ISARC Cultivate

IRRI's hub for South-South Cooperation on Rice Research

ISARC
IRRI South Asia Regional Centre

IRRI International Rice Research Institute

CGIAR

Issue No. 09 | September 2024

GOVERNMENT OF INDIA
MINISTRY OF AGRICULTURE AND FARMERS WELFARE

ISARC
IRRI South Asia Regional Centre

announces

13th National Seed Congress

{Under the aegis of Ministry of Agriculture & Farmers' Welfare, Government of India}

Fostering Regional Coorporation, Partnership, and knowledge Exchange in the Seed Sector

November 28-30, 2024 *Varanasi, Uttar Pradesh*

Important dates

Last date of registration for delegates & exhibitors	31 October 2024
Submission of abstracts	31 October 2024
Notification of acceptance	07 November 2024

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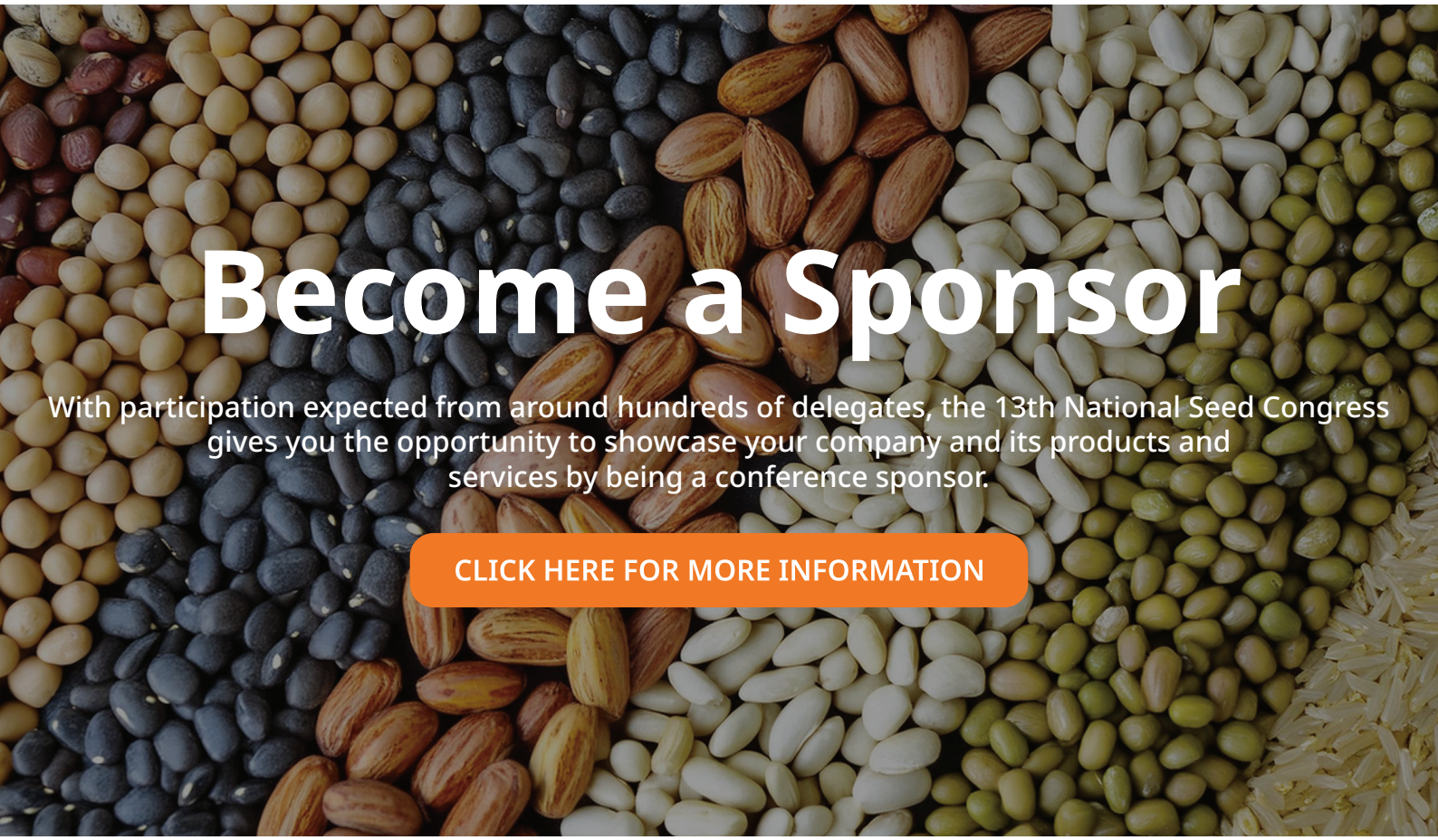

