

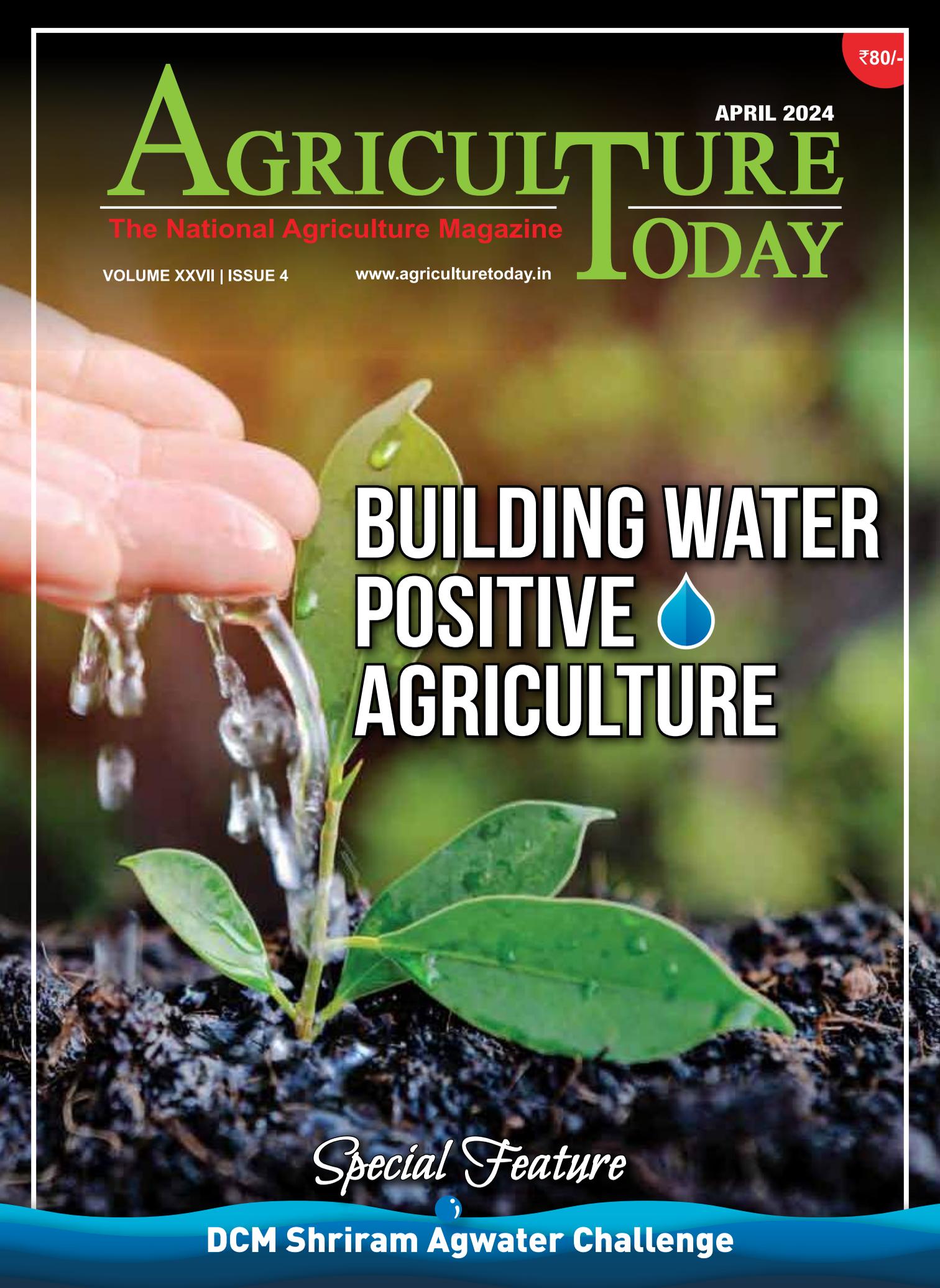
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BUILDING WATER POSITIVE AGRICULTURE

Special Feature

DCM Shriram Agwater Challenge



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‘DSR ADOPTION AT SCALE IS PIVOTAL’

A portrait of Simon Wiebusch, a middle-aged man with short, light brown hair, wearing a grey blazer over a light blue shirt. He is standing with his arms crossed, looking directly at the camera with a slight smile. The background is a solid blue color with some abstract circular shapes.

“India alone grows rice on around 45 million hectares with transplanting being the predominant cultivation practice. Increasing water scarcity due to climate change and challenges related to labour availability, energy usage, etc. are making this method of rice production unsustainable in the long term,” says Mr. Simon Wiebusch, President of Bayer South Asia and Vice Chairman, MD & CEO of Bayer CropScience Ltd (BCSL). In an interview with Agriculture Today, Simon talks about DSR and how its adoption can make a positive impact on water conservation. Excerpts from the interview.

What are the benefits of DSR?

Let us face it, as the third most-grown crop and a staple food for more than half the world's population, the importance of rice cannot be overstated. It is a critical food security crop. However, its cultivation is extremely water-intensive and requires heavy freshwater withdrawals. 40% of the world's irrigation water is applied for rice production. Direct seeding is a crop system wherein rice seeds are sown directly into the field, as opposed to the puddled transplanted method of growing seedlings in a nursery, and then transplanting into flooded fields. This shift can benefit farmers by reducing water usage by up to 40%, cutting greenhouse gas emissions by up to 45%, decreasing the reliance on manual labor by up to 50% and potential early harvesting of the crop. By 2030, Bayer plans to implement the DSR system on one million hectares across Asia, supporting over two million smallholder rice farmers.

