# Improving wage transparency in cotton:

## Key learnings from wage data in Pakistan

October 2025

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CABI

Rural Education & Economic Development Society

Sangtani

WWF

Photo Credit: Better Cotton/Arfa Usman

# Contents



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# Introduction

## Barriers to transparency

Wage transparency has long been a challenge in agricultural production, including in cotton, where key barriers relate to:

- Workforce seasonality
- Labour mobility
- Variable payment structures
- High informality
- Lack of oversight

Absence of data continues to veil the challenges faced, and in obscurity, there is rarely responsibility. Better Cotton Initiative's (BCI) strategic commitment to build wage transparency in cotton production seeks to address this gap.[1]

Photo Credit: Better Cotton/Khaula Jamil

## Our initiative

As part of our efforts, BCI and several of its Pakistan Programme Partners – Sangtani Women Rural Development Organization (SWRDO), CABI Pakistan, WWF Pakistan, and Rural Education and Economic Development Society (REEDS) - launched a targeted initiative to develop and pilot a farm-level wage sampling tool, made possible with support from ISEAL Innovations Fund.

Our main objective was to create a scalable approach for collecting reliable wage data in low and middle-income farming contexts. By testing our tool in Pakistan, we also aimed to take a first step in mapping wage levels across worker categories in a key cotton-producing country with a diverse labour landscape.

1 Better Cotton's Decent Work Strategy

Photo Credit: Better Cotton/Arfa Usman

The project ran from July 2024 to April 2025, and achieved the following:

A farmer survey tool was developed, along with 6 tailored survey tools for workers, covering key labour categories, including:

- Permanent workers;
- Seasonal workers;
- Hourly-rate workers;
- Daily-rate workers;
- Output-based workers (Piece-rate);
- Sharecroppers.

A two-stage stratified cluster random sampling approach was designed to collect data on farm-level wages.

Baseline data was collected in Pakistan from more than 200 farmers and 2,000 workers, across 25% of BCI Cotton Initiative's Producer Units in Punjab and Sindh provinces.[2]

Our wage survey tools were deployed on Commcare - a digital open-source platform - allowing for efficient data collection and standardised sampling across diverse farming contexts.

## Key findings

Our data showed significant variations in wage levels and arrangements among male and female permanent, seasonal, daily wage, hourly and piece-rate workers. It also showed a substantial share of in-kind compensation received by permanent and seasonal workers, amounting to 32% of overall compensation on average.

A common thread is that both male and female workers received well below Pakistan's 2025 minimum wage or equivalent[3] with gaps varying between 41– 62% among different worker categories in both Punjab and Sindh provinces. The gaps from relevant living wage benchmarks[4] were even greater, varying between 60 - 75%, in both provinces.

2 A Producer Unit (PU) is a group of Smallholders (SH) or Medium Farms (MF) who are organised together under a common management structure to participate in the Better Cotton Programme.
3 Depending on worker category or type (e.g., daily wage workers), wage gaps were calculated not solely on the basis of monthly minimum wages, but rather using a pro-rata equivalence that reflects the relevant wage standard for each employment arrangement.
4 WageIndicator Foundation, Living Wage Benchmarks for Punjab and Sindh, 2024.

Gender pay gaps were difficult to analyse in depth considering challenges faced in female sampling. However, for cotton picking, a task in which women workers were considerably involved, gender pay gaps between women and men workers varied between 35 - 68%. This is despite 98% of workers reporting that they perceived wages to be equal across genders.

Our study also demonstrated that smallholder producers employ 4 workers, on average, throughout the season. This challenges common assumptions that smallholder farm labour is restricted to family and non-hired labour. More data insights can be viewed on pp. 10 – 13.

## Cross-sectoral learning

Beyond the baseline data collected, BCI also engaged with 6 other ISEAL member sustainability schemes across 3 learning workshops, building an understanding of current efforts in wage data collection and exchanging learning experiences. Through these dialogues, we identified other common challenges facing sustainability schemes in the agricultural sector, including:

- Difficulty monetising in-kind benefits (e.g., housing, food, transport);
- Misalignment between harvest cycles and fiscal years complicating data collection;
- Farmers and workers fearing repercussions from sharing wage data;
- Strong incentive to conceal wage levels due to legal implications of non-compliance with the statutory minimum wage.;
- Possible discrepancies between data collected from Producer management systems and actual farmer interviews;
- Lack of decent work expertise among data collection teams, who are often agronomists;
- Limited understanding of living wage components (for measurement) at producer and trade union levels.

