TECHNICAL TRAINING MANUAL

FOR

DATA MANAGEMENT SYSTEM OF AICRPS PLANT BREEDING





Directorate of Soybean Research, Khandwa Road, Indore-452001 (M.P)

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Preface

Soybean is the most important and valuable oilseed crop of the world. India ranks fifth in the area (5.68mha) and production (4.30mt) of soybean in the world after USA, Brazil, Argentina and China. Recognizing the potential of soybean in meeting the present and future needs of the country for vegetable oil and protein rich food, the Indian Council of Agricultural Research (ICAR) launched a multi-location inter-disciplinary All India Coordinated Research Project on Soybean (AICRPS) in 1967. This network project has 7 main centers, 13 sub-centers and 8 need-based centers representing different agro-climatic regions of the country. The co-ordinating unit for the project, Directorate of Soybean Research (DSR), Indore, a constituent of Indian Council of Agricultural Research provides centralized support to the production system research with basic technologies and breeding material of soybean (Glycine max L. Merrill). This multidisciplinary and multi-location project has been catering the need of the country with respect to crop improvement, crop production and crop protection aspects. Of the activities envisaged under the project over 70% shares comes from crop improvement program. The experimentation covers five zones namely North Hill, North Plain, North eastern, Central and Southern. Every year, a sizeable data is generated from each cooperative centre and its manual compilation was in vogue. Moreover, it was cumbersome to lay hands on data generated over years. This process of compilation and report generation was time consuming, laborious and is prone to human error.

The drudgery involved in the manual procedure followed every year for AICRPS summary table report preparation, warrants for development of a system which would make summary table report generation more rapid by reducing delays in data input and provide the users with a simple, easy-to-handle, user-friendly method to retrieve accurate and efficient report production for varietal performance decisions to be taken in Annual Workshop of AICRPS.

Initial system was developed using Visual Basic (VB).NET and was partly online. The present system is developed using ASP.NET and is completely web based, linked to the institute website (www.dsrindore.org), using which data-entry is done from different location by the DEOs (Data Entry Operators) and accordingly reports in the form of summary tables are generated .The system also maintains historic data based on which performance analysis is done.

The data management system developed at Directorate of Soybean Research (DSR) for All India Coordinated Research Project on Soybean (AICRPS) experimentation provides routine processing of data and production of summary table reports in easy, efficient and userfriendly manner. It is an on-line data-entry system allowing users the flexibility to enter/edit the data from any place provided they have internet connectivity. This on-line data-entry and management system is developed using and ASP (Active Server Pages) .NET. The database at back end is designed using SQL Server 2005 relational database. The reports are generated in the form of summary tables which is exported to EXCEL worksheets.

<u>Chapter1</u>

INSTALLATION GUIDELINES FOR THE SYSTEM ADMINISTRATORS

Before starting the installation administrators should ensure the system requirements.

1.1 SYSTEM REQUIREMENTS

1.1.1 Software Requirements:-

The computer should have –

- 1. Windows XP or higher version of professional operating system.
- 2. MS Office 2000/2003/2007.
- 3. Microsoft Visual Studio 2010 Professional with Framework 4.0.
- 4. Microsoft SQL Server 2005.
- 5. Google Chrome Browser (software works best with this browser and not with Internet Explorer).

1.1.2 Hardware Requirements:-

1. Pentium IV with at least 1 GB RAM and 10 GB Hard Disk Space with CD-ROM.

If the system requirements are fulfilled then installation steps as given below is to be followed.

1.2 INSTALLATION STEPS TO BE FOLLOWED

1.2.1 For MS Visual Studio 2010:-

- 1. Insert the installation CD of MS Visual Studio 2010 in the CD drive.
- 2. First Install Microsoft .NET Framework 4.
- 3. Double click the "Setup.exe" file.
- 4. Click "Next" wherever asked during installation process.
- 5. Wait until installation is complete.

1.2.2 For MS SQL Server 2005:-

- 1. Insert the installation CD of MS SQL Server 2005 in the CD drive.
- 2. First Click SQL Server x86(Upgrade Adviser)
- 3. Install SQL Server 2005 Upgrade Adviser. Click "Next" wherever asked during installation process.
- 4. Double click the "Setup.exe" file.
- 5. Apply all Components to install then click next.
- 6. Then Apply Install on Local Hard Disk.
- 7. Use the built in system account-local system or network system.
- 8. Apply mixed mode (Windows Authentication and SQL Authentication).
- 9. User Id: sa and choose a Password: dsr123
- 10. Wait until installation is complete.
- 11. Check for Microsoft SQL Server 2005 folder in All Programs.
- 12. If it is available then installation is complete or else re-install the software.

<u>Chapter 2</u>

STEPS FOR STARTING THE SYSTEM SOFTWARE

2.1 AICRPS DATABASE INSTALLATION STEPS

There are 2 ways for database installation-

c)

i) By attaching .mdf files e.g. Aicrps2013.mdf.

- a) Copy .mdf and .ldf files from software cd in a specific location e.g. Data folder in F drive.
- b) Open "Microsoft SQL Server Management Studio" by double clicking the icon available on desktop after SQL server installation or go to Start -> All Programs -> Microsoft SQL Server 2005 -> SQL Server Management Studio
 - Connect to Server Window will appear as shown below in Fig.1.

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File Edit View Tools Window Community Help		
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Object Explorer		
	Connect to Server	
	Microsoft	
	SQL Server 2005	
	Server type: Database Engine	
	Server name: PRIVE-A49D90049	
	Authentication: Windows Authentication	
	User name: PRIVE-A49D90049\UserXP	
	Password:	
	Connect Cancel Help Options >>	

Fig.1 Connect to Server Window

- d) Select Authentication as Windows Authentication or SQL Server Authentication (provide User name "sa" and Password as given during MICROSOFT SQL SERVER installation e.g. "start").
- e) Press **Connect** button to open window as shown below in Fig.2.

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f) Right click on Databases option in Object Explorer panel which appears on left side of the window and select Attach... option as shown below in Fig.3.

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			6	

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Fig.4 Attach Databases

h) Now browse for .mdf files using Uccate Database Files window as shown below in Fig.5.

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Fig.5 Locate Databases Files

i) Press button for final attachment of AICRPS database which will appear in the sub-list of databases in Object explorer panel on left hand side of the window as shown below in Fig.6.

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Object Explorer - 4 ×	/Summary	- ×
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Fig.6

ii) By restoring Backup e.g. Aicrps 2013-14.bak.

- a) Copy .bak file in a specific location e.g Aicrps 2013-14.bak in Data folder in F drive.
- b) Follow above Steps b to e of 'By attaching .mdf files' to open Microsoft SQL Server.
- c) Right click on Databases option in Object Explorer panel which appears on left side of the window and select Restore Database... option as shown below in Fig.7



Fig.7

 d) Now select or type the name of new or existing database for restore operation in To database: textbox as shown below in Fig.8.

🍫 Microsoft SQL Server Management Studio		a X
File Edit View Tools Window Community Help Diget Diget <td< td=""><td>Resort - Restore Database - Aicrps2013 Select a page Select a page Select a page Select a page Select a page Select a page</td><td>• X</td></td<>	Resort - Restore Database - Aicrps2013 Select a page Select a page Select a page Select a page Select a page Select a page	• X
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Ready		

Fig.8

e) Select 'From device' radio button to specify the source and location of backup sets as shown below in Fig.9.



Fig.9

f) Press 🔲 button to open "Specify Backup" window as shown below in Fig.10.

🍢 Microsoft SQL Server Management Stud	io				- 7 🗙
File Edit View Tools Window Community	Help	Restore Database - Aicrp	s2013		
Connect - C	Summar Databases PRIVE-A49050049/Databases PRIVE-A49050049/Databases Databases Databases Acrya2013 Acrya2013 Acrya2013 Acrya2013 Acrya2014 d 1 D 22 D 0 C 0 C 0 C 0 C 0 C 0 C 0 C 0 C	School a puop Schoo	Sonot Help Destination for restore Select or type the name of a new or existing database To database: For a point in time: Most recent possibl Source for restore From distabase: From device: Select the backup sets to restore: Restore:	e for your restore operation.	S Item(s)

Fig.10 Locate Databases

g) Press detune button to browse for .bak file in "Locate Backup File" window as shown below in Fig.11.

Server Managen	nent Studio						- ª 🛛
File Edit View Tools Window	Community Help	Dest.	loco Databaco - Al	croc 2012			
New Query 📑 📸 🔂	🖪 😂 🗟 🥔 🚯 🔅		none parabase - Po	cipszors			
Object Explorer	Summary	Gen	eral	Script - D Help			- ×
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Ready							

Fig.11 Locate Backup File Window

h) Select desired backup file e.g. Aicrps2013-14.bak and press button for final restoration as shown below in Fig.12.

So Microsoft SOL Server Manage	ment Studio					a X
Server Adamager Fie Edt Vew Tools Vindow New Query New Tools Vindow Object Explorer Connect - Resolved 9(Cg, Server 9.0) B - Server Objects B - Server Objects B - Relacion Management B - Management B - Notication Services SQL Server Agent (Agent XPs of	Community Help Community Help Summany Summany Summany Conte Bockupp Fil Select the fie: Conte Bockupp Fil Select the fie: Context Bockupp Fil Context Bockupp Fil Cont	Restore Database - A Sefect a page General Gotons 9 Cotons 9	Soriot • Help Destination for restore Select or type the name of To database: To a point in time: Source for restore Specify the source and loc O From database: O From database: Select the backup sets to Restore Name Comp ation for your restore operation. Fie	a new or existing database for yo Acrps2013 Most recent possible ation of backup sets to restore. restore: onert Type Server Database Restore: Contents	ur restore operation.	×
Ready	>		OK Cano			

Fig.12

2.2 SOFTWARE INSTALLATION STEPS ON SERVER:-

- 1. Copy all the contents of the software folder "AICRPSPB" in a specific location e.g. in F drive with the same folder name.
- Open "Microsoft Visual Studio" by double clicking the icon
 Open "Microsoft Visual Studio" by double clicking the icon
 Open "Microsoft Visual Studio" by double clicking the icon
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 Open "Microsoft Visual Studio" by double clicking the icon
 Open "Microsoft Visual Studio" by double clicking the icon
- 3. Start window of Microsoft Visual Studio will appear as shown below in Fig.13.



Fig. 13 Microsoft Visual Studio

- 4. Go to File option in the main menu.
- 5. Select Open option and then B Web Site... option in the submenu as shown below in Fig.14.





- 6. For testing the functionality of the AICRPS s/w after installation, Browse for the AICRPSPB folder in Open Web Site window as shown below in Fig.15.
- 7. Select the project folder and press ______ button.



8. Go to ^{View} option in the main menu.



Fig. 16 Solution Explorer

10. Select web.config file from the listing of the Solution Explorer for database connectivity as shown in Fig.17.

👓 AICRPSPBNew - Microsoft Visual Studio	
File Edit View Website Build Debug Team Data Tools Test Window Help	
: 🔚 = 🖾 = 🧭 🚚 🍻 🕺 👘 🖄 👘 - 🕾 - 💭 - 🖾 🕨 🕨 🖸 - 🖏 -	
Note:	Solution Explorer

Fig. 17 Solution Explorer window

- 11. (Important Step) Double click on ^{web.config} file to open its coding page as shown below in Fig 18.
- 12. Replace the selected line in Fig.21 with "Data Source = Comp1; Initial Catalog = Db1;User ID = abcd; Password =abcd1234" where Comp1 is Computer Name, Db1 is Database name, abcd is user id of SQL Server and abcd1234 is Password of the same.



