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| **S.**  **No** | **TITLE &AUTHOUR** | **YEAR & PUBLICATION** | **METHODOLOGY** | **ADVANTAGE** | **DRAWBACK** |
| 1. | Smart farming Using IOT  Reshma S, Ramya J, Swathi S, Srinidhi B M, Sindhu R N | April 2019  IJISRT  International Journal of Innovative Science and Research Technology | controlling the irrigation process and preservation of water resources automatically by Raspberry Pi, python program , Moisture sensor , Rain water sensor , Infrared sensor , Soil  moisture sensor | Raspberry Pi 3 is cost efficient. | Rain sensor is sensitive to temperature and salinity |
| 2. | Smart Crop Protection System from Animals  M. Jaya Prabha,  R. Ramprabha, V.VasuBrindha,  C. Asha Beaula | **2020**  Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). | Arduino Uno microcontroller, Ultrasonic sensor, IR sensor & GSM module | Increased yields | Not appropriate in certain conditions |
| 3. | IOT Based Wireless Sensor Network for Prevention of Crops from Wild Animals  S. R. Chourey,  P. A. Amale, N.  B. Bhawarkar | **2017**  International Journal of Electronics, Communication & Soft Computing Science and Engineering IJECSCSE | A wireless sensor network (WSN) , sink node , Master node . Sensor node requires four basic units i.e. sensing unit, processing unit, transceiver unit and a power unit. Actuator. | Low cost wireless sensor node. | The boards are not protected against harsh, dirty or electrically noisy environments |

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| 4. | Smart Crop Protection System  Mohit Korche, Sarthak Tokse, Shubham Shirbhate, Vaibhav Thakre,  S. P. Jolhe | **2021**  IJLES(Internatio nal Journal of Latest Engineering Science) | PIR sensors, Embedded PIC Microcontroller,LCD (16×2)N(JHD162A),  PIEZO Buzzer, GSM based technology | This is used to saving time and also preventing the loss of crops. | losses of adjacent crops and contamination of groundwater |
| 5. | Smart Crop Protection System from Animals and Fire using Arduino  Srikanth N, Aishwarya, Kavita H M, Rashmi Reddy K,  Soumya D B | **April 2019** International Journal of Engineering Research in Electronics and Communication Engineering (IJERECE) | Arduino Uno Microcontroller AT Mega328P, GSM  Module, SMOKE SENSOR (MQ-2), SMOKE SENSOR (MQ-2), DC MOTOR | This will also help them in achieving better crop yields thus leading to their economic wellbeing. | Not appropriate in certain conditions |
| 6. | SMART IRRIGATION AND CROP PROTECTION FROM WILD ANIMALS  N.Penchalaiah , D.Pavithra , P.Bhargavi , D.P.Madhuri4, K,Eliyas Shaik , S.Md.Sohaib | **April/2020**  RFID  development community | SOIL MOISTURE SENSOR,  PIR SENSOR, LCD, DHT11 SENSOR  (TEMPERATURE / HUMIDITY SENSOR), SPEAKER, GSM, RELAY | Measuring four parameters such as soil moisture, temperature, humidity and the system also includes intruder detecting system. | The proposed system is only limited for a village surrounded area that is near to the forest area |
| 7. | Smart Crop Protection System Using IOT Shishir Bagal, Krunal Mahajan , Riya Parat , Ekta Zade  , Shubham Khante | **APRIL 2021**  International Research Journal of Engineering and Technology (IRJET) | Arduino UNO  ,NodeMcu controller, LCD display, Solar charged converter and a Micro SD Card | It works on Solar Power and they uses solar charged convertor to charge the battery efficiently. | software failure, internet connectivity problem |

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| 8. | Smart Crop Protection System Mohit Korche, Sarthak Tokse, Shubham Shirbhate, Vaibhav Thakre,  S. P. Jolhe | **2021**  IJLES(Internation al Journal of Latest Engineering Science) | PIR sensors, Embedded PIC Microcontroller,LCD (16×2)N(JHD162A),  PIEZO Buzzer, GSM based technology | This is used to saving time and also preventing the loss of crops. | losses of adjacent crops and contamination of groundwater |
| 9. | Microcontroller based Smart Crop Protection System to Detect Fire and Animals  Premjyoti G Patil,B. | **April-2020** IJISRT(Internatio nal Journal of Innovative Science and Research Technology) | PIR sensor, IR transmitter- Receiver Laser source,Perimeter control system, microcontroller, smoke sensor,GSM | This would prevent starvation of the animals, thus help maintaining ecologica | Improper implementation can cause much more harm than good |
| 10. | Protecting Crops From Birds, Using Sound Technology In Agriculture  Guguloth Devilal  P. RAMA RAO | **JULY/2018**  International Journal of Management, Technology And Engineering | Arduino, APR9600,Power Supply, Buzzer,Voice Module, Infrared Obstacle Sensor Module | Reduce human work , More efficient | bird damage became much worse after the introduction of new varieties such as Kosui, which have higher sugar content than traditional varieties |