Smart Irrigation System using Arduino

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Abstract: A variety of strategies must be used to address supply and demand issues in order to provide a growing and increasingly wealthy global population with inexpensive and wholesome food. In terms of supply, increasing irrigation is Future food production will depend on this, but the accompanying needs for storing water and the effects of doing so are uncertain. In this article, we calculate biophysical potentials for storage-fed sustainable irrigation, which does not degrade freshwater supplies or increase cropland but instead requires water to be stored before use. We also examine the consequences for infrastructure and food security. Because 460 km3/yr of sustainable blue water—enough to grow food for 1.15 billion people—can only be used for irrigation after being stored, we find that water storage is essential for future food systems. Even if they were all known Our findings point out the limitations of grey infrastructure for future irrigation and call for greater irrigation efficiency, a switch to less water-intensive farming methods, and the widespread use of alternate storage options.

Keywords: Smart Irrigation, Sustainable Irrigation, Water, Efficiency, Storage

REFERENCES

[1] Veena Divyak, Ayush Akhouri, A Real time implementation of a GSM based Automated Irrigation Control System using drip Irrigation Methology.

[2] Mansour, H. A, Yousif El-Melhem ,impactthe automatic control of closed circuits raingun irrigation system on yellow corn growth and yield(International Journal of Advanced Research.

[3] m. guerbaoui, y. el afou, a. ed-dahhak, a. lachhabpc-based automated drip irrigation system.

[4] Purnima, S.R.N Reddy, "Design of Remote Monitoring and Control System with Automatic Irrigation System using GSMBluetooth",

[5] Jin Li :Dept. of Electronics and Information Engineering Huazhong University of Science and Technology,"Filter Design and Optimizing based on a Neural Network"

[6] Author Nicholas J. Car researched on the topic "Using decision models to enable better irrigation Decision Support Systems"

[7] Author Rooholla Moradia, researched in the year of 2015on the topic "Energy use and economical analysis of seedy watermelon production for different irrigation systems inIran"

[8] Authors Darouicha, researched on the topic "Drip vs. surface irrigation: A comparison focussing on water saving and economic returns using multi-criteria analysis applied to cotton Hanaa M."

[9] Authors Salvatierra-Bellidoa, researched on the topic "Development of an automatic test bench to assess sprinkler irrigation uniformity in different wind conditions ."

[10] Zuraida Muhammad,Muhammad Azri Asyraf Mohd Hafez,Nor Adni Mat"Smart Agriculture Using Internet of Things with Raspberry Pi."

[11] Divya J., Divya M.,Janani V."IoT based Smart Soil Monitoring System for Agricultural Production".

[12] H.G.C.R.Laksiri,H.A.C.Dharmagunawardhana,J.V.Wijayakulasooriya "Design and Optimization of loT Based Smart Irrigation System in Sri Lanka".

[13] Anushree Math, Layak Ali, Pruthviraj U "Development of Smart Drip Irriga- tion System Using IoT".

[14] Dweepayan Mishra1 ,Arzeena Khan2 Rajeev Tiwari3 , Shuchi Upadhay,"Automated Irrigation System-IoT Based Approach".

[15] R. Nageswara Rao, B.Sridhar,"IOT BASED SMART CROP-FIELD MONI- TORING AND AUTOMATION IRRIGATION SYSTEM".

[16] Shweta B. Saraf, Dhanashri H. Gawal,"IoT Based Smart Irrigation Monitoring And Controlling System".

[17] Shrihari M, "A Smart Wireless System to Automate Production of Crops and Stop Intrusion Using Deep Learning"

[18]https://scholar.google.co.in/scholar?start=20&q=Smart+irrigation+system+Research+paper+using+arduino&hl=en&as_sdt=0,5&as_vis=1#d=gs_qabs&t=1686403062248&u=%23p%3DZ-gK0fyT6JIJ

[19]https://scholar.google.co.in/scholar?start=20&q=Smart+irrigation+system+Research+paper+using+arduino&hl=en&as_sdt=0,5&as_vis=1#d=gs_qabs&t=1686403062248&u=%23p%3DZ-gK0fyT6JIJ

[20]https://scholar.google.co.in/scholar?start=10&q=Smart+irrigation+system+Research+paper+using+arduino&hl=en&as_sdt=0,5&as_vis=1#d=gs_qabs&t=1686402915517&u=%23p%3DxZiCbleQHtsJ

[21]https://scholar.google.co.in/scholar?hl=en&as_sdt=0%2C5&as_vis=1&q=Smart+irrigation+system+Research+paper+using+arduino&oq=Smart+irrigation+system+Research+paper+using+ar#d=gs_qabs&t=1686402866886&u=%23p%3DeAvXq6fjkCsJ

[22]https://www.researchgate.net/publication/327964370_A_Study_on_Smart_Irrigation_System_Using_IoT_for_Surveillance_of_Crop-Field

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