

Stream Aquatic Reaping and Crop Fields Redeemable using Rain Drop Detection Sensor

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Abstract: Currently, global environments suffers from loads of rain which in terms of creates flood through urban areas and destroy surrounding as well as agriculture fields. Agriculture fields became too moisture and die of heavy fall rain which cannot be hold much longer for covering acres of areas within a short time period. What is the way to solve this kind of problem in the surroundings? We proposed a method, rain water harvesting and saving crop fields from heavy rain fall using rain drop detection sensor which senses rain and automatically send intimation back to our main board. Main controller board receive signal and precede an action to cover field, divert a way to store the water in to wells. Here, the diversion creates via. path predetermined to flow water on to that direction to save crop fields as well as save water for future proceedings. The implementation even research for city peoples where rain water sensor is implemented on the roofs. Whenever, rain senses it automatically opens a bridge connection between roof and wells. From there, the water is been diverted to well or reservoirs to harvest rain water securely without any manual research.

Key words: Rain water harvesting, saving crops, rain drop detection sensor, implemented, crop fields, period

INTRODUCTION

JeanCharles (2007) explains about the most people in urban areas are not planning to save rain water for future cause. Even village people have no awareness of saving crops on heavy rain falls and create a method to save water for Summer seasons. Initial research to save rain water is to build reservoirs or connect pipes from roofs to well which will be efficient to harvest rain water in rainy seasons. People need fresh water but they will not route a path to provide that pure and clean water from open clouds to earth surface (JeanCharles, 2007).

By R. Angeline, farmers suffer from heavy rains while crop fields float on water and die without any protection or harvest. They don't preserve mistaken from their part whenever rain started they just cut fields and open a current to take water away (Julius *et al.*, 2013). But they are not protecting it for future or even next season which will help them. Economically we are suffering from water on Summer season (survey over India) estimated that wasting water cause you nothing today but harm you back when needed. By Kumar *et al.* (2011) to save water, the action is to provide a route for it. Create awareness among people about our future with less amount of drinking water which leads to conflict, bring them to rain water harvesting system (Kumar *et al.*, 2011).

By Pawar *et al.* (2014), technology updated many things which can be done without any manual works to go and put some buckets outside of houses to save rain water for short time period. Youngsters must create

awareness of rain water harvesting among people to save water on cities as well as village sides to protect farming (Pawar *et al.*, 2014). Where farmers will not to stand for water to other states, we have the source to create reservoirs, rivers and dams to store rain water which will keep on changing the farming of rural areas.

Literature review: Ankit Patel in the methodology, implementation of rain drop detection sensor on roofs of cities and farming fields of villages to protect crops as well as save water to the future. Where this rain water sensor senses of rain drop automatically a system manages the water to flow on predetermined paths to collect all sources and hold it on one side (Kumar *et al.*, 2008). In farming, many acres suffer from huge rain to protect that an automatic roof is been designed and attached with main board for controlling action when the sensor collects data from surrounding environments. By implementing this improves the protection of crop fields as well as increase the water level in the ground to take water for further necessary things. Redirecting it to huge wells in village sides will help farming as well as people who need water for living.

MATERIALS AND METHODS

In architecture, the flow of water harvesting and protection of crop fields from heavy rain mechanism has been implemented with RDD sensor with main board controller connection (Fig. 1). First the RDD sensor is

