

BenguFarm™

ADVANCED LIVESTOCK MANAGEMENT SOFTWARE
BEEF • GAME • SHEEP • GOATS • PIGS • GENETICS



BenguFarm-MOBILE Manual

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Compiled by

Leslie Bergh & Tim Pauw

www.bengufarm.co.za

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1. About BenguFarm-MOBILE

BenguFarm -MOBILE is a separate mobile application (app) for Android and Apple iOS which is installed and operates separately from BenguFarm for a desktop/laptop (BenguFarm DESKTOP) on an Android phone or tablet or an Apple iOS iPhone or iPad. The main function of BenguFarm-MOBILE is to operate as a data capturing tool in the field as well as to lookup the most important animal information. Data can be synchronised between BenguFarm-MOBILE and DESKTOP. BenguFarm-MOBILE is designed to work side-by-side with BenguFarm-BEEF and BenguFarm-SHEEP & GOATS modules. There is a separate app BenguFarm-MOBILE for GAME to be used side-by-side with BenguFarm-GAME. Under existing license conditions, a user must have a valid BenguFarm-BEEF or BenguFarm-SHEEP & GOATS license to be able to use BenguFarm-MOBILE.

2. Please note:

- 2.1. The instructions in this manual are applicable to BenguFarm-MOBILE version 2.08, 1 April 2021 working in combination with BenguFarm-DESKTOP version 1 April 2021 or newer. You are strongly encouraged to update both BenguFarm MOBILE and DESKTOP to these versions or newer.
- 2.2. The manual will further refer to BenguFarm that are installed on a personal computer or laptop as BenguFarm-DESKTOP, or just DESKTOP.
- 2.3. BenguFarm-MOBILE (hereafter called MOBILE) can be installed on smartphones and tablets running Android v4.4 (KitKat) or later or iPhones/iPads running iOS v10.2 or later operating systems.
- 2.3. MOBILE is only available with English as language option.
- 2.4. All the screens on MOBILE have a menu located to the left of the screen. On small screen devices such as phones, this menu is hidden. It can be accessed by clicking on the 3 lines icon located top left of screen. On tablets the menu will always be visible.

3. Install BenguFarm-MOBILE:

3.1. Android users:

- 3.1.1. Go on your ANDROID smartphone or tablet to www.bengufarm.co.za > Downloads > Software and download BenguFarm MOBILE **v2.43, 10 June 2022** (or newer version) and install it. **Please note:** You need to press the link button for about two seconds to start the download. At this stage, the smartphone or tablet should be set to accept "Unknown Sources - All installation or apps from unknown sources". This should be able to be done under Settings > Security on a smartphone. Newer versions of Android may not have these options and will prompt the user to allow the installation from an unknown source when installing. The unknown source settings are necessary as MOBILE is distributed from outside Google Android App-Store.
- 3.1.2. Go on your PC or laptop to www.bengufarm.co.za > Downloads > Updates and download BenguFarm Update **v21 April 2022** (or newer version) and install it. This version is required to work with MOBILE **v2.33, 15 March 2022** (or newer version).

3.2 Apple users:

- 3.2.1 Go on your iPhone or iPad to the Apple App Store. Search for "BenguFarm MOBILE". You can download and install BenguFarm MOBILE like any other app from the Apple App Store.

4. MOBILE Login:

4.1. Create BenguFarm-CLOUD Users:

- 4.1.1. Access to MOBILE is controlled by creating users who are allowed to login to MOBILE. Each user will have a username and password. The users are created on a webserver to which MOBILE connects to authenticate user access. The webserver is called BenguFarm-CLOUD.
- 4.1.2. In DESKTOP, go to Data Send/Receive > Synchronize BenguFarm MOBILE.
- 4.1.3. Ensure the computer is connected to the Internet.
- 4.1.4. Click on "Edit BenguFarm MOBILE Users".
- 4.1.5. The first time this function is used, you will be required to enter the details of the user with administrator rights (the administrator). This is the user who will have rights to, if necessary, create and change other users. Most MOBILE clients will probably not have the need to create any additional users in addition to the administrator. There however needs to be at least an

administrative user. Enter all the administrator's details. The administrator's password and e-mail address must be entered in duplicate to ensure it is correct. When done, click on "Create Administrator". **PLEASE NOTE:** The administrator's username and password are selected by the administrator him/herself.