Fig. 18 WEB CONFIG CODE PAGE

13. Select DAL.CS from the sub list of App_Code which appears in the listing of Solution Explorer as shown below in Fig.19.

File Edit View Website	Build Debug Team Data Tools	Test Window Help			
1 🔄 - 🔛 - 🥶 🖬 🥔	X - 12 - 10 - 10 - 12 - 12 - 12 - 12 - 12	🕨 Debug 🔹 🌌	CnnStr 1	- I 🖓 🕾 🖓 🐼 🛠 🛃 🖬	
(Y tooka)					Solution Explorer Solution According Solution According Accorde Accorde Accorde Solution Accordent Accorde Solution Accordent Accordent Solution Accordent Solution Accordent Solution Solution Accordent Solution

Fig. 19

14. Double click on DAL.cs to open its coding page as shown below in Fig.20.



Fig.20

15. (Important Step) Goto Line no. 530 in GenerateBackup method and replace the selected word within square brackets in Fig.20 with current database name e.g.

AICRPSPB to generate database backup file on pressing of Generate Database Backup button as shown in Main Menu Page in Fig.15 in User Training Manual.

16. Select from the list of forms as shown in the Solution Explorer in Fig.21.



- 18. Click *View in Browser* option as shown below in Fig.22. ug Team Data Tools Open • I 🖘 🕾 🖬 🖬 🕻 🛅 • 🔛 • 😂 🔄 🥔 | 🔉 🖏 🖄 | 49 - (41 - 💭 - 🖏 | 🕨 Debug M CnnStr1 Open With View Code 2 🗉 | 🔁 🎾 View Designe shift+F7 88 View Markup ch project\AICR iew Component Desi View in Browser 3 age Browse With. Set As Start Page Build Page ø Check Aco Exclude From Project dUser.asp) 👗 Cut Ctrl+X 🐚 Сору Ctrl+C × Delete Del • Fig.22 19. Running Login form will appear as shown below in Fig.23. 20. Enter User ID and Password and Click Sign In button to login. bcalhost: 1885/AICRPSPB/Lo × → C n localhost:1885/AICRPSPB/Login.aspx QS = Data Management System For Plant Breeding Login User ID Dassword Sign In For AICRPS s Of Data Over Years / Locations Of In P IultiVariate Analysis :- Principal Com nt Analysis Cluster Analysis dvanced Statistical Analysis For Designs Of Yield Trials AICRPS The ICAR started the All India Co-ordinated Research Project on Soybean (AICRPS) in 1967. The AICRPS is an integral part of the DSR with 8 main, 14 sub and 16 need based centers, spread across the nation. The aim of the project is to coordinate the multi location interdisciplinary soybean research through AICRPS. The web-based AICRPS data management system is developed to reduce the drudgery involved in the data compilation, data entry, analysis and report generation tasks. For any queries : Please email to savitasoham@gmail.com Right@ Directo ate of Sovbean Rese Fig.23. LOGIN FORM (AICRPS)
 - 21. User "Admin" home page will appear as shown below in ADMIN PAGE in Fig.24.

. ~	A						
-> C tome	Users	Master	Data Entry	Report Generation	Check Data Status	Performance Analysis	<u></u>
	Welcome	: Dr. S. M	. Husain	Thursday, Ju	ıne 12, 2014 8:52:34	AM Settings	Logout
	Allow DE	O Users to	View Report				
	Allow DE Gener	O Users to ate Databas	View Report e Backup				
	Allow DE Gener Upd	O Users to ate Databas ate Date Of	View Report e Backup FExpiry				
	Allow DE Gener Upd	O Users to ate Databas ate Date Of Reset DataB	View Report e Backup [°] Expiry Base				

Fig.24. ADMIN PAGE

22. Start using the system as per guidelines provided in the "User Reference Manual for Data Management and Report Generation"

<u>Chapter 3</u>

STEPS FOR CONFIGURING THE SYSTEM FOR RUNNING IT ON REMOTE CLIENT

3.1 (VIRTUAL DIRECTORY INSTALLATION STEPS):

1. Go to Start \rightarrow Programs \rightarrow Administrative Tools \rightarrow IIS Manager to open "Internet Information Services (IIS) MANAGER WINDOW" as shown below in Fig.25.



Fig.25 Internet Information Services (IIS) Manager

2. Select **DSRAICRPS** (local compute and open its sub list by clicking " ⊞" as shown below in Fig.26.



3. Open ^{Web Sites} sub list and select ^{Default Web Site} as shown below in Fig.27.

(IIS) Manager		
Help		
Application Pools Web Sites Web Service Extensions Default SMTP Virtual Server	Status Service is running Running	
1		
	(IIS) Manager Help Particular Service Extensions Default SMTP Virtual Server	(IIS) Manager Help P P P P P P ame Status Application Pools Web Sites Service is running Web Service Extensions Default SMTP Virtual Server Running Fina 27

4. Right click on \bigcirc Default Web Site and go to \bigvee \rightarrow \bigvee \bigvee \rightarrow \bigvee Intual Directory... as shown below in Fig.28.



Fig.28

5. In the "VIRTUAL DIRECTORY CREATION WIZARD" press button to continue as shown below in Fig.29.



Fig.30

7. In the "WEBSITE CONTENT DIRECTORY WINDOW" click button to browse for

the location where the software is stored and press	in the "Browse For
Folder" window as shown below in Fig.31.	

rtual Directory Creation Wizard	×	
Web Site Content Directory Where is the content you want to publish on the Web site?	A Contraction of the second se	
Enter the path to the directory that contains the content for Path:	this Web site.	
	Biowse	
	Browse For Folder	× I
	Virtual Directory Creation Wizard	
	My Computer Cocal Disk (C:) Cocal Disk (D:) Cocal Disk (D:) AlcRespB	
<u>Seck</u>	Flashs	
	Make New Folder OK Cancel	1
Fig.31 Brow	vse For Folder	
Then press	in the "Website Content Directory" as show	vn
below in Fig.32.		
below in Fig.32.		
tual Directory Creation Wizard Where is the content you want to publis	h on the Web site?	
below in Fig.32. tual Directory Creation Wizard #eb Site Content Directory Where is the content you want to publis Enter the path to the directory that conta	h on the Web site?	
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below in Fig.32. tual Directory Creation Wizard Web Site Content Directory Where is the content you want to publis Enter the path to the directory that conta Path: D:\AICRPSPB	h on the Web site?	
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Fig.32 Website Content Directory

9. The "VIRTUAL DIRECTORY ACCESS PERMISSIONS" window will open as shown below in Fig.33.

ual Directory Access Permissions	8
Set the access permissions for this virtu	ual directory.
Allow the following permissions:	
Run <u>s</u> cripts (such as ASP)	
Execute (such as ISAPI application	ns or CGI)
Erowse	
To complete the wizard, click No	ext.
	< <u>B</u> ack <u>N</u> ext > Cano
Fig.33 VIRTUAL DIRECTO	ORY ACCESS PERMISSIONS
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W CHECK EXECUTE, KUII dhu BIOW	se permissions (Important Step) and pre
Mext > button as shown below in Fig	rse permissions (Important Step) and pro g.34.
\underline{N} button as shown below in Fig	se permissions (Important Step) and pro g.34.
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Next> button as shown below in Fig Don't check write permission otherwise al Directory Creation Wizard ual Directory Access Permissions Set the access permissions for this virtual Allow the following permissions: Image: Read Image: Run geripts (such as ASP) Image: Execute (such as ISAPI application)	rse permissions (Important Step) and pro g.34. ise anybody can temper the code. s ual directory.
Next> button as shown below in Fig Don't check write permission otherwise al Directory Creation Wizard val Directory Access Permissions Set the access permissions for this virtual Allow the following permissions: Image: Read	rse permissions (Important Step) and pre g.34. ise anybody can temper the code. s ual directory.
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Next> button as shown below in Fig Don't check write permission otherwise al Directory Creation Wizard cual Directory Access Permissions Set the access permissions for this virtual Allow the following permissions: Image: Provide the Second S	rse permissions (Important Step) and pro g.34. ise anybody can temper the code. s ual directory.
button as shown below in Fig Don't check write permission otherwite al Directory Creation Wizard ual Directory Access Permissions Set the access permissions for this virtu Allow the following permissions: Read Run scripts (such as ASP) Execute (such as ISAPI application Write Browse To complete the wizard, click Net	rse permissions (Important Step) and pro g.34. ise anybody can temper the code. s ual directory.
button as shown below in Fig Don't check write permission otherwite al Directory Creation Wizard ual Directory Access Permissions Set the access permissions for this virtu Allow the following permissions: Read Run scripts (such as ASP) Execute (such as ISAPI application Write Rowse To complete the wizard, click No	rse permissions (Important Step) and pro g.34. ise anybody can temper the code. s ual directory. hs or CGI) ext . < <u>Rack</u> <u>Next></u> Car

24



Fig.35

- 3.2 (ASP.NET Settings in Virtual Directory Properties):-
- 12. Right click on Virtual Directory e.g. ACCRESPE and select Properties from the popup menu as shown below in Fig.36.

🐚 Internet Information Ser	vices (IIS) Mana	ger		
🐚 Eile Action View Win	dow <u>H</u> elp			
← → 1 1 1	0 🗈 😫 🖬	是 ▶ ■ Π		
Internet Information Service DSRAICRPS (local computed of the service) DSRAICRPS (local computed of the service) Default Web Sites Default Web Sites Default Web Site Rep Default SM Rep Default SM New All Ta View New Default SM Properties dia	s Name App_Code Backup Flashs Image NewImages NewImages sks window from Here e issh rt List	aspx aspx.cs ion.aspx ion.aspx ion.aspx.cs px px.cs aspx aspx.cs cs x x.cs	Path	Status

Fig.36

- 13. The AICRPSPB Properties window will open as shown below in Fig.37.
- 14. Press ASP.NET tab which appears at the top of AICRPSPB Properties windows to open ASP.NET Settings panel in the same window.

• > 🗈 📧 🗡 🕾 🙆 🗟 😫 💷 💂 🕨 🗉 🛛	AICRPSPB Properties	dite-	?
Internet Information Services DSRAICRPS (local compute Application Pools Web Sites Default Web Site Agro AICRPSPB ReportS addCharacter.aspx addCocation.aspx addTrialMaster.aspx addVariety.aspx addVariety.aspx addVariety.aspx addVariety.aspx addVariety.aspx addZone.aspx	HTTP Headers Virtual Directory The content for this resou A sh C A sh C A sh C A ref Script source access Read Write Directory browsing Application settings Application name: Starting point: Execute germissions: Application pool: C	Custom Errors Documents Cestould come from: rectory located on another comput direction to a URL CRPSPB CRPSPB CRPSPB CRPSPB CALCRPSPB Default Web Site>\AICR cripts and Executables refaultAppPool	ASP.NET Directory Security

Fig.37

15. Select ASP.NET version as 4.0.30319 from the list which appears in front of ASP.NET version: and press or button to apply the setting, as shown below in Fig.38.

