

AUTOGRICULTURE

-An Automated Agricultural System

COLLEGE : ST.JOSEPH'S COLLEGE OF ENGINEERING

TEAM NAME:INTELLENS

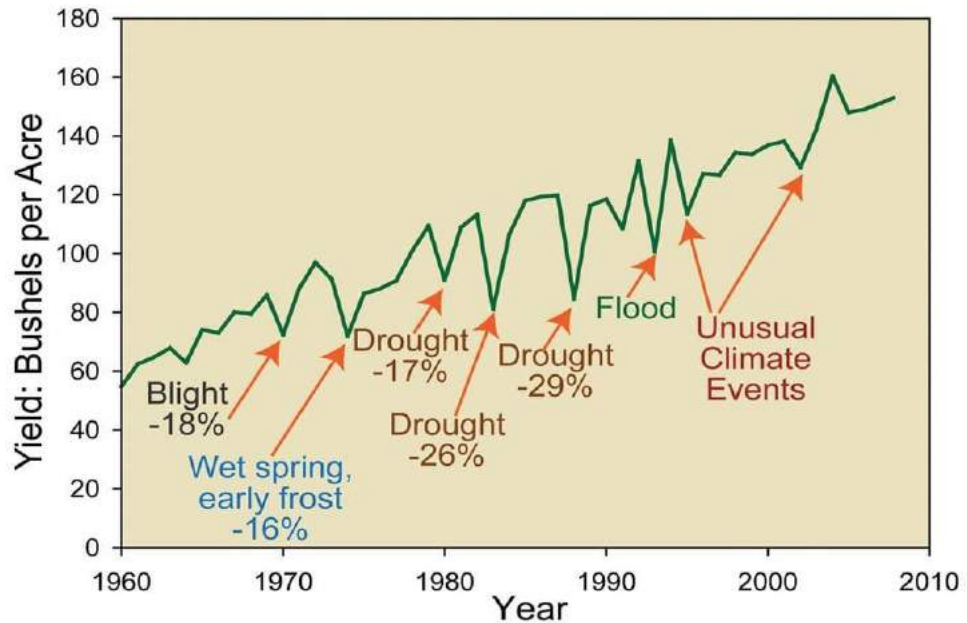
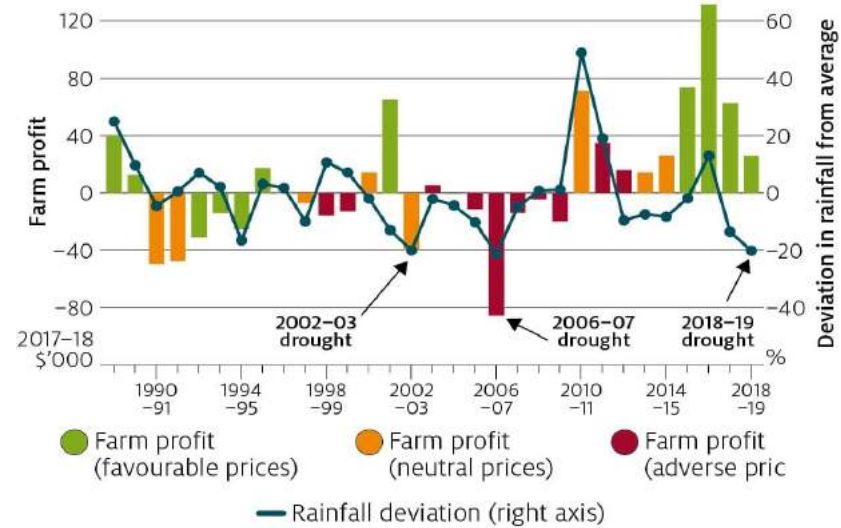
TEAM MEMBERS:

1)G.GOUTHAM

2)HRITHICK KRISHNA KR

3)HARISH.S

PROBLEMS FACED BY FARMERS



The impact of the 2017 South West Monsoon (SWM)

Bay of Bengal, the Nicobar Islands and parts of the north Andaman Sea

The rains begin

Sri Lanka

Record SWM rains cause severe flood damage (WSWS, 2017)

Karimganj, Assam, north-eastern India

Land flooded for over a month and nearly 160,000 people affected (FloodList, 2017a)

Assam

Flooding affects 268,000 people (Times of India, 2017)