- 4.1.6. The BenguFarm-CLOUD Services window will now open. If need to, you may now create additional BenguFarm-MOBILE users. Just close the window if you do not want to create and/or edit additional users.
- 4.1.7. You can always at a later stage go back to the BenguFarm-CLOUD Services > BenguFarm CLOUD Users window to add additional BenguFarm-MOBILE users and/or edit information. Please note that in the section "Herd(s) this user has access to" (at the bottom of the screen) the access this specific user has to herds can be set.
- 4.1.8. **If you forget your administrator's password**, click again on "Edit BenguFarm MOBILE Users". You will be asked to login. At the bottom left corner of the login screen, click on "Forgot Password". Then enter the e-mail address of the administrator, as entered when you created the administrator or, if the email address was changed, that email address. Click on "Request Password Reset". BenguFarm-CLOUD will send an e-mail to the administrator's e-mail address. The e-mail will contain a link. When you received the e-mail, click on the link or "copy" and "paste" the link into your web-browser, for example Google Chrome. A page will open where you can enter a new password for the administrator.

4.2. LOGIN on MOBILE:

- 4.2.1. Select the BenguFarm icon  on your smartphone/tablet.
- 4.2.2. The "Login"  screen will be displayed.
- 4.2.3. Enter your customer number (BPU...), username and password and select "Login". Your smartphone/tablet will have to have Internet access at this point of time to be able to login.
- 4.2.4. Due to the usage characteristics of MOBILE a user is not required to login every time when opening MOBILE. After successful login, you may use MOBILE for 30 days without the need to login again. During this period, you can just click on "Login" without entering a username or password to open MOBILE. MOBILE will attempt to verify login credentials in the background. If the credentials could not be verified for a period exceeding 30 days, you will be required to login again.
- 4.2.5. Once logged in, the "Home"  screen of MOBILE will be displayed. From here you can access the different functions of MOBILE.

5. Multiple Databases:

MOBILE can handle multiple databases. To add a new MOBILE database or change the database you are working in, click on "Change Herd"  from the "Home"  screen. The "Change Herd" screen allows a user to "Select" a herd to work in, "Add" a new database and "Delete" an existing database. Each database should correspond to a database on the DESKTOP as setup at Options > Databases menu. You do not need to give a new database a name. The name will be updated automatically during synchronization.

6. Important information regarding synchronization of data:

6.1. Please take note:

- 6.1.1. If there are multiple databases on DESKTOP, only one database can be synchronised at a time. In other words, each database must be synchronised separately.
- 6.1.2. When data from a particular database on DESKTOP is synchronized, ALL herds (species) on the relevant database's data are automatically synchronized.
- 6.1.3. Photos can be sent from DESKTOP to MOBILE as an additional option. Only the animal's main photo (selected as the Default photo in DESKTOP) as well as other photos selected to be displayed on reports will be send to MOBILE by default. The reason for this is the limited capacity

of many smartphones and tablets. You may select the "Import All Photos" option on MOBILE's synchronization screen if you want to import all photos.

- 6.1.4. Data synchronization between MOBILE and DESKTOP can be done via Wi-Fi connection (where the computer and smartphone/tablet can communicate with each other using a Wi-Fi "ROUTER") OR with an Internet connection (BenguFarm-CLOUD is used as an intermediary to make this possible).
- 6.1.4.1. With **Wi-Fi** selected as the synchronization method the IP address and PORT are used as the communication parameters. Look on DESKTOP what these parameters are and fill it in on MOBILE.
- 6.1.4.2. With **Cloud Services** selected as synchronization method the BenguFarm account number (BPU...) and Computer Identification Code (CIC) are used. To ensure this synchronization method will work, please check the following:
 - 6.1.4.2.1. The BenguFarm account number (BPU...) and Computer Identification Code (RIC) should be registered on BenguFarm's administrative system. If not, please contact Naomi Havenga at 082 696 8306.
 - 6.1.4.2.2. The BenguFarm account number (only the number, without "BPU") and Computer Identification Code (RIC) must be recorded on MOBILE.
 - 6.1.4.2.3. The client must be activated on the BenguFarm administrative system for BenguFarm-MOBILE. If not, please contact Tim Pauw from BenguelaSoft at accounts@benguelasoft.co.za.
- 6.1.5. Synchronization of photos:
 - 6.1.5.1. With the **Cloud Services** selected as synchronization method photos are NOT sent from MOBILE to DESKTOP. The photos are simply too big and will too quickly exhaust the user's Internet data. The photo record links will still be sent. The user will need to copy photos with e.g. Windows Explorer to the correct folder on the DESKTOP.
 - 6.1.5.2. With **Wi-Fi** selected as synchronization method, the photos taken with MOBILE will be sent to DESKTOP during synchronization.
- 6.1.6. Make sure your smartphone/tablet and computer's date and time corresponds.

