

An Analysis and Reporting on "Study of Various Drone Technologies available to provide low cost and effective Solutions to Agricultural Sector with Respect to Indian Context"

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Abstract: *An aircraft without a human pilot on board is referred to as a drone, also known as an unmanned aerial vehicle (UAV) or unmanned aircraft system (UAS). Software-controlled flight plans allow drones to be remotely piloted, operated autonomously, or both. From small consumer drones for recreational use to larger, more complex drones used for commercial, military, and scientific applications, they come in a variety of sizes, forms, and capabilities. A variety of sensors and technology, including cameras, GPS, accelerometers, gyroscopes, and occasionally even specialized gear like LiDAR or thermal imaging cameras, are installed on drones. Applications for them are numerous and include search and rescue, agriculture, scientific research, surveillance, aerial photography, and videography.*

Drone technology in agriculture aids farmers in decision-making, boosts productivity, lowers resource input costs, and eventually increases agricultural yields and profitability. To properly take use of new technology, farmers must be trained in drone operation and data analysis. Additionally, while employing drones for agricultural, adherence to local legislation is essential.

Keywords: unmanned aerial vehicle

REFERENCES

- [1] S. B. and G. N. S. Ahirwar*, R. Swarnkar, "Application of Drone in Agriculture," *Int. J. Curr. Microbiol. Appl. Sci.*, vol. 8, no. 1, 2009, doi: <https://doi.org/10.20546/ijcmas.2019.801.264>.
- [2] S. Sun, "Market size of drone in India 2020-2030," *Online Reference*, 2023. <https://www.statista.com/statistics/1365217/india-market-size-of-drone/> (accessed Dec. 10, 2023).
- [3] Blueave Consulting, "India Agriculture Drones Market," *Online Reference*, 2023. <https://www.blueweaveconsulting.com/report/india-agriculture-drones-market> (accessed Dec. 10, 2023).
- [4] G. B. and R. J. Pathak H, Kumar GAK, Mohapatra SD, "Use of Drones in Agriculture: Potentials, Problems and Policy Needs, Publication no. 300, ICAR-NIASM, pp 13+iv." p. 19, 2020.
- [5] F. N. Bashar Alsadik, Farzaneh Dadrass Javan, "UAV Remote Sensing for Smart Agriculture," 2023. <https://www.gim-international.com/content/article/uav-remote-sensing-for-smart-agriculture#:~:text=The Use of UAVs in Smart Agriculture&text=UAVs can be equipped with,their chlorophyll content and biomass.> (accessed Dec. 10, 2023).
- [6] and S. R. K. Umesh B. Pawar, Sunil G. Bhirud, "Analysing the Effect of Temperature and Humidity on AC Compressor Speed Using Fuzzy Control over CAN Communication," 2019. doi: <http://dx.doi.org/10.2139/ssrn.3356534>.