Bangladesh

Third of the country underwater, eight million people affected across the country and 600,000 people marooned across the lowland delta region (The Guardian, 2017b; FAO, 2017). At least 134 fatalities (Independent, 2017)

MAY

JUNE

JULY

AUGUST

Kerala, southern India, and north-eastern states including Nagaland, Manipur, Mizoram and Arunachal Pradesh

The rains extend their reach (IMD, 2017)

Himalayas

Flooding begins to rapidly increase

The Lakhimpur district, Assam

Nearly 82,000 people displaced by flood (FloodList, 2017a)

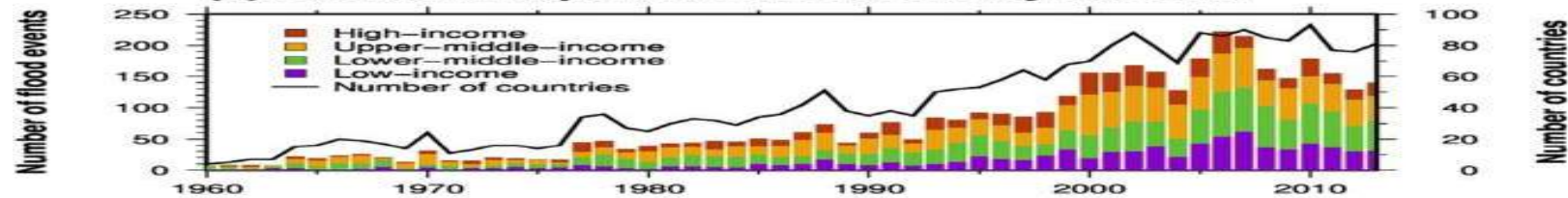
Bihar, India

13 districts within the state impacted by flood water, with 17 million people affected, 700 villages flooded and more

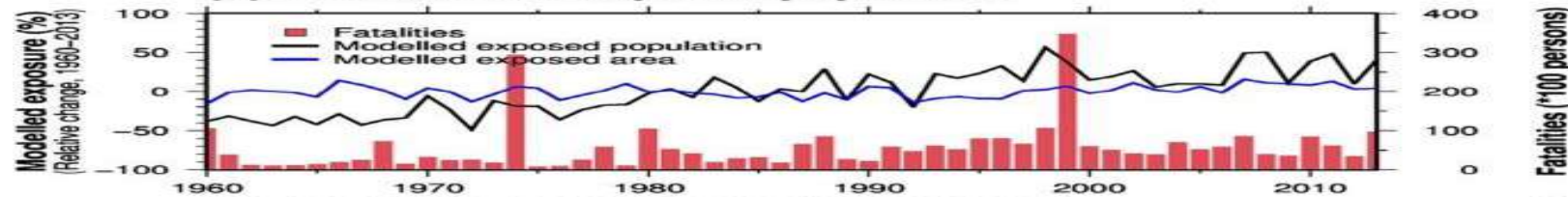
Nepal

Worst rains in 15 years, with severe flooding in Terai and more than 940,000 people affected (WFP, 2017)

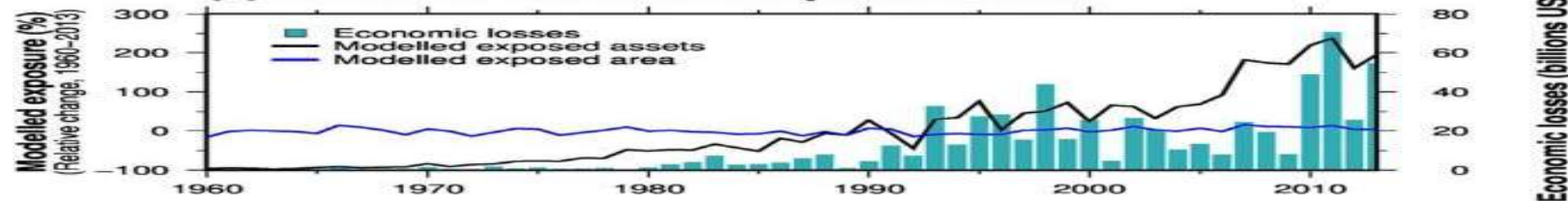
(a) Number of reported flood events by EM-DAT