7. To synchronize data:

7.1. In DESKTOP:

- 7.1.1. Go to any of the databases the CLOUD user has access to. It does not need to be the specific database you wish to synchronize with. DESKTOP will automatically select the correct database in a multi database scenario. If you are syncing new animals or performance test data to DESKTOP, you are however recommended to be in the applicable database you are syncing to.
- 7.1.2. Make sure that the appropriate lists such as Camps, Contacts (e.g. the veterinarian involved), Vaccines, Remedies & Supplements, Diseases & Injuries, Medicines, etc.) you plan to select in MOBILE from the relevant list was set up in DESKTOP [Settings > ...] BEFORE the data is sent to MOBILE, since it is not possible to add new list items to lists in MOBILE at this stage.
- 7.1.3. Go to Data Send/Import > Synchronize BenguFarm MOBILE. **Please note:** The screen works for the database in which you are currently in DESKTOP.
- 7.1.4. At Device Connection Type, select the type of connection (Wi-Fi or Cloud). Note the parameters in the block to the right which are applicable to selected connection type.
 - 7.1.4.1. With **"Wi-Fi"** selected, the computer IP and PORT will be displayed. In certain circumstances more than one IP could be listed. Select the correct IP through which the router connected to the computer/laptop. The PORT can be changed for cases where the default port number conflicts with existing computer settings.
- 7.1.5. Addition synchronization options can be set on the "Advanced Options" tab. As the name indicates, these options are meant for advanced users. The exception is the "Upload Photo Size" setting where a user can set the size photos will be resized to when sent to MOBILE.
- 7.1.6. Click on "Start Synchronization Server". DESKTOP will now start to listen to incoming connections from devices running MOBILE which wants to synchronize with the specified connection type.

7.2. In MOBILE:

- 7.2.1. On the "Home"  screen, select "Synchronize Desktop" .
- 7.2.2. At "Mobile Database and Synchronization Options", select the appropriate option:
 - 7.2.2.1. Select the Mobile database you wish to synchronise with DESKTOP.
 - 7.2.2.2. To send data entered on MOBILE to DESKTOP, select "**Export New Data to DESKTOP**".
 - 7.2.2.3. To send data that has been changed/added/deleted on DESKTOP to MOBILE, select "**IMPORT New Data from DESKTOP**".
 - 7.2.2.4. To send photos that have been added on DESKTOP since the previous synchronization to MOBILE, select "**Import Photos from BenguFarm DESKTOP**". This option is disabled by default since many smartphones/tablets have limited capacity and may not have enough space to save many photos. **Please note:** This option is only available where synchronization is done via Wi-Fi connection. By default, only the animal's default photo and photos marked for reports are synchronized. Select "Import All Photos" if you also wish to import the animal's other photos.
 - 7.2.2.5. To delete all data on MOBILE, select "**Empty MOBILE Database**".
 - 7.2.2.5.1. **Please note:** The "Empty MOBILE Database" option can only be selected if "IMPORT New Data from DESKTOP" is marked. The option "Export data to DESKTOP" cannot be marked in this case. This option is therefore used to clear the database in MOBILE and then re-import all the data in applicable database from DESKTOP.
 - 7.2.2.5.2. This option should also be selected if data from another database need to be imported into MOBILE. **Please note:** Remember to first send the data changed/added on the current MOBILE database to DESKTOP (see "Export NEW data to DESKTOP" above). If "Empty MOBILE Database" is selected, the MOBILE database is cleared, and the data cannot be recovered. This means that BenguFarm DESKTOP and MOBILE both keep a type of "log" of when what data have been changed, so the entire database do not need to be send back and forth each time, but only those records which were added/changed/deleted since the last time data was exchanged between DESKTOP and MOBILE.
- 7.2.3. At "Connect to PC via" select the same method of communication (Wi-Fi or Cloud) as chosen in DESKTOP.
 - 7.2.3.1. With "**Wi-Fi**" selected, enter the IP address and PORT as displayed in DESKTOP in the corresponding fields in MOBILE.
 - 7.2.3.2. With "**Cloud Services**" selected, you need to enter the "BenguFarm Account Number (BPU)" and Computer Identification Code (CIC) as displayed in DESKTOP in the corresponding fields in MOBILE.
- 7.2.4. Click on "**Start**" to start the synchronization process. MOBILE will automatically synchronize to the correct DESKTOP database where multiple databases are setup on DESKTOP, except when "Empty BenguFarm MOBILE Database" is selected. In this case, MOBILE will in some scenarios show a popup from which the user must select which DESKTOP database MOBILE should synchronise with. Subsequent synchronizations with this MOBILE database will not show this popup selection again as the database is then linked to the applicable DESKTOP database.
- 7.2.5. If you wish to synchronize another MOBILE database, select the database and synchronization options as described at 7.2.2 above and "Start" to start synchronizing the selected MOBILE database.
- 7.2.6. **When the synchronization of data is finished**, go on DESKTOP to Data Send/Receive > Synchronize BenguFarm MOBILE and click "Stop Synchronization Server". This will stop the synchronization with MOBILE until "Start Synchronization Server" is clicked.