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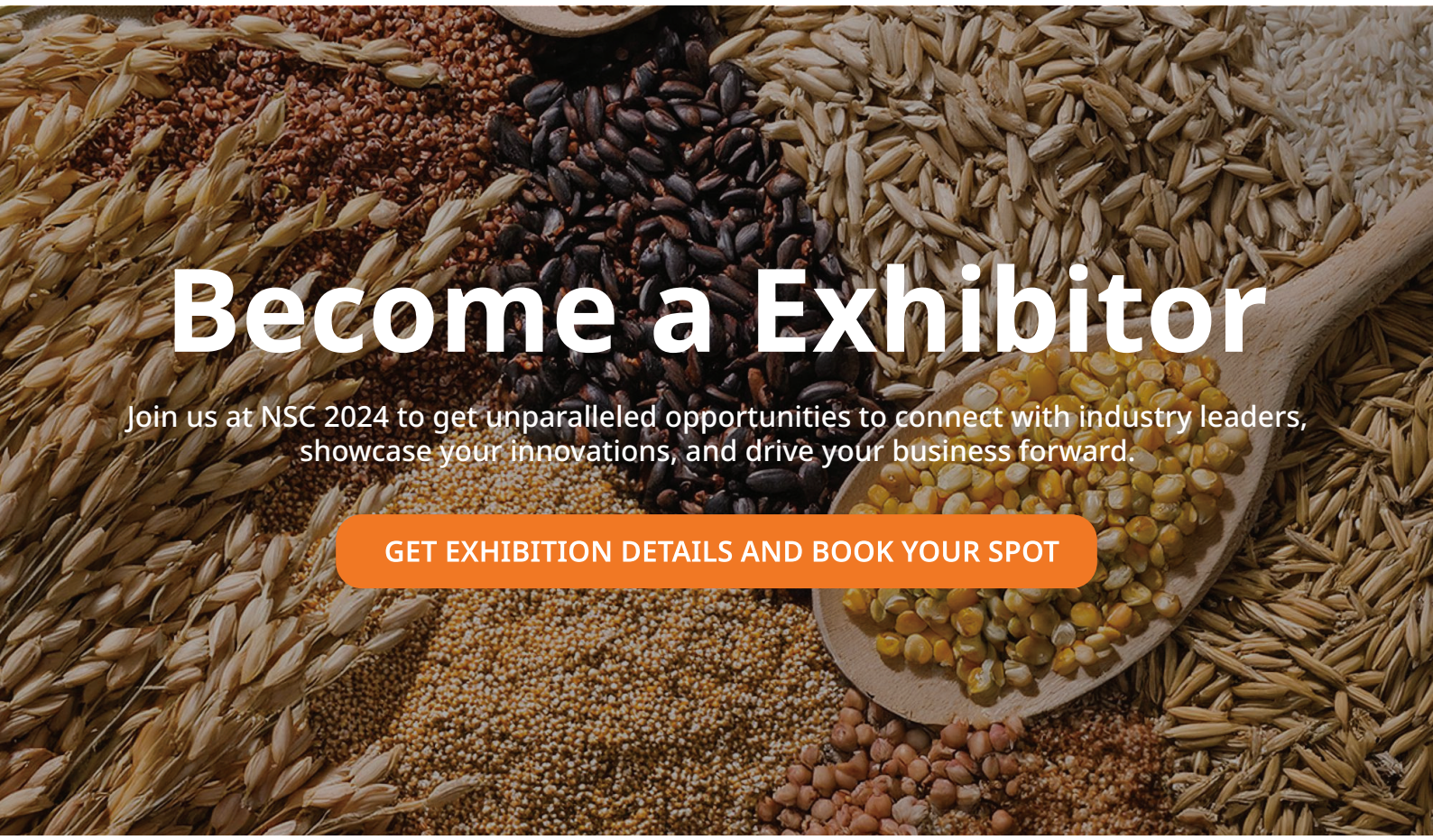

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GET EXHIBITION DETAILS AND BOOK YOUR SPOT

Farmers gained insights on Direct Seeding and Mechanized Post-Harvest Technologies

Progressive farmers from 38 FPCs around the Eastern Uttar Pradesh & East Burdwan region received insights on DSR and related agronomic techniques.

Varanasi, India (July 23, 2024)

The International Rice Research Institute-South Asia Regional Centre (ISARC) and Grameen Foundation for Social Impact (GFSI) successfully concluded a comprehensive two-day training and exposure visit on rice production practices, held from July 22 and 23, 2024 at ISARC, Varanasi.

Addressing the opening session, ISARC Director Dr. Sudhanshu said, "This training program is a significant step towards empowering farmers with the tools they need to thrive in a changing climate while ensuring proper yield, income, and profitability. ISARC wants to remain committed to supporting UP farmers in the days ahead."