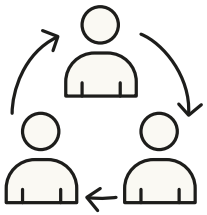
Photo Credit: Better Cotton/Khaula Jamil

While our project was able to address some of these common challenges, managing logistical complexities of data collection in remote and vastly distanced farming areas within a mobile labour context, remained extremely difficult. In particular, the project did not succeed in achieving sufficiently representative sampling from women workers, where further data still needs to be collected, and where lessons can be drawn on the need for purposive sampling strategies to address sample bias.

Nonetheless, the project achieved its core ambition: creating a user-friendly, replicable wage monitoring tool that enables ongoing wage data tracking and supports strategic efforts to improve wages and promote greater transparency, both within and beyond BCI's programmes. Beyond its immediate application, the project contributes to broader sectoral learning and cross-initiative collaboration. By sharing findings with the ISEAL community and other sustainability actors, BCI hopes to support and collaborate with other stakeholders navigating wage measurement challenges in low- and middle-income agricultural contexts, to explore solutions together.

# Methodology

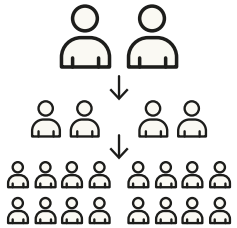
The development and implementation of the wage sampling approach and survey tools in Pakistan followed a structured yet practical approach, designed to ensure relevance and scalability, with a view to ensuring ease of replication for adaptation in other contexts. The methodology was shaped by the project's objectives and informed by targeted stakeholder engagement, background research, and contextual framing.



## Stakeholder Engagement and Design Process

Better Cotton Initiative and four of its Pakistan-based Programme Partners – Sangtani Women Rural Development Organization (SWRDO), CABI Pakistan, WWF Pakistan, and Rural Education and Economic Development Society (REEDS) - were actively involved in the project, from initial design to final delivery. With their support, survey tools were designed to account for local specificities in the cotton production cycle, including related to production tasks and labour categories. Partner field staff were also trained to support with the deployment of the surveys, aiming also to support the integration of wage data monitoring into their data measurement systems.

As part of the project, BCI also created a Learning Circle, composed of 6 other ISEAL members, to stimulate cross-learning on farm-level wage data collection. This included Fairtrade, Bonsucro, Rainforest Alliance, Organic Cotton Accelerator, ASC International, and Fair Labour Association. The group's insights helped to shape the wage survey tool design and methodology, drawing on lessons learned from participant experiences. The design also drew on research into BCI's operational contexts, wage practices in agriculture, and lessons from other countries where BCI is active.



## Sampling Approach

To ensure the data collected was representative and robust, a two-stage stratified random sampling method was used.

In the first stage a random sample of Union Councils [5] (UCs) were selected from within the geographic areas of 24 BCI Producer Units (PUs).

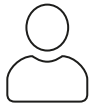
In the second stage, a pre-determined number of paid farm workers and farmers were selected based on key characteristics such as gender, worker category and type of work. This ensured that the survey captured the diversity of labour roles and demographics within cotton farming.

lessons learned

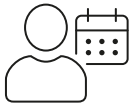
The sample selection presented a challenge for the Better Cotton Initiative and its partners. Given the variety of factors which may affect wage rates for workers, such as gender, age, ethnicity, migration, geographic location and types of tasks performed, achieving representative sampling across all these dimensions is very challenging. Ultimately, key dimensions guiding the research were: representation across worker types, tasks, gender and provinces, even if some were more challenging to achieve.

5 Union Councils are the smallest administrative areas as delineated by the Government of Pakistan.

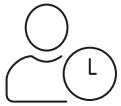
Relevant worker categories selected for the survey are detailed below:



**Permanent worker**
Employed on a continuous, non-fixed term basis or on a fixed term basis of at least 12–months



**Non-permanent (seasonal) worker**
Employed on fixed basis for several consecutive months (3 to 7 months) or covering the entire duration of cotton season.



**Hourly rate worker**
Hired and/or paid per hour of work.

**Daily rate workers**
Hired and/or paid per day of work.

**Output based (piece rate) workers**
Temporary employment in which workers are paid for each unit produced or service performed, regardless of time spent working.

**Sharecroppers**
Tenant farmers who do not own the land they work on, but lease it or take on farm labour, often in exchange for a share of the crop.

