

Report on One Day Orientation Program for Amrit Internship on “Farmers Health”

Organized by



**Department of Lifelong Learning and Extension
(REC), P.S.V, (Visva-Bharati), Sriniketan**

In collaboration with



**INDIAN POTASH LIMITED (IPL) FOUNDATION,
NEW DELHI**

Date: 18/07/2028

Venue: REC, Seminar Hall

Inaugural Program

The programme started with the brief introduction by Dr. Bikash Majhi, Programme Officer, Lifelong Learning & Extension (Rural Extension Centre).

The Honorable Vice Chancellor, Visva-Bharati, Dr. Probir Kumar Ghosh, Prof. Santanu Rakshit, Principal (Palli Samgathana Vibhaga), Prof. Amit Kumar Hazra, Head of the Department of Lifelong Learning & Extension (Rural Extension Centre), and eminent guests- Dr. Rajeev Ranjan, IAS (Rtd.) Senior Advisor, Indian Potash Limited (IPL) Foundation, New Delhi and Sri Nilanjan Sinha, Regional Director, National Cooperative Development Corporation, Kolkata were welcomed in the traditional way by the students of the Department. Among the distinguished audience the Principals of Palli Siksha Bhavana and Vidya Bhavana, Visva-Bharati, Honorary Director of Agro-Economic Research Centre(AERC), Visva-Bharati, Head of the Department of Silpa Sadana, Nandini Roy-Mentor IPL foundation, Kolkata, Dr. Abhjit Roy, Assistant professor, Dr. Bhupendranath Dutta Smriti Mahavidyalaya, Purba Bardhaman were also present alongwith other dignitaries and faculty members of other departments.

Thereafter the lighting the lamp ceremony took place. The Music Unit, PSV presented the opening song.

Welcome & Inaugural Address:

The programme commenced with a welcome address by Prof. Amit Kumar Hazra, who extended heartfelt gratitude to the dignitaries and everyone present in the programme. He also thanked Hon'ble Vice-Chancellor, Visva-Bharati, Dr. Probir Kumar Ghosh for giving his valuable time to this programme and mentioned that Hon'ble Vice Chancellor belongs to one of the top two percent of agricultural scientists at global level and thus his presence would add significant value to this orientation programme.

The programme was graced by farmers from surrounding villages. Their presence underlined the core intent of the internship. Students of Visva-Bharati, who will be the primary executors of this initiative, participated with great enthusiasm.

Address by Dr. Subhrangsu Santra:

Dr. Subhrangsu Santra, Assistant Professor, Department of LL&E(REC),PSV, presented a contextual background to the Amrit Internship Program, supported under the IPL Foundation's Centre for Rural Outreach. This initiative functions under the theme "*Farmer's Health?*"—going beyond physical health to question the overall well-being of India's farming community.

Dr. Santra pointed out that India has over 12 crore farming families and it becomes 14 crores if agricultural laborers are included. The IPL Foundation's initiative is thus timely and vital. Under this internship, each student of Visva-Bharati will engage with 100 farmers over the next three months. The students will collect field data and provide grassroots-level insights, supported by a ₹6,000 monthly stipend funded by the IPL Foundation.

He also announced the upcoming '*Agri Connect*' program — a long- term collaborative effort between the university and IPL Foundation aimed at sustained farmer-student engagement.

Keynote Address by Dr. Rajeev Ranjan, IAS (Rtd.) :

Dr. Rajeev Ranjan, Chief Advisor of IPL Foundation and a distinguished former civil servant, brought national perspective and experience to the platform. He acknowledged the visionary leadership of Dr. Probir Kumar Ghosh, Vice-Chancellor, Visva-Bharati, who had significantly contributed to the Government of India's *Doubling Farmers' Income* (DFI) Committee Report.

Dr. Ranjan recalled his work as Fisheries Secretary, citing the Pradhan Mantri Matsya Sampada Yojana as a pivotal intervention to boost fish production — highly relevant to state like West Bengal.

He emphasized the urgency of making agriculture aspirational for youth, noting the distressing trend of farmers discouraging their next generation from continuing in agriculture. Integrated farming models, rural-urban linkages, and capacity building (such as that being undertaken through the Amrit Internship) — are essential to reverse this trend.