Director- Agriculture and Livelihoods Practices at Grameen Foundation for Social Impact (GFSI) Ms. Shatarupa Kashyap expressed her enthusiasm at the continued partnership of Grameen with IRRI which is enabling access of farmers to improved technologies also in the wake of climate change. She added, “Grameen is working with more than 35,000 small and marginal farmers under Measuring Empowerment in the Market Access eNabled by Digital Innovation (MANDI) II initiative and is also aiming to promote agri-entrepreneurship along the value chain with FPOs and SHGs in the forefront in Uttar Pradesh and West Bengal. Besides these States, Grameen’s agri-focussed program is also going on in the coastal districts of Andhra Pradesh”.

This initiative brought together progressive farmers from 38 Farmers Producers Company (FPC) of Eastern Uttar Pradesh and East Burdwan, providing them with cutting-edge knowledge and practical skills essential for modern rice cultivation. The training program aimed to enhance the farmers' ability to cope with the challenges posed by climate change, reduce postharvest losses, and increase the value of their crops.

The participating farmers were provided insights on best suited rice varieties for eastern UP, Direct Seeded Rice (DSR), Integrated Pest Management (IPM), Conservation Agriculture along with hands-on-training on DSR equipments, Alternate Wetting and Drying (AWD), Paddle Thresher and soil health assessment etc.

The participants expressed their gratitude for the opportunity to attend the training, emphasizing the value of the knowledge and skills they acquired. Sharing her experience Ms. Rani Mishra, a participating women farmer and member of a Pratapgarh based FPC said, “ We got a lot to learn in this two days training and learning from experts of such notable international organizations has been added to this experience. The techniques in agriculture have for sure changed for good and I am excited to implement the learnings on my farm and share them with my fellow farmers to make our farming more profitable and sustainable.”

IRRI, World Bank and partners discuss low methane rice scaling opportunities for South Asia

Delegates at this multistakeholder roundtable discussed multifaceted benefits of DSR, including reduced greenhouse gasemissions, enhanced water conservation, increased farm productivity, carbon resources management and India's vision for the future carbon markets.

Varanasi, India (August 8, 2024)

The International Rice Research Institute (IRRI), in collaboration with the World Bank, hosted a roundtable on low methane rice at the IRRI South Asia Regional Centre (ISARC) in Varanasi. The event is part of the broader proposed UP-AGREES project aimed at scaling up Direct Seeded Rice (DSR) to leverage its potential to mitigate methane emissions and promote sustainable rice-based food systems in the region.

The roundtable brought together various government and private sector representatives, carbon project developers, and farmer leaders. Notable participants from the World Bank 2030 Water Resources Group, Bayer, CORE Carbon X, Indian Oil Corporation, PyroCCS/Teo Ventures, Reddy's Foundation, and NARES institutes engaged in discussions on the multifaceted benefits of DSR, including reduced greenhouse gas emissions, enhanced water conservation, and increased farm productivity. The event also focused on the existing and potential opportunities of carbon resource management and India's vision for the future of carbon markets.

IRRI Director General Dr. Yvonne Pinto thanked the World Bank and participating stakeholders for choosing ISARC as a venue for this initiative. "DSR has been a flagship initiative of IRRI and is among our cutting-edge solutions for rice-based agrifood systems facing climatic challenges. This roundtable is a pivotal moment and a committed effort towards strategizing the scaling up of DSR adoption in the region."

IRRI has successfully partnered with the World Bank on projects such as APART in Assam, the Climate Pro Project in Odisha, and the One Million Hectares of High-Quality Rice Project in Vietnam, among others, and proposed new partnerships in Kerala and Uttar Pradesh. These initiatives support the scaling up of low-carbon technologies such as DSR, Alternate Wetting and Drying (AWD), and biochar, while optimizing systems with short-duration varieties, timely planting, entrepreneurship development, and carbon credit mechanisms for higher profitability.

Ms. Dina Umali-Deininger from the World Bank lauded the collaborative nature of the initiative; "The partnership between IRRI and the World Bank under the UP-AGREES project is a testament to our commitment to fostering innovative solutions in agriculture. By integrating the expertise and resources of various stakeholders, we aim to create a robust ecosystem that supports the widespread adoption of climate-smart practices like DSR."

Dr. Shobha Shetty, World Bank Global Director for Agriculture and Food Global Practice said, "DSR promises to deliver faster planting, early maturing and works around aerobic systems making it a viable solution for reduced methane emissions. To make this

technology more feasible for farmers, we need to come up with reduced-cost operations involved. It is heartwarming to see discussions happening in India around reducing methane emissions in rice-based systems. This knowledge-sharing initiative can help us identify gaps and strategize potential solutions. Uttar Pradesh, with its significant contributions to Indian and global rice farming systems, could be a lighthouse for other countries in South and Southeast Asia in this area." She further expressed her desire to see major gender-based impacts coming out through DSR on reducing drudgery.

