Highlighted PigCHAMP Program Features

Data Item Management (DIM)

A unique feature for PigCHAMP Reproductive is the user's ability to define what fields appear on screen and the order in which they appear for each data entry event. Data Item Management will allow users to define the fields available for each data entry screen, choose the order in which the fields will be displayed, and create user-defined data entry fields.

Data Item Management Screen:

Items Category Dropdown List: This option allows for each farm or group of farms to have individualized data entry fields that pertain to a specific farm.

Items Available Column: The items listed in the Items Available Column are not currently displayed on the screen, but can be added for data entry.

Items Selected Column: The items listed in the Items Selected Column are currently displayed on the screen in the order listed. Users can add and remove optional data entry fields or alter the order in which to see all fields displayed for every data entry event.
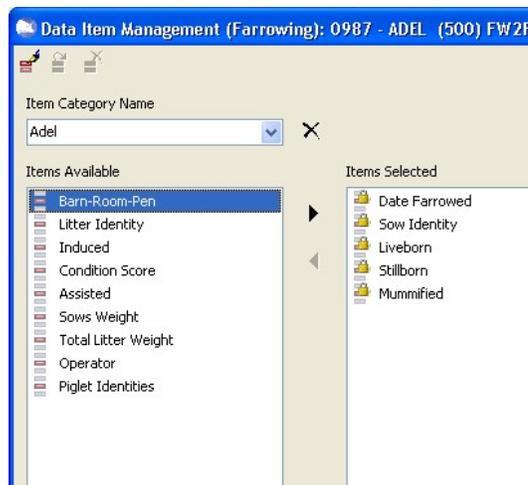
Some items are required to be displayed on the screen. These items have a gold lock icon next to the individual item.

Creating a User-Defined Data Entry Field
PigCHAMP Reproductive enables users to create custom data entry fields for each event within the program through the Data Item Management screen. For ease we have provided a wizard to help guide the customer through designing and creating their own custom data entry fields

Through the wizard tool users are able to define the label (name) displayed on the entry screen, the description of the field when selected and selects the type of data that is to be stored from 5 provided options.

Display Label: The name of the field to be added to data entry. The maximum length for a name field is 30 alphanumeric characters.

Display Prompt: The description for the field being added. The maximum length for a description is 70 alphanumeric characters.

Type of Data: The type of data that will be recorded in the new field and additional data related to the specifics on how that data can be recorded. Options include:
- **Text (Free Form):** Creates a free form text field; user defines the number of characters allowed between 1 and 100
- **List of specific options**: Creates a list drop down field to select from; user defines the specific options to be selected from.
- **Date:** Date selection field; a calendar pick option is associated with the field automatically
- **Yes or No response:** Creates a dropdown with Yes and No as the selection options; fields are stored in the database as Yes = 100 and No = 0 for filtering
- **Number:** Creates a number field; user defines the number of decimal places and for validation minimum and maximum number that can be record from 0 to 999.

Users can alter a user-defined data entry field at any time and my delete user defined fields provided they have not been referenced with in the database.

Lookup Item Management (LIM)

Within PigCHAMP Reproductive many data entry fields require a user to select from a dropdown list. Some of these options are pre-defined by the program, while others are user-defined. Users can add, edit, delete and merge list items through the Lookup Item Management. Lookup Item Management is very similar to the dictionary function in our legacy program.

Lookup Item Management Categories
The Lookup Item Management is broken down into 10 main categories such as the below listed. Some of the main categories have sub-categories associated with them.

Genetics and Genetic Companies: The Genetics and Genetic Companies category contains the following sub-categories:
- Genetic Companies: The items in this list refer to companies that supply genetics for the operation.
- Genetics: The items in this list refer to the genetic makeup of the animals arrived into the herd and the details associated with that particular genetic line.

Operators Category: The names in this list represent production staff on the farm. This list will be used to identify who was responsible for specific production events. If PigCHAMP Mobiles are being used on the farm, the user name and password for the mobile application is defined here.