He concluded with an important announcement: a 12-month extended internship opportunity under the proposed *Agri Connect* program for selected students, fostering long-term rural engagement.

Special Address by Hon'ble Vice-Chancellor, Visva-Bharati, Dr. Probir Kumar Ghosh:

He started with a comprehensive discussion on Potash- a critical but underutilized nutrient in Indian agriculture. Dr. Ghosh highlighted India's complete dependency on import for its Potash need (~4.5–5 million tons annually); He also mentioned imbalanced fertilizer use and poor residue management as reasons for deficiency of Potash in the soil. Attention was drawn towards the skewed N: P: K ratio as well (currently 7.5:2.9:1 instead of the ideal 4:2:1).

He underlined how such imbalances directly affect crop health, productivity and sustainability. The solution lies in adopting Integrated Farming Systems (IFS), promoting lifelong learning and following the principle of *One Health* — connecting soil, environment, animal, and human health.

Dr. Ghosh encouraged students to actively use the internship to raise awareness among farmers, Promote sustainable farming practices, Create a meaningful impact through grassroots outreach.

He also connected the initiative with Rabindranath Tagore's concept of Lifelong Learning, reiterating the importance of continuous education for all — from students to seasoned professionals.

Concluding Speech:

The word of thanks was given by Dr. Bikash Majhi (Program Officer, Department of Lifelong Learning and Extension (REC), Visva-Bharati to each and every person who acted at their best to facilitate various tasks for smooth functioning of the seminar.

This session concluded with the Ashram Sangeet, the tradition of Visva- Bharati, performed by everyone present at the seminar Hall, REC.

Technical Session I :

The importance of sustainable agriculture in the current scenario was emphasized during the address

delivered by Sri Rajeev Ranjan, IAS (Retd.). It was observed that while many farmers continue to believe that agriculture is a domain guided solely by common sense and experience, such assumptions no longer hold true in the face of modern-day challenges. It was highlighted that without adequate knowledge and scientific understanding, agriculture cannot be made sustainable or resilient.

Reference was made to the landmark revolutions that transformed Indian agriculture—the Green Revolution, White Revolution, Yellow Revolution and Blue Revolution. Of these, the Blue Revolution, related to fisheries, was particularly underscored as a major income- generating sector. It was noted that India has emerged as the second- largest fish-producing country in the world. A structural shift was mentioned wherein after independence nearly 75% of fish cultivation was practiced in marine water and only 25% in inland saline or freshwater. However, a reversal in the trend has been noticed, with 75% of fisheries cultivation being practiced in freshwater systems and only 25% in marine water, reflecting a paradigm change in India's aquaculture landscape.

The sector's growth was further highlighted through the Compounded Annual Growth Rate (CAGR) of 10.5% recorded over the last decade—making fisheries the fastest-growing sub-sector in agriculture and allied activities.

In terms of overall contribution, it was stated that agriculture and allied sectors currently contribute approximately 18% to India's GDP, while these sectors provide employment to nearly 70% of the population, including both direct and indirect livelihoods. These figures clearly demonstrate the sector's continued relevance and its foundational role in the Indian economy.

Special mention was made of several government initiatives, such as the Pradhan Mantri Krishi Shiksha Yojana, which aims not just to increase production but also to equip farmers with critical knowledge regarding post-harvest handling, marketing, pricing mechanisms, and logistics. Given that Indian agriculture remains heavily dependent on the monsoon, such comprehensive support systems are considered vital for stability and progress.

Crops such as sugarcane were cited as examples where market demand remains consistently high and procurement is relatively smooth, thanks to the active presence of sugar mills across the country.

The Pradhan Mantri Kisan Samman Nidhi Yojana was also referenced as a transformative initiative providing direct income support to farmers through DBT (Direct Benefit Transfer) mechanisms. This scheme has brought financial security to millions of small and marginal farmers.

Attention was drawn to modern farming practices such as Integrated Farming Systems (IFS) and Precision Agriculture where informed decision-making is key. It was pointed out that precision agriculture cannot be implemented effectively without adequate access to scientific knowledge and training. The use of drones, GPS and remote sensing technologies was acknowledged as essential components of a modern and sustainable agricultural framework.