The agenda included presentations on IRRI's low-emission rice agenda, discussions with key players on input provision and carbon credits, and insights into crop residue management. The roundtable also explored the role of carbon credits in incentivizing sustainable practices and the potential for generating carbon credits through DSR, providing farmers with new economic opportunities.

"India has vast emerging opportunities for voluntary carbon markets (VCM), given the contribution of 14% methane emissions coming from agriculture. Although the subject of carbon resource management is a bit new, the Government of India has already come up with a visionary framework of potential opportunities in the sector in its 100-day action plan. We are also coming up with several pilot projects to mobilize and capacitate the national agricultural research system around the subject," said Mr. Franklin Khobung, Joint Secretary for Natural Resource Management of the Ministry of Agriculture & Farmers Welfare, Government of India. He also advocated the efforts of CGIAR centers such as IRRI, and organizations like the World Bank, Indian Council of Agricultural Research (ICAR), and NARES institutions in driving developments in rice systems. He emphasized the importance of these institutions in promoting VCM and developing short-term and cost-effective methodologies that generate accurate credits.

Few other eminent dignitaries who were present in this discussion included Mr. Oliver Braedt, Practice Manager South Asia, Agriculture, and Food Global Practice, World Bank; Mr. Parmesh Shah, Global Lead for Data-Driven Digital Agriculture, Agriculture and Food Global Practice, World Bank; Mr. Andrew Goodland, Lead Agricultural Specialist, World Bank; Mr. Vinayak Ghatate, Senior Rural Development Specialist, World Bank; Mr. Farbod Youssefi, Senior Agribusiness Specialist, World Bank, Dr. Ajith Radhakrishnan, 2030 Water Resources Group; and Dr. Sudhanshu Singh, Director ISARC.

Participants also had the opportunity to visit the DSR plot and interact with local farmers, gaining first-hand insights into the practical applications and benefits of DSR.

This event marks a significant milestone towards bringing diverse stakeholders together in a single platform to leverage public-private partnerships for scaling and delivering DSR with complementary benefits of mitigating agricultural emissions. The event also highlighted the opportunities presented by carbon credit markets towards incentivizing the adoption of DSR and other low-emission rice cultivation practices such as improved crop residue management through biochar, and bio-energy while ensuring environmental benefits.

ISARC hosts a workshop to develop a regional strategy on climate change adaptation and Sustainable intensification for Eastern IGP

The workshop was attended by ICAR-CRIDA Director Dr. V.K. Singh; ISARC Director Dr. Sudhanshu Singh, World Bank Senior Agriculture Economist - Mr. Iftikhar Mostafa; IRRI's Sustainable Impact Department Deputy Head & regional lead of EiA Dr. Virender Kumar; Rani laxmi Bai Central Agricultural University Vice Chancellor Dr. A.K. Singh; ICAR-CRIDA Principal Scientist Dr. BMK Raju; BHU Institute of Agriculture Sciences Dean Dr. UP Singh; Dr. SS Rathore from ICAR-IARI, and other scientists and experts from IRRI, ICAR-CRIDA, BHU, BAU, KVKs, etc.

Varanasi, India (August 22, 2024)

The International Rice Research Institute (IRRI) South Asia Regional Centre (ISARC), Varanasi hosted a two-day multi-stakeholders workshop on Prioritizing Agronomy in Changing Environments(PAiCE) intending to prioritize interventions which will have the highest impact and address the climatic challenges and production constraints smallholder farmers are facing in the region using PAiCE tool. The workshop was a joint effort by the Cereal Systems Initiative for South Asia (CSISA), a regional program of Excellence in Agronomy (EiA), and the Indian Council of Agricultural Research-Central Research Institute for Dryland Agriculture (ICAR-CRIDA), Hyderabad.

Addressing the event, ICAR-CRIDA Director Dr. V.K. Singh underscored the importance of the Eastern IGP, which contributes to 50% of the total food grain production. He noted that the rice-wheat system in the Eastern IGP region faces significant challenges, including floods, droughts, and heat waves, which have severely impacted the rice-wheat system, leading to substantial yield losses. He outlined three critical aspects of the PAiCE tool, out of which two have been completed: system productivity characterization and losses caused by production constraints and climate hazards in the region whereas adaptation/responses were discussed in these two-day workshops.

"PAiCE is an interactive tool developed to aid in the prioritization process of mitigating climatic hazards and identifying adaptation options," said ISARC Director Sudhanshu Singh. "It deals with the system characterization of key crops based on their area and economic value of production and the identification and prioritization of major climatic challenges and hazards for each crop and season. He emphasized the significant challenges faced by smallholder farmers, while also noting the opportunities for dryland, rainfed, and upland areas. He equally stressed the importance of leveraging the expertise of all NARES partners to effectively address these challenges.

EiA aims to increase the productivity and quality per unit of input (agronomic gain) of millions of smallholder farming households in prioritized farming systems by 2030. The initiative emphasizes women and young farmers, showing a measurable impact on food and nutrition security, income, resource use, soil health, climate resilience, and climate change mitigation.

APEDA-ISARC to advance healthier rice-based food innovations

Delegates including Shri. Rajesh Agrawal, Additional Secretary, Department of Commerce, Ministry of Commerce and Industries; Shri. Abhishek Dev, Chairman, APEDA; IRRI Principal Scientist Dr. Nese Sreenivasulu in the inaugural session of the workshop.

New Delhi, India (August 29, 2024)

An initiative led by the Agricultural and Processed Food Products Export Development Authority (APEDA), in collaboration with the IRRI South Asia Regional Centre (ISARC), is at the forefront of revolutionizing rice-based agri-food systems in India by enhancing the value of non-basmati rice varieties. The varieties are positioned as key contributors to the emerging low Glycemic Index (GI) rice industry in India. This effort also focuses on expanding the production of nutrient-rich rice-based food products, unlocking substantial opportunities in both domestic and international markets.

APEDA, under the Ministry of Commerce and Industry, Government of India, and the ISARC jointly organized a workshop on "Profiling of Potential Varieties of Non-Basmati Rice and Value-Added Products of Rice" to showcase the outcomes of two pioneering research projects, "Comprehensive Grain and Nutritional Quality Profiling of Non-Basmati Rice" focusing on identifying high-quality aromatic, nutrient-rich, low glycemic index (GI) rice varieties with geographical indication (GI) tag germplasm from various Indian states; and "Value-Added Products from Rice and Rice-Based Food Systems", a project aimed at creating innovative, healthier rice-based products like nutrient-dense rice muesli, whole grain rice cookies popped rice, rice flakes, and instant upma.

These significant APEDA-supported projects are conducted at the state-of-art Centre of Excellence in Rice Value Addition (CERVA) laboratories at ISARC in Varanasi. During the event, IRRI presented the profiling of potential non-basmati rice varieties across India and showcased value-added products with global market potential.

Chief Guest Shri. Rajesh Agrawal, Additional Secretary, Department of Commerce, Ministry of Commerce and Industries acknowledged and appreciated the joint efforts of APEDA and IRRI for coming up with the focused research on the potential varieties of non-basmati rice. He emphasised that this joint initiative has "huge potential and the identified varieties of non-basmati rice not only possess significant export potential but also have health benefits such as low GI and are climate resilient". He further drew attention to the value addition and branding of the non-basmati rice varieties for tapping into the export potential and marketability of these varieties.

Shri. Abhishek Dev, Chairman, APEDA, shared some insights on the importance of the rice industry in India, the need for value addition, and research to improve sustainability and global competitiveness. He also expressed the need for a collective effort to increase rice exports and benefit all stakeholders in the value chain. Further he stressed the urgent need to develop strategies for increasing rice exports and rice-based products. Finally, he appreciated ISARC's efforts, stating, "These projects not only respond to the growing demand for healthier food options but also capitalize on traditional rice varieties to create value-added products."

"Receiving this recognition in India is a testament to the hard work we have invested in these projects. Rice, traditionally seen as a staple with limited nutritional value, is being redefined through our research. We are identifying and developing low GI, nutrient-dense rice varieties and value-added products backed by scientific evidence. This work will be instrumental in transforming rice-based agri-food systems in India," said Dr. Nese Sreenivasulu, Principal Scientist, Grain Quality and Nutrition, and IRRI-India Research Coordinator.

Building on the success of APEDA's initiatives, the strategic collaboration with stakeholders, alongside targeted marketing efforts by the industrial stakeholders, will be key to expanding both domestic and international market reach, thereby contributing to the premium rice economy and enhancing its export potential under the non-basmati category.

APEDA's support has significantly contributed to the success of these projects, enabling ISARC to pioneer advancements that will shape and innovate the future of India's rice industry. The combined approach of developing low GI rice varieties and nutrient-dense value-added products is set to boost India's export capabilities and promote significant economic growth within the agricultural and food processing sector.

IRRI researchers identify genes for low glycemic index and high protein in rice

Globally, about 537 million adults suffer from diabetes, and the number is expected to grow to 783 million by 2045. Low- and middle-income countries account for more than three-quarters of diabetes incidences, with Asia accounting for 60 percent of the global diabetic population. High-protein rice may help boost the diets and health of half a billion protein-deficient consumers, many of whom live in South Asia and Central Africa.

LOS BAÑOS, Philippines (August 30, 2024)

A team of researchers at the International Rice Research Institute (IRRI) has identified genes and markers responsible for low glycemic index (GI) and high protein content in rice, using genetics and artificial intelligence classification methods.