8. Setup Bluetooth EID Reader:

- 8.1. MOBILE can be connected to a Bluetooth EID reader. This enables MOBILE to receive scanned EIDs from a reader and, depending on the screen opened in MOBILE, view/capture data for the animal to

which the EID is assigned. MOBILE for Android was tested with the Tru-Test SRS2, XRS2, Agrident AWR250, AWR300, APR250, APR500 and APR600 Bluetooth EID readers, though other Bluetooth readers would most probably work as well. EID readers without Bluetooth connectivity will NOT work. Mobile for iOS only works with the Tru-Test SRS2, XRS2, Agrident AWR250, AWR300 and APR600 readers.

- 8.2. Before you setup the scanner in MOBILE, follow the reader manufacturer's instructions on how to pair (connect) the applicable reader to your phone/tablet. This step is very important. MOBILE cannot connect to a reader if that reader has not been properly setup (paired) with your phone/tablet.
- 8.3. Once your phone/tablet is paired with the reader and your phone's/tablet's Bluetooth is enabled, open MOBILE. From the "Home"  screen, select "Setup EID Reader" .
- 8.4. If the reader is not listed in the "Select Bluetooth Reader" list, click on the Search icon . If you are using an Agrident AWR250, AWR300 or APR600 reader on iOS, either enable the "BLE Mode Connection" option before searching for connected readers connected with Bluetooth Mode set BLE or else make sure the Bluetooth mode is set to iAP and that the reader is connected to your iPhone / iPad at the iPhone's/iPad's Bluetooth settings. (**See Appendix A for detailed instructions**). If your reader is not listed, double check that your device's Bluetooth is enabled and that the reader is paired to your device, the reader is switched on and its Bluetooth is enabled. Certain readers also require changing settings on the reader itself when connecting to a different device it was previously connected to. On the Tru-Test SRS2 and XRS2 reader, make sure the Bluetooth output mode is NOT set to "Ticket". The advanced Bluetooth options should all be set to "Default". On the Agrident AWR250, AWR300 or APR600 reader, select the menu and go to Setup > Interface Setup > Bluetooth > Set BT Profile and select the "BLE" option (Apple users can also use iAP mode). (**See Appendix B for detailed instructions**).
- 8.5. Select the reader you want to use with MOBILE and enable the "Enable Bluetooth" option at the top of the screen.
- 8.6. Click the Connect Device icon  to try connecting to the reader. If the connection is successful, most readers will display a Bluetooth icon on the reader and/or make a sound.
- 8.7. You may now test scan an EID. If successful, the EID will be displayed on the screen.
- 8.8. You may also enable the "Auto Save Task on EID Scan" option. This option is used with tasks (see later) which only has one non-common field which must be either a "Select Animal" or "Select Female Animal" animal. In such a case, when the EID is scanned and the animal is found, the applicable task is automatically saved. In other words, you do not need to click on the Save icon. A good example is a camp movement task. It has common fields for movement date, reason and camp move to. It has only a "Select Animal" as a non-common task field to select the animal that is being moved. In other tasks, such as a "Pregnancy Test", there are additional non-common task fields that must be entered for each animal, such as if the animal is pregnant or not, the period pregnant and the number of foetus. Scanning the animal will not automatically save the pregnancy test as these other non-common fields must be entered for the animal. Once entered, the user will have to click on the Save icon to save the pregnancy test.
- 8.9. Referring to the "Pregnancy Test" example above, you may specify a specific tag in the "EID Tag to use as Save Command" field. It must be an EID Tag which is not assigned to any animal. Scanning this EID Tag will Save the current task. In other words, it has the same effect as clicking on the Save icon. Such a tag can for example be kept in your pocket. You can either type in the tag number or click on the field and scan the tag.
- 8.10. Once your reader setup is done, click on the Save icon .
- 8.11. MOBILE will automatically try to connect to Bluetooth EID Reader when entering the "View Animal"  and "Enter Information"  screens.
- 8.12. Reader connection can be lost for various reasons. If you are in the "Enter Information" screen and a connection has been lost, click on "Reconnect Reader"  located top of screen (on Android device

located in the context menu "... " top right). It may be necessary to first "Disconnect Reader"  if the "Reconnect Reader" is not successful.