Measures like DSR are also acutely important for countries like ours, where labour shortages and water scarcity are impacting agriculture and overall food security.

How do you plan to implement DSR in such a large scale?

In India, we initiated the Bayer DirectAcres Programme in 2022 and it is our pioneering effort to develop a comprehensive and sustainable rice cropping solution to support Rice DSR smallholder farmers at critical crop stages to maximize grower benefit. The key objective of DirectAcres is to make DSR smallholder farmers suc-

cessful in the first attempt through a hassle-free and seamless step-by-step agronomy advisory along with an effective seed and weed management package, mechanization service linkage and 24X7 information accessed digitally through our FarmRise and call center support.

Our teams on the ground are working to increase awareness around the practice and our solution package, engaging with 200+ distinct DSR clusters spread across 48 districts. The program positions them as hubs for catalyzing change in cluster villages, spanning advocacy, awareness, mechanization, and innovative solutions.

Supplementing the DirectAcres efforts, we have the "Bayer Rice Carbon Program" in place which is being tried out across states such as UP, Bihar, Odisha, West Bengal, Telangana, Andhra, Karnataka, Chhattisgarh, Jammu, Haryana, Tamil Nadu, wherein we are trying to mitigate climate change impact and reduce GHG emissions by promoting and scaling up the



adoption of techniques like direct-seeded rice (DSR) and Alternate Wetting and Drying method (AWD). We are hopeful that through these regenerative sustainable rice farming practices smallholder farmers will derive some benefits for themselves and the environment and reduction in resource consumption. Through this program, we also intend to build a voluntary market for carbon credits.

What are the support systems you intend to extend to the early adopters?

At the forefront of our support system for early adopters within the DirectAcres program is a personalized approach aimed at addressing the specific needs and challenges faced by smallholder farmers. Through meticulous tailoring, we blend agri inputs with expert advisory services to equip early adopters with the critical tools and insights necessary to successfully embrace Direct Seeded Rice (DSR) practices.

Bayer's dedicated team of field experts are also committed to offering support directly to early adopters in their fields. Moreover, to empower early adopters with the benefits of mechanized processes, the program has established strategic collaborations with multiple service providers. The partnerships ensure that the latest mechanization technologies are readily accessible to farmers within the cluster villages.

In parallel, Under the Rice Carbon Program, Bayer had announced in 2023, a collaboration with GenZero, Shell Energy India Private Limited and others to create a carbon farming model to target GHG emission reductions in rice farming and generating carbon credits in the process. This initiative seeks to generate carbon credits through regenerative agricultural practices that can combat climate change through reduced emissions, water conservation, and soil health improvements while supporting smallholder farmers. Through these initiatives, we aim to facilitate a smooth and successful transition to innovative agricultural practices, ensuring that early adopters are well-equipped to lead the way towards sustainable and efficient farming methods.

You may already be aware of our col-

By 2030, Bayer plans to implement the DSR system on one million hectares across Asia, supporting over two million smallholder rice farmers.

laborations in this space with ICAR and IRRI. Bayer joined hands with ICAR and IRRI to create integrated direct-seeded rice systems that are specifically tailored to the unique conditions of India through these partnerships. We aim to transform rice cultivation in India, making it more efficient, sustainable, and profitable for farmers. Bayer plans to support over 2 million smallholder rice farmers and bring one million hectares under its DirectAcres program by 2030.

Do you think farmers will reject the conventional means of rice cultivation and adopt DSR?

The transition to DSR is not easy and it will require cross-industry support to create an ecosystem that will help farmers become successful without compromising their ROI. The ecosystem is developing, and the right seeds, agronomy, weed and nutrient management supplemented by access to mechanization and digital solutions will help assure the farmers and help in the transition process.

Farmers in India are accustomed to generational farming practices and while they may be hesitant towards the adoption of modern methodologies, confidence can be built through community engagement, real-time advisory, a lot of handholding and communication around the long-term benefits of DSR adoption. With an initial registration of 800 farmers to the DirectAcres program, the program's reach continues to expand, culminating in the registration and impact on a total of 2,000 farmers in 2023. This growth showcases the program's dedication to amplifying its influence and driving

transformative change within agriculture.

How can DSR be promoted on a large scale in India? What kind of policy level changes would you like to see?

I do believe that DSR adoption at scale is pivotal if we are looking at a sustainable solution to food security and the growing impact of climate change on agriculture. Measures like DSR are also acutely important for countries like ours, where labor shortages and water scarcity are impacting agriculture and overall food security. We are seeing nascent levels of adoption right now; however, the transition has been impacted by several challenges. Weed and pest management, for example, remain crucial. Not only farmers but the entire value chain needs education. A conducive and supportive policy and regulatory framework will definitely help in the scale-up of DSR in the country.

Government(s) can formulate supportive policies and regulations to address challenges related to credit access, mechanization, insurance, incentivization in procurement and market linkages for DSR farmers. Additionally, enhancing smallholder farmers' access to credit and insurance services to mitigate risks associated with DSR adoption will help in the long run. Recognition for farmers/ villages adopting DSR may help in promoting the wider adoption of DSR.

Strengthening extension services to develop capacity and technical support to farmers on best practices for DSR cultivation and service providers on supporting various on- and off-farm operations are need of the hour as well. SAUs, KVKs, and seed companies, with their extensive reach in the rice belts, can also play a foundational role in this. Training and educational modules should be introduced to equip farmers with the knowledge and support needed to make a successful transition to DSR, which is not just sustainable, but also efficient and eco-friendly.

All in all, while we remain confident about the benefits it spurs, policy interventions and strong partnerships are very crucial to increase awareness and fuel sustainability in farming.