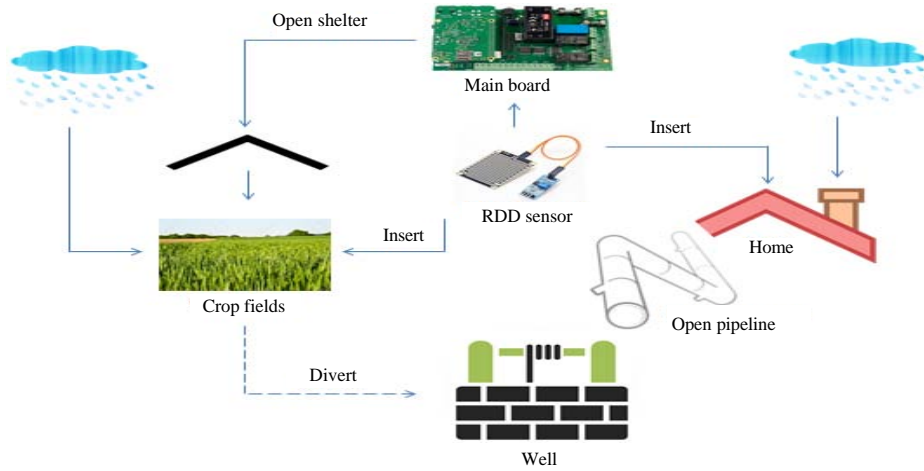


Fig. 1: Architecture

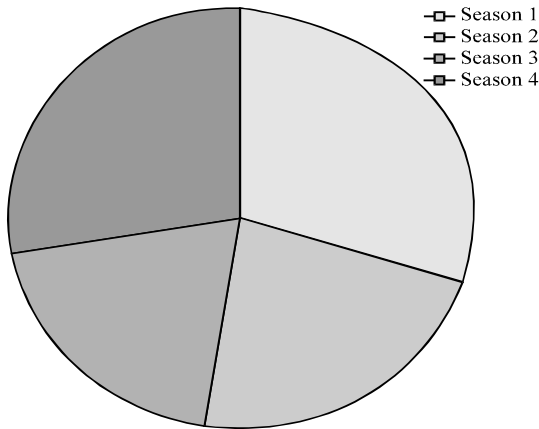


Fig. 2: Pie chart (season wise RWH); Rain Water Harvesting

inserted into crop fields and roof top of cities, later then when it senses rain drops, automatically intimation is forwarded to main board to control action of shelter as well as pipe line connection. It directs all services to well to save rain water and protects insufficiency in future. Each action is controlled by the main board with a signal of intimation from RDD sensor, via. that shelter is opened to secure crop fields, water is diverted to well. In city side, the controller proceed to open automatic pipeline to the well which leads the water directly in to it without any diversion.

RESULTS AND DISCUSSION

In Fig. 2, the rainwater harvesting methodologies worked under various seasons by implementing RDD sensor to sense raining and protects crop fields and save rain water and led it to well.

CONCLUSION

Rain water harvesting emerges with boom in environment to protect water for future sake and further need of necessity. Developing devices to manage this nature source to keep farming and harvesting water automatically with a sensor effectively improves the solution for holding resources safely and protects farming from natural disaster. This system helps in storing nature source into reservoirs automatically without any manual work.

REFERENCES

JeanCharles, M., 2007. Rainwater harvesting systems for communities in developing countries. Ph.D Thesis, Michigan Technological University, Houghton, Michigan.

Julius, J.R., R.A. Prabhavathy and G. Ravikumar, 2013. Rainwater Harvesting (RWH): A review. Intl. J. Innovative Res. Dev., Vol. 2,

Kumar, M.D., A. Patel and O.P. Singh, 2008. Rainwater Harvesting in the Water-Scarce Regions of India: Potential and Pitfalls. In: Strategic Analyses of the National River Linking Project (NRLP) of India Series 2, Upali, A.A. and B.R. Sharma (Eds.). International Water Management Institute, Lahore, Pakistan, pp: 289-314.

Kumar, R., S. Thaman, G. Agrawal and S. Poonam, 2011. Rain water harvesting and ground water recharging in North Western Himalayan Region for sustainable agricultural productivity. Univ. J. Environmental Res. Technol., 1: 539-544.

Pawar, C., S.S. Patil and R.P. Pawar, 2014. A case study of rooftop rainwater harvesting of Renavi village in Sangli District of Western Maharashtra: New approach of watershed development in India. Afr. J. Agricultural Res., 9: 1941-1947.