9. View Animal Data:

- 9.1. On the "Home"  screen:
 - 9.1.1. At "Change Herd"  select the relevant herd.
 - 9.1.2. Select "View Animal" .
- 9.2. The screen menu (top left) contains all the active animals in the selected herd. You can filter this list by entering a part of an animal's IDnr in the "Search Animal" box. Click on the animal you wish to view.
- 9.3. When a Bluetooth EID reader is connected to MOBILE, you can also scan an EID tag to display the animal to which the EID is assigned.
- 9.4. You may also use the device's volume buttons to navigate to the next and previous animal in the active animal list.
- 9.5. The View Animal screen is divided into sections (tabs) to organise similar data together. The different tabs are displayed at the bottom of the screen. You can click on any of the tab icons to display the applicable tab page. Alternatively, you may swipe the screen left and right to "scroll" through the different tabs.
- 9.6. Due to limitations of the environment, only 5 tabs can be handled on the screen at a time. There are additional pages containing more data. To navigate to other pages of data, click on the More icon at the bottom right of the screen and select the applicable page. You can also switch between pages by swiping left and right on the screen.
- 9.7. Some additional notes:
 - 9.7.1. You can click on an animal in the pedigree to view that animal. Keep in mind that full data is only synchronised to MOBILE for active animals and their progeny. Clicking on a non-active pedigree animal will thus only display limited data.
 - 9.7.2. You can click on an animal in the progeny view to view that animal.
 - 9.7.3. Select "Back", located top of screen on your iPhone/iPad or from the context menu "... " top right on your Android phone/tablet, to navigate to the previously viewed animal.
 - 9.7.4. In photo view, swipe screen left and right to view the previous and next photo.
- 9.8. To go back to the "Home"  screen, press on  on your iPhone/iPad or press the "back" button on your Android phone/tablet.

10. Edit Tasks:

- 10.1. MOBILE takes an approach of given the user the ability to define how data capturing screen must look and function. Each farm is different. What may be practical on one farm may not be practical or the norm on another farm. This is where tasks come in. A Task is a definition of just that – a specific task the user is performing on the farm and for which he/she wants to enter information on MOBILE. MOBILE has many pre-defined tasks. These tasks can be changed by the user, or the user can also setup his/her own tasks.
- 10.2. To change task definitions, go to "Edit Tasks"  on the "Home"  screen. The list of tasks will be listed in the menu located top left of the screen. You can either click on one of the tasks you wish to edit or click on the Add Task icon  below the task list to **add your own task**. The Delete Task icon  is used to **delete the task** that is currently selected.
- 10.3. Once a task is selected or  was clicked to add a new task, the task definition will be displayed. If you added your own task, you should give your task a name. The names of predefined tasks cannot be changed.
- 10.4. A task consists of a collection of fields. Each field corresponds to a specific piece of information you want to be able to capture when working with the task. For a pregnancy test, you for example

may want to enter who did the pregnancy test, whether the animal is pregnant or not and what period the animal is pregnant. Another user may also want to enter the number of fetuses and yet another user may only want to enter if the animal is pregnant or not and none of the other information.

- 10.5. Usually, each task should have at least a "ALL: Recording Date" (the date the task was done) and a field to select the applicable animal, in other words either a "ALL: Select Animal" or "ALL: Select Female Animal" field.
- 10.6. Click on the Add Field icon  below the task definition to **add another field** to the task. The field will be added at the bottom of the existing task fields. You may be required to scroll down to see the added field. The new field will always be a "ALL: Recording Date" field. Each field in a task definition has three parts:
 - 10.6.1. **Data Field** - To change the data field, click on the field (default "ALL: Recording Date"). A list of available fields will be displayed. The fields are categorised and sorted by category and in category in chronological order. Scroll the list up and down and click on the data field you want to select. If you made a mistake or want to change the data field again, simply click on it again and select a different data field.
 - 10.6.2. **"Common Field"** - A task usually consists of two types of data. That which are the same for all (or at least most) of the animals and that data which are specific to each animal. Say you weigh animals. All the animals are weighed on the same date, but each animal's weight is different. It would be cumbersome to enter the weigh date for each animal. In such a case where a field is the same for all or most of the animals in a task, it is helpful to mark that field as a "Common Field". Common fields are created in a separate tab on the "Enter Information" screen. You can go to this "Common Fields" tab, enter the common fields and then go to the "Capture" tab. The "Capture" tab will contain all the fields not specified as common fields. In the weights example, the "Capture" tab will only contain a field to select the animal being weight and a field to enter the weight. The weigh date is in a separate tab and out of the way. You can thus then just concentrate on the fields specific per animal.

