**SOURCE CODE**

#include <dht.h>

#include <LiquidCrystal.h>

LiquidCrystal lcd(2, 3, 4, 5, 6, 7);

dht DHT;

#define DHT11\_PIN 8

int sensorPin = A0;

int sensorValue = 0;

void setup()

{

pinMode(sensorPin, INPUT);

Serial.begin(9600);

lcd.begin(16,2);

}

void loop()

{

int sz = DHT.read11(DHT11\_PIN);

lcd.setCursor(0,0);

lcd.print("Temp :");

lcd.print(DHT.temperature);

lcd.print(" degC");

lcd.setCursor(0,2);

lcd.print("Humidity: ");

lcd.print(DHT.humidity);

lcd.print("%");

Serial.print("Temp :");

Serial.print(DHT.temperature);

Serial.println(" degC");

Serial.print("Humidity: ");

Serial.print(DHT.humidity);

Serial.println("%");

sensorValue = analogRead(sensorPin);

Serial.print("Soil Moisture value:");

Serial.println(sensorValue);

//Display the plant need

if(sensorValue < 400){

Serial.println("Crops that can be grown in these conditions : Peas, Cabbage, Cauliflower, Mustard, Broccoli");

}

else if(sensorValue > 400 && sensorValue < 700){

Serial.println("Crops that can be grown in these conditions : maize, potato, peanut, melon, pepper, rice ");

}

if(sensorValue > 700){

Serial.println("Crops that can be grown in these conditions : sugarcane, sunflower, tomato, soyabean, cotton.");

}

Serial.print("\n");

delay(4000);

}