



Sahbhagi Dhan

Empowering Bihar's Farmers against Drought

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Introduction

In the agrarian landscape of Bihar, India, where rice cultivation is a lifeline for millions, the advent of Sahbhagi Dhan marks a significant stride towards resilience in the face of drought. The "Sahbhagi Dhan" initiative in the state of Bihar introduced stress-tolerant rice varieties that are better suited to the flood-prone areas of the region. These varieties were selected based on their ability to withstand submergence and recover after flooding

events. As a result, farmers experienced reduced crop losses and improved food security, showcasing the impact of choosing the right seeds for local conditions (Pathak et al. 2023) [3]. This introduction aims to shed light on the paramount importance of Sahbhagi Dhan, not only in safeguarding farmers' livelihoods but also in fostering agricultural sustainability amid challenging climatic conditions. The vulnerability of traditional rice varieties to

drought has long been a concern for farmers in Bihar, where erratic rainfall patterns and water scarcity pose formidable challenges. Sahbhagi Dhan, developed through meticulous breeding efforts, stands as a beacon of hope for agriculturists facing the unpredictable impacts of climate change. Its resilience to water stress not only ensures a more stable yield but also provides a buffer against the economic uncertainties that drought-prone regions often experience. This rice variety's

significance extends beyond immediate yield considerations. Sahbhagi Dhan plays a pivotal role in enhancing the overall sustainability of agriculture in Bihar. By offering a viable alternative that aligns with the region's climatic challenges, it reduces the reliance on water-intensive farming practices. This, in turn, contributes to the conservation of water resources and mitigates the environmental impact associated with excessive water usage in Agriculture.

2. Dissemination and Adoption of Sahbhagi Dhan

The successful dissemination and adoption of Sahbhagi Dhan among farmers in Bihar have been orchestrated through a concerted effort involving diverse channels, ranging from non-governmental organizations (NGOs) to governmental initiatives and farmer-to-farmer networks. This section illuminates the collaborative endeavours that have propelled the widespread recognition and acceptance of Sahbhagi Dhan, emphasizing its pivotal role in fortifying resilience against drought and augmenting food security.

Non-governmental organizations (NGOs) have played a crucial role in bridging the gap between agricultural innovations and farmers in Bihar. Collaborative initiatives between NGOs and agricultural research institutions have facilitated awareness campaigns, training programs, and on-the-ground support, disseminating information about the benefits of Sahbhagi Dhan. These efforts not only educate farmers about the unique features of the drought-tolerant rice variety but also provide them with the

necessary resources for successful adoption.

Government initiatives have acted as catalysts in promoting Sahbhagi Dhan as a cornerstone of sustainable agriculture in Bihar. Subsidies, incentives, and extension services have been strategically employed to encourage farmers to adopt this resilient rice variety. Policy measures addressing seed accessibility and affordability have further streamlined the integration of Sahbhagi Dhan into the agricultural practices of the region. The farmer-to-farmer network has proven to be an organic and effective means of disseminating Sahbhagi Dhan. Farmers who have experienced the benefits of this drought-tolerant variety firsthand become ambassadors for its adoption within their communities. This peer-to-peer approach fosters trust and a sense of shared experience, accelerating the diffusion of Sahbhagi Dhan across diverse agricultural landscapes in Bihar.

3. Yield Performance and Farmer's Experiences

Sahbhagi Dhan has been found to exhibit better performance over existing rice varieties grown by farmers, even under non-drought conditions. Evidence from

field trials and farmer testimonials has demonstrated the positive impact of Sahbhagi Dhan in ensuring food security and sustaining agricultural livelihoods

during periods of water scarcity. There are some study has been shown given below to judge yield performance and farmers experience as evidence:

1. A study conducted in Eastern India found that Sahbhagi Dhan remained unaffected by a severe drought spell of 35 days, while other varieties like Moti and Damini got affected even after 4-5 irrigations. Sahbhagi Dhan yielded 4.5 t ha⁻¹, while Moti and Damini produced only 1.2 t ha⁻¹ and 1.5 t ha⁻¹, respectively. Early harvesting of Sahbhagi Dhan also ensured a longer period for vegetable cultivation in the dry season.
2. Evidence from randomized control trials in Eastern India has shown that Sahbhagi Dhan enabled farmers to cultivate crops after Kharif and become less vulnerable to crop shocks. While the average yield of Sahbhagi Dhan was found to be lower than that of other rice varieties under certain circumstances, its impact in enabling farmers to cope with drought conditions has been significant.
3. Sahbhagi Dhan has been recognized as a hope for farmers in drought-prone

Conclusion

Sahbhagi Dhan, a drought-tolerant rice variety, has emerged as a promising solution for ensuring food security and enhancing the resilience of farmers in Bihar against drought. Its widespread adoption and the evidence of its superior

regions, and various initiatives, including training and technical support, have been undertaken to promote its adoption. A study conducted in Jharkhand found that Sahbhagi Dhan is a highly drought-tolerant variety and recommended for cultivation in rainfed upland areas.

4. Sahbhagi Dhan has been found to exhibit better performance over existing rice varieties grown by farmers, even under non-drought conditions. Data taken from head-to-head trials during 2017 showed that Sahbhagi Dhan exhibited better performance over the existing rice varieties grown by farmers.
5. A study focused on trait combinations that improve rice yield under drought found that Sahbhagi Dhan is one of the drought-tolerant varieties that can improve rice yield in rainfed environments. Sahbhagi Dhan has been found to be a promising solution for ensuring food security and enhancing the resilience of farmers in drought-prone regions.

performance under water-stressed conditions underscore its significance in bolstering agricultural sustainability and mitigating the impact of climate-related risks on smallholder farmers.

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