

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202541065993 A

(19) INDIA

(22) Date of filing of Application :10/07/2025

(43) Publication Date : 05/09/2025

(54) Title of the invention : NUTRIENT DELIVERY SYSTEM FOR AN AGRICULTURAL FIELD

(51) International classification :A01C23/04, A01C23/00, A01G25/16,
G01N33/24
(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)Woxsen University

Address of Applicant :Kamkole Village, Sadasivpet, Sangareddy District,
Hyderabad, Telangana, India – 502345. Hyderabad -----

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)G. Kesava Datta

Address of Applicant :School of Technology, Woxsen University, Kamkole
Village, Sadasivpet, Sangareddy District, Hyderabad, Telangana, India – 502345.
Hyderabad -----

2)Dr. Bhanu Prakash S

Address of Applicant :School of Technology, Woxsen University, Kamkole
Village, Sadasivpet, Sangareddy District, Hyderabad, Telangana, India – 502345.
Hyderabad -----

3)Srikar Miriyala

Address of Applicant :School of Technology, Woxsen University, Kamkole
Village, Sadasivpet, Sangareddy District, Hyderabad, Telangana, India – 502345.
Hyderabad -----

4)Shaik Imran

Address of Applicant :School of Technology, Woxsen University, Kamkole
Village, Sadasivpet, Sangareddy District, Hyderabad, Telangana, India – 502345.
Hyderabad -----

5)Sana Sujan Kumar Reddy

Address of Applicant :School of Technology, Woxsen University, Kamkole
Village, Sadasivpet, Sangareddy District, Hyderabad, Telangana, India – 502345.
Hyderabad -----

(57) Abstract :

A nutrient delivery system for an agricultural field, comprising one or more sensor arrays 101 to detect for availability of macronutrient to crop, pH level of soil and moisture level in soil, a biodegradable capsule 102 encapsulating sensor array 101, a centralised control unit 103 receive data from sensor array 101 and determine quantity of nutrients required by crop, multiple nutrient tanks 104 to deliver to crop, a mixing chamber 105 to receive nutrients in specific ratio for mixing, a delivery line 107 to deliver nutrient mixture, a method for delivering nutrients to crop in an agricultural field, comprising steps, initialising a sensor array 101, collecting data from sensor array 101, processing sensor data from sensor array 101, transmitting data to a control unit 103, receiving nutrients from tanks 104 into a mixing chamber 105, mixing nutrients in mixing chamber 105 and delivering nutrient mixture via a delivery line 107.

No. of Pages : 22 No. of Claims : 9