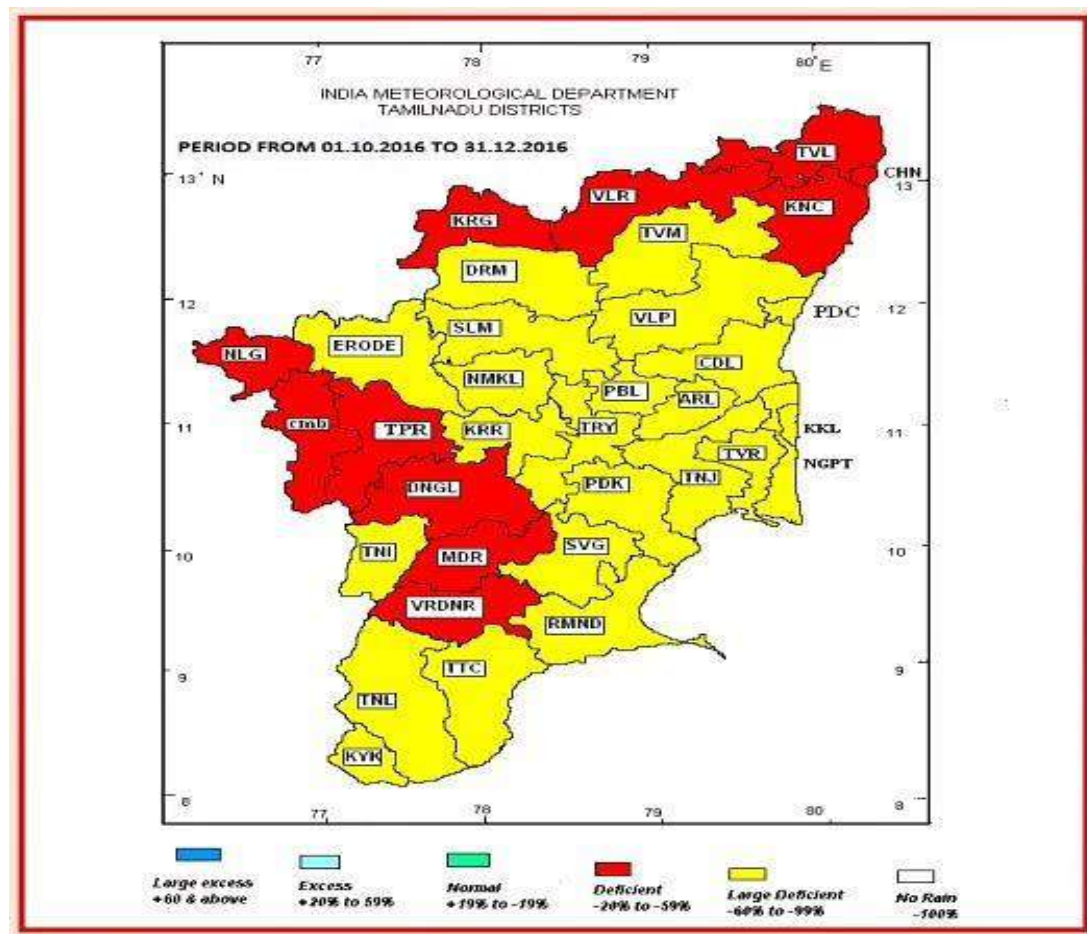


(b) Fatalities and exposed population



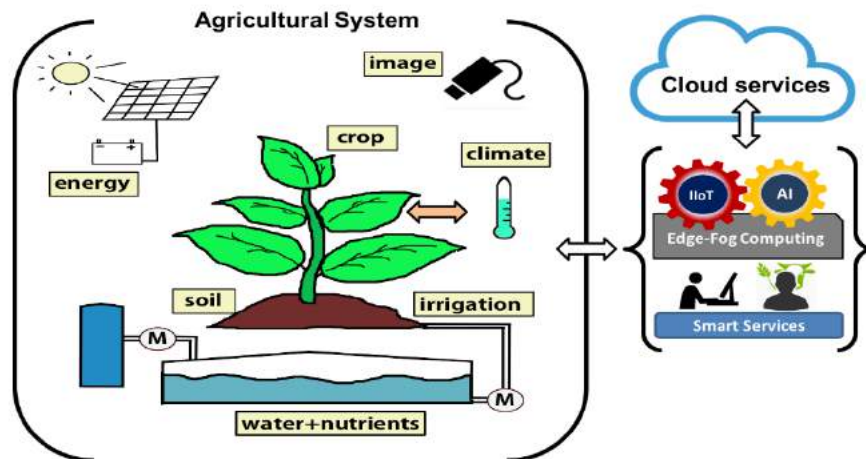
(c) Economic losses and exposed assets





SIGNIFICANCE OF AGRICULTURE

- Agriculture domain plays an important role in a supply chain which is expected to rise in the forthcoming years and in turn in the technological development for supporting agriculture.
- Agriculture originates from desperate human needs; the domain proves to be an utmost importance to facilitate modern complex business processes related to agriculture.



IMPACT IN AGRICULTURAL INDUSTRY

- *With the growth in technological advancements, the monetary growth from agriculture can also be revived.*
- *It is possible for farmers to utilize scientific data and technology to improve crop yields and keep themselves updated with innovative methods of farming.*

PROBLEMS FACED BY FARMERS

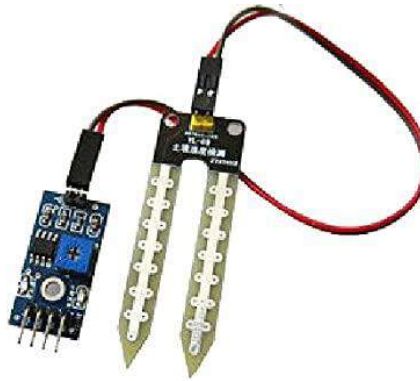
- ❖ *Farmers are facing increasing pressures from climate change, soil erosion, and bio diversity loss and from consumers changing tastes in food.*