Another function of common fields is that they stay the same when the applicable record is saved. Non-common fields default back to their defaults upon saving. In the weights example, the weigh date will stay to the value entered by the user while the weight will be reset to 0 (zero) when saved – ready to enter the next weight for the next animal.
 - 10.6.3. **"Enabled"** - Task fields can be removed by selecting the field (it will be highlighted orange) and clicking on the Delete Field icon  below the task fields. There can be circumstances where you temporarily do not want to enter certain type of data for a specific task. You could remove the field and add it again if you later want to enter the applicable information for the task at a next date. As an alternative, switch off the "Enabled" field. The field will then be excluded from the task when selecting the task in the "Enter Information" window.
- 10.7. You can also change **order of the fields** in the task. Select the field you want to move (it will be highlighted orange) and click on the Move Up and Move Down icons   located to the right of the screen to move the field up and down.
- 10.8. If you want to **remove a field**, select the field and click on the Delete Field icon  at the bottom of the screen.
- 10.9. You may also temporarily **disable tasks** if you do not want to see that task in the "Enter Information"  screen. To disable a task, switch of the "Enabled" of the task (located top right next to the task name).
- 10.10. Click on the **Save** icon  bottom right to save any changes you made to the task definition.

10.11. To go back to the "Home"  screen, click on  on your iPhone/iPad or press the "back" button on your Android phone/tablet.

11. Record Data:

- 11.1. From the "Home"  screen, select "Record Data" . All the data in MOBILE is captured here. As described above, all the input screens are based on Task definitions as defined at "Edit Tasks" . If a Bluetooth EID Reader is setup , MOBILE will attempt to connect to the reader when the "Enter Information" screen is opened.
- 11.2. The list of tasks will be listed in the menu located top left of the screen. Select the task you want to enter data on. Once selected, the screen will be built according to the task definition. The screen is divided into 5 tabs. Session , Common Fields , Record  and Compare . You do not need to work with all the tabs. At minimum Common Fields and Capture tabs will be used. You can move to the different tabs by clicking on the applicable tab icon or by swiping left and right to move to the previous and next tab.
- 11.3. "Session"  - You do not need to use sessions. A session is place where the list of animals for which data were entered, is saved. This list can be used to do a camp comparison and to add addition information for all the animals in a single step. More on this later. To add a new session, click on the Add Session icon . Enter a name for the session and click on the Save Session icon  below the session name. You may also click on the Cancel Add Session icon  to cancel adding a new session. As an alternative, you can select to continue using an existing session by selecting that session from the drop-down at the top of the session tab page. As data is entered for animals, those animals will be added to the session. You can use the Sort icons to sort the animals in the session on screen either by alphabetic order  or in order in which data was captured  for them.

One of the more powerful functions of sessions is the ability to add additional data for all the animals in the session. Say you did a camp movement and at the same time the animals were vaccinated. You may have recorded the camp movement and linked the recorded animals to a session. To enter a vaccination for all these animals is as easy as selecting the vaccination task and defining the vaccination details (date, vaccine used, dose, etc) at "Common Fields" . Then click on the Multi Add icon . This will then add the vaccination for all the animals in the session. If the animals were vaccinated with multiple products, change the applicable common fields and Multi Add again. You can repeat this for as many types of data you require. It must be emphasized that Multi Add only makes sense where the applicable animals have the same data. It would for example not make sense to multi add weights as each animal's weight is different.

To delete a session, select the session and the click on the Delete Session icon .

- 11.4. "Common Fields"  - As described in the Edit Tasks section above, common fields are those fields in the tasks that is the same for all the animals. Normally you enter these fields only once and then go to "Capture" tab to select and enter data for each animal. You can however come back to common fields at any time and change some of the fields. Subsequent animals will get these new values when capturing data for them.
- 11.5. "Record"  - Here you select the animal for which data is entered. If there are any non-common fields for the task, you can enter that data here. Once done, click on the Save icon  to save the

