Chapter: IX

Development of An Information System for Tea Industry
9.1 Introduction

With the ever increasing utilization of Information Technology, no one can remain un-alarmed by its mind blowing benefits. And tea industry is not an exception. As described in earlier chapters, tea industry is one of the oldest industrial establishments of India. Starting from the steep hills of Darjeeling, through the green valleys and plains of Assam and up to the Nilgiri Hills, tea is one of the prime concerns to people’s life in India.

Despite the great passion for tea round the world, it is quite disappointing to see that there is a lack of digital information about Assam Tea—both on-line & off-line. It is disheartening to see that there is no known informative software available. The very few commercial sites available on the net do not satisfy the thirst of a common man looking for information on the gigantic industry since they have a touch of self-interest. Even the people associated with the industry often find it difficult to cope with the ever-increasing demand of the fast growing industry due to lack of proper informative channels/sources.

Moreover, many tourists coming from all over the world who are passionate for “Chai” are very much interested in getting information about Tea - its cultivation, manufacturing and the culture associated with it.

This Chapter deals with the development of an Information System for Tea Industry of Assam incorporating all the possible aspects of tea. The information system has been linked with software for computation of TQMI and PI for a tea garden. The calculation of TQMI as described in the previous chapter involves lot of computation which if done manually, would be both time consuming and complex. The TQMI module developed as an executable programme (TQMI.exe) in Visual Basic environment deals exclusively with the computation of the TQMI and PI of a tea garden.

The objectives behind the development of the Information System are:

Primary Objectives:

- The Tea Information System would serve as a Knowledge-base for the Tea Management
- It would help the knowledge-seekers to know about the facts of Tea Industry
Secondary Objectives:

- It would act as an estimation tool for evaluation of TQMI of a garden.
- It would help Tea Management Professionals in decision making.

In order to fulfill the requirements, the information system developed here, designated as "TEA INFORMATION SYSTEM (TIS)" can prove to be a starting step. The information system provides an in-depth coverage on Assam Tea Industry. It includes the origin of tea and tea facts, tea cultivation, tea manufacturing process, status of Assam tea, tea standards, factors affecting quality of tea with causality, culture of tea tribe of Assam etc. and computation of TQMI and PI of gardens.

9.2 The Structure

The Information System is menu driven, user friendly and elaborative in structure. It has been developed in a simple way. The information system is Window 98 Based, developed using MS Front Page providing hyper linking with VB 6.0. It occupies nearly 327 MB of memory space. The contents of the Information System is shown in Fig 9.1

The algorithm of the Tea Information System for user guidance is given in Appendix VI – A.
Figure 9.1
Contents of Tea Information System (TIS)
9.3 Menus and Screens of Tea Information System

The Tea Information System is a menu-driven information system developed in HTML and Visual Basic 6.0. The Information System consists of more than fifty screens. Some of the screens of the Tea Information System are shown below:

Fig 9.2a and Fig 9.2b show the Theme Screen and Start-Up Screen respectively of the Information System.

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**Fig 9.2a**
The Theme Screen

**Fig 9.2b**
The Start-up Screen
Fig 9.3 shows the Screen for Main Menu

Fig 9.4 shows the Screen for Culture of Assam Tea Tribe Menu
Fig 9.5 shows the Screen for Processing Menu

Fig 9.6 shows the Screen for Origin and Tea Facts Menu

Fig 9.5
The Processing Menu

Fig 9.6
The Origin and Tea Facts Menu
Fig 9.7 shows the Screen for the ‘Health Aspects of Tea Drinking’ Menu

![Image of the Health Aspects of Tea Drinking Menu]

Fig 9.7
The Health Aspects of Tea Drinking Menu

Fig 9.8 shows the screen for the field activities menu

![Image of the Field Activities Menu]

Fig 9.8
The Field Activities Menu

Chapter IX: Development of Tea Information System
Fig 9.9 shows the Tea Standards Menu

Fig 9.9
The Tea Standards Menu

Fig 9.10 shows the Screen for the Tea Vocabulary Menu

Fig 9.10
The Tea Vocabulary Menu
Fig 9.11 shows the Screen for TQMI Menu

TOTAL QUALITY MANAGEMENT INDICATOR (TQMI) OF A GARDEN
(BASED ON THE MANAGEMENT CONTROLLABLE FACTORS AFFECTING TEA QUALITY)

THE CONCEPT OF TQMI

THE CONCEPT OF SECTOR PERFORMANCE INDICATOR (SPI)

