

Candidate must adhere to the word limit specified in the question.  
Any page or portion of the page left blank must be clearly struck off.

2. Drones have the potential to be the technology led-intervention of Indian agriculture. Critically analyse.

World Economic forum - Drones will act as a harbinger for technology led growth/transformation in Indian agriculture.

Drones usage & potential areas

currently Drones are used in areas for mapping water areas, pesticide application and irrigation.

Potential Areas

1. World Economic forum says drones will reduce cost of application by 20%. Drone data can be used for effective planning. Sowing, harvesting precision agriculture can be achieved due to reduced man power. eg: perhaps more crop + drones - will reduce water water use in efficiency.

2. Combining Drones with GIS and Google Earth satellite images will help schemes like Pradhan Mantri Fasal Bima Yojana [Crop insurance scheme] - for crop cutting experiment and crop loss mapping.

3. Agri-Research will be eased - and can be localised based on the drone mapped data

4. Forward & backward linkage can be achieved. eg: Drone data on crop quality can be used by Food processing industries for procurement, furthering value addition & exports

Efforts Needed

1. Expert advice - eg: Israel - Artificial Intelligence drones for mapping & other purpose.

2. 'Sand box' for testing for private players.

3. Cost of production with drones will increase by 45%. Hence FPO's can procure drones and offer at some amount to farmers since 85% are small/marginal farmers in India

4. Cross Industry application of drones - civil/military way forward

still ICAR - shows challenges like weather forecasts, potential misuse and Internet connectivity as issues. ~~The~~ Government schemes like Bharat net can be linked, <sup>addressing</sup> ~~making it~~ <sup>to</sup> holistic perspective to realise full potential of drone.