Examples were drawn from Israel, where limited natural resources have not hindered productivity due to the efficient use of technology and innovation in farming.

It was noted that irrigation practices in India vary widely by geography, with the Gangetic plains offering

better irrigation access, while other regions struggle due to deep or inaccessible groundwater levels. Understanding such regional disparities was described as essential for effective policy and planning.

The potential for agriculture-based startups was underlined, especially those that can offer end-to-end solutions—from production to market, covering logistics, handholding support, and monitoring. It was observed that while India's youth are venturing into various sectors, very few startups have emerged from agricultural institutions to address this comprehensive need.

The relevance of Argo-based Food Processing Industries was discussed under the theme of value addition. Farmers were encouraged to explore food processing as a means to enhance the economic value of their produce.

The concept of Atmanirbhar Krishi (Self-reliant Agriculture) was closely linked with the larger vision of Atmanirbhar Bharat (Self-reliant India). It was shared that the agriculture budget has seen a substantial increase—from ₹22,000 crore a decade ago to ₹1.22 lakh crore today, reflecting the Government of India's strong commitment to the sector.

In conclusion, schemes such as M-Kisan, which offers real-time updates to farmers, and Skill India, which provides training opportunities, were recognized as key enablers of transformation in the rural economy. It was emphasized that agriculture in India must now be viewed as a knowledge-driven, technology-enabled, and entrepreneur-friendly sector-essential for achieving sustainability and national self-reliance.

Technical Session II:

During the program, an insightful address was delivered by Prof. Biswapati Mandal, Former professor in the Directorate of Research, Bidhan Chandra Krishi Viswavidyalaya, Nadia, West Bengal who reflected on the emerging relevance of Group Agricultural Practices (GAP) in the context of India's agrarian future. It was emphasized that in the near future, GAP might be mandated by the government as a necessary condition for farmers to avail agricultural subsidies.

It was highlighted that GAP is not simply a set of guidelines, but a comprehensive framework that influences every stage of the agricultural process—from crop selection to the production of the final product. The core attributes of GAP were outlined as - 1. Ensuring economic viability; 2. Preventing environmental degradation; 3. Achieving social acceptance; and 4. Maintaining food safety and quality standards.

Reference was made to the Green Revolution of the late 1960s, which had initially been celebrated for its unprecedented increase in food grain production. However, it was observed that while yields had doubled, the long-term environmental and health impacts—such as rising cases of cancer, diabetes, and the degradation of natural ecosystems—had gone unnoticed for decades. These consequences have now become apparent, and the need to correct them was strongly underlined.

GAP was presented as a corrective approach that emphasizes sustainability without compromising on productivity. Practices such as soil and water conservation, carbon sequestration, crop diversification, and resource efficiency were cited as core elements. The adoption of deep-rooted crops and reduced tillage was described as essential for restoring underground carbon levels and preventing rapid oxidation, thereby

improving soil health.

Prof. Mandal further noted that earlier, Indian agriculture was predominantly rice-centric, limiting nutritional diversity. In recent years, with the inclusion of horticultural crops, food systems have started to shift toward greater nutritional balance. GAP was credited with enabling this transformation by encouraging integrated farming systems and value-added production.

The discussion also touched upon government efforts such as the Namami Gange Project, which identified agricultural runoff- especially nitrogen leaching into rivers—as a major pollutant. To address this, organic farming has been promoted in the Ganga River basin. However, it was cautioned that these fertile belts also serve as the back bone of India's food security. Therefore, the application of GAP in these regions was considered more appropriate, as it offers a balanced approach—ensuring both ecological protection and productivity.

The misuse of fertilizers was discussed as a significant challenge, and the need for site-specific nutrient management was stressed. For example, in areas with acidic soil—comprising nearly one-third of India's agricultural land—liming practices were recommended under GAP to enhance nutrient absorption and productivity.