Their study, recently published in the Proceedings of the National Academy of Sciences (PNAS), revealed a superior set of lines that exhibited ultra-low GI (below 45%) with an unprecedented protein level (15.99), which is twice the content usually found in conventional milled rice. Rice varieties with higher protein content may contribute to slower digestion and absorption rates, potentially helping control blood glucose levels, further enhancing its ultra-low GI characteristics.

"Collectively, these findings underscore the stacked potential and benefits of low GI and high protein rice to offer a substantial source of protein and essential amino acids such as lysine for consumers, particularly in regions where rice is a dietary staple," said Dr. Nese Sreenivasulu, corresponding author of the paper and Principal Scientist at the IRRI Grain Quality and Nutrition Center. He adds that the lines included in the study also generated yields comparable to existing high-yielding rice varieties.

The healthier rice lines were developed by intercrossing an inbred variety from Samba Mahsuri and the amylose extender of IR36. The results could help address the growing incidence of diabetes and the need for adequate protein intake for hundreds of millions of people at risk.

"Considering that rice is a staple food for a substantial portion of the global population, it is crucial to deploy high-yielding rice cultivars with milled rice samples possessing high-quality protein and ultra-low glycemic index to address the triple burden of nutritional challenges among low- and middle-income communities," said Dr. Gurdev S. Khush of the University of California, Davis, and co-corresponding author of the paper.

Dr. Sreenivasulu's team and partners now seek to incorporate these genes into future breeding programs and popular varieties grown across Asia and Africa.

"With its remarkably low GI and protein content surpassing traditional rice varieties, these high-yielding nutritious rice varieties will pave the way to addressing critical food and nutritional security targets," said IRRI Director General Dr. Yvonne Pinto.

The study was conducted in collaboration with the University of California, Davis, the United States of America, the Max Planck Institute of Molecular Plant Physiology in Germany, and the Center of Plant Systems Biology in Bulgaria.

Engaging Women Farmers in Direct Seeded Rice System in Jharkhand

Farmers participating in demonstration work in Lodhama village, Jharkhand.

Jharkhand, India (September 05, 2024)

The challenges of rice farmers in Jharkhand

Jharkhand ("The land of the forest"), a state in eastern India, is home to many resource-poor tribal farmers. Rice is grown in 1.5 million hectares annually with a poor productivity of 2.4 tons per hectare. Depending on the topography, rice is grown in upland or medium-low land. Poor water holding capacity, rainfed system, sloping land, and acidic soils are the major characteristics of upland agricultural land. Merely 16% of the agricultural area has irrigation facilities in the wet season. Frequent drought and water shortages, more so in recent years due to the impact of climate change, adversely affect rice cultivation. Rice seeds in many districts are sown mainly by broadcast without precision in crop establishment and management practices. Consequently, these constraints prevent farmers from harvesting reasonable yields.

Scope and relevance of direct-seeded rice (DSR)

Given the scarcity of water and upland topography, dry direct seeding is a science-backed option to maximize yield. However, for the DSR system to succeed, farmers need good access to improved varieties, machines, crop management practices, and other crop advisories. Smallholder farmers lack knowledge about better varieties, provision of seed drills, and weed management advisories, according to a specialist at the Krishi Vigyan Kendra (KVK) Knowledge Network. DSR should be considered as an essential package for smallholder farmers to optimize their yields. However, DSR has not been picked up significantly despite its advantages and critical role in the future of rice cultivation in Jharkhand.

The ScaleDirect Initiative introduced new varieties, machine-driven DSR crop establishment, and better weed management practices to the farmers in Hazaribagh District. The initiative also partnered with the KVK in the community to mobilize a group of farmers for on-farm trials of different DSR-suitable crop varieties. Pre-sowing training on machine sowing, judicious weed management, and field preparation for farmers were organized. The initiative placed particular emphasis on the participation of women and empowered them to be DSR diffusers.

DSR flagbearer

The experience of Sangeeta Devi is an inspiring story and a testament to the potential of DSR to transform rice cultivation in Jharkhand. A smallholder woman farmer from Lodhama, Ramgarh district of Jharkhand, Sangeeta has years of experience as a community agriculture care service provider and collaborates with over 25 Self Help Groups (SHGs) in her village. Sangeeta provides crucial information about various government benefits, including subsidies for seeds, fertilizers, equipment, crop insurance, and market access for female farmers.

IRRI-Odisha project helps farmers and other stakeholders get acquainted with mechanized direct-seeded rice

Odisha, India (September 10, 2024)

Progressive men and women farmers, SPs, and representatives from non-government organizations from Odisha, Andhra Pradesh, Chhattisgarh, and Telangana participated in a hands-on demonstration of mechanized direct-seeded rice. The objective was to allow stakeholders to observe and experience advanced agricultural practices.

