

The Success Story of Mukesh Mehra: *From Struggling Farmer to Aquaponics Pioneer*

(Under the Leadership of Dr. Brijesh Sharma, President: SEC, Bhopal)

(1). Background and Early Struggles: Mukesh Mehra, a resident of Bilkhiriya village in Phanda Block, Bhopal, came from a family deeply rooted in agriculture. For generations, his family's livelihood depended on traditional farming. The work was demanding, and the returns were uncertain a reality that kept many small-scale farmers trapped in a cycle of financial instability. Mukesh faced immense challenges, including irregular income, high input costs for essentials such as fertilizers and pesticides, and limited access to modern agricultural techniques. The seasonal nature of farming often led to periods of unemployment and financial distress, pushing him to the brink of despair. At one point, the pressures became so overwhelming that Mukesh even contemplated leaving his village to migrate to the city in search of a stable income.

(2). A Turning Point: Mukesh's life took a dramatic turn with the introduction of a new initiative in his village. On January 6, 2023, the project titled "Livelihood Generation through Aquaponics", supported by **NABARD** and implemented by the Society for Environmental Conservation (SEC), launched its first aquaponics unit in Bilkhiriya. Eager to overcome his struggles, Mukesh willingly stepped forward to participate. His involvement was further strengthened through his membership in the Bilkhiriya Group, which provided him with a vital support system offering a platform for collective collaboration, access to financial assistance, and a network of peers who shared his aspirations.

(3). Capacity Building: To prepare him for this new venture, Mukesh underwent a rigorous training program. Experts from **SEC, MANIT, Barkatullah University, Bhopal** and other local institutions provided comprehensive instruction. The training was designed to transform him from a traditional farmer into a modern agricultural entrepreneur. Key areas of focus included the setup and maintenance of aquaponics systems, understanding integrated aquaculture, hydroponics and mastering the cultivation of *Azolla-pinnata*, a natural and low-cost fish feed. He also received specialized training in producing high-value vegetables like broccoli and bell peppers, along with crucial marketing and sales strategies. This education not only equipped him with technical knowledge but also gave him the confidence to take charge of his own destiny.

(4). Establishing the Aquaponics Unit: With the knowledge and confidence he had gained, Mukesh secured project support from **NABARD, Bhopal**. The implementing agency, SEC Bhopal, together with the support of his SHG, further strengthened his efforts. With this combined support, he successfully established his own state-of-the-art aquaponics unit. This modern system was a leap forward from his past farming practices. It featured dual-purpose production, allowing him to simultaneously farm high-value vegetables and fish. This innovation enabled year-round operation, freeing him from the unpredictable whims of seasonal cycles. The unit also embraced eco-friendly practices, using organic techniques and creating a self-sustaining bio-integrated system with minimal waste.



Aquaponics System at village Bilkhiriya, Bhopal.



The Chief Guest was the DGM, of NABARD, at Bilkhiriya village, Bhopal.

(5). Remarkable Transformation and Economic Impact: The results of Mukesh's dedication were extraordinary. In the first year, he achieved a net profit of Rs. 1,95,000. By the second year, his aquaponics unit generated an impressive net annual profit of Rs. 6,98,000. This remarkable success was driven by the diversification of his income streams, which included the sale of exotic vegetables, organic produce, and fish. His achievements did not go unnoticed his farm soon became a model unit for the community, attracting over **75 students** from institutions such as **Government Maharani Laxmi Bai Girls College, Bhopal, and MANIT**, who came to learn and gain hands-on exposure to innovative aquaponics technology. This transformation not only lifted Mukesh's family out of financial struggles but also established him as a respected community leader and mentor.

(6). Establishment of the Aquaponics Units: The aquaponics project, supported by **NABARD**, Bhopal, and implemented by SEC, was designed to empower and uplift the local population in four villages: Bilkhiriya, Sankal Tanda, Bangrasiya, and Bagroda. The initiative targeted 100 beneficiaries, who were organized into Self-Help Groups (SHGs), each comprising 25 members. The project aimed to provide a sustainable alternative livelihood to a diverse section of the community, including farmers, unemployed youth, and other residents, all of whom were eager to explore the potential of aquaponics.

(7). Wider Community Impact: Mukesh's story became a beacon of hope for his community. His success created a ripple effect, inspiring others to adopt aquaponics. Following his example, 32 members from three women's SHGs *Krishna Ajivika Swa Sahayata Samuh*, *Khushi Ajivika Swa Sahayata Samooh*, and *Shree Ram Swa Sahayata Samuh* secured loans from Punjab National Bank (PNB), Bilkhiriya Branch, to establish their own aquaponics systems. This initiative led to the establishment of seven fully operational aquaponics units across the four villages of Bilkhiriya, Sankal Tanda, Bangrasiya, and Bagroda. The project directly benefited around 150 villagers by providing them with a stable source of income and significantly reducing the need for migration. Moreover, the availability of fresh organic vegetables and healthy fish contributed to a marked improvement in the nutritional security of the entire community.

(8). Marketing Channels and Sales: The project's success was sustained by a well-defined marketing strategy. The Self-Help Groups (SHGs) provided a collective platform for sales, offering better bargaining power and a wider market reach. The produce was also sold through **commercial platforms** like the Ajeevika project and at **weekly open markets**, such as the popular one at Gandhi Bhawan in Bhopal. Mukesh and the other aquaponics farmers also engaged in **direct sales** of organic fish, live fingerlings, and seeds to other farmers and customers, creating multiple revenue streams.

(9). Value Addition and Skill Development: To further enhance income opportunities, a two-day training program was conducted in June 2025 at Sankal Tanda village by the **Department of Zoology and Applied Aquaculture, Barkatullah University Bhopal**, in collaboration with SEC Bhopal. The program focused on value-added fish products and was attended by Mukesh Mehra along with 33 other trainees. Participants were trained in processing low-value fish into a range of high-value products, including fish cutlets, cakes, balls, fillets, smoked fish, and fish soup. This initiative opened up a new avenue for skill development and economic growth, building upon the strong foundation established through the aquaponics project.



Govt. MLB Girls' College students held a discussion with the Dr. Brijesh Sharma Bhopal.



Discussion of Women Self-Help Groups with the Dr. Brijesh Sharma & DDM, NABARD, Bhopal.



Discussion of Women Self-Help Groups with the Dr. Brijesh Sharma & DDM, NABARD, Bhopal.

The DDM, NABARD, Bhopal visited the aquaponics unit at Bilkhiriya village.



The journey of Mr. Mukesh Mehra is a testament to how innovative, eco-friendly farming practices can transform rural livelihoods. Supported by NABARD, SEC Bhopal, his story showcases the power of collective effort, financial inclusion, and sustainable technology. From a small farmer struggling to make ends meet, Mukesh has become a successful entrepreneur, a mentor, and a role model for other villagers. His success underlines the project’s vision: ***“Empowering people through sustainable livelihood and community-driven growth”***.



Value-added fish products developed by the Department of Zoology and Applied Aquaculture, Barkatullah University and Dr. Brijesh Sharma SEC Bhopal.