賃 Internet Information Services (IIS) Manager			
🗐 Eile Action View Window Help			
	AICRPSPB Properties		? ×
Internet Information Services DSRAICRPS (local compute Application Pools Web Sites Default Web Site Agro AddCharacter.aspx AddF0Information AddColinformation AddLocation.aspx.cs addLocation.aspx.cs addVariety.aspx.cs addVariety.aspx.cs addZone.aspx	Virtual Directory HTTP Headers Microsoft ASP.NET version: S X X.CS File location: File creation date: File last modified:	Documents Custom Errors Image: Custom Errors	Directory Security ASP.NET
		OK Cancel	Apply Help

Fig.38

Note: Steps 12 to 15 are necessary steps to be followed for setting ASP.NET version; otherwise the AICRPS Data Management System will not run.

16. Create hyperlink at the "homepage of institute website" for accessing the software at client end e.g. AICRPS Data-Entry as shown below in Fig.39. In this, the path of the virtual directory will be used and not the physical path of the Folder containing the code. (e.g. http://202.141.78.206/AICRPSPB/login.aspx).



Fig.39

Chapter 4

TECHNICAL DETAILS ABOUT THE SYSTEM

4.1 Aims of the system developed:

The AICRPS data management and report generation system was developed with the following objectives.

- 1. To ensure that the routine processing of trial data and production of reports are carried out in an efficient and effective way thus significantly reducing the time and drudgery involved in-
- Compilation of AICRPS plant breeding Trial data obtained from different AICRPS Centers.
- Preparation of yearly summary table reports.
- Performance Analysis based on historic data's.
- 2. To computerize the whole manual procedure by developing a user-friendly system.
- 3. To provide all multi-location users with facilities for on-line data-entry into the database to ease the work of compilation of huge data.
- 4. To allow safe storage of, and easy access to performance data for varieties.

4.2 Data Collection-

The research on soybean improvement and identification of better varieties to suit varied location specific requirements of different regions of the country is being continued. Improved lines/material developed as a result of breeding efforts at different centers are evaluated in three tier system consisting of –

- 1. Initial Varietal Trial (IVT)
- 2. Advanced Varietal Trial-I (AVT-I)
- 3. Advanced Varietal Trial-II (AVT-II)

These trials are conducted across the country in five zones viz. "Northern Hill", "Northern Plain", "Central", "Southern" and "North-eastern" zones. The performance of test varieties for a particular zone in each trial are compared against a few check varieties in terms of 'Rank' assigned based on the variety-wise 'Mean'. Only those varieties, which perform better with respect to yield performance than the check varieties in a particular zone, are promoted to the next tier in the 3-tier testing system. So, the data, collected on various performance parameters on each trial by the coordinated centers spread all over the country at different locations of five zones, is compiled at the DSR Indore and summary table reports are prepared every year.

4.3 Description of the system:

The overall computerized system is user-friendly and interactive and has been designed in such a manner that even a person with limited computer skills can handle it easily. The complete system is developed using ASP (Active Server Pages).NET. The database at back end is designed using SQL Server 2005 relational database. The reports are generated in the form of summary tables which is exported to EXCEL worksheets. The total software size is 15 MB.

The main user-interface is provided in the form of Menu-bar with menu options viz., 'Home', 'Users', 'Master', 'Data-entry', 'Report Generation'. Each of these menu options has a few sub-menu options which when clicked will open a certain form to perform certain task. In 'Master' Menu, Master entries viz. Character, Location, Trial, Zone and Variety are done with their respective entry-forms. The Variety list for a particular zone and trial is entered through 'Variety-Information' form that is available to the user by clicking 'Variety' sub-menu option of 'Master', main menu option. The user can do the local as well as on-line data entry through "Data-Entry page" opened by clicking "Data Entry" option in the main menu and subsequently the reports can be generated by using 'Report Generation' form.

The complete database comprises of ten tables along with their respective fields and data types as shown below –

	Column Name	Data Type	Allow Nulls
8	Id	int	
	ZoneName	varchar(100)	
	ZoneCode	varchar(10)	

1. ZoneMaster

Limitations-

- i. ZoneName should not be more than 100 characters.
- ii. ZoneCode should not be more than 10 characters.

2. TrialMaster

	Column Name	Data Type	Allow Nulls
P	Id	int	
	TrialName	varchar(100)	
	TrialCode	varchar(10)	
	NumberOfReplicas	int	E

Limitations-

- i. TrialName should not be more than 100 characters.
- ii. TrialCode should not be more than 10 characters.

3. CharacterMaster

	Column Name	Data Type	Allow Nulls
1	Id	int	(m)
	CharacterName	varchar(100)	

Limitations-

i. CharacterName should not be more than 100 characters.

4. Locations

	Column Name	Data Type	Allow Nulls
8	Id	int	
	LocationName	varchar(100)	
	ZoneId	int	

Limitations-

i. LocationName should not be more than 100 characters.

5. Varieties

	Column Name	Data Type	Allow Nulls
8	Id	int	
	VarietyType	varchar(10)	
	VarietyName	varchar(50)	
	TrialId	int	
	ZoneId	int	
	SequenceNo	int	

Limitaions-

- i. VarietyName should not be more than 50 characters.
- ii. VarietyType should not be more than 10 characters.

6. MainData

	Column Name	Data Type	Allow Nulls
8	Id	int	
	TrialID	int	
	LocationID	int	
	VarietyID	int	
	CharacterID	int	
	ReplicationID	int	
	ReplicaData	decimal(10, 2)	V

Limitations-

i. ReplicaData should contain 10 digit before decimal point and 2 digit after decimal point e.g. 1234567890.12

7. MeanData

5	Column Name	Data Type	Allow Nulls
8	Id	int	
	TrialID	int	
	LocationID	int	
	VarietyID	int	
	CharacterID	int	
	MeanData	decimal(10, 2)	

Limitations-

i. MeanData should contain 10 digit before decimal point and 2 digit after decimal point e.g. 1234567890.12

8. Footers

	Column Name	Data Type	Allow Nulls
8	Id	int	
	TrialID	int	
	LocationID	int	
	CharacterID	int	
	NetPlotSize	decimal(7, 2)	
	DateOfSowing	datetime	
	CD	decimal(7, 2)	
	CV	decimal(7, 2)	

Limitations-

- i. NetPlotSize, CD and CV should contain 7 digit before decimal point and 2 digit after decimal point e.g. 1234567.12
- ii. DateOfSowing should be of the form dd/mm/yy.
- 9. UserInfo

	Column Name	Data Type	Allow Nulls
P	Id	int	
	Name	varchar(MAX)	
	City	varchar(MAX)	
	CorrespondenceAddress	varchar(MAX)	
	PermanentAddress	varchar(MAX)	
	Email	varchar(MAX)	
	AlternativeEmail	varchar(MAX)	
	Mobile	varchar(MAX)	
	Phone	varchar(MAX)	
	UserId	varchar(MAX)	
	Password	varchar(MAX)	V
	LocationId	int	
	DOE	varchar(50)	V
	UserLevel	int	

10. Temp

	Column Name	Data Type	Allow Nulls
	S_No	int	v
	Mean	decimal(10, 2)	v
۲			

Limitations-

i. Mean should contain 10 digit before decimal point and 2 digit after decimal point e.g. 1234567890.12

11. Remarks

	Column Name	Data Type	Allow Nulls
8	Id	int	
	TrialId	int	
	LocationId	int	
	CharacterId	int	
	Remarks	varchar(MAX)	~

The database size without insertion of data is nearly 2MB and with insertion of the data from all the locations, the size becomes 170MB or more depending on the number of varieties in each trial every year.

4.4 Data Flow Diagram:

The logical operation of the system can be described with the data flow diagram as shown in Fig.40. It shows the flow of data through the system and the work or processing performed by the system.

DFD Level 0



DFD Level 1



DFD Level 2



4.5 E-R Diagram:-

The whole system design can be viewed with the "Entity- Relationship (E-R) diagram" as shown below in Fig.41. The ER-model is a conceptual data model of the system. The diagram shows the kind and organization of the data that is stored in the database.



Fig. 41 Entity-Relationship (E-R) diagram of the system

4.6 Use Case Diagram:-

A use case diagram is a graphic depiction of the interactions among the elements of a system. A use case is a methodology used in system analysis to identify, clarify, and organize system requirements. In this context, the term "system" refers to something being developed or operated, such as a **AICRPS DATA MANAGEMENT SYSTEM** software. Use case diagrams are employed in UML (Unified Modeling Language), a standard notation for the modeling of real-world objects and systems.

System objectives can include planning overall requirements, validating a hardware design, testing and debugging a software product under development, creating an online help reference, or performing a consumer-service-oriented task. For example, use cases of **AICRPS DATA MANAGEMENT SYSTEM** software for Admin would include managing characters, managing trials, managing DEO users, etc. A use case diagram contains four components.

- The boundary, which defines the system of interest in relation to the world around it.
- The actors, usually individuals involved with the system defined according to their roles.
- The use cases, which the specific roles are played by the actors within and around the system.
- The relationships between and among the actors and the use cases.





Fig.43 Use Case for DEO

4.7 Activity Diagram:-

In Unified Modeling Language (UML), an activity diagram is a graphical representation of an executed set of procedural system activities and considered a state chart diagram variation. Activity diagrams describe parallel and conditional activities, use cases and system functions at a detailed level. An activity diagram is used to model a large activity's sequential work flow by focusing on action sequences and respective action initiating conditions. The state of an activity relates to the performance of each workflow step.

An activity diagram is represented by shapes that are connected by arrows. Arrows run from activity start to completion and represent the sequential order of performed activities. Black circles represent an initial workflow state. A circled black circle indicates an end state. Rounded rectangles represent performed actions, which are described by text inside each rectangle.

A diamond shape is used to represent a decision, which is a key activity diagram concept. Upon activity completion, a transition (or set of sequential activities) must be selected from a set of alternative transitions for all use cases.





Fig.45 Activity Diagram (DEO)

4.8 Sequence Diagram:-

A sequence diagram, in the context of UML, represents object collaboration and is used to define event sequences between objects for a certain outcome. A sequence diagram is an essential component used in processes related to analysis, design and documentation. A sequence diagram is also known as a timing diagram, event diagram and event scenario. Object interactions usually begin at the top of a diagram and end at the bottom. In a sequence diagram, object interactions occur through messages on the vertical and horizontal dimensions and are designated by horizontal arrows and message names. The initial sequence diagram message begins at the top and is located on the diagram's left side. Subsequent messages are added just below previous messages. Sequence diagram subdivided messages may be by based on functionality. type,

A lifeline, which indicates a role, is represented by a named rectangular box with a dashed line descending from the center of the diagram's bottom edge. Lifeline boxes represent participating sequence object instances. Blank instance names represent anonymous instances.



Fig.46 Sequence Diagram (Admin)





<u>Chapter 5</u> <u>STAGES WHILE OPERATING THE SYSTEM</u> 5.1 Preparation of the system as per the technical program

The system needs to be prepared to get it ready before starting data compilation and report generation tasks as follows.