- task data to the selected animal. Once saved, the captured fields will reset to their default values while the common fields in the Common Fields tab will stay the same.
- 11.6. **"Animal View"** - The animal view tab is used to display information of the selected animal. You may want to see additional information of the animal you are working with for decision making purposes. Any of the tabs available at "View Animal Data" can be selected to be displayed in here.
- To change the animal information tab, which is displayed here, click on  on your iPhone/iPad or select "Select Animal View" from the context menu "... " top right on your Android phone/tablet.
- 11.7. **"Compare"**  -The compare tab is used to do a camp comparison. Please note that you must use a session for this function to work. The animals in the session is compared to the camp selected at the top of the Compare tab page at "Compare to Camp" drop-down. The comparison is colour coded:
- **Green**: The animal was found in the particular camp.
 - **Orange**: The animal was found but is assigned to another camp in the database.
 - **Purple**: The animal's status is non-active in the database.
 - **Red**: The animal was not found (i.e. missing) in the particular camp.
- 11.8. The "Record Data" screen can integrate with Bluetooth EID Readers. You must first setup a Bluetooth EID Reader at "Setup EID Reader"  from the "Home"  screen. The settings setup here would influence how the EID reader integrates with the "Enter Information" screen. Refer to section 8 of this manual. It is necessary point to a few specifics regarding EID readers and EIDs.
- 11.8.1. The **"Registration (EID)"** can be used to register new animals in MOBILE while at the same time assigning an EID to them. The most probable scenario when this task will be used is new clients that do not have any animals in the database and wish to start loading animals in an empty database.
- 11.8.2. Except for new clients that populate an empty database, new calves should be captured with the **"Calving" / "Lambing"** tasks and not one of the "Registration" tasks.
- 11.8.3. There is a special **"EID Change"** task. This task will mostly be used if an animal has lost its EID and you want to assign a new EID to the animal. In such a case, select the "EID Change" task and go to the "Capture" tab page. "Select the Animal" whose tag must be changed. Then scan the new tag. A popup will appear which will ask your conformation if you wish to change the selected animal's EID to the scanned EID. Please note that if the scanned EID is assigned to another animal, that animal will be selected in the "Select Animal" field. The reason for this is that the animal who previously had the applicable EID, was never cancelled. You will first have to cancel that animal or just delete the EID, before assigning the EID to another animal.
- 11.8.4. If **"Auto Save Task on EID Scan"** is selected at "Setup EID Reader", the task will automatically save when and EID is scanned and the task contains only one non-common field, which is either a "Select Animal" or "Select Female Animal" field.
- 11.8.5. **VERY IMPORTANT:** An EID must be cancelled before it can be assigned to another animal. The **"Sales and Deaths"** task can be used for this. As an alternative you can use the "Edit Animal" task to set the animal's status to non-active and delete the EID. The "Sales and Deaths" task are however the preferable way as you build up additional historic data that is useful for reporting purposes.
- 11.8.6. The "Record Data" screen has powerful, yet simple to use, **EID problem solving functions** build in. Depending on the task definition, when scanning an EID, some checks are done. In two scenarios the **EID Problem** screen will be displayed. Either an EID was scanned that could not be found in the database and the task also does not contain and EID input field or the EID was found but assigned to a non-active animal. The EID Problem solving screen gives an interface to sort out the problem. There are four options:
- 11.8.6.1. **"Make Non-Active Animal Active"** - In this scenario the applicable animal was mistakenly set non-active by the user. This option will change the animal's status to active.
- Click the Save icon  to save the changes.

- 11.8.6.2. **"Assign EID to Existing Animal"** - Here the EID was either not found or was assigned to a non-active animal. If assigned to a non-active animal, that animal was probably never cancelled. This option will remove the EID from the non-active animal if applicable and assign it to animal you select that is already in the database. Click the Save icon  to save the changes.
- 11.8.6.3. **"Assign EID to New Animal"** - This is the same as the previous option, except that the animal to which you want to assign the EID, is not in the database. This option will display a few basic fields through which you can quickly create a new animal. The EID will be assigned to this animal and, if applicable, remove from the EID from the non-active animal. Click the Save icon  to save the changes.
- 11.8.6.4.  (Cancel) - In the above the options the problem is solved. You can however select to cancel EID Problem solving by clicking on the Cancel icon . If the Cancel option is selected, nothing is done with the EID and no task data is saved with the scanned EID.
- 11.8.6.5. **"Ignore Unknown EID"** - This function should be used with caution and is meant for special use purposes. This option is located towards the top of the "Session" tab . When this option is switched on, the EID problem solving functions will be disabled. Nothing will in effect happen when such an EID is scanned, except that if a session is selected, that EID will be added to the session. No data will be saved with the scanned EID. This will be useful in a scenario where some animals of another farmer are on your farm and you do not wish to capture any data on MOBILE for them. The negative result is that potential problems are not identified. A better option would be not to enable this function and rather just cancel the EID Problem screen when it appears if one of these animals are scanned.
- 11.9. To go back to the "Home"  screen, click on  on your iPhone/iPad or press the "back" button on your Android phone/tablet. You can now synchronise  the newly captured data to your DESKTOP.

12. Count Group:

The purpose of this feature is to easily take stock of animals in a specific camp or group.

- 12.1 On the home screen, select the "Count Group" icon .
- 12.2 At the top of the screen, select a camp or group. The animals will be listed and the number of animals will be displayed at the bottom left as "# Animals".
- 12.3 The animals can be counted by pressing the "+" (or "-" if counted incorrectly) at the bottom of the screen. The total number of animals counted will be displayed at the bottom right as "# Counted".
- 12.4 If the number of animals counted does not correspond to the number supposed to be the camp or group, the animals can be checked in the list to determine which animal(s) are missing. The total number of animals checked will be displayed as "# Checked".
- 12.5 Animals Found in the Group / Animals Not Found / Animals Found in Another Group / Non-active Animals Found can, if needed, be moved to a group or camp by selecting the  icon.
- 12.6 Data can, if needed, be recorded for Animals Found in the Group / Animals Not Found / Animals Found in Another Group / Non-active Animals Found by selecting the  icon.