- ❖ *The objective of this project is to prevent damage of crops during monsoon, fire and from excessive drought.*



NATURAL CAUSE AND ITS SOLUTION

➤ During flood:

Due to excessive rains during monsoon, crops get damaged due to stagnation of water in the fields. Hence an moisture sensor is employed to get rid of this problem.



Moisture sensor



damaged crops due to flood

➤ ***During crop fire:***

- ✓ *Incase of crop fire,a gas sensor is employed in our project to detect the smoke quickly.*
- ✓ *Once it is detected, the water pump motor starts to spray the water from the tank directly on the crops,using a shower like structure to control the fire.*



water shower



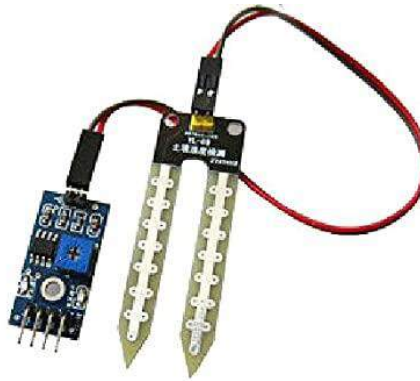
pump motor



crop fire

➤ ***During water scarcity:***

During water scarcity, the crops get affected, therefore the moisture sensors are employed to get rid of this problem.



MOISTURE sensor

(used to detect the moisture of the soil)



