to rice. The reduction in crop diversity, shift from maize to rice, and reduced availability of uncultivated foods is resulting in a reduction in the dietary diversity of the Paharia people. This is having far reaching impacts on the overall health and nutrition of the Paharia people.

## Way Forward

In the light of these challenges, the Using Diversity Network is working for the safeguarding and revival of traditional agricultural practices and traditional crops. Efforts are being made to spread awareness about the importance and benefits of traditional crops like Muto/Pearl millet, Petge/Foxtail millet, Kodme/Finger millet and Batwa/Little millet (long duration) that are gradually disappearing from the area. A variety of training programs, interactive sessions and exhibitions of tradition seeds and crops are being held across the region. Community Seed Banks (CSBs) are being established to make a variety of traditional seeds available to Paharia farmers through community seed exchanges within the Paharia community as well as with other communities like the Baiga of MP and Chhattisgarh and the Pahari Korwa of Chhattisgarh. Farmer families of Sundar Pahari have commenced cultivating seeds of a variety of traditional crops accessed



*Distribution of seeds of traditional crops in Bada Palma village*





*Distribution of seeds of traditional crops in Badda Panna village*

through the CSBs and are working towards an expansion of the quantity of seeds available in the bank by contributing a portion of their production to the seed bank.

Aimed at increasing the productivity of Kurwa fallows, and subsequently increasing the fallow period, Soumik Banerjee (UD partner) is promoting Forest Gardens. After 2 years of cultivation in the Kurwa plots, the land is left fallow for 3 - 5 years for regeneration and then again brought under cultivation. However, the minimum optimal time period should be at least 10 years, which has gradually declined and brought in invasive species like Siam Weed (*Chromolaena odorata*) resulting in loss of

biodiversity and nutrient depletion. In order to extend the fallow time period Forest Gardens are being developed through shade tolerant crops like Turmeric, Ginger, Taro, Dioscorea, Elephant Foot Yam, and Small gourd which are being cultivated in the forest fallows to generate additional livelihoods. The fallows are closed for grazing and protected from fires.

Aimed at addressing challenges being faced in the first year of the fallow period, an initiative known as Guided Fallows is being piloted in Kurwa plots of Paharia farmers. In the new fallows Velvet bean, Jack Bean and Sword bean are being sown. This is like live mulching. The aim is to reduce invasive species, promote

conservation of moisture, creation of a suitable microclimate for microbial action, improving soil structure and texture, maintaining soil pH, improving saline soils, preventing soil erosion, protecting soil biota from UV and Cosmic rays, replenishing water table, aiding in germination by maintenance of soil temperature, increasing crop resilience, creating dense root network, reducing excessive heating of soil or deposition of salt in top soil.

With eye to the future there is an urgent need all stakeholders namely the community, civil society and concerned government departments and officials to come together to address the challenges plaguing the traditional agricultural practices and food systems of the Pahria people. There is a need to upscale grass root interventions. This will help facilitate implementation of broad based, holistic strategies like the incorporation of traditional crops and food items in government schemes such as PDS and MDM, and also facilitate smoother implementation of existing schemes and acts.



*Velvet bean in a guided fallow in Chamdade village*



## Acknowledgement

We would like to extend our heartfelt thanks to Soumik Banerjee and Pragya Bajpai for their support in carrying out the research for compiling this Agricultural Profile. We are grateful for the tireless efforts of Using Diversity Network fellow Surja Paharia and community members Leta Paharia, Dharmendra Paharia and Rameshwar Paharia in carrying out and supporting participatory research in project villages. This research would not have been possible without the trust and support of all the villagers who opened their hearts and homes to us across all the villages that were covered, and we extend our heartfelt thanks to all of them.

### Annexure 1







List of Paharia villages in Sundar Pahari Block, Godda District, Jharkhand where the research was carried out:

Sr. No.	Village Name	No. of Paharia Households	Paharia Population	Total Population
1	Tatakpara	32	129	129
2	Cheo	51	202	202
3	Telo	27	107	107
4	Chamdade	40	159	159
5	Nathgoda	58	231	231
6	Ghagri	28	110	110
7	Gargama	51	202	202
8	Bara Paktari	52	209	278
9	Bara Palma	73	290	306
10	Balami	50	200	200
11	Salgama	38	151	151
12	Pertara	68	273	273
13	Porkani	49	194	194
14	Sidhapara	38	151	173
15	Dorio	59	236	236
16	Dalkundi	31	122	203
17	Asripara	13	52	52
18	Chaparbhita	14	55	55
19	Tasgama	40	159	159
20	Charchari	50	198	198
<b>20</b>	<b>TOTAL</b>	<b>861</b>	<b>3430</b>	<b>3618</b>