Prof. Mandal also referred to historical shifts in crop varieties. Since the 1970s, several high-yielding varieties (e.g., Ratna, HYV-64) have been widely cultivated. However concerns were raised regarding their declining nutritional content and increasing presence of toxic elements, which directly affect human health. This reinforces the importance of prioritizing nutrient-rich and safe crop varieties under the GAP model. In conclusion, it was stated that GAP represents a forward-looking agricultural vision—one that embraces modern mechanization and innovation but remains rooted in ecological responsibility. It was conveyed that GAP is not a universal formula, but a flexible, context-specific system that must be adapted to the regional climate, soil conditions, and local crop patterns.

Prof. Mandal's address emphasized that by adopting GAP, Indian agriculture can move towards a future that is not only productive and resilient, but also healthy, sustainable and equitable for generations to come.

Technical Session III:

In this session, Shri Nilanjan Sinha, the Regional Director, NCDC, Kolkata, gave a thoughtful presentation on the cooperatives in West Bengal and in India, including their operations, the number of Primary Agricultural Credit Societies (PACS) that are currently operating in the state (5500 total), the amount of money granted in loans to the registered Kishan Credit Card recipients (4990crore to date) and the decentralized cooperative systems. The technical session examined the structure, operational scope, potential for positive change, and obstacles to the success and growth of farmer cooperatives and Primary Agricultural Credit Societies (PACS) in India's agricultural sector. He underlined how important PACS are in helping farmers at the local level by offering them financial assistance and other services. He

discussed Farmer Producer Organizations (FPOs), fertilizer subsidies, and other government program that are meant to improve the productivity of Indian farmers and their lifestyles. He divulged his views on the Indian Farmers Fertilizers Cooperative Limited (IIFCO), Anand Milk Union Limited (AMUL), and the Laxmanrao Inamdar National Academy for Cooperative Research and Development (LINAC) and its role in advancing and developing cooperative societies. He gave an example of how the West Bengal government invested ₹400 crore through cooperatives to boost the state's agricultural development. He explained the distribution of loan percentages among farmers across various agricultural sectors, including dairy, ice cream, sugar, rubber, and cereal production, as well as for purchasing staples like paddy, wheat, and maize. He then demonstrated West Bengal's position in the production of rice, potatoes, honey, tea, and other products. He also highlighted that India is the biggest seller of Basmati rice and has the largest GDP from the export of saffron and drumsticks to the countries such as the United States, the United Arab Emirates, and Japan which generates

\$814 USD. He highlighted initiatives like the Pradhan Mantri Matsya Sampada Yojana (PMMSY) and the National Bee keeping and Honey Mission (NBHM). He also discussed the three programs— Cooperative Interns, Young Professionals, and the Sahakar Mitra Scheme on Internship Program(SIP)- that aim to encourage young engagement and growth in the cooperative sector. These initiatives aim to strengthen the cooperative movement across the country, cultivate future leaders, and bridge the knowledge gap between academia and practical experience. The speaker concluded his speech with an uplifting message, leaving the audience with a broader perspective.

Technical Session IV:

In this session Dr. Subrata Mandal, Senior Scientist of RKVK, Visva Bharati, imparted knowledge of the key issues faced by Indian farmers today, as well as an extensive description of the most significant government programs and projects intended to enhance their standard of living and guarantee the sustainability of agriculture. He explored the severe climate changes and environmental concerns, such as irregular rainfall, water scarcity & impurity, and soil degradation, especially in Birbhum district and throughout India. He also referred to socio-economic problems such as lack of knowledge about modern technologies and inputs, small and dispersed landholdings, price fluctuations and market volatility, a persistent reliance on middlemen, financial constraints and debt, a heavy reliance on the production of staple foods rather than market-demand foods, pest and disease outbreaks, irrational production processes, policy, and institutional issues, all of which make it difficult to ensure food security and overall development. He then went into great detail on the different government programs that address these issues, including enhanced credit, crop insurance, direct income support, digital market reforms, sustainable farming practices, and the promotion of modern irrigation and technology. Next he discussed programs like PM-KISAN (Pradhan Mantri Kisan Samman Nidhi), which gives small and marginal farmers ₹6,000 in direct income support, annually in three installments. All farmers can obtain crop insurance through PMFBY (Pradhan Mantri Fasal Bima Yojana) at reasonable prices against diseases,

