Arduino Meteo

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The advancement of agriculture depends on environmental conditions, productivity of soil, climate changes, etc. The problem that exists is the lack of multifunctional gadgets available for farmers, which would conveniently provide them with important data, thus avoiding any potential damage, facilitate their work and ensure protection of the environment. Therefore, the goal of our project is to support farmers in their efforts to increase productivity of the agriculture and protect the environment. By using our gadget, farmers will be able to measure and control the temperature and humidity of the soil, as well as atmospheric humidity, pressure and temperature. This information enables to forecast the local weather. Farmers will get information about salinity of the soil as well, which will make it possible for them to plan the use of soil rationally. So these opportunities will help us to save plants. The gadget is based on Arduino Uno. APC 220 transmitter and receiver modules in it provide us with an opportunity to receive the information as far as 3 kilometers away from the device and read it on the LCD and on the computer screen as well. The device is also equipped with GSM/GPRS module, which makes it possible for users to receive the data collected by the gadget via SMS while farmers are not at home.The Gadget is also capable of alarming users based on the infrared photodiodes if it sensors fire. The video camera is attached on the Gadget. It is also an environmentally friendly device because it is solar-powered. The quadcopter, used together with the gadget, enables users to determine productivity of the soil. Farmers can save the coordinates of the specific piece of landscape together with related data onto SD card and indicate coordinates on the Google Earth.

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