damaged crops due to drought

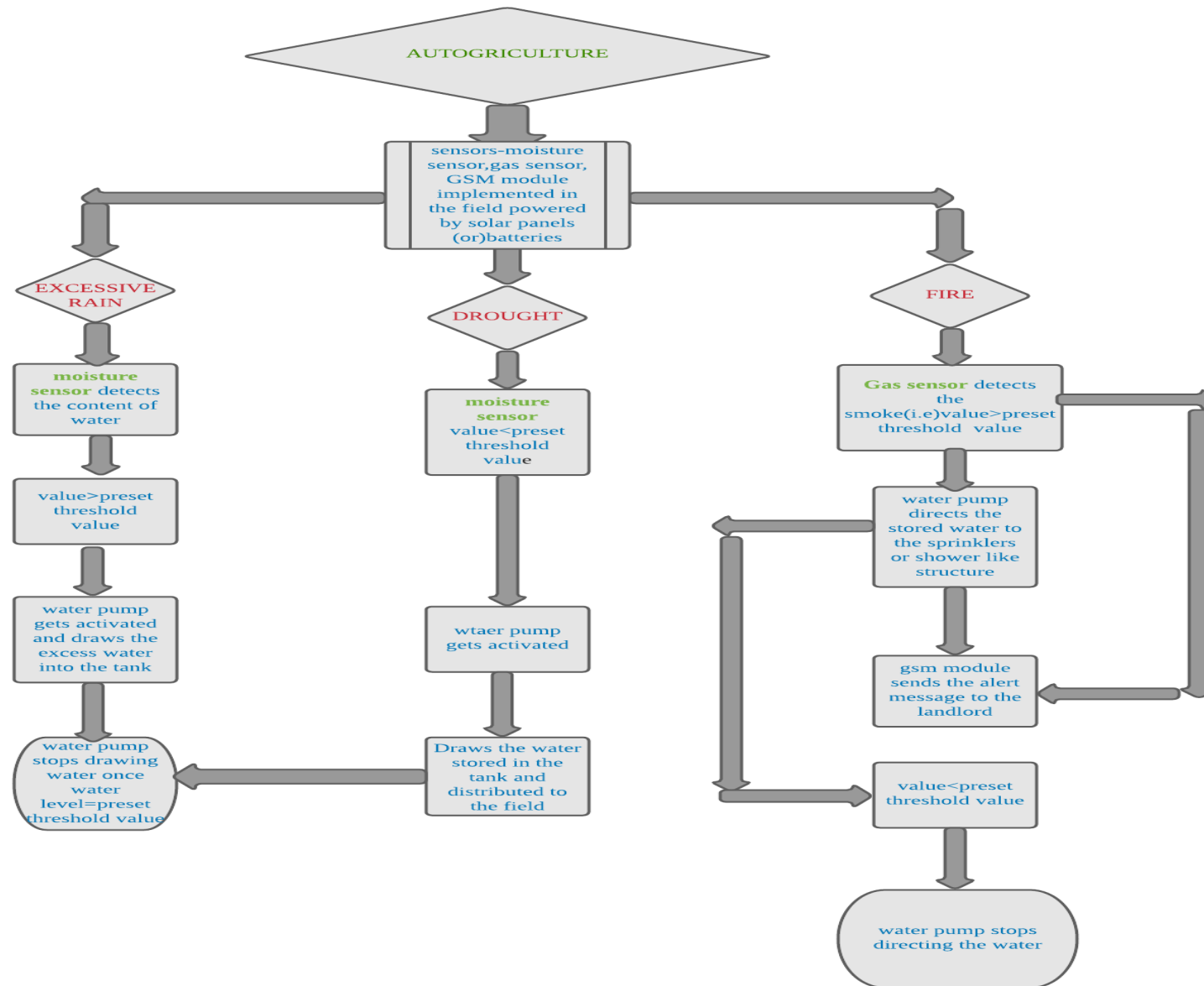
- A water level sensor is also been employed in our project which acts as a backup option when the moisture sensor fails to work.

ALERT THE LANDLORD

- *Further, the greater loss is being avoided by sending a message or initiating a voice call to the registered owner's mobile as well as to the landlords of adjacent fields using GSM Module.*
- *The amount of energy required to power the sensors and to drive the motors can be obtained by a solar panel installed in the agricultural land or using a battery.*

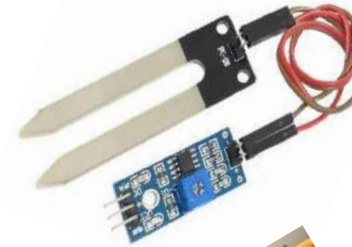


FLOWCHART



COMPONENTS REQUIRED

- ▶ *Arduino UNO*
- ▶ *Sensors:-*
 - A) *Gas sensor*
 - B) *Moisture sensor*
- ▶ *Sprinkler or shower*
- ▶ *Solar panel and solar cells*