pests, and natural calamities. Access to flexible, low-interest loans for agricultural equipment, crop production and related needs is provided by the Kisan Credit Card (KCC) Scheme. With subsidies for micro-irrigation systems, PM Krishi Sinchai Yojana (PMKSY) promotes sustainable and effective irrigation. By using crop-specific recommendations and soil testing, the Soil Health Card Scheme encourages the use of fertilizer in a balanced manner. Grameen Bhandaran Yojana (Rural Godown Scheme) sought to improve rural agricultural infrastructure by offering financial aid for building and remodeling of godowns, or warehouses, in rural regions. The main objective is to make it possible for farmers, particularly small and marginal farmers, to safely store their product, guard against damage, and avoid low-priced distress sales. The Paramparagat Krishi Vikas Yojana (PKVY) offers training and incentives for sustainable and organic farming methods. After retirement, small and marginal farmers can get social security through the PM Kisan MaanDhan Yojana Pension plan. The National Agriculture Market, or e-NAM, is an online marketplace that gives farmers better access to markets and price transparency. By creating robust post-harvest management infrastructure and community farming assets, the Agricultural Infrastructure Fund (AIF) aims to revolutionize India's agricultural industry. The program seeks to increase farmers' incomes, reduce post-harvest losses, and promote contemporary agribusiness by providing access to reasonably priced loans for the construction of infrastructure. He went on to say that despite the fact that Punjab, Haryana and the Southern Zone (Karnataka, Kerala) are adopting modern technologies and diversifying their agricultural activities, the majority of the villagers lack the understanding of extension services, and the Eastern Zone (West Bengal, Bihar) is trailing behind. At the end of the discussion he reminded the audience that success depends on tailoring these programs to local needs, assuring last-mile delivery, and empowering farmers to embrace resilient and profitable farming methods for a secure future.

Technical Session V:

In this session Prof. Souvik Ghosh, Honorary Director of the Argo-economic Research Centre (AERC) at Visva Bharati, shared insights on Indian agriculture and doubling farmer income. Supporting almost half of the population and contributing significantly to food security, Indian agriculture is the foundation of the nation's economy. Despite remarkable increases in productivity since independence, a significant portion of the farming community still faces challenges related to unstable and low earnings, mounting debt and market volatility. Despite the fact that farmers are essential to the production of food, the economic rewards of agriculture are not usually shared equally. Because of market structures, patterns of land ownership, and governmental regulations, wealthier people typically receive a larger share of profits. Over time a number of factors, including environmental stress, shifting economic conditions, evolving consumer behavior, and deliberate governmental and technological interventions, are contributing to the fall in the dominance of staple crops. He meticulously delved into the multifaceted dimensions of Indian agriculture, closely examining the feasibility, strategies, and challenges rooted in the mission to double farmers' income. In order to accomplish the ambitious aim of doubling farmers' income, he highlighted the

seven key point solutions. Adopt high-yield varieties, modern agronomy and expand efficient irrigation (e.g. “Per Drop More Crop”). Encourage dairy, poultry, fisheries, and related sectors as alternative income streams. Promote balanced use of fertilizers (e.g., soil health cards), micro-irrigation, and targeted subsidies to cut production costs. Encourage multiple cropping cycles and better land utilization to maximize returns per hectare. Shift from staple grains to horticulture, pulses, oilseeds, and floriculture, and promote allied activities like beekeeping and agroforestry. Reform agricultural marketing (e-NAM, contract farming), strengthen procurement, and ensure fair MSPs to deliver better value for produce. Facilitate rural employment in food processing, agro-services, small enterprises and skill development. He said that the seven bronze strategies are away to make rural areas more welcoming and they have already helped many areas move forward. But their long-term effects are affected by problems with implementation, differences between regions, market limitations, and environmental concern. He wanted to make sure that the benefits reach all parts of India's huge farming community. To make this happen, there needs to be ongoing investment, targeted policy improvement, grassroots awareness and strong institutional coordination. He concluded on a note of hope, practical unity, and mutual support; his speech leaves an imprint that students can carry forward—transforming inspiration into lasting progress for every household in the village.

Valedictory Session:

Dr. Bikash Majhi, Program Officer, Department of Lifelong Learning and Extension, (REC), Visva-Bharati congratulated everyone for their participation and contribution through his word of thanks.