Sub: “Cane Adviser”- a mobile app on sugarcane

Dear Sir / Madam,

We are happy to inform you that we have developed a mobile app named “Cane Adviser” on sugarcane for cane growers and millers. It gives complete details from planting to harvest with text and relevant graphics for both tropical and sub-tropical India. The unique feature in this is the scheduler app, tailor-made for each individual registered user and reminder messages are popped up on real time mode through the entire period of cultivation. The “Query handler” helps to raise queries as text or in graphic form that are replied via SMS / email.

The app is android based and is available in google playstore as “Cane Adviser” in English and Hindi for free download. Registration can be made using your mobile number, which is confirmed with a OTP sent to the mobile number registered. In the interest of the sugarcane community, I request you to give wide publicity at your level.

Best regards,

Yours truly,

(BAKSHI RAM)
Cane Adviser - A Digital Compendium on Sugarcane

Developing a Mobile App for Sugarcane: An Initiative Towards Digital India

ICAR-Sugarcane Breeding Institute
Coimbatore - 641 007
Tamil Nadu, India

2017
ICAR-Sugarcane Breeding Institute, Coimbatore has evolved as an “organisation without walls” with its activities taking place at the institute, sugar mills and village level. Though new sugarcane varieties and relevant crop management technologies are evolved, sugarcane productivity in India remains stagnated for the past two decades. The information and communication support for sugarcane crop has been mainly conventional. This approach has not been able to reach majority of the sugarcane farmers who are spread across the whole country. The diversity of agro ecological situations in the sugarcane growing states, the varied technologies recommended and the needs of sugarcane farmers further mount to this challenge. Information and Communication Technology (ICT) and in particular mobile technologies are often seen as a game changer in agriculture. Hence, an attempt is being made to harness the potentialities of information technology through the development of a mobile app for technology dissemination bridging the barriers of time and space.

The Background

The increasing penetration of the mobile phones and mobile enabled information services can reduce information asymmetry and complement the role of extension services in making useful information more widely and swiftly available to the sugarcane growers. M-app is an application software designed to take advantage of mobile technology and has many key advantages like affordability, wide ownership, voice communications, and instant and convenient service delivery. The app envisaged in this endeavor targets to provide farmers, cane staff and line department officials timely access to extension services such as advancements on scientific sugarcane production, advice on appropriate technology, and other related services.

Importance of Mobile App

The increasing penetration of the mobile phones and mobile enabled information services can reduce information asymmetry and complement the role of extension services in making useful information more widely and swiftly available to the sugarcane growers. M-app is an application software designed to take advantage of mobile technology and has many key advantages like affordability, wide ownership, voice communications, and instant and convenient service delivery. The app envisaged in this endeavor targets to provide farmers, cane staff and line department officials timely access to extension services such as advancements on scientific sugarcane production, advice on appropriate technology, and other related services.

What is ‘Cane Adviser’?

Cane Adviser is a computer program designed to run on mobile devices such as smart phones and tablet computers and is accessible for anybody interested to know about scientific sugarcane cultivation.

This mobile app is the result of a 12 months research project entitled ‘Developing a mobile app on sugarcane: An initiative towards digital India’ funded by Extramural Project, Division of Agricultural Extension, Indian Council of Agricultural Research, New Delhi during 2016-17.
The development process included conducting baseline survey, digitization of data, content management in terms of sugarcane varieties, production and protection technologies, developing the mobile app in android platform, provision for digital flow for sending messages, facilities for mobile transmission, pilot study, performance analysis and finalization of the module.

**Project Architecture**

The features of the app developed include static as well as dynamic platforms embedded in the app. A few modules available in the mobile app are listed below:

**Login dialogue**

This go-ahead user-interface is the first step towards registration. The particulars needed comprise name, mobile number, age, address, land area, yield obtained and email (optional).

**Requirement Analysis**

As an initial step, the requirement of the sugarcane growers / cane staff was analyzed through focus group discussions conducted in the villages as well as during other interface meetings. The information was collected in terms of the type of mobile phones used, pattern of mobile use, content needs in the app, services required through the app, format of the messages, preferred medium of communication etc. The information gathered was analyzed and accordingly the app was developed.
Downloader: This static downloadable display of knowledge base, contains information on sugarcane agriculture right from planting to harvesting, otherwise referred as technical part. The content involves mainly text and graphics in the form of still pictures. The text runs to around 220 pages with more than 650 digital stills describing the content. The information is given as state-wise varieties, crop production technologies, pest identification and management, disease identification and management and ratoon management. The general contents include history of the institute, mandate, sugarcane research stations etc.

Scheduler app: Ingrained in the module is a scheduler app, which is tailor-made for each individual registered user. The basic inputs for registration include date of planting, choice of crop (plant / ratoon) and option of season (autumn / spring). Corresponding to the date of planting, continued advice and reminder messages on the calendar of cultural operations to be carried out are popped up on real-time mode.

Fertilizer schedule: Apart from the information on nutrient management detailed in the knowledge base, the app contains information on recommended dose of fertilizer for all the sugarcane growing states.

Query handler: As the eventual dialogue window, the user has the option to raise queries either as text messages or in graphic form, be it as live images or from the gallery. The queries are then replied by the administrator via message sorting, short message service, email etc.

Languages

The entire matter was developed in English and then translated to Hindi and Tamil so as to have the app in trilingual. The app was named as ‘Cane Adviser’ in English in accord with ICAR norms and ‘Ganna Salahkar’ in Hindi and ‘Karumbu Aalosakar’ in Tamil.

Why Mobile App?

The mobile internet application developed would be a digital compendium of sugarcane related vocabulary comprising all details on sugarcane agriculture and can serve as a ready reckoner for sugarcane growers and cane development personnel working with sugarcane knowledge.