BASIC REQUIREMENTS

- ▶ *Tanks OR wells*
- ▶ *Pipes*
- ▶ *Wires*
- ▶ *motors*



VIDEO TAPE

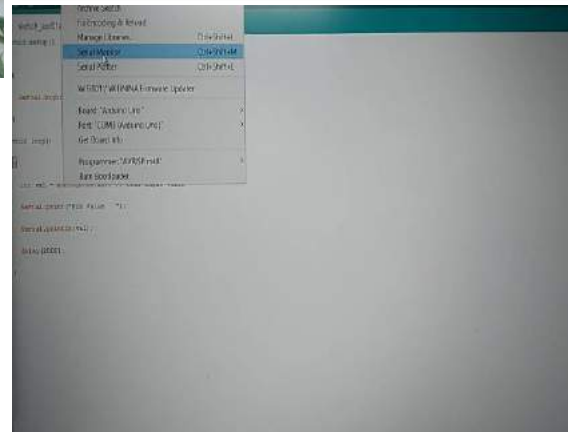
WORKING OF WATER SHOWER



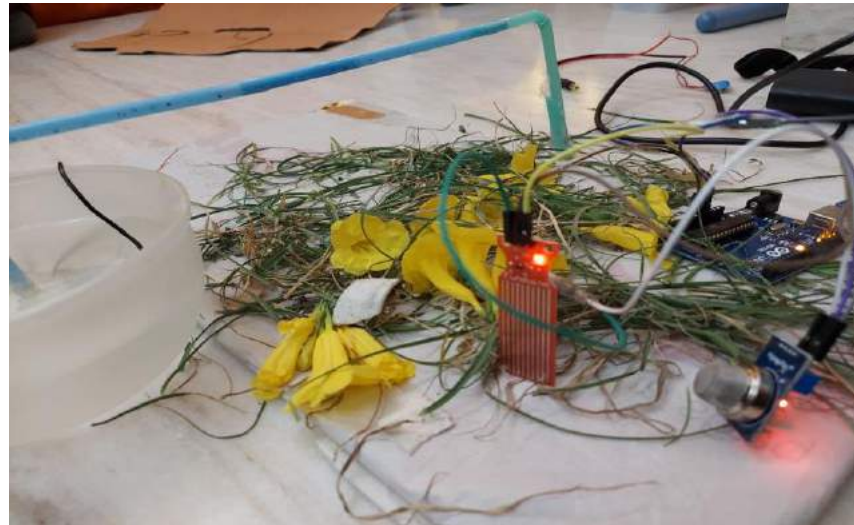
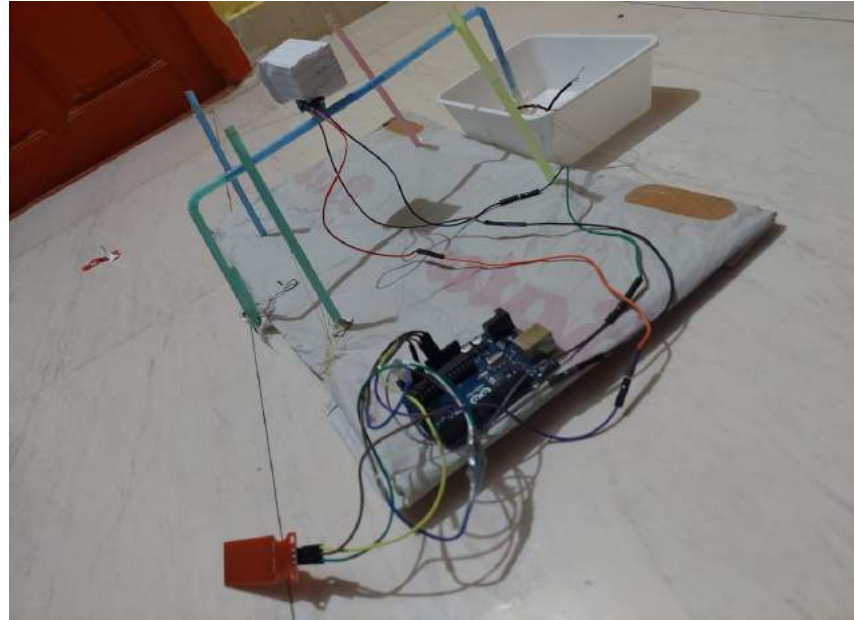
WORKING OF GAS SENSOR