Case I: If system is used for the first time

1. Initially all the zone names, trials, characters and zone-wise location list are to be entered using the **Master** main menu-option of the main interface as shown below in Fig.48.

localhost: 18	885/AICRPSPB/Su ×						- @ ×
$\ \ \leftarrow \ \ \Rightarrow \ \ C^{i}$	n 🗋 localho	ost:1885/AICRP	SPB/SuperAdmin.a	aspx			@ ☆ ≡
Home	Users	Master	Data Entry	Report Generation	Check Data Status	Performance Analysis	
	Welcome	Character Location Trial	usain	Saturday, Ju	ıne 14, 2014 4:27:52	PM Settings	Logout
		Zone Variety					
	Allow DE Genera Upda	O Users to V ate Database ate Date Of I Reset DataBa	/iew Report Backup Expiry Ise				
	(Copy DataBa	ase				

Fig. 48

 Every year as per the technical program for that year variety list is entered based on zone and trial by using Variety option the Master main menu-option as shown below in Fig.49.





3. Out of all the varieties some are indicated to be check variety as shown below in Fig.50. These are of special importance to the plant breeders while taking "Varietal" performance decisions during annual AICRPS workshop.

🖹 kaliost.1885/NLCR958/s: × 📃					
$\leftarrow \rightarrow \mathbf{C} \land \square localhost: 18$	85/AICRPSPB/addVariety.aspx				♀☆ 〓
Home Users Master	Data Entry Report Generation	Check Data Status Performan	ce Analysis		
Welcome : Dr	. S. M. Husain	Thursday, June 12, 2014	9:12:47 AM	Settings	<u>Logout</u>
Variety Information					
Select Variety Type	Main Variety Ocheck Va	riety			
Select Trial	Initial Varietal Trial	Select Zone	CENTRAL ZONE	·	
Variety Name	μ <u>s 335</u>	>> << Delete Variety	Variety List JS 95-60(C) JS 93-05(C) JS 335(C) JS 97-52(C)	* *	
		Submit			

Fig. 50

4. IVT entries are displayed in the form of variety-code on to the Data Entry Operators (DEOs) as show below in Fig.51. Thus all the master tables of the database are made ready for subsequent functionality of the package.

	C 🔒 🗋 localhost	: 1885/AICRPSPB/DataEntry.aspx	52
iew R	eport		w)
ata Entr	ry Page		Instructions for Data
Velcom	e : Dr. S.R. Ramgiri	Location : SEHORE , Zone : CENTRAL ZONE	Entry Operator
elect D	ata Type	🖲 Main Data 🔘 Footer Data	Steps for Main Data Entry
elect Tr	rial Initial Varietal Tr	ial Select Character 100 Seed Weight (g)	
		Click Here For Adding Remarks	1. Select Data Type (Main Data) 2. Select Trial
emarks	;	Main DataDEO Page	3. Select Character 4. Select Replication 1 5. Press GO Button 6. Enter Replication 1 Data
		17. Press Submit Button to	
Subn	nit Remarks		save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately
Subn Choose You a	nit Remarks Replication Replica are Entering Data	tion 1 V GO a for Replication 1	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately <u>Steps for Footer Data</u> <u>Entry</u>
Subn Choose You a S. No	nit Remarks Replication Replica are Entering Data TrialCode	tion 1 T CO a for Replication 1	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately <u>Steps for Footer Data</u> <u>Entry</u>
Subn Choose You a S. No 1	nit Remarks Replication Replica rre Entering Data TrialCode	tion 1 V GO a for Replication 1 Data	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately <u>Steps for Footer Data</u> <u>Entry</u> 1. Select Data Type (Footer Data)
Subn Choose You a S. No 1 2	nit Remarks Replication Replication re Entering Data TrialCode 1 2	tion 1 V a for Replication 1 Data 10.50 8.50	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately <u>Steps for Footer Data</u> <u>Entry</u> 1. Select Data Type (Footer Data) 2. Select Trial 3. Enter Net Plot Size (Sqm
Subn Choose You a S. No 1 2 3	nit Remarks Replication Replication TrialCode 1 2 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	tion 1 v co a for Replication 1 Data 10.50 8.50 6.50 6.50	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separatel Steps for Footer Data Entry 1. Select Data Type (Foote Data) 2. Select Trial 3. Enter Net Plot Size (Sqm and Date Of Sowing 4. Press Submit Button to
Subn Choose You a S. No 1 2 3 4 5	nit Remarks Replication Replication TrialCode 1 2 3 4 5	tion 1 • co a for Replication 1 Data 10.50 8.50 8.50 8.50 8.50	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separatel Steps for Footer Data Entry 1. Select Data Type (Foote Data) 2. Select Trial 3. Enter Net Plot Size (Sqm and Date Of Sowing 4. Press Submit Button to save Footer Data
Subr Choose You a S. No 1 2 3 4 5 5 6	nit Remarks Replication Replica Replication 1 2 3 4 5 6	tion 1 v a for Replication 1 Data 10.50 8.50 6.50 8.00 8.50	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separatel Steps for Footer Data Entry 1. Select Data Type (Foote Data) 2. Select Trial 3. Enter Net Plot Size (Sqm and Date Of Sowing 4. Press Submit Button to save Footer Data Important Note:
Subn Choose You a S. No 1 2 3 4 5 6 7	nit Remarks Replication Replication TrialCode 1 2 3 4 5 6 7	tion 1 v GO a for Replication 1 Data 10.50 8.50 6.50 8.00 8.50 8.50 8.50	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately Steps for Footer Data Entry 1. Select Data Type (Footer Data) 2. Select Trial 3. Enter Net Plot Size (Sam and Date Of Sowing 4. Press Submit Button to save Footer Data Important Note: There is NO need to enter CD and CV
Subn Choose You a S. No 1 2 3 4 5 6 7 8	nit Remarks Replication Replication TrialCode 1 2 3 4 5 6 7 8 8	tion 1 a for Replication 1 Data Data 10.50 8.50 6.50 8.00 6.50 8.50 6.50 7.00	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separatel Steps for Footer Data Entry 1. Select Data Type (Foote Data) 2. Select Trial 3. Enter Net Plot Size (Sqr and Date of Sowing 4. Press Submit Button to save Footer Data Important Note: There is NO need t enter CD and CV data



Case II: If system already has data

1. Follow Steps "3 and 4" of **Case I** for entering names of varieties as per technical program.

5.2 Zone-wise and trial-wise data compilation and Web-Based Data entry:-

Every year, after the cropping season, all the AICRPS in-charges of different centers do dataentry on their own system at their locations instead of sending the printed sheets through post. This is possible using this on-line AICRPS Data Entry software linked to the DSR website. The in-charges have separate user-name and passwords so that they are allowed to enter, edit and access the data of their location only. The data thus entered is stored on remote server of DSR Indore which is further used for report generation. This not only saves the time for getting final data but also reduces the burden of huge volume of data handling on coordinators at DSR Indore.

5.3 Processing of data files:-

After the completion of data-entry, correction of erroneous data, validation of the final data and before the generation of reports, the data files are processed at the system level for calculation of variety-wise mean, location-wise mean (for yield character) and varietal performance ranking. Based on these ranks as shown in the final reports, decisions on better performance of varieties are taken.

5.4 Efficient error handling:-

The system has been designed in such a way that data-entry operator is not given any chance to commit any error. The user interface is such that most of the inputs are provided to the system through selections from a list with more than one valid option. Efficient error handling procedures are used so that if, by chance, any wrong entry is done, it will alert the user by promptly producing error messages. Even before every update/delete operation a confirmation massage is prompted on user's screen in order to ensure final changes in the database at DSR Indore's server. The user interface is such that even a novice user with less computer skills can also handle the system comfortably.

5.5 Data analysis and Report Generation:-

After the completion of the data-entry and processing tasks, the summary table reports for each zone and trials for all characters are taken out. The printed computer reports for all the zones are scrutinized briefly by data processing staff for recording errors that have not been trapped by validation at the input stage. This is done by physically matching the data on computer-generated reports to the original data sheets. The erroneous jobs are edited by them and submitted for rerunning. The reports again generated are then referred to the trials coordinators for subsequent correction at their stage. After complete correction of errors at different levels by coordinators, final reports are produced in formats specified by the AICRPS coordinators using, where possible, computer procedures, which will produce reports in a standard format. More complex and non-standard reports are produced using a combination of Report Generation menu-option and word-processing viz. MS-Word and spread sheet packages like MS-Excel. This provides a more versatile approach to report production than customized computer procedures.

5.6 Creating history database files:-

Looking for the safety of overall database and its easy access after a long period of gap as and when required, system has a provision to create history database files. The complete database with all the tables in it can be stored in the form of backup files, which can be restored and linked to the system, as and when required for getting information, in future. The structure of the history databases is same as the original database when it is restored from the backup files.

5.7 Monitoring all the phases of the system:-

The System administrator can give access rights to different breeders with different permissions as an administrator and data-entry-operator. The administrator monitors every phase of the system from Master table data-entry as per the technical program up to final report generation.

<u>Chapter 6</u> <u>INPUT/OUTPUT FORMS AND THEIR PURPOSES</u>

Zone Entry Form - This form is used for adding information of different Zones with the help of Zone Name and Zone Code textboxes provided in "ZONE INFORMATION FORM" as shown below in Fig.52.

🗋 localhos	t: 1885/AICRPSPB/ac ×				
← ⇒ (🗧 🏠 🗋 🗈 localhe	ost:1885/AICR	PSPB/addZone.aspx	x	© ☆ 🗉
Home	e Users	Master	Data Entry	Report Generation Check Data Status Performance Analysis	
	Welcome	: Dr. S. I	M. Husain	Thursday, June 12, 2014 8:57:54 AM Settings	Logout
			Zone	Information	
Zone	Name		CENTRAL	LZONE	
Zone	Code		cz		
			I	Submit	
		ID	Zone Code	Zone Name	
Edit	Delete	1	NHZ	NORTHERN HILL ZONE	
Edit	Delete	2	NPZ	NORTHERN PLAIN ZONE	
Edit	Delete	3	NEZ	NORTH EASTERN ZONE	
<u>Edit</u>	Delete	4	CZ	CENTRAL ZONE	
Edit	<u>Delete</u>	5	sz	SOUTHERN ZONE	

Fig. 52 ZONE INFORMATION FORM

Trial Entry form - This form is used for adding information of various Trials with the help of Trial Name and Trial Code and Number of Replicas textboxes provided in "TRIAL INFORMATION FORM" as shown below in Fig.53.

🖹 localhost: 18	85/AICRPS	PB/ad ×	2							-@ ×
← → C	fi	localhost:1	885/AIC	RPSPB/addTrialMaster.a	spx					@ ☆ 〓
Home	Use	ers Ma	aster	Data Entry	Report Genera	ation Check	Data Status	Performanc	e Analysis	
W	/elco	me : D	r. S.	M. Husain	Thurso	lay, June 12	, 2014 9:	01:23 AM	Settings	Logout
Trial Inf	forma	tion								
Trial Na	me				Initial Varietal	Trial				
Trial Co	de				IVT					
Number	r of R	eplicas			3					
				Sub	omit					
		Trial ID	Tria	Name	Trial Code	Number Of R	eplicas			
Edit De	<u>elete</u>	1	Initia	l Varietal Trial	IVT	3				
Edit De	elete	2	Adva	nced Varietal Trial	I AVT-I	4				
Edit De	<u>elete</u>	3	Adva	nced Varietal Trial	II AVT-II	4				

Fig. 53 TRIAL INFORMATION FORM

Character Entry Form – This form is used for adding information of various Characters with the help of Character Name textbox provided in "CHARACTER INFORMATION FORM" as shown below in Fig.54.

