The first agriculture drone of its type, it is quad tiltrotor fixed-wing UAV configuration with all 4 rotors at ends of 4 wings. It isn’t just an abstract idea of an unrealistic drone configuration but a thorough analysis and calculation of its performance in required mission, manufacturability, procurement and mitigation of all possible safety hazards. This UAV is capable of:

* Stable flight in vertical mode due to rotors placed at more distance from fuselage
* Powerful horizontal flight due to thrust from all 4 rotors horizontally
* Quick and stable transition in flight modes due to variable tilting angles of rotors

When compared to other designs for this mission, this configuration is at top of the charts for the following reasons:

* 5.5 to 6 times more power efficient in horizontal cruise than multi-copters. i.e., suitable for spray zones far away from Ground Control Station
* Higher precision in spraying than fixed wing configuration due to capability of hovering, gliding and staying at transition state while spraying
* More stable hovering and spraying than its parent configuration quad plane

The UAV’s mass is 4kg with a capacity of 3kg pesticide carriage. Maximum spraying capacity of drone is 3.5L/min. With full payload, the drone can cruise at 15ms-1 consuming only 84 Watts for propulsion. Drone can fly at 30ms-1 (max. airspeed for required mission) with rotors burning only 452 Watts.