Bank of Ceylon Paves the Way for Drone Technology in Sri Lankan Agriculture

Posted on

Professor Buddhi Marambe.

Drones are transforming agriculture in Sri Lanka, supported by the Bank of Ceylon (BOC). Professor Buddhi Marambe, an expert in climate-smart agriculture from the University of Peradeniya, has been a key player in these initiatives. He discusses the role of BOC in funding training for drone pilots and promoting large-scale adoption of drone technology. This shift toward precision farming and sustainable practices is positioning Sri Lanka at the forefront of technology-driven agriculture. Drone technology has been used for a long time, especially in developed countries. It helps farmers apply fertilizers accurately, save water, and reduce the time

needed for various tasks. Drones are also useful for monitoring crops. In agriculture, drones primarily monitor fields or apply inputs. In Sri Lanka, a private company launched a service in 2014 that failed quickly due to a lack of acceptance and limited understanding of its benefits. This led to unsuccessful commercial operations at that time.

In the 2020s, the Skills Development Council, Kotelawala Defence University, and Kenilworth International began training drone operators, as flying drones requires specialized skills. A key advancement came when the Ministry of Agriculture partnered with Kenilworth International, securing a one billion investment from the Bank of Ceylon. This collaboration enabled farmers to use drones for more efficient input application. The technology to create drones is widely available, with many small companies in Sri Lanka producing their own for various applications. However, effective drone operations rely on quality software. The partnership between BOC and Kenilworth International was significant as they invested in a leading drone operating system. Using DJI T-series drones, known for their accuracy and reliability, the focus is on agricultural tasks to ensure efficient application of inputs. BOC's support has facilitated the introduction of this technology into agriculture, enhancing productivity in the sector.

Drones are increasingly used in agriculture, particularly in paddy and tea farming. Out of approximately 565 agrarian service centers, 64 are currently utilizing drones for applying agricultural inputs, with support from BOC. Trained drone pilots collaborate with the Ministry of Agriculture to offer paid services, ensuring precise application of pesticides and fertilizers while reducing overuse. Drones cover large areas quickly and can use remote sensing to target specific locations, which minimizes chemical usage and benefits the environment. However, additional training for pilots may be necessary. Moreover, drones significantly conserve water; they require only 20 liters to spray an acre. Ongoing tests at research institutes aim to enhance methods for applying fertilizers and broadcasting seed paddy with drones, showcasing the technology's potential in agriculture. BOC has been pivotal in supporting this initiative, which is shaping the sector's future.

Flying a drone requires considerable skill; thus, trained pilots are essential for effective agricultural operations. BOC's investment has been crucial in funding training programs for these professionals, ensuring the successful application of drone technology in agriculture. Drones are increasingly used for security and surveillance in large agricultural operations like tea plantations. They help managers monitor vast areas for nutrient deficiencies, pest infestations, and

diseases, allowing for timely interventions. Moreover, drones assist in labor management by ensuring plucking happens in designated fields at proper times and tracking worker movements to enhance efficiency. Overall, they significantly improve oversight in agricultural and security tasks. In Sri Lanka, unrestricted drone ownership poses risks, but drones have significant potential in humanitarian efforts, especially in locating people during natural disasters. They provide aerial surveillance and real-time data that enhance rescue operations. Efforts have been made to use drones to warn rural communities about migrating wild animals, particularly elephants, to raise awareness of potential dangers. However, small drones can disorient elephants, leading to unintended consequences. Future research should refine drone technology to ensure effective early warning systems that don’t harm wildlife.

Given that drones have only been used in agriculture for one season, we need more time to assess long-term effects. However, there’s an immediate need for skilled drone pilots in Sri Lanka. Kenilworth International currently oversees training and deployment funding, and I expect more partners will support these efforts.