	85/AICRPSPB/ac	×	DDCDR/addCharacter	2004					
lome	Users	Master	Data Entry	Report Generation	Check D	ata Status	Performanc	e Analysis	Q 23
W	/elcome	: Dr. S.	M. Husain	Thursday,	June 12,	2014 8	:56:17 AM	Settings	Logout
haract	er Inforn	nation							
haract	ter Name		Plant Heig	ht (cm)					
			Submit						
	Ch	aracter ID	Character Nar	ne					
Edit De	elete 1		100 Seed Weigh	nt (g)					
Edit De	elete 2		Days To Flower						
Edit De	<mark>elete</mark> 3		Days To Maturit	τ γ					
Edit De	<mark>elete</mark> 4		Oil Content (%)						
Edit De	<u>elete</u> 5		Plant Height (cr	n)					
Edit De	elete 6		Vield (Ka/Plot)						

Fig. 54 CHARACTER INFORMATION FORM

Location Entry Form - This form is used for adding information of various Locations with the help of Select Zone combo box and Location Name textbox provided in "LOCATION INFORMATION FORM" as shown below in Fig.55.

📄 localhos	t: 1885/AICRPSF	78/ac ×							
← ⇒ (7 fi 🗋	localhost:1885/AI	CRPSPB/add	Location.as	рх				@ ☆ 🔳
Home	e Use	rs Master	Data	Entry	Report Generation	Check Data Status	Performan	ce Analysis	
	Welco	me : Dr. S	. M. Hu	sain	Thursday, I	June 12, 2014 9:0	04:26 AM	Settings	Logout
Locat	ion Infa	ormation							
Selec	t Zone			NORTH	ERN HILL ZONE				
Locat	ion Nan	ne		Palamp	ur				
				Su	ıbmit				
		Location ID	Locatio	n Name					
<u>Edit</u>	<u>Delete</u>	1	Almora						
Edit	Edit Delete 2 Majhera								
Edit	<u>Delete</u>	3	Palampu	ır					
Edit	<u>Delete</u>	34	Bajaura						

Fig. 55 LOCATION INFORMATION FORM

Main Variety Entry Form - This form is used for adding information of various Main Varieties of different trial of a particular zone with the help of Select Variety Type radio-button and Select Trial, Select Zone combo-box and Variety Name textbox provided in "Main – VARIETY INFORMATION FORM" as shown below in Fig.56.

🛅 localhost: 1885/AICRPSPB/ad ×					- 0 ×
← → C fi localhost	:1885/AICRPSPB/addVariety.aspx				@.☆ 〓
Home Users Master	Data Entry Report Generation	Check Data Status Performa	nce Analysis		
Welcome	: Dr. S. M. Husain	Thursday, June	e 12, 2014 9:10:01 AM	Settings	Logout
Variety Information					
Select Variety Type	Main Variety Check Var	iety			
Select Trial	Initial Varietal Trial	Select Zone	CENTRAL ZONE		
Variety Name	NRC 107	>> << Delete Variety	Variety List KDS 726 PS 1539 DS 3050 SL 983 DS 2961 RKS 109 SL 955 DS 3047 AMS 1001 JS 20-79 MACS 1419 NRC 98 RVS 2002-4 KDS 722 MAUS 609 NRC 107 MACS 1410 V		
Check Zone Check All Zones	CENTRAL ZONE NORTH EASTER	RN ZONE ONRTHERN HILL ZONE	NORTHERN PLAIN ZONE	DNE	
		Submit			

Fig.56 Main - VARIETY INFORMATION FORM

Check Variety Entry Form - This form is used for adding information of various Check Varieties of different trial of a particular zone with the help of Select Variety Type radio-button and Select Trial, Select Zone combo-box and Variety Name textbox provided in "Check -VARIETY INFORMATION FORM" as shown below in Fig.57.

C localhost: 1885/AICRPSPB/ad ×				l	- @ ×
← → C fi localhost:18	85/AICRPSPB/addVariety.aspx				0. ☆
Home Users Master	Data Entry Report Generation	Check Data Status Performan	ice Analysis		
Welcome : Dr	. S. M. Husain	Thursday, June 12, 2014	9:12:47 AM	Settings <u>Lo</u> g	<u>jout</u>
Variety Information					
Select Variety Type	Main Variety Ocheck Va	riety			
Select Trial	Initial Varietal Trial	Select Zone	CENTRAL ZONE	T	
Variety Name	þs 335	>> << Delete Variety	Variety List JS 95-60(C) JS 93-05(C) JS 335(C) JS 97-52(C)	*	
		Submit			

Fig.57 Check - VARIETY INFORMATION FORM

Main Data Entry Form -This form is used for entering data of different Varieties of a particular Location with the help of Select Data Type radio-button and Select Location, Select Trial, Select Character, Choose Replication combo-box provided in "Main - DATA ENTRY PAGE" as shown below in Fig.58.

localhost:	1885/AICRPSPB/DE ×		- 6 ×
- → C	🔒 🗋 localhos	t:1885/AICRPSPB/DataEntry.aspx	ය =
liew Re	port		
)ata Entry	Page		Instructions for Data
Welcome :	Dr. S.R. Ramgiri	Location : SEHORE , Zone : CENTRAL ZONE	Entry Operator
Select Dat	а Туре	🖲 Main Data 🔍 Footer Data	Steps for Main Data Entry
Select Tria	I Initial Varietal 1	Trial V Select Character 100 Seed Weight (g) V	
		1. Select Data Type (Main Data) 2. Select Trial	
Remarks		Main DataDEO Page	3. Select Character 4. Select Replication 1 5. Press GO Button 6. Enter Replication 1 Data
Submit	Remarks		7. Press Subilit bitton to save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately
Choose R You are	e Entering Dat	ation 1 v co ta for Replication 1	Steps for Footer Data Entry
S. No	TrialCode	Data	
1	1	10.50	1. Select Data Type (Footer Data)
2	2	8.50	2. Select Trial 3. Enter Net Plot Size (Sqm)
3	3	6.50	and Date Of Sowing 4. Press Submit Button to
5	5	8.00	save Footer Data
6	6	6.50	Important Note:
7	7	6.50	There is NO need to enter CD and CV
8	8	7.00	data
9	9	7.00	

Fig.58 Main - DATA ENTRY PAGE

Footer Data Entry Form - This form is used for entering data of different Varieties of a particular Location with the help of Select Data Type radio-button and Select Location, Select Trial combo-box and Net Plot Size (sqm), Date Of Sowing textbox (used by Data Entry Operator) and C.D. at 5%, C.V. (%) text box (used by Administrator) provided in "Footer - DATA ENTRY PAGE" as shown below in Fig.59.

C locahost: 1885/AICRPSP8/D ×	- @ ×
← → C n Localhost:1885/AICRPSPB/DataEntry.aspx	☆ =
View Report	
Data Entry Page	Instructions for Data
Welcome : Dr. S.R. Ramgiri Location : SEHORE , Zone : CENTRAL ZONE Logout	Entry Operator
Select Data Type	<u>Steps for Main Data</u> Entry
Select Trial Initial Varietal Trial 🔹]
Click Here For Adding Remarks	1. Select Data Type (Main Data) 2. Select Trial
Remarks Footer DataDEO Page	4. Select Replication 1 5. Press GO Button 6. Enter Replication 1 Data
Submit Remarks	save Replication 1 data 8. Repeat Steps 4,5,6, for each Replication separately
Footer Information	
Net Plot Size (sqm) Only Numeric Value	<u>Steps for Footer Data</u> Entry
Date Of Sowing 6/23/2013	
C.D. at 5% Cakulate CD and CV	1. Select Data Type (Footer Data) 2. Select Trial
C.V.(%)	3. Enter Net Plot Size (Sqm) and Date Of Sowing 4. Press Submit Button to
Submit	save Footer Data
There is NO need to enter CD and CV values!!	Important Note: There is NO need to
	data

Fig. 59 Footer - DATA ENTRY PAGE

New User Registration Form (step 1) - This form is used by un-registered users who is using this software for the first time, to register by filling required details in appropriate field provided in "NEW USER REGISTRATION PAGE(step 1)" as shown below in Fig.60.

🖹 localhost: 1885/AICRPSPB/N × 🚺			
$\leftarrow \Rightarrow \mathbf{C} \widehat{\mathbf{n}}$ Dicalhost	1885/AICRPSPB/NewUserRegistration.aspx		@ ☆ 🗧
Back To Login Pa	ge		
New User Regist	ration Page		
Name	Priyanka Singh		
City	Jabalpur •		
Email ID	priyankasingh_06@yahoo.com		
Confirm Email ID	priyankasingh_06@yahoo.com		
Mobile number	9424889722		
	Submit		

Fig.60 NEW USER REGISTRATION PAGE (step 1)

New User Registration Form (step 2) - This form is used by un-registered users who is using this software for the first time by filling required details in the appropriate field provided in "NEW USER REGISTRATION PAGE(step 2)" as shown below in Fig.61.

Firefox http://localhost:491EO	Registration.aspx +							X
() localhost-49165/AJCRPSPBNew	/DEORegistration.aspx		☆ ⊽ C	8 + Google	<u>م</u>	₽ _1	-01	0-
Welcome : Dr. S.R. Ramgiri		Logout						
Registration : step 2								
Name	Dr. S.R. Ramgiri							
City	Sehore							
User Id	shor							
E-mail	sr.ramgiry57@gmail.com							
Mobile Number	09806971662							
Alternative Email								
Correspondence Address	đ							
Pemanent Address same as coresspondence address	ų							
Phone Number								
Enter new Password								
Re-type Password								
	Submit							

Fig.61 NEW USER REGISTRATION PAGE (step 2)

User Information Form – This form is administrator to add new user's information by filling required details in the appropriate fields provided in "USER INFORMATION FORM" as shown below in Fig.62.