The DSR practices in the comprehensive demonstration included the application of pre-seeding herbicides, field preparation for dry DSR, soil mulching, basal phosphatic fertilizer application, drill seeding, and planking, spraying of pre-emergence herbicides, and mechanical weeding.

The activity was held on 02-08 August under the Precision Direct-Seeded Rice-based Diversification Systems for Transforming Labour Requirement, Yields and Profitability of Smallholder Farmers in Odisha (IRRI-GoO-DSR-Odisha) Project. The collaborative project between IRRI and the Odisha Government (GoO) aims to showcase mechanized DSR systems and their successful implementation at farm levels.

Sugandha Munshi, a scientist at the International Rice Research Institute (IRRI), highlighted the significance of firsthand experiences in learning and sharing knowledge about mechanized DSR. This activity is crucial in building confidence among farmers and promoting wider adoption of the technology, according to Dr. Munshi

Praanadhaara Organized Agro-forestry Private Ltd., a leading NGO in mechanized rice farming, facilitated the event. Praanadhaara has been instrumental in expanding mechanized DSR adoption and its potential benefits for farmers in Andhra Pradesh. The organization has made significant progress and impact with more than 1.5 lakh acres under mechanized dry-DSR in the 2024 kharif season.

Praanadhaara Director Kurra Pundarikashudu emphasized that DSR's efficiency and cost savings could reach about INR 3.0 crore per kharif season for 6,000 acres.

Ashok Yadav, coordinator of the IRRI-GoO-DSR-Odisha Project, commended the impressive scale of mechanized DSR in Andhra Pradesh and Guntur Districts. Dr. Yadav encouraged replicating the practices in Odisha and looked forward to closer collaboration with Praanadhaara to tailor DSR technology to local conditions.

The positive feedback and insights from the activity indicate the potential of mechanized DSR to transform rice cultivation in Odisha and beyond. Encouraged by the successful outcomes, the Department of Agriculture and Farmers Empowerment Principal Secretary Arabinda Kumar Padhee and Dr. Virender Kumar, Deputy Head -

Sustainable Impact Department, and Research Leader - Climate-Resilient Farming Systems, IRRI, emphasized the need to replicate and intensify similar efforts in Odisha.

The activity also included a delegation from Malaysia led by Rais Hussain. Dr Hussain discussed recent developments in rice cultivation and extended an invitation to implement mechanized rice cultivation on 2,000-ha land in Malaysia. This collaboration is expected to bolster bilateral agricultural ties and advance mechanization in rice cultivation between India and Malaysia.

ACTIVITIES AT A GLANCE

New Delhi (July 22, 2024)

IRRI participated in a workshop on "Remote Sensing-Based Crop Mapping," chaired by Dr. Pramod Kumar Meherda, Additional Secretary, DA&FW. Organized by the Mahalanobis National Crop Forecast Centre at NASC Complex, New Delhi, the workshop aimed to create a collaborative framework for national crop mapping using remote sensing. IRRI will focus on paddy, while ICRISAT will map soybean and gram. The KrishiMapper app will be shared for feedback, and Krishi-DSS will host satellite data. A committee will assess the accuracy of the mapping activities.

Dr. Panneerselvam Peramaiyan presented on DSR at the Bengal Rice Conclave in Kolkata. The event was inaugurated by Shri Sobhandeb Chattopadhyay, Hon'ble Minister-In-Charge, Department of Agriculture, and Shri Pradip Kumar Mazumdar, Hon'ble Minister-In-Charge, Department of Panchayats & Rural Development and Cooperation, Government of West Bengal. Shri Arup Roy, Hon'ble Minister-In-Charge, Department of Food Processing Industries & Horticulture, also attended. Dr. Peramaiyan's presentation highlighted IRRI's advancements in rice cultivation, making it a valuable opportunity to engage with diverse stakeholders and showcase our contributions to sustainable agriculture.

West Bengal, Kolkata (July 24, 2024)

Varanasi, Uttar Pradesh (July 29-31, 2024)

A National Coordination Group workshop was organized at ISARC under the Carbon Offsetting Rice Emissions (CORE) project. A team of CORE project consortium partners—IRRI, GIZ, OLAM Agri, and UN Women—with other implementing partners from Andhra Pradesh, Madhya Pradesh and Haryana joined the meeting to review and discuss the project progress, challenges, and explore strategies and new opportunities. The consortium partners learned from one another's experiences and gained valuable insights from a dedicated session on IRRI's ongoing projects and activities in India. This workshop allowed possible synergies and future collaborations to be explored both within and outside the CORE consortium network.