## Annexure 2

### Principal Crops of the Paharias of Sundar Pahari Block, Godda District, Jharkhand





<p><b>Paharia Name:</b> Osra  <b>Hindi Name:</b> Barbatti  <b>English Name:</b> Cowpea  <b>Subsistence, Commercial or Both:</b> Mostly commercial with farmers selling around 70% of their produce.  <b>Status of Cultivation:</b> Major  <b>Where it is cultivated:</b> It is a major <i>Jara</i> crop and it is grown to a lesser extent in <i>Kurwa</i>.  <b>Seed collection and storage:</b> Cowpea pods are allowed to dry on the plant. In small quantities the dried pods are tied together and hung indoors for future sowing. In large quantities seeds are dried for 2 to 3 days before storing in a <i>bora</i> (sack) for future sowing.</p>		<p><b>Paharia Name:</b> Gangi  <b>Hindi Name:</b> Makka  <b>English Name:</b> Maize  <b>Subsistence, Commercial or Both:</b> Predominantly a subsistence crops with only excess production being sold.  <b>Status of Cultivation:</b> Major  <b>Where it is cultivated:</b> <i>Kurwa</i> and <i>Potio Keta</i> or <i>Badi</i> (Homestead plots)  <b>Seed collection and storage:</b> The biggest and longest ears of maize are set aside for future sowing. These ears are hung indoors over wooden stove or oven in the kitchen.</p>	
<p><b>Paharia Name:</b> Potio Osra / Ghangri  <b>Hindi Name:</b>  <b>English Name:</b> Small Cowpea  <b>Subsistence, Commercial or Both:</b> This is predominantly a subsistence crop with only excess produce being sold.  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> <i>Potio Keta</i> or <i>badi</i> (Homestead plots).  <b>Seed collection and storage:</b> Pods are allowed to dry on the plant. Pods are beaten with a threshing stick to extract seeds which are dried for 2 to 3 days before storing in a <i>bora</i> (sack) for future sowing.</p>		<p><b>Paharia Name:</b> Tialo  <b>Hindi Name:</b> Jowar  <b>English Name:</b> Sorghum  <b>Subsistence, Commercial or Both:</b> This is largely a commercial crop.  <b>Status of Cultivation:</b> Major  <b>Where it is cultivated:</b> <i>Kurwa</i>  <b>Seed collection and storage:</b> They set aside some of the best panicles for future sowing. The panicles are hung indoors.</p>	
<p><b>Paharia Name:</b> Ture/Lahari  <b>Hindi Name:</b> Arhar  <b>English Name:</b> Piegion Pea  <b>Subsistence, Commercial or Both:</b> Subsistence and Commercial. This is predominantly a subsistence crop.  <b>Status of Cultivation:</b> Major  <b>Where it is cultivated:</b> <i>Kurwa</i>  <b>Seed collection and storage:</b> The pods dry on the plant and seeds are dried for 4 to 5 days and stored in a <i>Bora</i> (sack) for future sowing.</p>		<p><b>Paharia Name:</b> Kakro  <b>Hindi Name:</b> Sutri  <b>English Name:</b> Rice Bean  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial.  <b>Status of Cultivation:</b> Major  <b>Where it is cultivated:</b> <i>Jara</i> and <i>Kurwa</i>  <b>Seed collection and storage:</b> Pods are allowed to dry on the plant. Once they dry the pods burst spontaneously dispersing the seed. So, the pods need to be harvested when they are partially dry. The seeds are then dried for 2 to 3 days before storing in a <i>bora</i> (sack) or <i>Kochra/Khusri</i> (traditional seed storage container) for future sowing.</p>	