Flags, Conditions, Defects, Medications, and Vaccines Category: This category contains the 4 sub-categories:
- Flags: The items in this list represent reasons for female flag or boar flag events.
- Disposal & Treatment Conditions: The items in this list are used to record why a female, boar, or piglet was sold, died or treated.
- Medications/Vaccinations: The items in this list define what medications and vaccinations are used to treat animals in the herd, as well as administration parameters. It also allows for recording market withdrawal periods.
- Defects: The items in this list represent types of piglet defects. These items are associated with the Piglet Defect event.
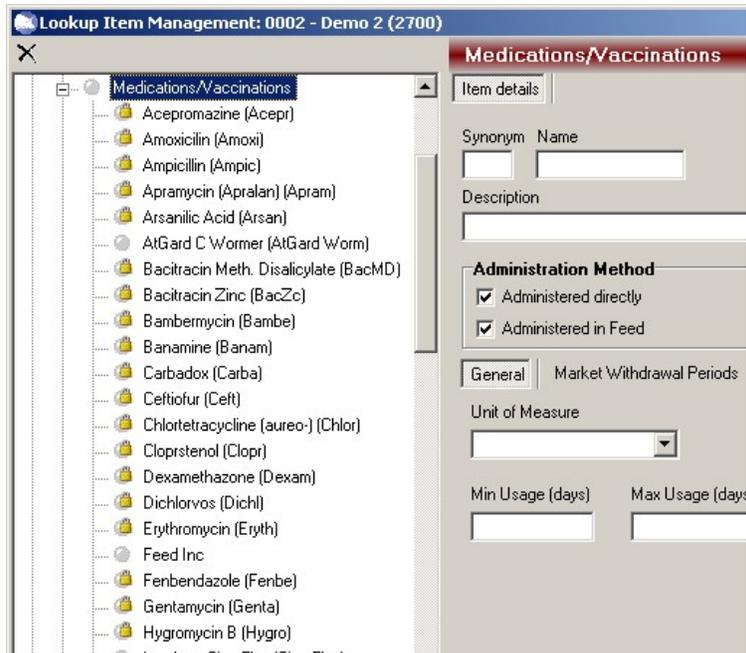
Herd Categories: The items in this list will allow the user to place animals into user-defined groups within the breeding herd, granting the ability to track the group.

Merge Lookup Item Management Items
The Merge function is used to combine two variables within a Lookup Item Management category. The user is able to select items to be replaced by other existing items in the tree view.

This feature is most often used to cleanup database reasons for multiple farms and ease data entry. After importing farm data from other databases via pcf4 files, or text files during a conversion from a third party product, the lookup items created can become disorganized. Often, many different lookup items are recorded over time and they mean the same thing - it is good practice to merge similar items into one lookup item. When you carry out a merging task, you have the option to save the rule so that it can be applied again later (e.g. after importing other pcf farm data files that may contain the old definitions.)

Report Options

The primary purpose of the PigCHAMP program is to generate reports that help manage your swine herd. PigCHAMP reports function by selecting data you have entered, organizing data, performing calculations and then presenting the results in a useful, intelligible format.

PigCHAMP produces two types of reports: standard reports and customized reports. There are 45 standard reports available for the users to select from such as basic action lists to detailed performance analysis.

Users are able to create custom reports based on the provided standard reports. Custom report tools can be used to create filters, customize period definition, add variables and data base columns etc. This allows for a one time setup of a report to be available in the future.

One basic way to customize a report is to change the properties. Many of the reports have properties associated to them that are common among all reports where some will have more extensive options that can be defined. Examples of Report Properties include a date, date range, checkbox, grouping options or lines to display options, just to name a few.

How the Report Properties are defined will dictate how the results will be displayed in a report. Keep in mind that some of the properties can be changed even after the report has been processed. Some common Report Properties found in the program are listed below.

Period Definition: Reports based off a date or date range will allow users to define certain criteria regarding the date settings on the report. Users have options from individual days, weeks, years to defining their own periods.

X-Axis and Y-Axis: Reports that display as graphs have X and Y axis properties specific to them. Users are able to define how the labels are visible on the report and how they are to be grouped.

Lines to display: Some reports, mainly those comparing production data like the Performance Trend Analysis give the user the option to display selected lines of data.

Add/Modify Column Headings: Allows the user to remove columns being viewed on the report and/or add any available columns that are currently not on the reports, re-arrange the order the columns are displayed as well as modify how the data is sorted (grouped) within the report.