The project also mapped the key cotton production tasks performed by workers in Pakistan, these covered:

| Irrigation (for land preparation) | Fertilizer application | Ploughing | Sowing (drill method) | Sowing (dibbling/ chopa method) | Gap filling | Hoeing | Thinning | Crop Irrigation | Fertilization | Spraying | Picking | Stick removal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| The practice of watering a field before sowing seeds, also called pre-sowing | The act of physically putting fertilizer onto the soil | Loosening or turning the soil before sowing seed or planting | Method of planting seeds in rows by drilling small holes in the ground to plant seeds in | Method of making small holes in the ground manually or by using a dibble or planter | Sowing seeds or transplanting of seedlings in gaps where early sown seeds do not germinate | Use of a hoe to remove weeds and break up the surface of the ground | Removing some cotton plants from a field to increase the yield of the remaining plants | The process of supplying routinely water to crops. Various methods of irrigation exist. | The process of supplying nutrients to encourage healthy growth and yield high-quality crop | The process of spraying insecticides, pesticides, fungicides and other preventative treatments | Harvesting of the matured cotton crop | The removal of leftover cotton sticks once a cotton crop has been harvested |

**Other support roles**
Any other miscellaneous or supportive tasks performed are attributed to this category

## Survey Tools

The survey tools were deployed on the Commcare platform allowing for efficient digital data collection and standardised sampling across diverse farming contexts.

The farmer survey explored:

- Section on general farmer information
- Days of waged labour required to perform tasks during different stages of cotton crop;
- What type of labour is engaged;
- Wage structure and rate;
- Payment modalities;
- Other benefits provided by farmers.

The worker surveys included:

- Section on general worker information;
- Employment type (worker category);
- Tasks performed and time worked;
- Wages and in-kind payments received;
- Other relevant points relating to transparency, wage deductions, and wage discrimination.

## Training and survey deployment

BCI's Programme Partner field staff were trained to carry out the survey, ensuring consistency and quality in data collection. Their feedback during training and fieldwork was used to refine the tool and improve its usability. A field monitoring team supported implementation and provided real-time guidance to address any challenges. To ensure a higher probability of access to workers, data collection took place during the cotton harvest, when a higher number of waged workers are present in the field.

Carefully timing data collection to align with labour-intensive stages of production is strongly recommended to increase probability of broad and representative coverage of workers.

lessons learned

## Data limitations

Because the survey used snowball sampling, the findings show the experiences of the people who were interviewed, but cannot be taken as representative of all farm workers. The results are best used to illustrate issues and highlight patterns, not to provide precise statistics for the wider population.

Also, the sample included fewer female respondents than originally intended in the study, which limits the ability to fully understand gendered wage dynamics. Additionally, the diversity of labour categories and tasks within cotton production made it difficult to achieve representative sampling across all worker types, potentially affecting the comprehensiveness and applicability of the findings. The sampling process also relied on farmers' initial identification of workers, followed by snowballing from those individuals. The extent to which this influenced the overall sample composition may have introduced bias.

While snowball sampling helped to reach a large sample of workers overall, it is likely that it amplified the female sample representation challenges since an initially low representation of female workers indicated by farmers, repeated itself across the sample with male workers often nominating more male respondents rather than females. Purposive sampling could help to mitigate this challenge.

lessons learned

A more focused study on a smaller number of worker categories or tasks could help to overcome representation challenges across the vast number of sample characteristics to consider. This is something we will consider in future replication.

lessons learned

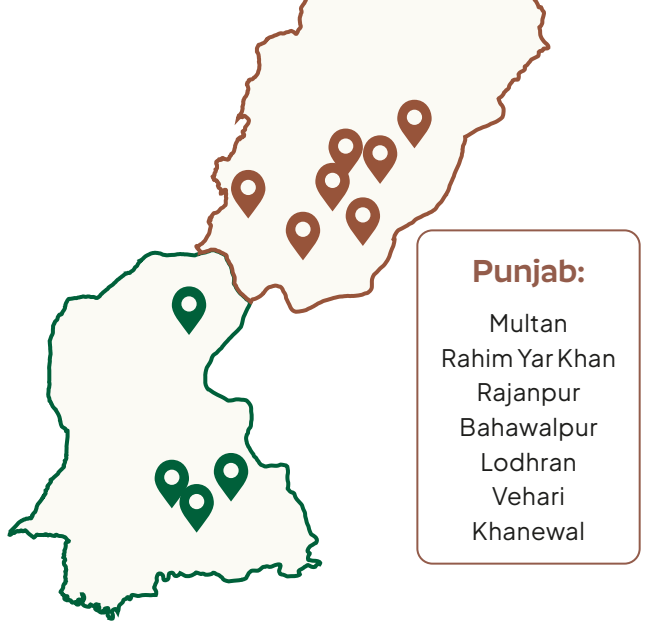
# Our sample

**Baseline wage data was collected from 25% of producer units in Pakistan, surveying 2006 workers and 200+ farmers across 12 districts in Punjab and Sindh.**