🗋 localho	st: 1885/AI	CRPSPB/	Ac X											
boahost: 1885/ALCRPSPE ← → C ↑ Prive Home Users Mass User Information Name Prive City Ujja Email ID Prive Mobile Number 9424 User ID Prive Password Pain Retype Password Prive Retype Password Prive Save Date Of Expiry 1 8 15 22 25 5 5 5 5 5 5 5 5 5 5 5 5 5	🗈 lo	calho	st:188	85/AI	CRPS	SPB/	AddU	ser.a	ser.aspx	ser.aspx	ser.aspx	ser.aspx 5	ser.aspx 🖒	
Home	Image: second secon	Mas	ter	Data	Entry	R	eport	Gene	eratio	eration Check Data Status	eration Check Data Status Performance Analysis	eration Check Data Status Performance Analysis	eration Check Data Status Performance Analysis	eration Check Data Status Performance Analysis
		Wel	com	e:D	r. S.	M. F	lusa	ain			Saturday, June 14, 2014 4:47:29 PM	Saturday, June 14, 2014 4:47:29 PM Settings	Saturday, June 14, 2014 4:47:29 PM Settings Logout	Saturday, June 14, 2014 4:47:29 PM Settings Logout
User Info	ormation													
Name		Priyar	nka Sir	ngh										
City		Ujjai	n	•]				í.	1	Ĩ			
Email ID	cost:1885/AIGRPSP8/A: × C° fi Docalhost:1885/AIGP Users Master Data Entry Welcome : Dr. S. M formation Priyanka Singh Ujjain • Dijjain • priyankasingh_06@yahoo.co dumber 9424889722 psingh peingh234 Password peingh234 User * Data Entry Operator 6/28/2014 Save 26 22 28 12 3 23 24 25 26 27 28 12 3 23 24 24 23 25 26 27 28 28 10 15 16 15 16 29 20 20 1 20 1	.com			1	1								
Mobile Nu					Ĩ	Ĩ								
User ID		psingl	h											
Password	1	psingl	h234]]				
Retype Pa	assword	Priyanka Singh Ujjain ▼ priyankasingh_06@yahoo.com priyankasingh_06@yahoo.com priyankasingh_06@yahoo.com priyankasingh_06@yahoo.com geingh prigankasingh_06@yahoo.com paingh234 @ Data Entry Operator 6/28/2014 Sun Mon Tue Wed Thu Sun Mon Tue Y]]]					
Type of U	lser	Data Entry Operator]				
<u> </u>								222222	{]				
		6/28/3	2014											
		≤		Jur	ne 201	4		2						
		Sun	Mon	Tue	Wed	Thu	Fri	Sat						
	pe of User	<u>25</u>	<u>26</u>	27	<u>28</u>	<u>29</u>	<u>30</u>	31						
Date Of E	xpiry	1	2	3	4	<u>5</u>	<u>6</u>	z						
		<u>8</u>	2	<u>10</u>	11	12	13	14	1					
		15	<u>16</u>	17	<u>18</u>	<u>19</u>	<u>20</u>	21						
		22	23	<u>24</u>	<u>25</u>	<u>26</u>	27	28	4	4				
		29	<u>30</u>	1	2	3	4	<u>5</u>	J	J				
	Save				Ser	nd E-m	nail		ł]				
								_						

Fig. 62 USER INFORMATION FORM (Add New User by Admin)

Edit - User Information Form – This form is administrator to edit existing user's information by editing required details in the appropriate fields provided in "Edit - USER INFORMATION FORM" as shown below in Fig.63.

📄 localhost: 1885/AI	CRPSPB/	Ac ×								
← ⇒ C fi	🗅 loo	alho	st:188	35/AI	CRPSI	PB/Add	User.asp	x?ID=2		
Home Users	Mas	ter	Data	Entry	Rej	port Ge	neration	Check Data Status	Performance Analysis	
	Wel	come	e:D	r. S.	м. н	usain			Saturday June 14 2014 4:45:34 PM Settings	
User Information						usum				
Name	Dr. P.	s Shul	kla							
City	Pantr	agar	v				╡			
Email ID	ousbo	endra	sh@va	aboo.co	in	_	-			
Mobile Number	97566	81711				_	-			
User ID	pnaga	r					4			
Password	pngr2	34					4			
Retype Password	pngr2	34				_	1			
		ata Er	ntry Or	perato	r		าี่ 🗌			
Type of User			, .,				_			
	6/27/	2014								
	<		Jur	ne 201	4					
	Sun	Mon	Tue	Wed	Thu	Fri Sa	t			
	25	26	27	28	29	30 31				
Date Of Expiry	1	2	3	4	5	<u>6</u> Z	1			
	8	9	10	11	12	13 14				
	15	<u>16</u>	<u>17</u>	<u>18</u>	19	20 2				
	22	<u>23</u>	<u>24</u>	<u>25</u>	<u>26</u>	27 28	1			
	29	<u>30</u>	1	2	3	4 5	1			
				_						
Save				Sen	id E-ma	ail				

Fig.63 Edit - USER INFORMATION FORM (ADMIN)

Forgot Password Form – This form is used by the users if they forget their password by filling required details provided in "FORGOT PASSWORD FORM" as shown below in Fig.64.

→ C fi localhost:1885/AICRPSPB/Fe	orgetPassword.aspx			Q 🕸 🗄
ack To Login Page				
		Forgot Password		
	Enter your E-mail	priyankasingh_06@yahoo.com		
	Confirm E-mail	priyankasingh_06@yahoo.com		
		Submit		
	C.			1
	Fig.64 FOR	GOT PASSWORD FO)RM	
	118:041 0110			

Change Password Form - This form is used by the users if they want to change their password by filling required details provided in "CHANGE PASSWORD FORM" as shown below in Fig.65.

localhost: 1885/AICRPSPB/	2 × 🔁						- 8	×
← → C fř 🗋 loc	alhost:1885/AICF	RPSPB/ChangePassw	ord.aspx				Q 🟠	≡
Home Users	s Master	Data Entry	Report Generation	Check Data Status	Performance	e Analysis		
Welcom	ne : Dr. S.	M. Husain	Thursday,	June 12, 2014 2:3	31:13 PM	Settings	Logout	
	Chang	ge Password						
Current Password	psingh234							
New Password	psingh456							
Re-type New Password	psingh456							
		Submit						



Report Generation Form – This form is used by the administrator for the generation of final report with the help of Select Trial, Select Zone and Select Character combo-box, GO, "Generate Report" and "Export To Excel" button provided in "REPORT GENERATION FORM" as shown below in Fig.66.

	f 🗋 localhe	ost:1885/AI	CRPSPB/Re	portGenerat	on.aspx								
ie Use	ers Master	Data Entry	Report G	eneration	Check Data s	status Per	tormance An	alysis					
	Welcor	ne : Dr. S.	M. Husai	n		I	Friday, Jun	ie 13, 201	4 2:27:4	8 PM		Settings	Logout
					Report Gene	ration							
ect Trial	Advanced Varie	etal Trial II 🔻	Select Zo	ne CENTR	AL ZONE	•	Select Cha	aracter 10	0 Seed Weight	(g) 🔻	co		
ation List			✓ Amlaha	✓ Amravati	C Gwalior	🗹 Jabalpur	🗹 Jalna 🗌 K	ota 🕑 Nagpu	ur 🗹 Parbhar	ni 🗹 Se	hore 🗌 Ujjain		
ect Precis	ion for Report		Round	I Off Decin	nal								
ect Rank C	Order		• Ascen	ding (Lowest	-First) Oes	scending (Hig	hest-First)						
Generat	e Report						E	xport To Excel	Export To Wo	rd			
				Trial :	Advanced Va	rietal Trial II	1						
				Z	one : CENTRA	L ZONE							
				Charac	ter : 100 See	ed Weight (g)						
S.No	Varieties	Amlaha	Amravati	Gwalior	Jabalpur	Jalna	Nagpur	Parbhani	Sehore	Mean	Rank		
1	JS 20-41	11.20	8.63	13.12	8.53	11.62	10.82	12.84	9.13	10.74	ш		
2	RVS 2001-18	7.30	10.00	13.43	7.53	12.65	7.70	11.54	10.38	10.07	п		
	Bragg(C)	11.20	11.44	12.04	6.90	13.82	9.80	16.05	9.63	11.36	v		
3	JS 93-05(C)	11.30	11.38	11.95	7.63	12.98	9.22	12.16	10.00	10.83	IV		
3			0.00	11.72	6.67	11.41	7.58	11.07	7.50	9.74	I		
3 4 5	JS 97-52(C)	13.00	9.00										
3 4 5 6	JS 97-52(C) JS 335(C)	-	9.00	12.86	7.18	15.19	7.80	13.13	9.60	10.74	ш		
3 4 5 6	JS 97-52(C) JS 335(C) N.P.S.(Sqm)	13.00 - 27.00	9.44 27.00	12.86 12.00	7.18 22.50	15.19 27.00	7.80 27.00	13.13 22.50	9.60 22.50	10.74	ш		

Fig. 66 REPORT GENERATION FORM

Show Data Status Form – This form is used by the administrator to view the status of data entered by DEOs from different locations with the help of Select Zone, Select Trial and Select Character combo-box and GO button provided in "Show Data Status Form" as shown below in Fig.67.

C 🕯 Dicalhost:188	5/AICRPSPB/ShowSt	atus.aspx					Qş
ome Users M	laster Data	Entry Report	Generation	Check Data S	tatus Perform	ance	Analys
Welcome : Dr.	S. M. Husain	Thursd	ay, June 12, 20	014 2:34:18	PM Setting	S	<u>Logou</u>
		Sho	w Data Status				
ect Zone RTHERN HILL ZONE	•	Select Trial Initial Varietal Tria	l •	Select Ch 100 Seed	aracter Weight (g) •		
LocationName	e Replication	n1 Replication2	Replication3	NetPlotSize	DateOfSowing	CD	cv
Almora	YES	YES	YES	YES	YES	YES	YES
Majhera	YES	YES	YES	YES	YES	NO	NO
Palampur	YES	YES	YES	YES	YES	NO	NO
						-	

Fig.67 Show Data Status Form

Show User Form – This form is used by the administrator to search a particular User (DEO) by first name, last name or middle name with the help of Enter UserName textbox, provided in "Search User Form" as shown below in Fig.68.

DI	localhost:	1885/AI	CRPSPB/S⊨×											
÷	⇒ C	fi	🗅 localh	ost:1885/AIC	RPSPB/ShowUsers.asp	х								☆ =
Hor	ne U	isers	Master	Data Entry	Report Generation	Check Data Status	Performance	e Analysis						
			Welcom	ne : Dr. S. M	I. Husain		Thursda	y, June 12, 2	2014	2:45:27	РМ	Se	ettings <u>I</u>	oqout
Sh	ow Us	sers												
Add	New U	ser			Show Unverified U	sers		Show Verified	<u>Users</u>					
Ente	r UserN	lame	Swan	ny	Search									
		Nan	ie	City	E-mail	Mobile	User Id	Password	User Level	Date of Expiry	Alternative Email	Phone	Correspondence Address	Permanent Address
<u>Edit</u>	<u>Delete</u>	Dr. M	I. Swamy	Bangalore	swamysoybean@yahoo	co.in 9448087235	bnglor	karunadevi	3	3/11/2014		9448087235	Dr. M. Swamy Seniour Soybean breeder UAS,GKVK, Bangalore-560 065	Dr. M. Swamy Seniour Soybean breeder UAS,GKVK, Bangalore- 560 065

Fig.68 Search User Form

Show Verified Users Form – This form is used by the administrator to view the list of users who have started using the system by completing the Step 2 of User Registration process with the help of Show Verified User hyperlink, provided in "Show Verified Users Form" as shown below in Fig.69.