For performance type reports this tool also manages the data trace report columns (the raw individual data used for results) and the order in which those columns are displayed

Report Item Selection: A more advanced way to customize a report would be to add additional variables (item) to a report for analysis and filtering purposes. This unique tool provides the user with the ability to select from an extensive list of variables, calculations and custom fields to add and include when analyzing the data.

All variables that are available to include on a report are categorized in the tool as a tree view. A user is able to select a specific variable(s) including customized data fields to be added to a report. When a specific variable (item) is selected a description of the variable is provided within the tool; for some variables user are also able to define additional parameters related to that specific variable such as a focus date and/or a focus parity or cycle.
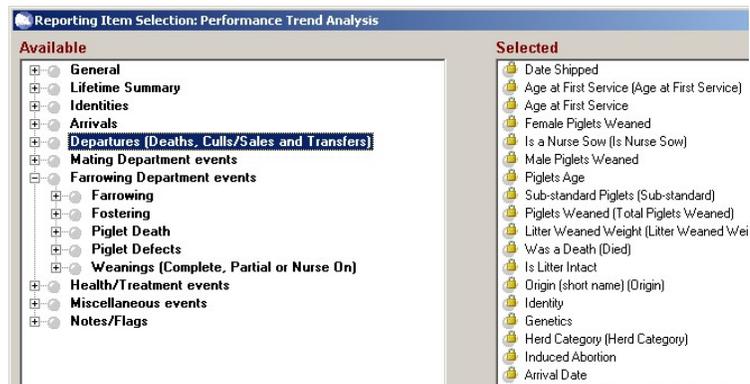
Report Results and Exports

Majority of the reports are what we consider as interactive, once the report is generated users are able to view the report on screen, drill down to individual data, filter the data, e-mail and save as a PDF file. User can also export the raw data (trace) and in some cases the summary data directly into a csv format.

Data Drilldown: The ability to click on to a variable within the analysis results and drill down to the specific animals that contributed to the selected result.

When selected a list of the contributing animals appears; when a specific animal is selected the user will be able to view her complete history as well as her current lifetime performance to date on screen.

From this feature users also have the option to generate sub-reports such as complete histories, sow cards and a list report for all contributing animals or the user can create the history and/or sow card for a specific selected animal.

Filtering: This unique option allows the user to narrow the results of a report down to a specific set of animals and/or animals that fit specific criteria for analysis. Users are able to create and apply filters to reports either prior to and/or after a report is processed.

Users are able to select any variable (item) that is available within the report parameters (see report item selection) from a dropdown list once selected the user can pick from a list of 10 SQL command options such as " is equal to", "between", "is null" etc. then based on the command option select or type the criteria.

Once the filter(s) are applied the report will be filtered down to only those animals that fit the criteria and will be displayed on screen. For reports sets that have multiple reports included the filter will be applied against all the reports that are associated with the set selected.

User are able apply and create multiple filters for a report and if created prior to processing those filters can be saved for future use.

Trace Data: Is the raw individual data used to generate the results on a report; each column heading represents a variable (item) including those variables that were added through the customization process. Each row represents an animal, based on the report type and focus report event will determine the number of rows the animal contributes. If the report is filtered the trace data will reflect the filtered results. Users are able to export the trace date into a csv format; no additional formatting needed once exported. See provided Performance Trend Analysis examples

Summary Data: Is summarized data that is used in calculated results and/or reflects the displayed values. As an example, the Performance Trend Analysis variable of lactation length on the report the average is displayed, however in the summary data the result is the total lactation days not the average. This was designed for those users that need the true numbers rather than the calculated averages for additional analysis. If the report is filtered the trace data will reflect the filtered results. Users are able to export the trace date into a csv format; no additional formatting needed once exported.

Current Available Reports

1. **Age at First Service:** This report analyzes the cause and effect relationship between gilt's age at the time of her first service and subsequent performance. A scattergraph format compares age versus total born, liveborn, stillborn, mummified, farrowing rate and repeat rate. This report also includes a histogram representing the age structure of the gilts first served in the reporting period.

2. **Breeder Herd Census:** The Breeder Herd Census report lists sows, gilts and boars active in the herd on the user-defined reporting date. Users may choose all or a combination of pig types to be included in the Breeder Herd Census Report. Options include un-worked boars, working boars, gilts, and sows. This is an excellent report to use when conducting a herd audit, as it helps align actual farm inventory with the number of animals recorded within the Reproductive module. This is also a great report to use when reviewing reproductive performance for any active animal in the herd, as it is fully customizable.