## Farmer sample breakdown by province

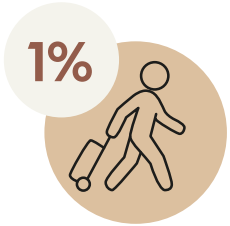
**Punjab: 109**

**Sindh: 93**



**Punjab:**
Multan
Rahim Yar Khan
Rajanpur
Bahawalpur
Lodhran
Vehari
Khanewal

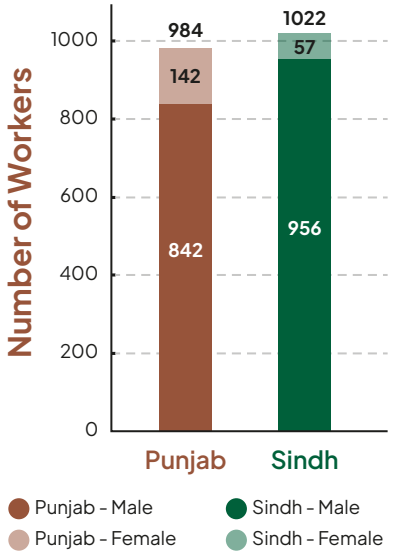
**Sindh:**
Matiari
Tando Allahyar
Sukkur
Sanghar




## Migrant worker representation

Only 1% of the overall sample of workers identified as migrant workers - either from a different province, district or other location

## Worker sample breakdown by province and gender

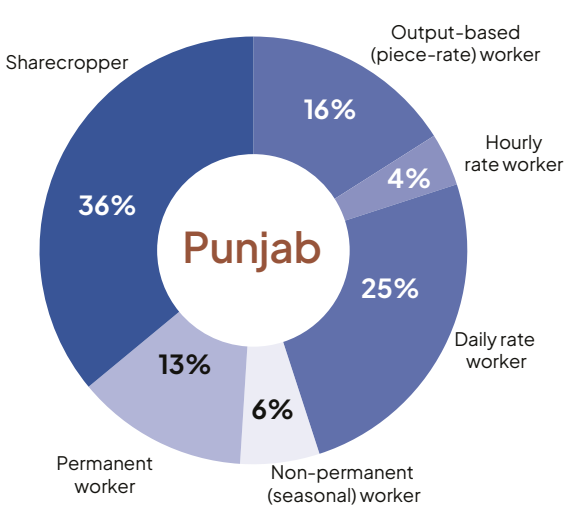


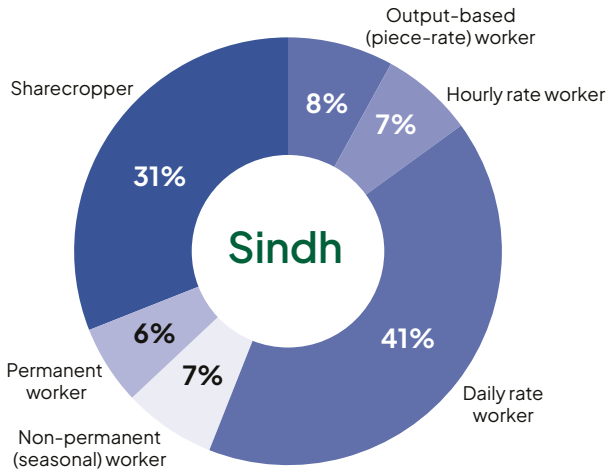


## Average age

The average age of workers across the sample was 35 years old

## Worker sample breakdown by province and labour category



# Wage data insights

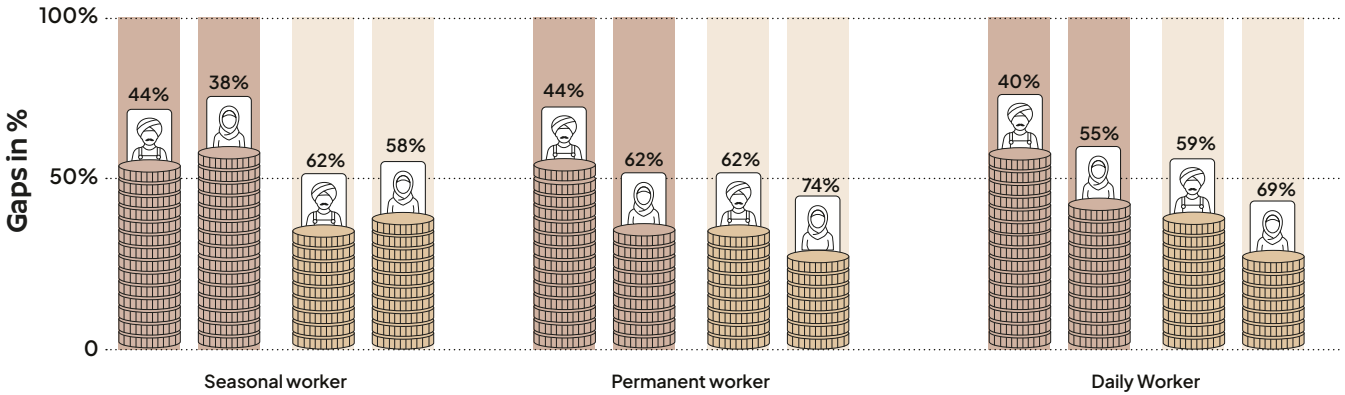
1. Across key labour categories and genders, cotton farm workers are earning significantly below minimum wage, and well below relevant living wage benchmarks[6] for the respective regions. On average, wages recorded in Sindh were lower and therefore, gaps from minimum and living wages were higher in Sindh than in Punjab.

