Knowledge dissemination through kiosk

P.Madhuri
Scientist (Computer Applications)
Directorate of Oilseeds Research
Rajendranagar, Hyderabad-500 030

Introduction

Information and communication always play a major role in the field of agriculture. Ever since people have grown crops, raised livestock, etc they have shared information from one another. Agriculture is facing new and severe challenges. Filling the stomachs of growing population is only one reason agriculture is critical to global stability and development. Given the challenges, the arrival of information communication technology is well timed. The benefits of green revolution greatly improved agricultural productivity. However, there is a need for a new revolution that will bring lower prices for consumers to increase their production. Public and private sectors have been on the search for effective solutions to address both the long and short term challenges in agriculture, including how to answer the abundant information needs of farmers. ICTs can be broadly interpreted as technologies that facilitate communication and the processing and transition of information by electronic means. ICTs have the potentials to enhance farmers ability to collate demands, collaborative learning, exchange of time sensitive information like market prices, disease outbreaks etc. ICTs provide many solutions in the field of agriculture. One of such solutions is an Interactive Kiosk which can be used as a tool to educate farmers, extension workers etc.

The information pertaining to the oilseed crops like castor, sunflower, safflower etc was converted into electronic format and is made available in the Information Kiosk for the oilseed growers through the touch screen technology. The information modules in the interactive kiosk makes use of knowledge from various sources and provides the oilseed growers with the desired solutions considering the various input parameters chosen by the user. Using the Interactive Kiosk, it would be possible for the end-user to visually request the information from the database, access the information and make appropriate decision.

What is an I-Kiosk ?

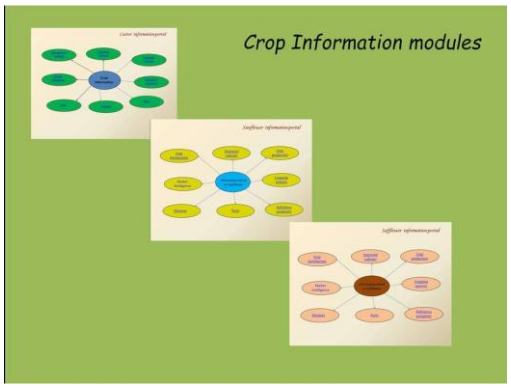
An Interactive Kiosk is a small physical structure which houses a computer terminal with a minimum of 512 MB RAM with a specialized hardware and software design that provides access to information using touch screen technology. The touch screen kiosk allows the users to access and navigate the targeted information by touching the screen of the computer monitor mounted in an attractive metal case.

Advantages of using an I-kiosk are :

- I-kiosk minimizes the human interaction and can be functional for 24 hours a day.
- Allows a wide range of users to meet their information needs in a timely fashion, regardless of their educational background or previous computing experience.
- Works as a self learning package at the users pace.

Interactive Kiosk for Oilseeds

The Interactive information modules for castor, sunflower and safflower were developed considering the information needs and production constraints of extension workers, farmers etc. The information module is divided into eight modules like Management practices, improved cultivars, cropping systems, deficiency symptoms, pests, diseases, uses and market intelligence. At the first instance the user can select the required crop module and from there the user can navigate to the information module of his or her choice.



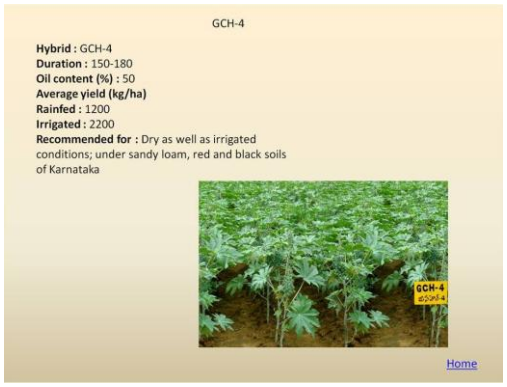
Once the crop is selected the user is free to select any of the sub-module from the available eight modules. Each module is again sub divided into many pages. The user can navigate to any of the page of his or her choice depending on the interest and requirement. At any point of time he or she can either change the module, page or even the crop.

Management Practices :

The management practices modules deals with all the management practices like suitable climatic conditions, soils, amount of seed required, spacing, land preparation, seed treatment, sowing methods, fertilizer application, irrigation methods, interculture operations, harvesting and also tips for achieving higher yields.

Improved cultivars :

This modules provides the users with the details of available varieties and hybrids. For each cultivar the detailed information like duration of the crop, oil content, average yield, recommended areas of cultivation are provided along with the photographs of the cultivar.

