**SmartFarm**

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| **Team Name** | The Misfits |
| **Team Members** | Saloni Tripathi, Bhaskar Tak, Goving Sisodiya, Radha Raman, Rutuja Madhure |
| **Theme** | Agriculture |

**One line pitch of your idea**

Building a Smart Farm Monitoring Device using IoT

**Problems, you are solving**

We plan to develop a user convenient and environment friendly device that will help the farmer to maintain the health of the crops and also to increase the crop yield. The device will have both hardware and software modules. It will monitor all the major crop health and growth affecting factors in real time and interpret the current crop situation which will then be forwarded to the user via a mobile application. The farmer (user) will also be notified of the remedial measures to improve the immediate condition of the crop (as well as the soil). Hence, via this device the farmer can get to know the condition of his/her crop from anywhere in real time. This device will help eradicate the obstacles faced towards a successful farming like lack of moisture in soil, lack of proper knowledge of amount of fertilizers & pesticides etc.

**Description of Solution/Product provided**

The device uses cloud computing to send the collected real time information to the system (server) where the data is interpreted and the farmer is notified via the application. This is a revolutionary idea in the field of farming and will prove to be a farmer’s friend. The implementation of the idea is cost effective and highly feasible. This will definitely be a huge help for the Indian farmers and the Indian economy.

**Competitors (Put it simply using SWOT Analysis)**

* Real time monitoring of soil conditions and sending of data to the cloud and interpreting and notifying of the results via an app.
* The device will act as a virtual assistant to the farmer which will provide help in taking decisions regarding the amount of irrigation and the quantity and type of fertilizer.
* Local farmers will be benefitted as it will help them to maximize yields using minimal resources such as water and fertilizers.
* On a commercial level too, the device will be useful as it prevents soil degradation due to excessive use of fertilizers and prevents excessive or inadequate irrigation.

**What innovation are you bringing?**

Our device uses different types of sensors mentioned above which communicate with a controlling device. It will be constantly monitoring the soil conditions. The device is powered by a battery which will be charged through solar cells. The collected data will be sent to the cloud through GSM module connected to Arduino. The data will be processed by our algorithm. Then the analyzed data will be displayed to farmer via the Mobile Application.