

Viticulture (Grape farming)

Challenge: Our customer is a consultant to grape farmers. In this farming several different parameters are measured and then applicable solutions are implemented. For example, the amount of Nitrogen, Phosphorous and Potassium decides, what kind of fertilizers are to be used. The humidity and water content in soil decides how much water is to be given to farm. If there is any disease to the grapes then, what kind of insecticides is to be sprayed? All these different factors keep on changing hence the treatment also changes. In order to get maximum yield of grapes a particular schedule was prescribed initially of about a fortnight to farmers by the consultant. However, this was not enough to get the maximum yield. The challenge was to establish communication between farmer and consultant on a daily basis and there are several farmers who require the consultancy. Also, the number of parameters described above is huge.

Solution by Arun InfoTech: An android application is provided to every farmer or grower. This farmer then goes out in the field every day and measures these parameters. After measuring the parameters he inputs them in the given android application. On the other side the consultant accesses the database in which these parameters get stored. As a result of which the schedules being provided to grower has become daily instead of fortnightly.

WE have also created an admin portal for the consultant in which he can see all the different factors input by various farmers. He has ready-made templates also from which he can choose the schedules.

Below is a screen shot from which observations done by the farmer of the factors can be seen by consultant.

The screenshot displays a web application interface for viticulture management. The interface is divided into several sections:

- Header:** Features the logo "DEMO" on the left, a user profile "WELCOME SUSHAMA SANAP" in the center, and a "SETTING" gear icon on the right.
- Navigation Menu:** Includes "HOME", "DAILY RECORDS", "GROWER", "CHEMICAL MASTER", "ADMIN MASTER", and "REPORT".
- Search Section:** A search bar with a "Search" button and a "Browse" button. The "Farm Name" dropdown is set to "LD Farm 1".
- Plot Details Table:** A table showing plot information with columns: Plot No, Type, Canopy System, Age(Year), Plot Area (In Acre), Expected Days of Harvest, and Action. One record is visible for "LD Plot 1".
- Left Sidebar:** A vertical menu with options: O-Observations, A-Observations, P-Observations, S1-Protection/Growth, S2-Nutrition, D-Directions, R-Report, H-Harvesting Reports, Residue Report, and Send Message.

Plot No	Type	Canopy System	Age(Year)	Plot Area (In Acre)	Expected Days of Harvest	Action
LD Plot 1	Bl...	ExternalYShape	2.00	1.24	160	[Icons]

Below is a screen shot of the master from which consultant can choose various fertilizers.

The screenshot displays a web application interface for fertilizer management. The page features a navigation menu with the following items: HOME, DAILY RECORDS, GROWER, CHEMICAL MASTER (selected), ADMIN MASTER, and REPORT. The 'CHEMICAL MASTER' dropdown menu is open, showing the following options: Varieties, Fertilizer Master, PGR Master, Fungicide Master, Insecticide Master, Acaricide Master, Phenological Stages Master, Target Master, Fungicide Class, Spray Equipment, Necessary Equipment, Consumable Input, Cultivation Operation, and Annexure 9 List.

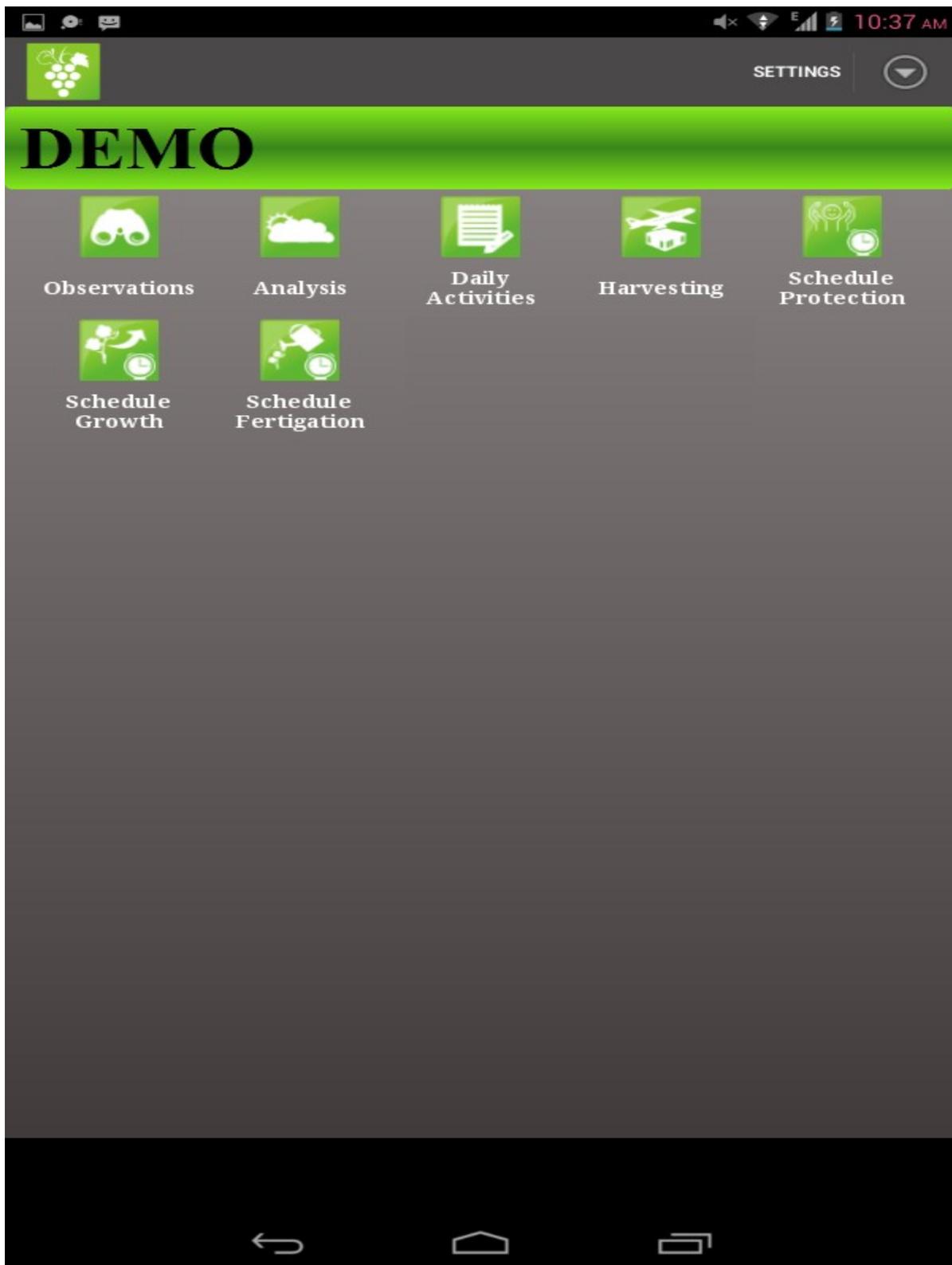
The main content area shows a search bar for fertilizers with the text '58 Records' and a search button. Below the search bar is a table with the following columns: Fertilizer Type, Fertilizer Name, N%, P%, K%, Fe%, Zn%, Mn%, B%, Mo%, Cu%, Remark, and Action. The table contains the following data:

Fertilizer Type	Fertilizer Name	N%	P%	K%	Fe%	Zn%	Mn%	B%	Mo%	Cu%	Remark	Action
Complex Fertilizers	0:52:34	0.0	52.0	34.0	0.0	0.0	0.0	0.0	0.0	0.0		✖
Complex Fertilizers	19:19:19	19.0	19.0	19.0	0.0	0.0	0.0	0.0	0.0	0.0		✖
Micro Nutrients	Ammonium Molybdate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	54.0	0.0		✖
Straight Nitrogenous Fertilizers	Ammonium Nitrate	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Drip	✖
Complex Fertilizers	Ammonium Phosphate Sulphate	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		✖
Complex Fertilizers	Ammonium Phosphate Sulphate Nitrate	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		✖
Straight Nitrogenous Fertilizers	Ammonium Sulphate	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Drip, Soil	✖
Straight Phosphatic Fertilizers	Bone Meal Raw	3.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Soil	✖
Straight Phosphatic Fertilizers	Bone Meal Steamed	0.0	22.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Soil	✖
Micro Nutrients	Boric Acid	0.0	0.0	0.0	0.0	0.0	0.0	17.0	0.0	0.0		✖

Below are some images of Android app for farmer:
As seen below the farmer can input date farm and plot before proceeding.



Second screen is that of android app giving different tabs of observation,analysis daily activities, harvesting,schedule-protection,growth and fertigation.



Third shot shows a the record of fertilizer and manure. Rest of images are self explanatory.

Name: Laxman Dhopare	Plot: LD Plot 1
Variety: Black Sonaka	Plant Distance: 9.00*5.00 ft
Soil: Heavy Soil	Age: 2.00
Canopy System: YShape	Stage: -13

Fertilizer & Manure Record

Date:

Time:

Select pruning date to take stage:
 Backward Pruning Date Forward Pruning Date

Days from pruning:

Select Fertilizer Category:
 Bio Chemical Organic Soil Other New Fertilizer

Fertilizer Name:

Fertilizer(Kg/Plot):

Price of fertilizer(Rs/Kg):

click on 'Add' button to add fertilizer



DEMO

Name: Demo User	Plot: Plot 1
Variety: Sonaka	Plant Distance: 8.00*9.00 ft
Soil: Light Soil	Age: 0.00
Canopy System: Bower	Stage: 209

Stage	Date	Chemical	Dose/Acre

DEMO

Name: Demo User	Plot: Plot 1
Variety: Sonaka	Plant Distance: 8.00+9.00 ft
Soil: Light Soil	Age: 0.00
Canopy System: Bower	Stage: 209



Yesterday Schedule

Date:

Stage:

Target

Fertilizer:

Sanjivake:

Today Schedule

Date:

Stage:

Spraying Goal:

Fertilizer:

Sanjivake:

Tomorrow Schedule

Date:

Stage:




Schedule Protection
SETTINGS 

DEMO

Name: Demo User	Plot: Plot 1
Variety: Sonaka	Plant Distance: 8.00+9.00 ft
Soil: Light Soil	Age: 0.00
Canopy System: Bower	Stage: 209





Yesterday Schedule

Date:

Stage:

Target

Insecticide:

Fungicide:

Today Schedule

Date:

Stage:

Spraying Goal:

Insecticide:

Fungicide:

Tomorrow Schedule

Date:

Stage:

