

THE NEW GREENHOUSE-IN-A-BOX IMPLEMENTED BY THE KHEYTI ENTERPRISE IN INDIA

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The [Kheyti start-up enterprise from India](#) was [recognized with the Lipman Grand Prize 2026](#) at the University of Pennsylvania (United States), that celebrates leadership and innovation in the social sector with an emphasis on impact and transferability of practices.

[The Lipman website underlines that Kheyti enables smallholder farmers in India to build climate-resilient livelihoods through affordable agricultural innovation.](#)

Their *Greenhouse-in-a-Box* protects crops from pests, heat, and erratic rainfall while dramatically increasing yields and conserving water. Combined with training, financing access, and market linkages, Kheyti helps farmers move from subsistence survival to a stable, dignified income.

India is home to over 100 million smallholder farmers who own less than five acres of land and make up 85% of the farming population. While they produce the majority of India's food, many earn little to nothing from agriculture, with incomes that are highly seasonal and unpredictable. They live in deeply rural areas with limited access to resources.

Kheyti provides smallholder farmers with a complete solution to grow more with less risk. They design and distribute their hallmark *Greenhouse-in-a-Box*, a low-cost, modular greenhouse that protects crops from weather and pests while improving productivity. This technology is coupled with end-to-end support services, including agronomy training, a dedicated field officer to provide ongoing and timely guidance, and market insights and linkages that help farmers generate a stable income throughout the farming cycle.

Kheyti has grown from 1,317 cumulative greenhouse installations in 2023 to 5,854 in 2025. Median additional income per farmer increased from \$144 to \$292 annually, with average income rising to \$420. By 2025, 58% of farmers earned over \$250 per year from greenhouse cultivation.

An independent evaluation across 1,698 farmers showed that greenhouse users earned over three times more net income per unit area than non-users, reduced crop loss by over 50%, and improved water-use efficiency by nearly 200%. Cumulative water savings rose from 1.2 billion liters in 2023 to nearly 6 billion liters in 2025. Greenhouse costs declined from \$756 to \$665, improving affordability while sustaining economic returns.

[The Lipman Prize recognized the Kheyti innovation by considering the following key criteria:](#)

- *Leadership.* Kheyti is the only social enterprise offering a full-service greenhouse solution specifically for smallholder farmers,



equipping them with tools, services, and confidence to succeed in the face of climate and economic uncertainty. They're setting an example for how combining protective farming technology with personalized, practical support can help smallholder farmers improve their livelihoods.

- **Impact.** Kheyti demonstrates clear proof of concept: fivefold growth in installations over three years, rising median incomes, and billions of liters of water saved. An independent experimental evaluation confirms income tripling, a 50% crop loss reduction, and significant efficiency gains, validating both economic and climate resilience outcomes.
- **Innovation.** Kheyti reengineered proven traditional greenhouse technology to be modular and affordable, reducing costs by 90% through iterative design and making climate-resilient farming accessible to smallholders. Their innovation lies not only in infrastructure but also in bundling advisory, input supply, financing access, and market intelligence into a farmer-centric, behavior-informed service model.
- **Transferability.** Validated across multiple Indian states and diverse agro-ecological zones, Kheyti's model demonstrates adaptability within climate-vulnerable farming systems. Its affordability-driven design, hybrid human-digital advisory structure, and government partnership integration provide a replicable framework for advancing smallholder resilience in other low-resource agricultural contexts.

[The Kheyti website](#) highlights that Kheyti's Greenhouse-in-a-Box is a solution that doubles farmers' incomes, protects crops from climate hazards and pests, and saves up to 90% of water and fertilizers. The website presents the following results of the Greenhouse-in-a-Box:

- Implemented in 8 Indian states: Telangana, Andhra Pradesh, Uttar Pradesh, Bihar, Jharkhand, Odisha, Rajasthan, and Madhya Pradesh.
- More than 20 vegetables, herbs, fruits and flowers cultivated.
- More than 7,000 farmers involved in the implementation.
- 73% increase in farmer income; 58% lesser crop loss; 10x labour productivity; 67% less water use; 70% less fertilizer use.

The greenhouse provides the following functions:

- **Temperature control:** Protects crops from the extreme heat of the sun; reduces heat inside the net house by 3–5°C.
- **Wind and rainfall resistance:** Shields crops from storms and unpredictable rains; withstands high-speed winds of up to 100 km/h.
- **Pest protection:** Prevents pests from reaching the crops; reduces pest infestations by up to 90%.

The Greenhouse-in-a-Box ecosystem is available in 10 variants, enabling farmers to grow more than 20 vegetables, herbs, fruits, and flowers profitably. Covering a minimum of 240 m², it is the most affordable net house on the market. It shields crops from pests, climate risks, and water wastage, ensuring abundant, high-quality yields with savings on labour and inputs. With variants spanning up to 1,600 m², every Greenhouse kit is comprehensive, convenient, and steadfast, and comes with a complimentary year-long agronomy advisory support service.

The Kheyti social enterprise offers Agronomy support to the farmers involved in the implementation of the greenhouse, enabling them to adapt to it for the best outcomes. To ensure a smooth transition from open-field farming to greenhouse farming, they offer one year of free agronomy support to each farmer. Their on-field representatives and online advisory team work together to engage with the farmers and guide them on their way to climate-resilient farming.



In 2022, the Greenhouse-in-a-box was awarded the Earthshot Prize for helping smalholder farmers reduce climate risk and increase yields. Today, 1,000 farms have a Kheyti greenhouse, but by 2027, Kheyti wants 50,000 farmers to have a Greenhouse-in-a-Box. Since winning the 2022 Earthshot Prize, Kheyti has doubled its team and now has access to hundreds of thousands of farmers. In particular:

- To scale its solutions to reach 10,000 farmers over the next two years, Kheyti has invested the Earthshot Prize money into its product, technology, market, and service strategy. This includes projects to further reduce the cost of the greenhouse and improve its efficiency, create a marketing function, build a sales channel, and set up a franchise model
- In 2023, Kheyti installed five times as many greenhouses as the previous year, the size of the team doubled, and income also almost doubled. Part of this growth is due to its new partnership strategy. Beginning with no partners the year before, Kheyti is now working with 16 NGO partners in India, with access to over 200,000 farmers.
- Kheyti greenhouses saved 2.5 million tonnes of water in 2023 compared to conventional farming methods. This is over three times more than they saved in 2022 and over six times more than in 2021. It has also reached almost 1,700 new smallholder farmers, more than three times the number reached across 2021 and 2022 combined.
- *Arup* is supporting the Kheyti team with product design to reduce the capital cost of the greenhouses, while *Deloitte* has provided advice on strategy development. The *Aga Khan Foundation* is bringing the solutions to farmers it works with in India and subsidising the project. Thanks partly to the support received, Kheyti has launched its cheapest greenhouse yet.

To know more

[Kheyti.com website](https://kheyti.com)

[Kheyti.org](https://kheyti.org)

[Article in Lipmanfamilyprize.wharton.upenn.edu](https://lipmanfamilyprize.wharton.upenn.edu)

[Kheyti winner in Earthshotprize 2022](#)

[KheytiFarmers in Facebook.com](#)

[Kheyti in thebetterindia.com 2026](#)

[Kheyti in thebetterindia.com 2023](#)

[Kheyti in maricoinnovationfoundation.org](#)

[Kheyti in Wikipedia.org](#)

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[Newsletter2 2026](#)