2. Lower wage gaps for daily workers across both genders and provinces can be explained by the fact that wages are benchmarked against minimum wage equivalent amounts per day of labour. Further analysis would be required into the number of days worked to better contextualise the gap.[7]

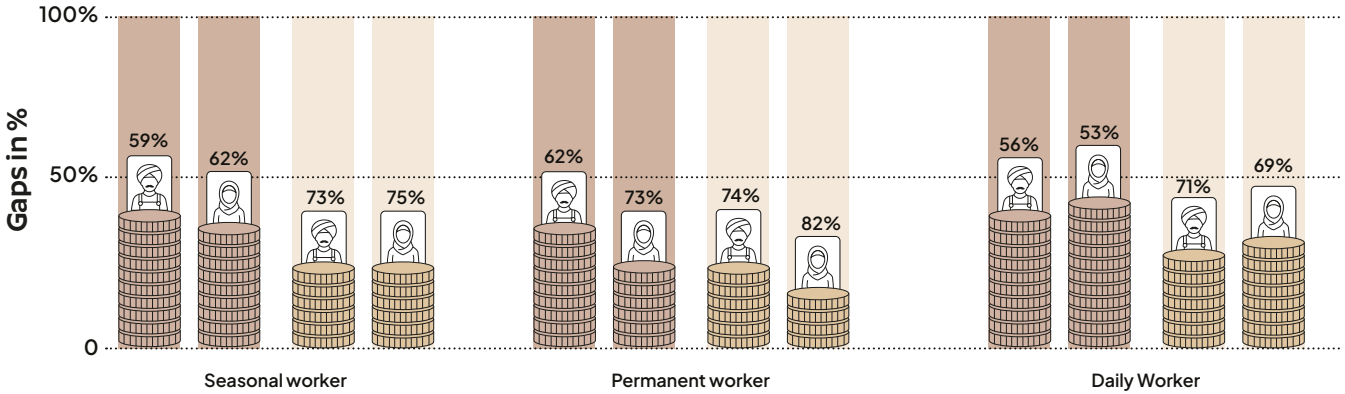
3. Minimum and living wage gaps for female workers were higher than male workers in the case of permanent and daily workers in Punjab, and seasonal and permanent workers in Sindh.

**Punjab**

**How much are workers earning as compared to the minimum wage and the living wage for Pakistan?**




**Sindh**

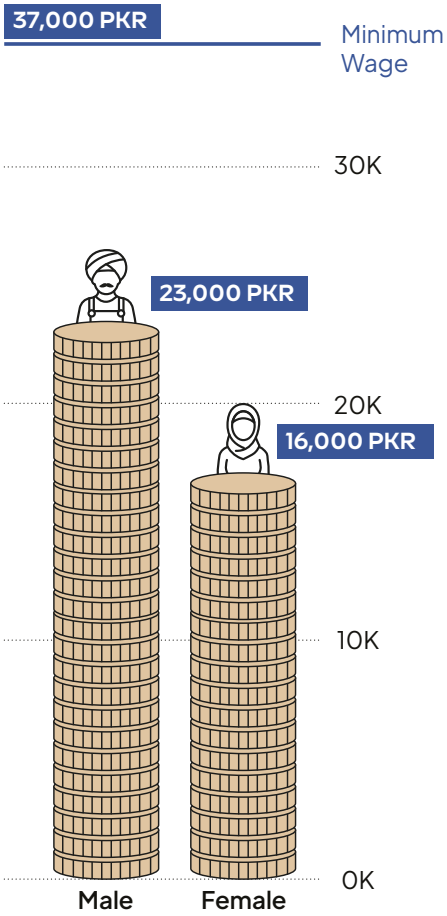



6 WageIndicator Foundation, Living Wage Benchmarks for Punjab and Sindh, 2024. WageIndicator Foundation Benchmarks are calculated as ranges. For the purpose of this gap analysis, the lower bound benchmarks for each province have been applied. A living wage is the income earned in a standard workweek that is enough to afford a decent standard of living for a worker and their family. This includes food, housing, healthcare, education, transport, and some savings, as defined by the ILO and IDH.

