

ICAR-NBAIR Demonstrated Utility of Agri-drone in Crop protection

ICAR- National Bureau of Agricultural Insect Resources, Bengaluru has been making efforts to develop novel and precise delivery mechanism for biopesticides for the effective management of insect pest and diseases. Further, ICAR-NBAIR has been selected as one of the ICAR Institutes for **“Drone technology demonstration”** under the Sub Mission on Agricultural Mechanization to popularize the Agri-drone among farming communities. In this direction ICAR-NBAIR conducted about 15 biopesticides spraying demonstrations in three clusters (5 demonstration /cluster) using oil based formulation in Tumkuru and Chikkamagaluru districts of Karnataka and Tiruppur and Coimbatore districts of Tamil Nadu in different crops such as coconut, brinjal, mango, sugarcane, arecanut and rice to create farmers’ awareness and promotion of drone technology especially in crop protection. These demonstration programs were attended by about 500 progressive farmers, line department officials, farmers producing organization (FPOs) officials, women shelf help groups (SHGs), custom hiring centers (CHCs) and other stakeholders which created great interest and motivation.



During demonstration, it was briefed about various government subsidy schemes for procurement of agri-drone to different target groups like government institutions, ICAR-KVKs, Line departments, FPOs, SHGs and CHCs. The drone technology is a revolutionary technology that is effectively used for the precision spraying of pesticides, thereby reducing chemical usage and its cost of applications, assessment of crop health, and real-time monitoring of pest, disease and weed over large area thus enabling timely action on management strategies.

Drone-based pesticide spraying is also safer for farmers avoiding physical exposure to pesticides and is more convenient to some inaccessible cropping system like sugarcane, uneven terrain like tea and coffee plantation and taller crops like coconut and arecanut, where manual spraying is challenging. Crop-spraying drones have much higher work efficiency (7-8 minutes /acre) as compared to manual spraying.



Moreover, manual spraying leads to non-uniform biopesticide application, poor penetration of active ingredient into the dense canopy and low application efficiency leading to inadequate control of pests and diseases. Therefore, ICAR-NBAIR is working on development of standard operating procedure (SOP) for bio pesticide application viz., dosages, efficacy on target insect pest; drift effect and particle size etc. Use of biopesticides through drone has led to a greater bio-suppression of pests.



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Source: The Director, ICAR-National Bureau of Agricultural Resources, Bengaluru