NEW CLASSIFICATION OF SECTORS OF TQMI

HUMAN RESOURCE SECTOR
ENERGY SECTOR
MAINTENANCE SECTOR
MANAGEMENT SECTOR

FIELD/GARDEN SECTOR
PROCESSING SECTOR
WELFARE SECTOR

Computation of Performance Indicator of a Garden

Fig 9.11
The TQMI Menu

Fig 9.12 shows the General Information Entry form for TQMI Computation

COMPUTATION OF TQMI OF TEA GARDEN (ASSAM)
GENERAL INFORMATION

NAME OF THE GARDEN
ADDRESS OF THE GARDEN
LOCATION OF HEAD OFFICE
LOCATION
POST OFFICE
DISTRICT
LOCATION OF THE GARDEN
DROUGHT AREA
RAINY AREA
ALTITUDE
AVERAGE LENGTH OF THE DAY IN HOURS
ORGANIC CARBON CONTENT OF SOIL (%M)
BULK DENSITY OF SOIL (GM/CC)

RETURN
a. Tea of choice
TQMI COMPUTATION

Fig 9.12
The General Information Form for TQMI Computation
Fig 9.13 shows the Attribute Information Entry Form for SPI for Garden Sector for TQMI Computation

The Attribute Information Entry Form for TQMI Computation

Fig 9.14 shows the Final Result Form for TQMI Computation

The Final Result Form for TQMI Computation
Fig 9.15 shows the Final Result Form for PI Computation

Fig 9.15
The Final Result Form for PI Computation

Fig 9.16 shows the Search Output of the Tea Directory

Fig 9.16
Search Results (Output) of Tea Directory

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Fig 9.17 shows the Format of Printer Output of TQMI Computation

<table>
<thead>
<tr>
<th>GARDEN INFORMATION</th>
<th>RESULTS OF ASSESSMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME OF THE GARDEN</td>
<td>SECTOR PERFORMANCE INDICATOR FOR GARDEN SECTOR</td>
</tr>
<tr>
<td>POST OFFICE</td>
<td>SECTOR PERFORMANCE INDICATOR FOR PROCESSING SECTOR</td>
</tr>
<tr>
<td>DISTRICT</td>
<td>SECTOR PERFORMANCE INDICATOR FOR ENERGY SECTOR</td>
</tr>
<tr>
<td>PIN CODE</td>
<td>SECTOR PERFORMANCE INDICATOR FOR HUMAN RESOURCE SECTOR</td>
</tr>
<tr>
<td>NAME OF THE COMPANY</td>
<td>SECTOR PERFORMANCE INDICATOR FOR WELFARE SECTOR</td>
</tr>
<tr>
<td>AREA OF THE GARDEN IN HECTARE</td>
<td>SECTOR PERFORMANCE INDICATOR FOR MAINTENANCE SECTOR</td>
</tr>
<tr>
<td>TOTAL PRODUCTION OF TEA FOR ALL TYPE OF TEA IN THE PERIOD (KG)</td>
<td>TOTAL QUALITY MANAGEMENT INDICATOR</td>
</tr>
<tr>
<td>COMPUTING PERIOD</td>
<td>PERFORMANCE INDICATOR</td>
</tr>
<tr>
<td>AVERAGE PRICE REALIZED FOR ALL TYPE OF TEA IN AUCTION (RUPEES)</td>
<td></td>
</tr>
<tr>
<td>DATE OF COMPUTATION</td>
<td></td>
</tr>
<tr>
<td>CODE OF COMPUTING AGENT</td>
<td></td>
</tr>
</tbody>
</table>

Continuous Improvement Effort Must Follow After Each Assessment

THANKS FOR USING TIS

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Fig 9.18 shows the Printer Output Format of TQMI, Base Score and PI Computation

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Continuous Improvement Effort Must Follow After Each Assessment

THANKS FOR USING TIS

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Fig 9.18
Format of Printer Output of TQMI, BS and PI computation

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For the other screens of the Information System the *Compact Disk attached* with this thesis may be referred.

### 9.5 Conclusion

The objective behind the development of the Tea Information System is to provide an in-depth coverage on Tea Industry and assessment of TQMI of a garden. It can serve as an MIS for tea management to be used as a decision tool.

It is hoped that the Tea Information System will be of great use to the Tea Industry. The system is designed in a user friendly manner. The Tea Directory and the Tea Vocabulary incorporated in the system will be useful for anyone seeking information on tea gardens and to know about the interesting terminology used in tea respectively.

The Information System can also be effectively used by tourism departments of various states of North-East India. It can be used as an interface between the tea industry and the common people.

The Tea Information System can be improved upon by providing information on the latest technological developments in the field taking place round the world so that any person associated with the industry can be benefited from it.