7 A new minimum wage was introduced in July 2024 of PKR 37,000. Since data collection for this project took place in October 2024, only 3 months later, gaps to the 2024–25 Minimum Wage are larger than they would have been to the 2023–24 Minimum Wage of 32,000 PKR. Important to note also that minimum wage as of 2025 is not considered legally applicable to the agricultural sector in Pakistan, apart from women workers in Sindh province, who are covered under the Sindh Women Agricultural Workers Act of 2019. However, both Minimum and Living Wage gaps shed light on the vulnerability of farmworkers in Pakistan, including through their informality and absence of legal protections.

Due to the sampling method used, and the sample sizes, definitive conclusions are hard to make for data disaggregated by gender (see 'data limitations' on page 8 for more information).

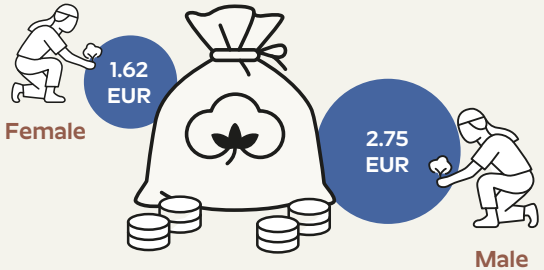
## Permanent Workers across Provinces: Average Monthly Remuneration by Gender (Wages + In-Kind)




4 In the permanent worker category average wages for men were 23,000 PKR while average wages for women were 16,000 PKR. The gender pay gap among permanent workers suggests that for every 1 EUR earned by men, women workers earned 0.70 EUR cents.

5 Gender pay gaps for key tasks in which women are involved were present across our data. For example, in cotton picking, women earned 37% less per maund of cotton picked compared to men.

### Cotton picking (piece-rate) by gender, wages per maund




46% Women's highest representation in the output-based labour category (46% of sample) highlights their specific vulnerability, with piece-rate workers being at greater risk of wage deductions. Piece-rate labourers are especially vulnerable because their earnings fluctuate significantly, due to their dependence on output, and can result in unfair wage deductions. Workers often forgo rest or safety to meet output targets, increasing risk from heat, injury or exhaustion.

6 Women's daily rates in cotton picking were slightly more equal, with the gender pay gap reducing to 5%.

7 While the data was not able to capture pay differentials between migrant and local workers, at least 8% of respondents were not sure or agreed that there were differences in pay based on religious background, with circa 2% explicitly agreeing that migrant workers were paid less than local workers.

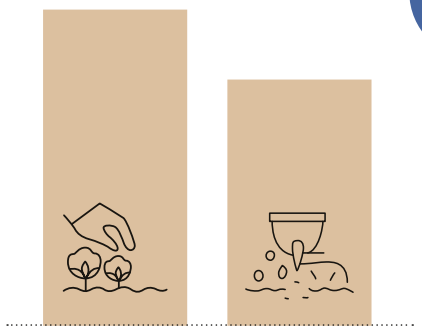
10%

### Wage deductions

At least 10% of workers (mostly women) involved in cotton picking reported wage deductions, mainly, 'picking deduction', 'middlemen deduction' and 'quality of cotton picked'.

24% In hoeing, the gap between women and men's daily wages averaged 24%, with women earning 0.76 EUR cents for every 1 EUR earned by men.

## Daily wages for highest and lowest paying tasks




8 Generally, daily wages for both male and female workers across production tasks in both provinces were extremely low, ranging between 1.66 EUR per day for sowing (using the drill method), which was the lowest paying task and 2.33 EUR per day for picking, which was the highest paying task. The daily rates for all production tasks place the cotton farm workers below the extreme poverty line definition of 3 USD, i.e. 2.57 EUR per person, per day.

9 Picking excluded, our data showed that workers who owned their own tools tended to receive higher wages, which can serve as a fairly practical and actionable insight in terms of BCI's programmes, and providing wider and more equitable access to tools.