3. **Cohort Analysis:** The Cohort Analysis report provides an overall comparison of female performance based on the event date. This report allows the user to evaluate the same group of animals throughout their breeding, farrowing and weaning. The user can define the way the report groups the animals. Options include grouping by service date, farrowing date or weaning date. The report will use the variable chosen as the event that occurred in the reporting period.

4. **Comparative Production Summary:** The Comparative Production Summary report provides side-by-side comparison of farms residing in the same database and/or farm group. Each farm residing in the selected group will have its own column of data. Users have the option to rank the farms based on certain performance values. The report displays the farms from the bottom to the top performance based on the variable selected. This is an excellent report to analyze production performance on several farms.

5. **Culls and Death List:** The Culls and Death List provides detailed information for all animals that left the breeding herd during the user defined reporting period. The report is grouped based on the status of the animal at the time of removal. A summary of removal data and non-productive days is available on the last page of the report.

6. **Data Entry Trace List:** The Data Entry Trace List displays a list of all events that occurred on the farm between the specified start and end dates

7. **Days to First Service Analysis:** The Days to First Service Analysis is a collection of separate graphs used to analyze different effects on production based on the number of days to first service. There are four performance traits to compare against the Days to First Service Analysis, including total born, liveborn, stillborn, and mummified. There are also two additional options to allow for plotting the farrowing rate and the repeat service

rate against the Days to First Service Analysis. A Days to First Service histogram can also be generated. This is a great report to generate if you are interested in the relationship between the Entry to Service Interval or Wean to Service Interval and the effect on subsequent production performance.

8. **Days to Service Histogram:** The Days to Service Histogram report is a graphical representation showing how long it takes to serve a sow following a weaning, after arrival into the herd or the date the gilt was made available to the herd. The report can be viewed a number of ways, including the number of days to first service and the number of days to effective service. This report aids in evaluating the arrival to service interval for gilts, the pattern of return to estrus for sows after weaning, or the pattern or repeat services.

9. **Event Inactivity List:** The Event Inactivity List identifies animals that have not had a data entry event entered within the user-defined number of days.

10. **Farrowing Control Chart:** The Farrowing Control Chart (FCC) provides an overview of the breeding herd's performance during the selected reporting period. It allows the user to spot trends and pinpoint problems in a clear and accurate manner. The Farrowing Control Chart is excellent to use when analyzing conception rate, farrowing rate, possible disease outbreaks, seasonal infertility, operator performance, day of week performance, and numerous other factors

11. **Female Removal Analysis:** The Female Removal Analysis provides detailed information for females that were removed during the reporting period, as a result of either a female death or female sale event. It is divided into two charts – one displays parity information at time of removal, the other displays removal reasons. This report analyzes parity and status at the time of removal and removal trends over any period of time.

12. **First Litter Performance:** The First Litter Performance report provides detailed farrowing information for parity one sows that farrowed within the user-defined reporting period. This is an excellent report to generate once new management risks have been taken within the gilt pool, such as new genetics, feeding routine, or earlier arrival to service intervals.

13. **Gestation Length Histogram:** The Gestation Length Histogram graphically displays the number of sows with a specific gestation length. It can monitor the variation of gestation length within a herd. It can also be useful to look at when creating or using an induction program.

14. **Gilt Pool:** The Gilt Pool identifies un-bred, parity zero females residing in the herd on the defined reporting date. This report groups the gilts into two sections – Gilts available for service and Gilts that are in the isolation period. This is based on the user-defined acclimatization period and overdue for service days. This is an excellent report to generate to identify which gilts are not bred by a specified date from entry, heat management of gilts and/or to view the availability of gilts in the herd to replace those exiting the herd.

15. **Heat Check List:** The Heat Check List indicates which sows and/or gilts are due to be observed for heat based on the user-defined settings. Users may alter the reporting period and the number of days in-pig.

16. **Herd Inventory Report:** The Herd Inventory report tracks pig inventory for both reproductive and grow-finish herds, with data displayed in a grid-type format. It includes all additions too and removals from the herd over a defined period of time. This report can be generated for an individual farm, farm group, company, or for all farms within the subscription. Ending inventory is based on the last date of each period defined. Average inventory is based on pig days and is a weighted calculation.