C los	calhost:	1885/AICRP	978/S⊨×											- 0 ×
← -	¢	ń 🗅	localh	ost:1885/	AICRPSPB/ShowUsers.a	spx								\$
Hom	e U	lsers N	laster	Data En	try Report Generation	Check Da	ta Status	Performa	nce Analysis					
		W	elcom	ne : Dr. S	S. M. Husain			Thursda	ay, June 12, 20	14 2	:54:54 P	M Settings	Log	out
Sho	w Us	sers												
dd N	lew U	ser			Show Unverified	<u>Users</u>			Show Verified U	<u>sers</u>				
nter	User	Name			Search									
		Name	City	Y	E-mail		Mobile	User Id	Password	User Level	Date of Expiry	Alternative Email	Phone	Correspo
idit D	elete	Dr. P.S.Shukl	a Pan	tnagar	pushpendra_sb@yahoo.co.	in 9	9756681711	pnagar	pngr456	3	3/11/2014	singh.kamendra@rediffmail.com	9997706784	Dept. of G Breeding Agriculture 263145
dit D	elete	Dr. S.K. L	al Delh	1i	sklal68@gmail.com	ę	9968063221	delhi	dlhi456*#	3	3/11/2014	sklal@iari.res.in	9968063221	Coordinat soybean (Genetics (Agricultura Institute,
dit D	elete	Dr. S.R. Ramgiri	Seh	ore	sr.ramgiry57@gmail.com	4	8982305368	shor	shor456	3	3/11/2014	dilipbirla100@gmail.com	08982305368	RAK Colle Sehore A Sehore
dit D	elete	G.D. Chandan	kar ^{Amra}	avati	gchandankar@rediffmail.co	m a	8275553087	amrti	amrti456	3	3/11/2014	gchandankar2007@hotmail.com	07212663076	Regional Centre(D Road,Am
dit D	elete	Dr. Philips Varghese	Pun	e	vphilipsari@yahoo.com	(09423014578	pune	pneari1188soy	3	3/11/2014	philipsv@gmail.com	09423014578	Genetics Agharkar (MACS), 0 Pune-411
idit D	elete	Dr. G.T. Basavara	ja ^{Dha}	rwad	basavarajagt@rediffmail.co	m 🤅	9449570687	drwad	gtbdsb21	3	3/11/2014	soyauasd@gmail.com	09141388524	Principal S AICRPS, U 580005
dit D	elete	Dr. M. Swamy	Ban	galore	swamysoybean@yahoo.co.	in 9	9448087235	bnglor	karunadevi	3	3/11/2014		9448087235	Dr. M. Sw Soybean Bangalor
dit D	elete	Dr. Jai De	v Pala	impur	jaidevsharma@gmail.com	9	9418054450	pImpur	ppur456	3	3/11/2014	jdhp@rediffmail.com	9816012020	Dept. of (CSK HPK) (HP)
dit D	elete	Dr. Anuradha	Almo	ora	anuradhagpb@gmail.com	9	9410560611	almra	321.soybeanvpkas	3	3/11/2014		05962241005	Type-IV o No.6,Exp Farm,VPk

Fig.69 Show Verified Users Form

Show Unverified Users Form – This form is used by the administrator to view the list of users who have not yet started using the system by completing the Step 2 of User Registration process with the help of Show Unverified User hyperlink, provided in "Show Unverified Users Form" as shown below in Fig.70.

D	ocalhost: 1	885/AICRPSPB/S	×										- 0 X
÷	→ C	n 🗋 loc	host :1885/A	ICRPSPB/ShowUsers.aspx									☆ =
Hor	ne U	sers Mast	r Data Entr	/ Report Generation Check	Data Status	Performance	Analysis						
		Weld	ome : Dr. S.	M. Husain		Thursday	, June 12, 2	014 2	2:53:24 F	м	s	ettings <u>L</u>	oqout
Sh	ow Us	ers											
Add	New Us	er		Show Unverified Users		5	ihow Verified U	<u>lsers</u>					
Ente	r UserN	ame 🗌		Search									
	1	Name	City	E-mail	Mobile	User Id	Password	User Level	Date of Expiry	Alternative Email	Phone	Correspondence Address	Permanent Address
<u>Edit</u>	<u>Delete</u>	Dr. Abhay Dashaura	Kota	abhayd1971@gmail.com	9460253469	kota	kta456	3	3/11/2014				
<u>Edit</u>	<u>Delete</u>	Dr. S.K. Kaus	hik Ujjain	kaushik.surendra@rediffmail.cor	n 9977050608	ujjain	ujjn456	3	3/11/2014				
<u>Edit</u>	<u>Delete</u>	Dr. Naval Kis	hor Bajaura	naval13@gmail.com	9418067729	bjra	bjra456	3	3/11/2014				
<u>Edit</u>	<u>Delete</u>	Mr. Anurag Mishra	Amlaha	NoEmailId@gmail.com	8989405737	amlha	amla456	3	3/11/2014				

Fig.70 Show Unverified Users Form

Allow DEO Users to View Report Utility – This utility is used by the administrator to grant rights to DEOs to only view the report generated by the software without being able to edit the report with the help of Allow DEO Users to view Report button in the Home page of administrator, as shown below in Fig.71.



Fig.71 Allow DEO Users to View Report Utility

Generate Database Backup Utility – This utility is used by the administrator to generate backup of the current database, for future use, with the help of Generate Database Backup button in the Home page of administrator, as shown below in Fig.72.

localhost:49	12/AICRPSPB/SU ×								- 0 ×	\$
← ⇒ C	fi 🗋 localho	ost:4912/AICR	PSPB/SuperAdmin.a	aspx					Q 🔂 :	≡
Home	Users	Master	Data Entry	Repor	t Generation	Check Data Sta	atus Pe	erformance Analysis	5	Â
	Welcome	: Dr. S. M	. Husain		Sunday, Jun	e 22, 2014 4:36	5:26 PM	Settings	Logout	
	Allow DE Genera Upda DataBase	O Users to ate Databas ate Date Of c Task (Res Task (Res Copen Always open Show in fidd	View Report e Backup Expiry et or Copy) fles of this type					INSTRUCTIONS RESETTING OR DATABASE :- 1. Create a date entering new datate in the Enter New Name TextBox aft on the Databa (Reset or Copy) I Note:- New data have empty tab with stored proced 2. To Reset Databa Copy Master Tab	FOR COPYING abase by base name Database er clicking se Task button. abase will les along ures. ase, select able radio	
AICRPS201	4.bak								Show all downloads	×

Fig.72 Generate Database Backup Utility

➤ Update Date of Expiry Utility – This utility is used by the administrator to update date of expiry of data entry by the DEO of different location with the help of Update Date of Expiry button in the Home page of administrator, as shown below in Fig.73.



Fig.73 Update Date of Expiry Utility

Reset Database Utility – This utility is used by the administrator to reset the existing database and filling only the master tables with the help of DataBase Task button in the Home page of administrator, as shown below in Fig.74.



Fig.74 Reset Database Form (Fill only Master Tables)

➤ Copy Database Utility – This utility is used by the administrator to copy the existing database completely for security purpose, with the help of DataBase Task button in the Home page of administrator, as shown below in Fig.75.

me	Users	Master	Data Entry	Report	Generation Ch	eck Data Status	Performance Analysis		
	We	lcome : Dr.	S. M. Husain			Sunday, June 22, 2	014 5:09:48 PM	Settings	Logout
	Allow D Gene Up DataBa	EO Users to rate Databas date Date O se Task (Re	View Report se Backup f Expiry set or Copy)		Enter New Da Name Dat	Create New I tabase Create New D tabase Create Success	DataBase ataBase sfully as Aicrps2018	INSTRUC RESETT COPYIN :- 1. Creat by en database	CTIONS FOR ING OR IG DATABASE te a database intering new pagne in the
					Select From DataBase	Copy Master tables	Copy all Data Base Tables	Enter No Name clicking Databas	ew Database TextBox after on the se Task
					To DataBase	Fill Tabl	es lease Refresh DataBase!	(Reset button. Note:- 1 will have	or Copy) New database empty tables

Fig.75 Copy Database Utility

Weather Data Entry Form – This form is used by the administrator as well as DEO to enter weather data of their location with the help of Click Here For Weather Data available on data entry page, as shown below in Fig.76.

C localhost:4912/AICRPSPB/W ×												- 6 ×
← → C fi localhost:4912/AICRPSPB/	Weather.aspx											Q 🛣 🔳
Home Users Master Data Entry R	eport Generation Check Data State	is P	erforr	nanco	e Anal	ysis						
Welcome : Dr. S. M. Hu	ısain f	Friday	/, Jur	ne 20	0, 20	14	7:5	54:30	PM	:	Settings	Logout
Click Hose To Enter Weather Date									1			
Click Here To Enter Weather Data	Weather Data Entry											
Click Here To View Weather Data	Select Zone	NORT	HERN	PLAIN	ZONE	•						
	Select Location	Delhi		•]							
		6/24/	2014			E CI	ick ere					
		<		Ju	ne 201	4		≥				
		Sun	Mon	Tue	Wed	Thu	Fri	Sat				
		25	<u>26</u>	27	<u>28</u>	29	<u>30</u>	31				
	Date	1	2	3	4	5	<u>6</u>	z				
		8	9	10	11	12	13	14				
		15	<u>16</u>	17	<u>18</u>	<u>19</u>	20	21				
		22	23	24	25	26	27	28				
		29	<u>30</u>	1	2	3	4	5				
	Maximum Temperature(in Celsius)	12					_	·				
	Minimum Temperature(in Celsius)	10										
	Rainfall (in mm)	30										
	Relative Humidity (in %)	26										
	Su	ıbmit										

Fig.76 Weather Data Entry Form

➤ Weather Data Viewing Form – This form is used by the administrator as well as DEO to enter weather data of their location with the help of Click Here For Weather Data available on data entry page, as shown below in Fig.77.

🕒 localhost:4912/AICRPSPB/W 🗙							
← → C f localhost:4912/AICRPSPB/Weat	her.aspx						@ ☆ 〓
Home Users Master Data Entry R	eport Generation	Check Data Status	Performanc	e Analysis			
Welcome : Dr. S. M. Husai	n	Friday, June	20, 2014	8:29:31 PM	l	Settings	<u>Logout</u>
Click Here To Enter Weather Data	Weather Data						
Click Here To View Weather Data	Locations	Adilabad Allah Bangalore Barapa Dholi Gwalior H Majhera Nagpur Sehore Ugarkhur	abad 🗹 Almora ani 🔲 Bhawanip lisar 💭 Imphal 🗍 Palampur 🗐 d 💭 Ujjain 🔲 U	Amlaha Amlaha A oatna Bidar Jabalpur A Pantnagar P miam	Amravati Coimbatoro Jalna K. Di Parbhani Po	B Chari Ali e 🗹 Delhi 🗖 D graj 🗍 Kota 🕻 une 🗖 Raipur	Bajaura □ bharwad □ □ Ludhiana □ □ Ranchi ☑
	Select Locations	Almora •					
	Enter Date (Optional) e.g. (MM/DD/YYYY)		Search By	Date			
	LocationName	Date	MaxTemp	MinTemp	Rainfall	RelativeHu	ımidity
	Almora	03/06/2014	6.00	7.00	8.00	4.00	
	Almora	05/06/2014	6.00	1.00	32.00	43.00	

Fig.77 Weather Data Viewing Form

> Performance Analysis Form – This form is used by the administrator for performance analysis of various varieties for a particular character with the help of Performance Analysis option in the main menu, as shown below in Fig.78.