10 Most male and female workers reported being paid upon task completion.

## Average daily wage rates by task

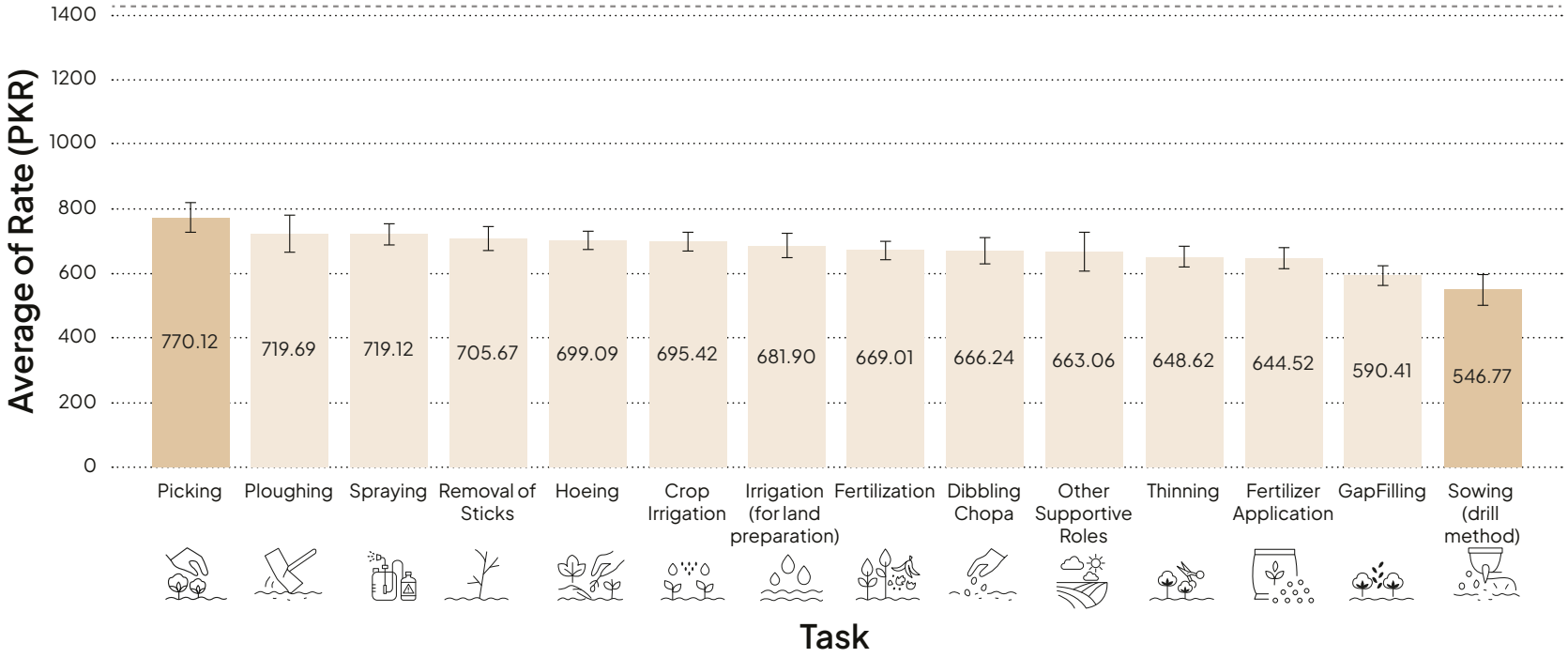
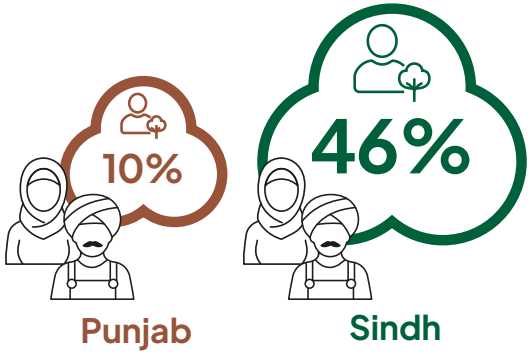


Photo Credit: Better Cotton/Khaula Jamil

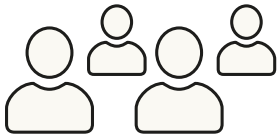
11 Workers received a significant proportion of non-monetary compensation, with average shares of in-kind contributions amounting to 32%. In the most extreme case, in-kind contributions amounted to up to 73% of total compensation, which leaves workers vulnerable to exploitation, with limited access to cash and financial autonomy. In-kind compensation such as food and grains represented the greatest monetary contribution to workers. Other contributions also included contributions to utilities and health costs, fodder and accommodation.

12 For sharecroppers, there was notable variance in the share of crop received as compensation from landowners, based on province. In Punjab, the average share of produce was 10%, while in Sindh it averaged 46%.

**Sharecroppers: share of crop received, by province**




13 Challenging common assumption of reliance only on family labour, smallholder farmers reported employing, on average, **4 workers** for cotton production throughout the year.



"Limited cash payments leaves workers vulnerable to exploitation and reduces their financial autonomy."

Photo Credit: Better Cotton/Khaula Jamil

# Challenges and Opportunities

Testing the tools developed as part of this study has been a valuable first experience in collecting wage data for BCI. Through the experience, we faced many difficulties, from running against the clock to align data collection with harvest – the peak labour period – to struggling with achieving desired sample representation for women and migrant labour. Navigating these challenges helped us to identify some key lessons and recommendations for other stakeholders embarking on similar endeavours.

