FLIGHT-2022

MADRAS INSTITUTE OF TECHNOLOGY

DEPARTMENT OF AEROSPACE ENGINEERING

ASSOCIATION OF AERONAUTICAL ENGINEERS

DRONES IN AGRICULTURE - DAY 2

MAY 14, 2022

Introduction

Drone technology is a phenomenal innovation with potential to transform the way the routine manual activities are carried out in agriculture. Agricultural industries globally are increasingly using drone technology to modernize farming. New technology has allowed the growers of today to optimize each part of their operations - from field spraying to grow cycles and crop health. With an agriculture drone, farmers get in-depth data analysis and mission planning as well as new tools capable of handling physical work.

Description

In this workshop we will discuss about, How drones are going to be a force multiplier for agricultural operations? And the related issues and challenges for implementing this technology both in terms economic and political perspective .

The various certifications/clearances required for a drone to be used in agriculture and the authorities responsible for providing the drone pilot license. Also there will a drone demonstration at the end of the session.

Come join us on 14th of May and get a chance to interact with some of the great minds of the nation

- **Dr.K.Senthil kumar,**
  Professor & Director Incharge, CASR
  And his team.

Schedule for the Workshop

09:00am - 10:00am :- Presentation

10:00am - 10:40am :- Group discussion

10:45am - 11:00am :- Drone demonstration

Contact Details

For any queries regarding the event, feel free to contact the organizers.

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KISAN DRONES –CHALLENGES AND BUSINESS OPPORTUNITIES

Rs.5 lakh worth of DGCA Certified Drone Training programme is free for registered participants

www.casrrpto.com

Drones are well-equipped with various features like multi-spectral and photo cameras, allowing them to be used in many areas of the agriculture sector, including crop stress monitoring, plant growth prediction, and herbicide and fertilizer delivery. By using drones to assess vegetation and crops, field areas infected by weeds or infections, and pests, farmers can precisely apply chemicals to fight these infestations, reducing their overall cost. Numerous start-ups are also developing drones that spray nutrients and seeds into the soil using drones. Thus, this technology will increase and can be applied thereby optimizing the overall cost for the farmer. Additionally, drone planting systems have been developed by several start-up companies that can shoot pods, seeds, and spray crop management, which reduces the cost of labour and reduces the exposure of workers to potentially hazardous conditions

Based on the unique advantages of drone technologies in agriculture, the Ministry of Agriculture & Farmers Welfare (Department of Agriculture and Farmers Welfare) has developed Standard operating procedures (SOPs) for the use of drones for the application of pesticides and nutrients that provide concise instructions for the effective and safe use of drones.

The ministry of agriculture and farmers welfare has issued guidelines to make drone technology more affordable for stakeholders in Indian agriculture.

As per the guidelines of the "Sub-Mission on Agricultural Mechanization" (SMAM), grants up to 100% of the cost of an agricultural drone or Rs. 10 lakhs, whichever is less, can be given to farm machinery training and testing institutes, ICAR centres, Kishi Vigyan Kendras and state universities for the purchase of agriculture drones.

Farmers' Producer Organizations (FPOs) may receive up to 75% of the cost of an agriculture drone to use in their fields. For agencies that are not interested in purchasing drones, a contingency expenditure of Rs6000 per hectare would be provided to hire drones for demonstrations from the custom hiring centres. Start-ups, drone manufacturers, and hi-tech hubs. For implementing agencies, contingent expenditures for drone demonstrations would be limited to Rs.3000 per hectare. Support and grants would be available until March 31, 2023.

Agricultural drone applications will require the basic cost of the drone and its attachments, or 40% of the basic cost. Existing custom hiring centers set up by cooperative societies of farmers would offer financial assistance for drone purchases of up to Rs. 4 lakhs, whichever is less. In addition to other agriculture machines in the CHCs/Hi-tech hubs that will be established by cooperative societies of farmers, FPOs and rural entrepreneurs, drones can also be included as one of the machines along with other agriculture machines in the projects of the CHCs/Hi-tech hubs. For agriculture graduates establishing Custom Hiring Centers, 50% of the basic cost of a drone and its attachments or up to Rs.5.00 lakhs in grant support will be provided. An entrepreneur should have a remote pilot license from the director general of civil aviation (DGCA) or from an authorized remote pilot training organization.

Apart from that, individual farmers are also eligible for financial assistance of 40% or four lakh rupees, whichever is less. Women, SC/ST small and marginal farmers and NE State farmers are also eligible for 50% or 5.00 lakhs of financial assistance to purchase kisan gifts. By subsidizing the purchase of agriculture drones, CHCs and Hi-tech Hubs will be able to adopt the technology at a lower cost.

With the growing use of Unmanned Aerial Vehicles (UAVs), often known as drones, for a variety of purposes, the Tamil Nadu government has chosen two underutilized airstrips for the establishment of a drone hub. It is attempting to attract national and international companies to locate their operations there. Honorable Chief Minister inaugurated the Tamil Nadu Unmanned Aerial Vehicles Corporation (TNUAVC).This would allow the government to provide a wide range of services, particularly in agriculture (aerial spraying), Training of manpower for spraying, MRO, and encouraging start up in the drone industries.