

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202211061260 A

(19) INDIA

(22) Date of filing of Application :27/10/2022

(43) Publication Date : 09/12/2022

(54) Title of the invention : SYSTEM AND METHOD TO DETECT CROP DISEASES USING A UAV

(51) International classification :G06N0020000000, H04W0004020000, G05B0019042000, B64C0039020000, H04L0067120000  
(86) International Application No :NA  
Filing Date :NA  
(87) International Publication No : NA  
(61) Patent of Addition to Application Number :NA  
Filing Date :NA  
(62) Divisional to Application Number :NA  
Filing Date :NA

(71)Name of Applicant :

**1)Chitkara University**

Address of Applicant :Chitkara University, Atal Shiksha Kunj, Pinjore-Nalagarh National Highway (NH-21A), District: Solan - 174103, Himachal Pradesh, India. Solan -----

**2)Chitkara Innovation Incubator Foundation**

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

**1)KAUR, Ravneet**

Address of Applicant :H. No. 123, Preet Nagar, Fatehgarh Sahib, Punjab - 140407, India. Fatehgarh Sahib -----

**2)TIWARI, Reet Kamal**

Address of Applicant :Ram Kutir, Arsandey, Boreya, Kanke, Jharkhand - 834006, India. Kanke -----

**3)MAINI, Raman**

Address of Applicant :Dhawan Colony, Street no. 6, House no. 142, Ferozepur City, Punjab - 152002, India. Ferozepur -----

**4)SINGH, Sartajvir**

Address of Applicant :Associate Professor, Chitkara University, Atal Shiksha Kunj, Pinjore-Nalagarh National Highway (NH-21A), District: Solan - 174103, Himachal Pradesh, India. Solan -----

(57) Abstract :

A system 100 and method 200 to detect and identify diseases and insects for suitable control is comprising an unmanned aerial vehicle 102 with a first set of sensors 104, a sensor grid 106, a communication module 108 includes a transceiver 108-1, GPS 108-2 and GSM 108-3, and a computing unit 110 in communication with the unmanned aerial vehicle 102. The computing unit 110 is configured to receive images of the crop to extract and identify any or a combination of diseases and insects using a machine learning algorithm to transmit to a mobile device 112 through a network 116. The electrical power supply to the system is coupled to a power module 114.

No. of Pages : 18 No. of Claims : 10