## Lessons and recommendations

- Working with local partners to map the labour categories and production tasks was a highly valuable exercise. Both labour categories and production tasks can vary across geographies, so local contextualisation is key.
- While collecting wage data from all relevant labour categories and across all production tasks helped to give more global insight into wage differentials and practices across multiple dimensions, we could also see the value in considering to focus on a smaller subset of vulnerable labour categories and key production tasks, to ensure more representative sampling and in-depth understanding across these.
- Communicate clear sampling targets for women workers and other vulnerable labour categories to your data collection team, and ensure equal representation of women in the team. Similarly, consider measures to ensure equal access to data collection training for women data collectors.
- Ensure adequate time ahead of peak labour periods for tool field testing, debriefing and refinement. The crop cycle does not wait, so leaving ample buffer time can help!

- Triangulating worker and farmer data was an effective approach though could be further improved by ensuring more balanced sample targets across both categories.
- The importance of collecting wage data from workers directly cannot be overstated. Our data clearly showed that farmers overreported wage levels by 1000 – 2000 PKR, compared to wage data from workers.
- Snowball sampling can help to reach a highly mobile labour population, but can reinforce sampling representation challenges if initial sampling is male-dominated.
- More spot-checks for data quality and ensuring data collection protocols and sampling targets were being followed could have helped to address some issues.
- Asking workers and/or data collection teams to monetise in-kind benefits in the survey process, led to some data outliers and was less efficient.

# Opportunities for collaboration

Photo Credit: Better Cotton/Khaula Jamil

Monetising in-kind benefits was highlighted as a common challenge among Learning Circle members. This was experienced within the scope of the study as well. A possible opportunity for collaboration among members could be to explore common geographies and monetising in-kind compensation through economic indices. These could be established and updated periodically.

Building insights and sharing wage data across agricultural commodities could support collective action and advocacy related to labour protection for informal worker segments, as well as living income and living wage advancements.

Continued spaces for learning and dialogue on this topic are important, given its complexity, and can help to move us forward.

# The road ahead: beyond transparency

Wage transparency is a cornerstone of BCI's Decent Work Strategy, and this pilot marks a critical step forward in unveiling the opacity and misconceptions surrounding farmworker wages. By establishing a reliable and scalable wage sampling tool, we have laid the groundwork not only for improved data collection but also for meaningful action to support wage improvements across cotton-producing communities.

The insights generated through this study offer clear pathways for targeted interventions. For example, data shows that workers who own their own tools tend to earn higher wages, suggesting that farm asset distribution may be a more effective livelihood support strategy than more common approaches such as sewing kits or apiculture. Additionally, the role of labour brokers has emerged as a key area of concern, with evidence of unfair wage deductions. Addressing these practices will require direct engagement with brokers, alongside efforts to strengthen worker rights awareness, support worker organisations, and promote collective bargaining.

Looking ahead, BCI is committed to refining and further testing the wage monitoring tool. This includes adapting it to other contexts. Plans are already underway to conduct baseline studies in other countries, ensuring that wage transparency becomes a global standard across our programmes.

Scaling up is a central priority. We aim to extend wage monitoring across different farm categories and sizes, enabling us to capture wage dynamics in different farming contexts. To support this expansion, BCI will disseminate global guidance on wage sampling and build its partner capacities to implement wage monitoring effectively and consistently.

Ultimately, this initiative for us is about more than data - it is also about driving change.

We know that change doesn't just start with workers. Smallholders represent more than 90% of cotton farmers globally, facing poverty and deeply entrenched structural inequalities. Beyond smallholders, farmers around the world face multiple challenges, not least due to climate change pressures and related losses. This altogether contributes to the high vulnerabilities experienced by cotton producing communities.

By embedding wage transparency into our Decent Work Strategy and aligning it with broader sustainability goals, we are aiming to foster the conditions for fairer, more equitable agricultural labour systems. The road ahead is ambitious, but with continued multi-stakeholder collaboration and commitment, we can move from understanding wage challenges to delivering tangible improvements for cotton farm workers worldwide.

"Plans are already underway to conduct baseline studies in other countries, ensuring that wage transparency becomes a global standard across our programmes."

Photo Credit: Better Cotton/Khaula Jamil

We would like to express our sincere gratitude to the following individuals and organisations for their valuable contributions and support on this project:

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- Karina Peña - Fairtrade
- Jayne Hulsebosch - Rainforest Alliance
- Rafael Seixas - Bonsucro
- Jean Johnson, then Annabel Mulder - Aquaculture Stewardship Council
- Rozenn Richardeau - Organic Cotton Accelerator
- Syed Azaz Mehdi - Organic Cotton Accelerator
- Gina Villarreal - UEBT

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