IRRI and ILRI, key players in the CGIAR Digital Innovation initiative, facilitated a delegation visit from Kenya Agricultural and Livestock Research Organization (KALRO) to India. The delegation, led by Dr. Eliud Kireger, discussed supporting Kenya's 7.4 million smallholder farmers through digital tools. Key points included enhancing digital extension services via mobile apps, e-learning, and IVR systems, leveraging IoT and GIS for site-specific advisories, and promoting data sharing through open data platforms and blockchain. To address low digital penetration, they proposed making tools affordable, improving rural connectivity, and boosting digital literacy through South-South Collaboration, aiming to create a sustainable digital agricultural ecosystem.

New Delhi (July 31 - August 02, 2024)

Online webinar (August 29, 2024)

The CGIAR Initiative on NEXUS Gains held a webinar on groundwater depletion in Northwest India. Dr. Proloy Deb from IRRI highlighted that the high cropping intensity of puddled transplanted rice (PTR) is a key factor in the declining water table. IRRI's study showed DSR improves water productivity by 18-50% compared to PTR while maintaining similar yields. DSR adoption has increased, with a 30% rise in acreage in Karnal since 2022. Dr. Swatantra Dubey discussed barriers to crop diversification in Haryana, stressing the need to shift from water-intensive crops due to climate change and water shortages.

We want to hear from you!

As our valued partner in South Asia, we would like to hear your thoughts about ISARC Cultivate.

Please scan this QR code to give us your feedback on the newsletter.

VISITS AT ISARC

July 12, 2024: *Visit of Dr. Arun Kumar, Vice-Chancellor of Swami Keshwanand Rajasthan Agricultural University (SKRAU), Bikaner.*

July 16, 2024: *Visit of Dr. Lutful Hassan, Former Vice Chancellor of Bangladesh Agricultural University and Expert Member of the Annual Performance Agreement (APA) Pool of the Ministry of Agriculture, Bangladesh.*

August 23, 2024: *Visit of Dr. Alok Kumar Srivastava, Director of ICAR-National Bureau of Agriculturally Important Microorganisms (NBAIM) & his team.*

September 03, 2024: *Visit of delegation from the World Bank to discuss possible collaboration opportunities on Soil mapping & nutrient dose response.*

September 05, 2024: *Visit of delegation including Mr. Chetan Joshi & Mr. Paresh Desai from Bharatiya Beej Sahakari Samiti Limited (BBSSL) - IFFCO.*

September 11, 2024: *Visit of delegation from Bayer Crop Science team, including Natasha Santos, Global Head for Sustainability & Strategic Engagement, and Dr. S.P. Kamath, Director- Science for Sustainability & Regenerative Agriculture.*

ANNOUNCEMENTS

Rice Varieties Released Through IRRI NAREs Network

IRRI and NAREs network has facilitated the release of ten rice varieties. These varieties have been developed and released in collaboration with various research institutions across India. Below is the detailed information on the released rice varieties:

Sr. No.	Varieties Released	Released by Institute	Location	Releasing Body
1	Swarna Purvi Dhan 4	Indian Council of Agricultural Research	Patna	CVRC
2	Swarna Purvi Dhan 4	Indian Council of Agricultural Research	Patna	CVRC
3	Laxmantri	Zonal Director of Research & Planning Research Station	Hathwara	SVRC
4	Shuvashini	Zonal Director of Research & Planning Research Station	Hathwara	SVRC
5	Musafir	Zonal Director of Research & Planning Research Station	Hathwara	SVRC
6	NDR 9407	Acharya Narendra Deva University of Agriculture and Technology	Faizabad	SVRC
7	BRR 2184	Birsa Agricultural University	Dhangain	CVRC
8	DRR Dhan 79	Indian Council of Agricultural Research, IIRR (Indian Institute of Rice Research)	Hyderabad	CVRC
9	NDR 8029	Acharya Narendra Deva University of Agriculture and Technology	Faizabad	SVRC
10	NDR 8028	Acharya Narendra Deva University of Agriculture and Technology	Faizabad	SVRC

FEATURED PUBLICATIONS

Proceedings of the National Academy of Sciences

Multiomics of a rice population identifies genes and genomic regions that bestow low glycemic index and high protein content

Saurabh Badoni, Ajay Kohli, Nese Sreenivasulu et al. 2024

Dr. Sudhanshu Singh
Director, ISARC
sud.singh@irri.org

Dr. Nese Sreenivasulu
Head, ISARC CERVA
n.sreenivasulu@irri.org

Dr. Rabe Yahaya
Head, ISARC CESA
r.yahaya@irri.org

Dr. Anilyn Maningas
Head, ISARC CEIRD
a.maningas@irri.org

IRRI South Asia Regional Centre
G.T. Road, Collectory Farm, Chandpur
Varanasi, Uttar Pradesh, India
Tel. no. (0542) 2518900

For more details, please email:
TC Dhoundiyal at t.dhoundiyal@irri.org & Anil H. Pimpale at a.pimpale@irri.org

Developed by
Ankita Tiwari, Specialist-Communication
V Prashant, Consultant-Desiging & Product Development