<p><b>Paharia Name:</b> Petge  <b>Hindi Name:</b> Kaon  <b>English Name:</b> Foxtail Millet  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor with low availability of seeds.  <b>Where it is cultivated:</b> <i>Kurwa</i>  <b>Seed collection and storage:</b> Panicles are set aside for future sowing and hung indoors.</p>	
<p><b>Paharia Name:</b> Batwa  <b>Hindi Name:</b> Kutki  <b>English Name:</b> Little Millet (long duration)  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor with low availability of seeds.  <b>Where it is cultivated:</b> <i>Kurwa</i>  <b>Seed collection and storage:</b> After threshing with their feet seeds are dried and set aside for future sowing in <i>bora</i> (sack). The panicles are also hung indoors for future sowing.</p>	
<p><b>Paharia Name:</b> Muto  <b>Hindi Name:</b> Bajra  <b>English Name:</b> Pear Millet  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor with low availability of seeds.  <b>Where it is cultivated:</b> <i>Kurwa</i>  <b>Seed collection and storage:</b> Panicles are set aside for future sowing and hung indoors.</p>	
<p><b>Paharia Name:</b> Kusa/Kursa  <b>Hindi Name:</b> Kawach  <b>English Name:</b> Velvet Bean  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial.  <b>Status of Cultivation:</b> Medium  <b>Where it is cultivated:</b> <i>Jara</i> and <i>Kurwa</i>  <b>Seed collection and storage:</b> Seeds are set aside for future sowing and dried on tiled roofs for a week and then stored in a <i>bora</i> (sack).</p>	

<p><b>Paharia Name:</b> Kodme  <b>Hindi Name:</b> Madwa/Raji  <b>English Name:</b> Finger millet  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor with low availability of seeds.  <b>Where it is cultivated:</b> <i>Kurwa</i>  <b>Seed collection and storage:</b> Panicles set aside for future sowing are allowed to dry on the plant and are hung indoors.</p>	
<p><b>Paharia Name:</b> Kurthi  <b>Hindi Name:</b> Kunthi/Kurthi  <b>English Name:</b> Horse gram  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> <i>Potio keta / badi</i>. It is grown in second class homestead lands or uplands.  <b>Seed collection and storage:</b> Seeds are set aside for future sowing and without drying stored in <i>bora</i>.</p>	
<p><b>Paharia Name:</b> Kohonda  <b>Hindi Name:</b> Kaddu  <b>English Name:</b> Pumpkin  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> In habitation areas usually on roofs of huts.  <b>Seed collection and storage:</b> Seeds set aside for future sowing are dried and wrapped in leaves (usually Sal) and stored.</p>	
<p><b>Paharia Name:</b> Karla  <b>Hindi Name:</b> Karela  <b>English Name:</b> Bitter gourd  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Kurwa</i> and near habitation, kitchen gardens.  <b>Seed collection and storage:</b> Seeds are dried and wrapped in a leaf (usually Sal) and stored for future sowing.</p>	







<p><b>Paharia Name:</b> Er margo  <b>Hindi Name:</b> Bhindi  <b>English Name:</b> Okra  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio keta/Badi</i>, kitchen gardens and to a lesser extent in <i>Kurwa</i>.  <b>Seed collection and storage:</b> They dry some of the fruits and tie them together and hang them and keep them indoors for future sowing.</p>	
<p><b>Paharia Name:</b> Sarso  <b>Hindi Name:</b> Sarso  <b>English Name:</b> Mustard  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial  <b>Status of Cultivation:</b> Medium  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>  <b>Seed collection and storage:</b> Seeds set aside for future sowing are dried for 1 or 2 days and wrapped in leaves (usually Sal).</p>	
<p><b>Paharia Name:</b> Palonje  <b>Hindi Name:</b> Kheera  <b>English Name:</b> Cucumber  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial  <b>Status of Cultivation:</b> Medium  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>  <b>Seed collection and storage:</b> Seeds of fruit set aside for future sowing are dried and wrapped in leaves (usually Sal).</p>	
<p><b>Paharia Name:</b> Kudrum  <b>Hindi Name:</b> Mesta  <b>English Name:</b> Kenaf  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Medium  <b>Where it is cultivated:</b> Edge of <i>Kurwa</i> and in <i>Potio Keta/Badi</i>.  <b>Seed collection and storage:</b> Seeds set aside for future sowing are dried and wrapped in leaves (usually Sal).</p>	



<p><b>Paharia Name:</b> Mula  <b>Hindi Name:</b> Mula  <b>English Name:</b> Radish  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial.  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio keta/Badi</i> and kitchen gardens.  <b>Seed collection and storage:</b> Seeds are purchased from the market.</p>	
<p><b>Paharia Name:</b> Kokri  <b>Hindi Name:</b> Kokri  <b>English Name:</b> Teasel gourd  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial.  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> It grows on its own in old <i>Kurwa</i> plots.  <b>Seed collection and storage:</b> It grows on its own and they also collect and plant the tubers/rhizomes.</p>	
<p><b>Paharia Name:</b> Lasara  <b>Hindi Name:</b> Jhinga  <b>English Name:</b> Ridge gourd  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation, kitchen gardens.  <b>Seed collection and storage:</b> They set aside some fruits and dry them and keep them for seeds for future sowing. It also regenerates on its own.</p>	
<p><b>Paharia Name:</b> Loldu  <b>Hindi Name:</b> Lauki  <b>English Name:</b> Bottle gourd  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation, kitchen gardens.  <b>Seed collection and storage:</b> They set aside some fruits and dry them and keep them for seeds for future sowing.</p>	