17. **Lactation Length Analysis:** The Lactation Length Analysis displays a series of scattergraphs comparing previous lactation lengths to subsequent litter performance. There are five performance traits to compare against the lactation length, including total born, liveborn, stillborn, mummified, and days to first service. There are two additional options to plot – Farrowing Rate vs. Lactation Length and Repeat Rate vs. Lactation

Length. A lactation length histogram can also be generated. This is a great report to use when analyzing the effect previous lactation length has on subsequent litter performance.

18. **Litter Reconciliation:** The Litter Reconciliation identifies individual sows that had a complete weaning event in the specified period. The report will display the reconciliation between the number that was weaned and the number farrowed, fostered and died. This report helps maintain the integrity of the litter information and piglet inventory.

19. **Lookup Item List:** The Lookup Item List displays the variables that are currently available in the farm's Lookup Item Management section.

20. **Mating List:** The Mating List reveals females mated in a seven-day period, based on the user-defined report end date. The report is grouped by the boar identity or semen batch number used in the mating. The report can help monitor boar or semen batch usage. It can also be used to gather female identities bred to a certain boar/semen batch for re-breeding purposes.

21. **Open Sow List:** The Open Sow List reveals any female currently in a non-productive status, including those that are not gestating or lactating. It is an excellent report to use to plan the breeding schedule, monitor the gilt pool, monitor non-productive days, monitor repeat services or problem sows, or select sows to cull from the herd.

22. **Parity Scattergraph:** The Parity Scattergraph compares sow performance by parity. Eight performance traits can be compared against the parity. These traits include total born, liveborn, stillborn, mummified, piglet losses, piglets weaned, sub-standard, and days to first service. This report aids in monitoring targeted parity structure, parity performance and culling practices.

23. **Performance Analysis by Group:** The Performance Analysis by Group report is a fundamental breeding herd report, analyzing production for services, farrowings, piglet losses, weanings and inventory, during the selected timeframe period. It provides an overall comparison of female performance by genetics, parity, origin, herd category and age at first service. Users can select which variable to group the report by. For example, if parity is the selected variable, the report will provide a parity distribution.

24. **Performance Trend Analysis:** The Performance Trend Analysis report is the fundamental breeding herd report. It monitors performance for five key areas of production, including services, farrowings, piglet deaths, weanings and herd inventory during the user-defined reporting period. The user can choose what combination of variables to display on the report. This report assesses trends within the production system and analyzes herd performance.

25. **Piglet Loss Analysis:** The Piglet Loss Analysis is a combination of five reports analyzing piglet deaths that occurred during the user-defined reporting period. Users are able to select which variable to analyze. Options include by death reason, by sow parity, or by piglet age. Each page of the report compares a selected variable in a histogram, scattergraph or list format. This is an excellent report to run when investigating the reason and timing of piglet losses during the nursing period. It can also help analyze piglet loss vs. sow parity, vs. piglet age, vs. sow lactation, or vs. sow genetics.

26. **Pregnancy Check List:** The Pregnancy Check List suggests which sows are due to be checked for pregnancy within the user-defined reporting period. The user may adjust the number of days after service and the reporting period.

27. **Production Summary:** The Production Summary provides an overview of the services, farrowings, piglet losses, weanings and inventory on the farm during the selected reporting period. This report indicates whether the farm has met production goals for the reporting period. It also indicates whether the farm is on track to meet established targets. The user is able to define two reporting periods for which to generate the report. Period one can provide the production information for one week, while period two can be used to compare production figures for a longer period against established production targets.

28. **Prolific Sow List:** The Prolific Sow List provides details for a sow's lifetime performance. This report ranks the sows in the herd based on the lifetime average of born alive performance. The report is grouped into three percentage intervals: Top 10%, 11% to 25%, and 26% to 50%. This is an excellent report to customize with additional lifetime performance variables such as average lifetime weaned etc.

29. **Repeat Service Analysis:** The Repeat Service Analysis is a combination of four different graphical representations displaying the repeat interval, repeat rate by parity, repeat rate by repeat number, and repeat rate by genetics. It also includes a table displaying repeat information and a list of females with a repeat service in the reporting period. This is a great report to use when evaluating days to re-service for the herd or regular and irregular repeat intervals. It can assist in analyzing genetic suppliers and semen quality. It can identify opportunities for process improvement and aid in monitoring employee performance.