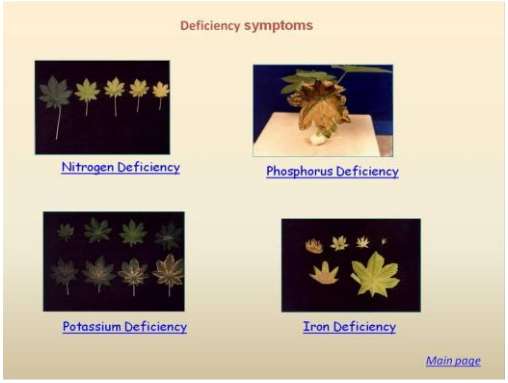


Cropping systems :

Under the module of cropping systems the state wise Inter cropping details are provided. The crop sequences to be followed for castor, sunflower and safflower are provided along with the photographs. For example in castor intercropping it is grown along with groundnut, cluster bean etc.

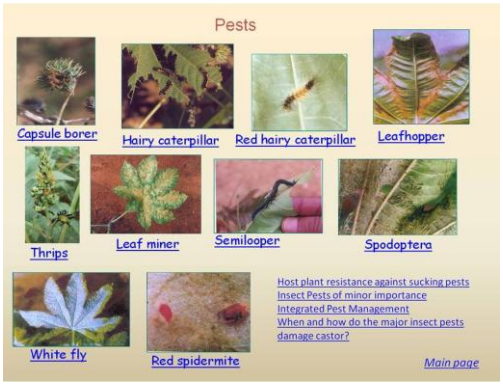
Deficiency symptoms :

The nutrient deficiency symptoms for each crop are described along with the photographs in a single page. Once the user selects the required symptom he or she can navigate to the detailed page where in the deficiency symptoms are explained in detail along with their control measures.



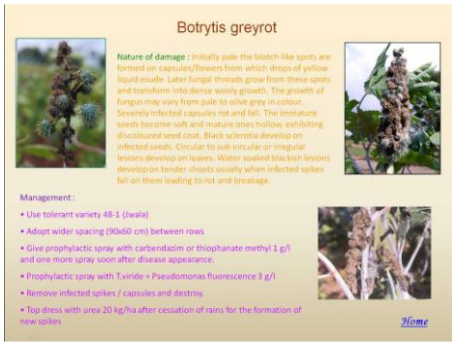
Pests :

Various pests attacks the oilseed crops at various stages. The images of major pests attacking the crop are captured and a photo-gallery of all the pests is provided in the information module to enable the user to identify the pest by seeing the photograph. Once the user identifies the pest, by a simple touch on the photo, he or she is navigated to the detailed information related to the pest along with the set of photographs, cultural management, control measures etc.



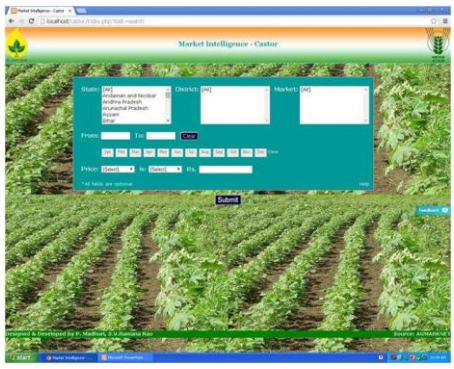
Diseases :

The yield losses in oilseed crops is due to the diseases attacking the crops. If these diseases are managed timely the yield losses can be saved. In the information module the details of all the diseases affecting the oilseed crops are compiled and explained in detail. The disease module is designed in such a way that the diseases affecting the crop are shown as a photo gallery and the user can identify the disease symptoms by seeing the photographs and if interested to know more details they can simply touch the photograph and are provided with the complete information of the disease along with their management practices.



Market intelligence :

Once the crop is harvested, the produce has to be sold in the markets which are nearby and provide remunerative prices to the farmers. The market intelligence module covers the details like minimum support price, maximum price, model price, the arrivals of the produce to a particular market on a particular date etc. To sell the produce the user can query the details of the prices of the produce in the nearby markets and sell the product.



Uses :

Each crop has its own utility. The information module on uses covers in detail the uses of each part of the plant. Apart from the oil we get from the oilseed crops the other parts of the plant like leaves, stem, flowers etc have a lot of commercial and medicinal value depending on the plant. Generally the end user is unaware of the utility of these parts. For example castor leaves are rich in protein and carbohydrates and are used as a good feed for the cattle, powdered leaves are useful in repelling aphids, mosquitoes, white flies etc. Similarly safflower petals have high medicinal values and are used for medical purposes.

Conclusion :

Finally the Interactive Kiosk is an effective ICT tool used for dissemination of information to the end users because the information is readily available in the kiosk and the user can access the information of his or her choice any time, any number of times according to their requirements. The system has random access facility by means of which the user can navigate anywhere at any point of time.