<p><b>Paharia Name:</b> Marcha  <b>Hindi Name:</b> Mirchi  <b>English Name:</b> Chilli  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial  <b>Status of Cultivation:</b> Medium  <b>Where it is cultivated:</b> <i>Potio keta/Badi</i> and near habitation, kitchen gardens.  <b>Seed collection and storage:</b> They make a nursery. They also collect and store seeds after the chilli dries on the plant and seeds are dried for a few days.</p>	
<p><b>Paharia Name:</b> Tisro Batango  <b>Hindi Name:</b> Tamatar  <b>English Name:</b> Tomato  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio keta/Badi</i> and near habitation, kitchen gardens.  <b>Seed collection and storage:</b> They make a nursery and also buy seedlings from the market.</p>	
<p><b>Paharia Name:</b> Para Batango  <b>Hindi Name:</b> Baigan  <b>English Name:</b> Aubergine  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation, kitchen gardens.  <b>Seed collection and storage:</b> They buy seedlings from the market.</p>	
<p><b>Paharia Name:</b> Bora  <b>Hindi Name:</b> Bora  <b>English Name:</b> Yardlong beans  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio keta/Badi</i> and near habitation.  <b>Seed collection and storage:</b> They set aside some pods and dry them and keep them for seeds for future sowing.</p>	


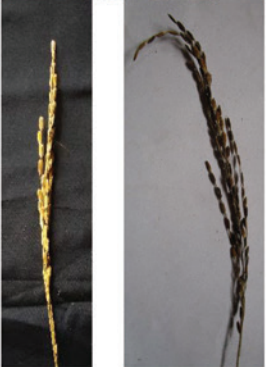

<p><b>Paharia Name:</b> Kundri  <b>Hindi Name:</b> Kundri  <b>English Name:</b> Small gourd  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Border of <i>Potio keta/Badi</i> and near habitation.  <b>Seed collection and storage:</b> They sow shoots and also plant rhizomes.</p>	
<p><b>Paharia Name:</b> Adro  <b>Hindi Name:</b> Chaulai  <b>English Name:</b> Amaranthus  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio keta/Badi</i> and near habitation.  <b>Seed collection and storage:</b> It regenerates on its own wherever it is grown regularly, and they also purchase seeds from the market.</p>	
<p><b>Paharia Name:</b> Balke  <b>Hindi Name:</b> Haldi  <b>English Name:</b> Turmeric  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> Near habitation, kitchen gardens.  <b>Seed collection and storage:</b> It regenerates from the tuber.</p>	
<p><b>Paharia Name:</b> Simbi  <b>Hindi Name:</b> Shim  <b>English Name:</b> Dolichos beans  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation.  <b>Seed collection and storage:</b> They set aside some pods and dry them and keep them for seeds for future sowing.</p>	



<p><b>Paharia Name:</b> Aammi  <b>Hindi Name:</b> Sakarkanda  <b>English Name:</b> Sweet potato  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation, kitchen gardens.  <b>Seed collection and storage:</b> Purchase from the market</p>	
<p><b>Paharia Name:</b> Son  <b>Hindi Name:</b> Son  <b>English Name:</b> Sunhemp  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial. They make sabji from flower and sell seeds.  <b>Status of Cultivation:</b> Medium  <b>Where it is cultivated:</b> <i>Kurwa, Potio keta/Badi</i>  <b>Seed collection and storage:</b> They dry the seeds and store in <i>bora</i>.</p>	
<p><b>Paharia Name:</b> Guzia  <b>Hindi Name:</b> Guzia  <b>English Name:</b> Niger  <b>Subsistence, Commercial or Both:</b> Mostly commercial.  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>  <b>Seed collection and storage:</b> They dry seeds for 2 to 3 days and store in a <i>bora</i>.</p>	
<p><b>Paharia Name:</b> Ramra  <b>Hindi Name:</b> Ramra  <b>English Name:</b> Black Gram  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial.  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>  <b>Seed collection and storage:</b> They dry seeds for 2 to 3 days and store in a <i>bora</i>.</p>	
<p><b>Paharia Name:</b> Garari  <b>Hindi Name:</b> Garari  <b>English Name:</b> Jobs tear  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> <i>Kurwa</i> in the shade.  <b>Seed collection and storage:</b> They dry seeds for 2 to 3 days and store in a <i>Kurchi</i> or <i>bora</i>.</p>	






<p><b>Paharia Name:</b> Til  <b>Hindi Name:</b> Til  <b>English Name:</b> Sesame  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial.  <b>Status of Cultivation:</b> Minor  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>  <b>Seed collection and storage:</b> They purchase seeds from the market.</p>	
<p><b>Paharia Name:</b> Aloo  <b>Hindi Name:</b> Aloo  <b>English Name:</b> Potato  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>, near habitation, Kitchen garden.  <b>Seed collection and storage:</b> Purchase from the market.</p>	
<p><b>Paharia Name:</b> Lasun  <b>Hindi Name:</b> Lasun  <b>English Name:</b> Garlic  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>, near habitation, Kitchen garden.  <b>Seed collection and storage:</b> Purchase from the market.</p>	
<p><b>Paharia Name:</b> Borongo  <b>Hindi Name:</b> Pij  <b>English Name:</b> Onion  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> <i>Potio Keta/Badi</i>, near habitation, Kitchen garden.  <b>Seed collection and storage:</b> Purchase from the market.</p>	
<p><b>Paharia Name:</b> Dhania  <b>Hindi Name:</b> Dhania  <b>English Name:</b> Coriander  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation, Kitchen garden.  <b>Seed collection and storage:</b> Purchase from the market.</p>	



<p><b>Paharia Name:</b> Mattar  <b>Hindi Name:</b> Mattar  <b>English Name:</b> Peas  <b>Status of Cultivation:</b> Supplementary  <b>Where it is cultivated:</b> Near habitation, Kitchen garden.  <b>Seed collection and storage:</b> Purchase from the market.</p>	
<p><b>Paharia Name:</b> Esdu (generic name used by Paharia, for specific variety names they adopt the Santhal names)  <b>Santhal Names:</b> Bhadoari (left) and Hende Bhadoi (Right) are some of the local varieties  <b>English Name:</b> Paddy (Early duration drought tolerant varieties suitable for upland and medium upland areas)  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b> Cultivated in a few villages but rare  <b>Where it is cultivated:</b> In upland and medium upland areas  <b>Seed collection and storage:</b> They keep the panicle or seeds which are stored in <i>bora</i> (sack) or <i>kurchi</i>.</p>	
<p><b>Horticultural varieties</b></p>	
<p><b>Paharia Name:</b> Kathale  <b>Hindi Name:</b> Kathal  <b>English Name:</b> Jackfruit  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> Trees are grown in and around villages and individual habitation and also grow on their own in and around villages and habitation.  <b>Source of planting material:</b> Seeds are retained after consuming the fruit and planted in holes dug at selected locations. It also grows on its own from discarded seeds.</p>	



<p><b>Paharia Name:</b> Sanjhori  <b>Hindi Name:</b> Munga  <b>English Name:</b> Drumstick  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> Homestead plots  <b>Source of planting material:</b> The branch is planted.</p>	
<p><b>Paharia Name:</b> Man Kundo  <b>Hindi Name:</b> Papita  <b>English Name:</b> Papaya  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> Homestead plots  <b>Source of planting material:</b> Seeds from the fruit are thrown in homestead areas and germinate during the monsoons.</p>	
<p><b>Paharia Name:</b> Tatte  <b>Hindi Name:</b> Aam  <b>English Name:</b> Mango  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial. They sell dried raw mango for pickle making.  <b>Where it is planted or where it grows:</b> In and around homestead plots and villages. It also grows wild in forest areas.  <b>Source of planting material:</b> Seeds that are thrown/discarded germinate and grow on their own; saplings from forest department or other nurseries are also procured and planted.</p>	
<p><b>Paharia Name:</b> Chakjo  <b>Hindi Name:</b> Sitaphal  <b>English Name:</b> Custard Apple  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> In and around homestead areas.  <b>Source of planting material:</b> It propagates on its own.</p>	