30. **Reproductive Loss:** The Reproductive Loss report displays service results by parity, previous lactation length, age at first service, weaning to first service interval and arrival to first service interval. This report helps evaluate events that occurred between the service event and subsequent removal or farrowing of sows. It can also provide reasons for lost productivity and non-productive days contributed due to a service fall-out result.

31. **Service Cusum:** The Service Cusum graphically displays the cumulative summary of services for each week and conception. This report allows the farm to determine whether the correct numbers of females are being served each week to reach maximum productivity. It also helps aid in identifying poor production weeks where there were fewer services made than there should have been.

32. **Service Performance Summary:** One of the most popular reports, The Service Performance Summary is a series of tables displaying females that were served within the reporting period and the cause and effect relationship between that service variable and subsequent performance. The services are grouped in a number of ways, including but not limited too service week, service and heat operator, genetics, previous litter performance such as wean to service interval and parity.

33. **Shipments Received:** This report displays activity associated with the Receive Shipments of Retained Gilts event. Users may choose to include shipments that have not yet been processed on the reproductive side of the PigCHAMP program.

34. **Shipments Sent:** This report displays activity associated with the Weaning Shipment event. It provides detailed information regarding weaning shipments sent to a grow-finish operation.

35. **Sow Cards:** Sow Cards provide a summary of the most significant data in a sow's history and reports lifetime averages. Users may choose from three sow card options and two history options to meet the needs of the operation. Users can select which major event to run the cards for within the reporting period, as well as define the order in which to sort the cards.

36. **Sow Herd Structure:** The Sow Herd Structure provides a graphical representation of the sow herd based on cycle, parity or status. Sow list reports are also available to provide detailed information regarding the identities included in the graph. Users may select a combination of graphs and list reports to generate. This report is commonly used to predict future gilt purchases and is important in managing the herd structure over the long term.

37. **Sow History:** The Sow History report displays the current, complete event history of an individual identity or identities.

38. **Sow Performance League List:** The Sow Performance League List ranks all sows in the breeding herd by the user-defined criteria. The report can be generated for the following averages; piglets born, piglets born alive, piglets weaned, farrowing interval, piglets born alive per year or piglets weaned per year. Users can define the status of animals to include in the report, as well as the minimum number of parities a sow must have in order to be included on the report. This report can be used to identify the best and worst

performing sows in the breeding herd. It is a great culling tool. It can assist managers by presenting information required at critical decision times.

39. **Sows Due for Attention:** The Sows Due for Attention report identifies all sows that need attention based on the user-defined report property options. This report will generate lists for events such as mating, pregnancy termination, induction, vaccination, etc. It is an excellent report to run to generate lists of possible duties to be performed by management "x" days after a specific event. Examples include vaccination lists, visual checklists, or sow movement lists.

40. **Sows Due to be Served:** The Sows Due to be Served report identifies which sows have not been served by the user-defined wean to service interval. It can help identify which sows need to be bred during the week, as well as manage non-productive days or parity within the herd.

41. **Sows Due to be Weaned:** The Sows Due to be Weaned report identifies sows that farrowed but have not been weaned. This report includes nurse sows. By default, the lactation length is seven days prior to the target lactation length for the system. This report generates a list of sows needing to be weaned each week. It can also identify sows to be bred in upcoming weeks.

42. **Sows Due to Farrow:** The Sows Due to Farrow report identifies all sows due to farrow within the user-defined reporting preferences. This report can help identify which sows are going to farrow each week. The "overdue" section can also aid in maintaining data integrity.

43. **Subsequent Litter Performance:** The Subsequent Litter Performance analyzes the effects that first parity performance has on subsequent litters. Users may choose to evaluate subsequent litter performance against any combination of the following variables: total born, liveborn, still born, mummified and age at first service. This report can help identify the right combination of lactation length and weaning age to maximize profitability and/or efficiency.

44. **Target List:** The Target List displays the production targets currently established for the site.

45. **Warning List:** The warning list is a combination of sows due to be weaned and those awaiting service in a basic list format. The user is able to define the number of days since weaned and the number of days since served. The report helps identify sows who have farrowed but not weaned or have weaned but not served within "x" days.