□ localhost:1755/AICRPSPB/P∈ ×										Х														
← → C 🗋 localhost: 1755/AICRPSPB/PerformanceAnalysis.aspx												Ξ												
Home Users Master Data Entry Report Generation Check Data Status Performance Analysis																								
Welcome	: Dr.	S. M	1. Hu	ısain		Mo	onday 1	y, Jui .2:24	ne 09 1:31	9, 20 PM	14		Settir	ngs					L	<u>oqout</u>				
Performance Analysis																								
Select Current Year						[2016 •																	
Select Character						[Yield (Kg/Plot)																	
Select Zone						[© CENTRAL O NORTH EASTERN O NORTHERN HILL O NORTHERN PLAIN O SOUTHERN ZONE ZONE ZONE ZONE ZONE																	
Select Locations							Amlaha Amravati Gwalior Jabalpur Jalna Kota Nagpur Parbhani Sehore Ujjain																	
	Submit																							
					G	Gwalio	or						Jabalpur											
VarietyName		2016			2015			2014			2016			2015			2014							
	R1	R2	RЗ	R4	R1	R2	RЗ	R4	R1	R2	RЗ	R1	R2	RЗ	R4	R1	R2	RЗ	R4	R1	R2	RЗ		
JS 20-41	1.37	1.45	1.45	1.60								3.05	2.95	2.00	3.55									
RVS 2001-18	1.43	1.46	1.68	1.55								0.35	0.40	0.30	0.45									
Bragg(C)	0.77	0.87	0.98	0.79	0.51	0.48	0.39	0.47				0.95	0.75	0.90	0.85	0.20	0.40	0.45	0.25					
JS 93-05(C)	0.34	0.36	0.32	0.54	0.65	0.70	0.62	0.60	0.31	0.35	0.40	0.10	0.15	0.15	0.10	0.15	0.20	0.20	0.10	0.00	0.00	0.00		
JS 97-52(C)	0.56	0.42	0.53	0.59	0.73	0.69	0.71	0.68	0.42	0.44	0.43	4.10	3.75	3.95	3.50	2.20	2.85	2.15	2.65	0.91	0.44	0.71		
JS 335(C)	1.16	0.93	1.47	1.35	1.08	0.94	0.99	0.89	0.54	0.51	0.52	0.55	0.77	0.65	0.65	0.20	0.45	0.35	0.55	0.06	0.04	0.07		

Fig.78 Performance Analysis Form

<u>Chapter 7</u> <u>LIMITATIONS AND CONSTRAINTS</u>

- The software works better with "Google Chrome browser" and not with internet explorer.
- For Performance Analysis the format of database name should be Aicrps followed by name of the current year e.g. Aicrps2014.
- The value of 'CV' on data entry page must be less than 25% and 'Mean Yield' should be greater than 1000 kg/h (rejection criteria of data of a perticular location). In order to

apply or remove this codition goto $\stackrel{\text{View}}{\rightarrow}$ \rightarrow $\stackrel{\text{Solution Explorer}}{\rightarrow}$ $\stackrel{\text{III}}{\rightarrow}$ ReportGeneration.aspx

→ ReportGeneration.aspx.cs → follow the commented code in Line 434 on ReportGeneration.aspx.cs as shown below in 'Code to Apply/Remove CV and Mean Yield constraints' window-



Fig.79 Code use to Apply/Remove CV and Mean Yield constraints

> The "mobile number" must be of 10 digit only.

The present system supports only 51 roman numbers. In order to add more roman number which is to be displayed in the final report generated by the sytem, goto

ReportGeneration.aspx.cs Solution Explorer

ReportGeneration.aspx View \rightarrow \rightarrow GenerateIntoRoman method (Line 601) \rightarrow Add more cases below Line 656. > CD and CV is shown only in case of 'Yield' character. In order to get these footer data View 👝 🟹 Solution Explorer 🔾 goto displayed for any other character, $\boxed{\mathbb{R}^{\mathsf{ReportGeneration.aspx}}} \rightarrow \boxed{\mathbb{R}^{\mathsf{ReportGeneration.aspx.cs}}} \rightarrow \texttt{follow the commented code in Line 215}}$ PartGeneration.aspx.cs on as shown below in "Code to show CD and CV for other character along with 'yield' character" window -

AICRPSPB16Apr	il2014 - Microsoft Visual Studio
File Edit View Rel	factor Website Build Debug Team Data Tools Test Window Help
i 🛅 • 🔠 • 🎽 🔒	🦼 🖇 🕼 🖏 ビービー 💭・马 ト Debug 🔹 🧭 Cristri 🔹 💀 🖓 🕾 🖓 🖄 🖓 🛃 🖬 🗤 🖕
i 🕄 🗞 🏊 🚸 👘	[建步] 코오 그 뒤다 위대 위 사진 -
KeportGeneration.	aspx.cs X web.config
ReportGeneral	ton • 💞 btnGenerateReport_Click(object sender, EventArgs e) •
×	// CD/ CV is displayed only in case of Yield
	<pre>if (ddlCharacter.SelectedItem.Text == "Yield(Kg/ha)")</pre>
	(
	query3 = query3 + " dbo.CalculateCD(" + ddlrial.SelectedItem.Value + "," + ddlCharacter.SelectedItem.Value + "," + cbllocations.Items[i].V. query4 = query4 + " dbo.CalculateCV(" + ddlTrial.SelectedItem.Value + "," + ddlCharacter.SelectedItem.Value + "," + cbllocations.Items[i].V.
	} //************Use this Code If u want to show CD/CV for any other Character*********
	<pre>//if (ddlCharacter.SelectedItem.Text == "Yield(Kg/ha)" ddlCharacter.SelectedItem.Text == "100 Seed Weight (g)") //{</pre>
	<pre>// query3 = query3 + " dbo.CalculateCD(" + ddlTrial.SelectedItem.Value + "," + ddlCharacter.SelectedItem.Value + "," + cblLocations.Items[i] // query4 = query4 + " dbo.CalculateCV(" + ddlTrial.SelectedItem.Value + "," + ddlCharacter.SelectedItem.Value + "," + cblLocations.Items[i] //}</pre>
	}
	}
	query1 = query1 + " ' ' as Mean,'' as Rank"; query2 = query2 + " ' ' as Mean.'' as Rank";
	<pre>if (ddlCharacter.SelectedItem.Text == "Yield(Kg/ha)")</pre>
	{
	query4 = query4 + " ' ' as Mean, '' as Rank";
	guery = query + " ' ' as Mean,'' as Rank";
	<pre>query = query + " From Varieties V ";</pre>
	<pre>query = query + " where zoneid=" + ddlZone.SelectedItem.Value + " and trialid= " + ddlTrial.SelectedItem.Value + " "; query = query + " order by V.VarietyType desc, V.SequenceNo";</pre>
	// Filling Hop Data
	objprop.Query = query;
	SqlDataReader reader = objbll.ExecuteNyQuery(objprop);
100 % - <	
Ready	Ln 213 Col 54 Ch 54 IN

Fig.80 Code use to show CD and CV for other character along with 'yield' character

In orde	r to increase the Timeout period due to which an error of sever timeout												
comes	during copying of complete database, goto \bigvee \xrightarrow{View} \rightarrow $\overrightarrow{\sim}$ Solution Explorer \rightarrow												
📧 Super	$(Admin.aspx) \rightarrow $ SuperAdmin.aspx.cs \rightarrow follow the code below the comment in												
Line 249	9 in Fig. 81.												
•• AICRPSPB17may14 -	Microsoft Visual Studio	3 X											
File Edit View Refactor	Website Build Debug Team Data Tools Test Window Help												
1 • 🔁 • 🐸 😹 🖉	<u>新加速</u> ツーページージーシート Debug ・ (図 CrnSt1 ・ (型 音) 20 米 回 型 コー _マ												
163222411月第	[1] [2] [1] 신경 전경 전경 (2)												
SuperAdmin.aspx.cs X	SuperAdmin.aspx												
SuperAdmin	<pre>objemd.CommandText = str:</pre>	• I+I											
	objcmd.ExecuteNonQuery();												
	abjconn.close();	orer											
	SalConnection objconn1 = new SalConnection():	2											
	SqlCommand objcmd1 = new SqlCommand();												
	<pre>objconnl.ConnectionString = ConfigurationManager.ConnectionStrings["AicrosPB"].ConnectionString; objconnl.Open();</pre>												
	objcmd1.CommandType = CommandType.Text;												
	objcmdl.Connection = objconnl; string strl:												
	//It is used for Increase Time when error comes like Time Out Server												
	objemol. <u>commandlimeout</u> = 2000;												
	<pre>str1 = " set identity_insert [" + ddlToDatabase.SelectedItem.Text + "].dbo.MainData on";</pre>												
	<pre>strl += " insert into [" + ddlToDatabase.SelectedItem.Text + "].dbo.NainData(Id,TrialID,LocationID,VarietyID,CharacterID,ReplicationID,ReplicaData); strl += " select Id.TrialID.LocationID.VarietyID.CharacterID.ReplicationID.ReplicaData from [" + ddlForeDatabase SelectedItem Text + " dob MainData";</pre>												
	<pre>str1 += " set identity_insert [" + ddlToDatabase.SelectedItem.Text + "].dbo.MainData off";</pre>												
	<pre>str1 += " set identity_insert (" + ddlToDatabase.SelectedItem.Text + "].dbo.Footers on"; str1 += " insert into (" + ddlToDatabase.SelectedItem.Text + "].dbo.Footers(Id_TrialID_LocationID_CharacterID_NetPlotSize_DateOfService (D_CU)";</pre>												
	<pre>str1 += "SELECT Id, TrialID, LocationID, CharacterID, NetPlotSize, DateOfSowing, CD, CV FROM [" + ddlFromDatabase. SelectedItem. Text + "]. dbo.Footers";</pre>	1											
	<pre>strl += " set identity_insert [" + ddlToDatabase.SelectedItem.Text + "].dbo.Footers off"; strl += " set identity_insert [" + ddlToDatabase.SelectedItem.Text + "].dbo.MeanData_on";</pre>												
	<pre>strl += " insert into [" + ddlToDatabase.SelectedItem.Text + "].dbo.MeanData(Id,TrialID,LocationID,VarietyID,CharacterID,MeanData)";</pre>												
	<pre>str1 += " SELECT Id,TrialID,LocationID,VarietyID,CharacterID,MeanData FROM [" + ddlFromDatabase.SelectedItem.Text + "].dbo.MeanData"; str1 += " set identity insert [" + ddlToDatabase SalectedItem Text + "] dbo MeanData off";</pre>												
	objcmdl.CommandText = strl;												
	objcmdl.ExecuteNonQuery(); objconnl.Close();												
	lb]Ei]]MartanTabla Tavt = "Tablar Coniad Supportfully 11 Diagra Dafrack DataBara 1".												
	ddlFromDatabase.ClearSelection();												
	ddlToDatabase.ClearSelection();	~											
100 % • <													
Drag margin handles to resize n	margins. Press SHIFT or CTRL for more options. Ln 249 Col 27 Ch 27	INS											

Fig.81 Code use to Increase the Time-Out period

In order to give a person all the rights of administrator i.e to make a perticular person an administrator, goto Aicrps2013-14 database, open UserInfo table and change the entry of UserLevel column of this person to 1 which is by default 2.