<p><b>Paharia Name:</b> Nimbu  <b>Hindi Name:</b> Nimbu  <b>English Name:</b> Lemon  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> It is planted in and around habitation.  <b>Source of planting material:</b> Exchange among themselves or procure saplings from outside.</p>	
<p><b>Paharia Name:</b> Kaldi  <b>Hindi Name:</b> Kela  <b>English Name:</b> Banana  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> In and around homestead areas.  <b>Source of planting material:</b> Stem of the rhizome is exchanged between villagers.</p>	
<p><b>Paharia Name:</b> Tetli  <b>Hindi Name:</b> Imlī  <b>English Name:</b> Tamarind  <b>Subsistence, Commercial or Both:</b> Subsistence and commercial  <b>Where it is planted or where it grows:</b> In and around villages and homestead areas.  <b>Source of planting material:</b> It either sprouts on its own or is planted by villagers.</p>	
<p><b>Paharia Name:</b> Ansopari  <b>Hindi Name:</b> Amrut  <b>English Name:</b> Guava  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> In and around homestead areas.  <b>Source of planting material:</b> They procure saplings from outside.</p>	
<p><b>Paharia Name:</b> Otte  <b>Hindi Name:</b> Bel  <b>English Name:</b> Bel  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> It grows on its own in and around villages and to a lesser extent in forest areas.  <b>Source of planting material:</b> It propagates on its own.</p>	

<p><b>Paharia Name:</b> Tisro Chakjo  <b>Hindi Name:</b> Barhar  <b>English Name:</b> Lookoch  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> It grows on its own in and around villages and to a lesser extent in forest areas.  <b>Source of planting material:</b> It propagates on its own.</p>	
<p><b>Paharia Name:</b> Khejri  <b>Hindi Name:</b> Khajoor  <b>English Name:</b> Date  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> It grows on its own in and around villages.  <b>Source of planting material:</b> It grows on its own.</p>	
<p><b>Paharia Name:</b> Talmi  <b>Hindi Name:</b> Tal  <b>English Name:</b> Palmyra palm  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Status of Cultivation:</b>  <b>Where it is planted or where it grows:</b> In and around villages and homestead areas.  <b>Source of planting material:</b> It grows on its own and some also plant it, getting the sapling locally.</p>	
<p><b>Paharia Name:</b> Tute  <b>Hindi Name:</b> Toot  <b>English Name:</b> Mulberry  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> In and around villages  <b>Source of planting material:</b> It grows on its own</p>	



<p><b>Paharia Name:</b> Jambu  <b>Hindi Name:</b> Jamun  <b>English Name:</b> Java plant  <b>Subsistence, Commercial or Both:</b> Subsistence  <b>Where it is planted or where it grows:</b> In and around village as well as in forest areas.  <b>Source of planting material:</b> It grows on its own.</p>	
<p><b>Paharia Name:</b> Ambare  <b>Hindi Name:</b> Amra  <b>English Name:</b>  <b>Where it is planted or where it grows:</b> In and around village as well as in forest areas.  <b>Source of planting material:</b> It grows on its own.</p>	

**Definitions:**

Status of Cultivation:

- Major – More than 2/3 of households are cultivating it on 2/3 or more area of their plots.
- Medium – 1/3 or more of households are cultivating it on 1/3 to 2/3 of the area of their plots.
- Minor – Less than 1/3 of the households are cultivating it on less than 1/3 of the area of their plots.
- Supplementary – mostly vegetable crops grown in Bewara or Badi to meet short term self consumption needs.



### Annexure 3

Hindi Months and corresponding dates of English Calendar

Sr. No.	Short Form	Hindi Month (Name used locally in Paharia areas)	Hindi Month (As per Hindu Lunar Calendar)	Number of Days	Corresponding English Calendar dates
1	Ma	Mang	Magha	30	January 21 to February 19
2	Ph	Phagun	Phalgun	30	February 20 to March 21 / 20*
3	Ch	Chaith	Chaitra	30/31*	March 22 / 21* to April 20
4	Ba	Baisakh	Vaisakha	31	April 21 to May 21
5	Je	Jeth	Jyaistha	31	May 22 to June 21
6	As	Asad	Asadha	31	June 22 to July 22
7	Sa	Sawan	Shravana	31	July 23 to August 22
8	Bh	Bhado	Bhadra	31	August 23 to September 22
9	Ku	Ashwin	Asvina	30	September 23 to October 22
10	Ka	Kartik	Kartika	30	October 23 to November 21
11	Ag	Aghan	Agrahayana	30	November 22 to December 21
12	Pu	Pus	Pausa	30	December 22 to January 20
	Note - * Leap year				





**MISEREOR**  
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