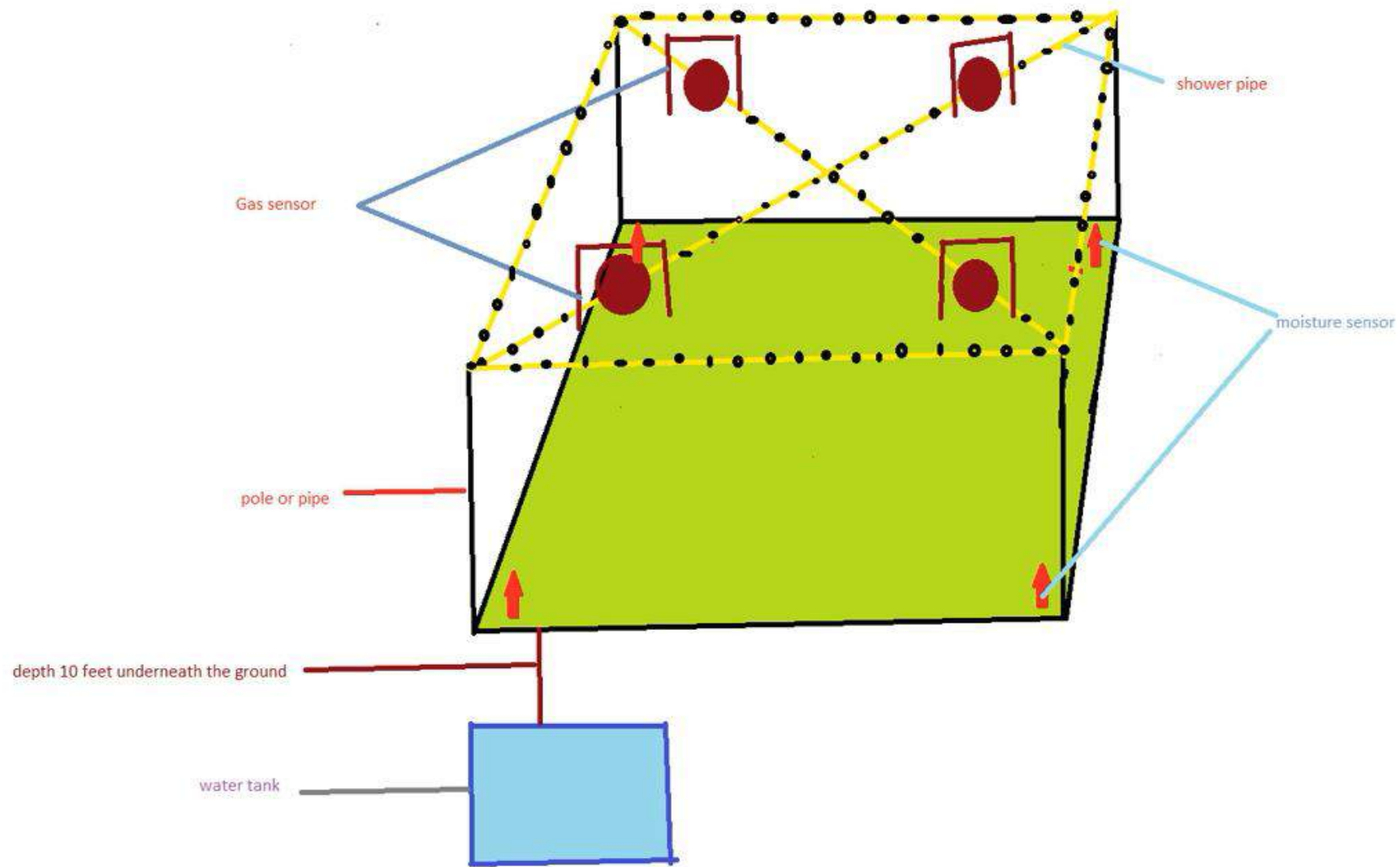


working of water level sensor



SNAPSHOTS





CONCLUSION

- ▶ *Farmers are the backbone of our nation. We are indeed grateful in helping them by our immense idea which will be user-friendly for farmers.*
- ▶ *By using our idea we can prevent the farm land from getting affected by various calamities like fire, drought and flood.*
- ▶ *The idea which we are implementing is cost efficient and more over the farmers will surely be benefited by our idea.*

REFERENCES

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- ▶ <https://www.udemy.com/course/arduino-sbs-17gs/learn>
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*Once in your life you need a doctor,a lawyer,a policeman
and a preacher,but everyday,three times you need a
farmer.*

Respect farmers 🙏💣🙏💣🙏💣

THANK YOU!!