13. Taking Photos:

You can also take photos of your animals with BenguFarm MOBILE. Photos are also synchronized back to BenguFarm DESKTOP during synchronisation with the "Export New Data to DESKTOP" option selected. To take photos, go to the "Home"  screen and select "Take Photos"  from the context menu located top left. The photo view screen will open. Select the animal for which you want to take

a photo from the context menu located top left of screen and then click on the camera icon  centre bottom to take a photo for the selected animal. The device's photo app will open. Use the photo app as you would normally do to take a photo of the animal. Depending on the device and the camera app, you will be presented with an option to accept the photo or not. If accepted, control will be passed back to BenguFarm MOBILE and the photo linked to the selected animal. A default name will be assigned to the photo. You may change the photo's name and click the Save icon  to save the new name. Click on the Cancel icon  if you do not want to link the photo to the selected animal. To take another photo, simply repeat the process.

14. **Advanced Options:**

BenguFarm MOBILE have additional options that adds functionality to other screens. To set-up these advanced options, go to the "Home"  screen and select "Advanced"  from the context menu located top left. There are two advanced options that can be defined.

- 14.1. **"Alert when Animal in Group"** - This option is used when you want to be alerted when a selected or scanned animal is in a specific group. You may have pre-selected animals for some or other task and put those animals in a group in BenguFarm DESKTOP. BenguFarm MOBILE will display an alert "Animal in Alert Group" on a dark red background at the top of "View Animal" and "Enter Information" screens when the selected or scanned animal is in the specified group. Switch the "Alert when Animal in Group" option on and select the applicable group for which you want to be alerted if an animal is in that group. Click on the Save icon  to save the settings.
- 14.2. **"Put Scanned Animals in Session"** - This option is specifically meant to work with the View Animal  screen in association with a Bluetooth enabled EID reader . This gives the "View Animal" screen the same sessions functionality as the "Enter Information" screen whereby an animal would be put in the selected session when the animal is scanned. Please note that manually selecting an animal from the list of animals will not result in the animal to be added to the session. Switch the "Put Scanned Animals in Session" option on and select the applicable session. Click on the Save icon  to save the settings. Sessions can be added in the "Sessions" tab  in the "Enter Information"  screen.
- 14.3. **"Use Volume Buttons to Navigate Animals"** - This option allows you to navigate to the previous and next animal using the volume up and down buttons on the "View Animal"  screen. The option is disabled by default on iPhones/iPads and enabled on Android phones/tablets.
- 14.4. **"Synchronisation Max Timeout (Seconds)"** – This option is used to specify the maximum time MOBILE will wait for a response from the synchronisation server. Only change this time on advice of your agent. Click on the Save icon  to save the settings.
- 14.5. **"Data Capture Screen Load Delay (Seconds)"** - This option is used to specify how long the input fields take to become available on the data capture windows from the time a new animal or record is selected and prevents the capture of data before the screen load is complete. Entering data before the screen load is complete could result in the need to re-enter some of the data. On current generation phones/tablets this value can be decreased to make the data capture screens more responsive. Click on the Save icon  to save the settings.

- 14.6. **“Language (Needs App to Restart)”** – This option is used to change the language for the app. Select the preferred language and click on the Save icon  to save the settings. To display the selected language, close and restart the app.

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Appendix A

Detailed instructions to connect Agrident AWR250, AWR300, APR500 and APR600 EID Readers to BenguFarm Mobile on Apple iOS and Android devices

AWR250, AWR300, APR600 and iPhone/iPad:

1. With AWR250, AWR300, APR600 set to iAP mode (Preferred method):

Please note that this option is only available for an AWR250, AWR300, APR600 that has the MFi chip used in combination with BenguFarm Mobile 1.10 and later. The APR500 does not work with BenguFarm Mobile for iOS.

a. On AWR250, AWR300, APR600:

Menu- Setup - Interface Setup - Bluetooth - Set BT Profile = iAP

b. On iPhone/iPad:

- Make sure Bluetooth is switch on.
- Follow AWR250, AWR300, APR600 instructions to pair the reader with iPhone/iPad.
- Connect to the AWR250, AWR300, APR600. BenguFarm Mobile cannot pick up the reader when set to iAP and it is not connected in the iPhone's/iPad's Bluetooth settings.

c. In BenguFarm Mobile:

- Setup EID Reader.
- Check "Enable Bluetooth".
- Check "BLE Mode Connection".
- Click Scan button (Magnification Glass icon bottom left).

BenguFarm Mobile will now scan for BLE devices.

- Once scan is done, click on "Select Bluetooth Reader" drop down and select the AWR250, AWR300, APR600.
- Click the Connect button (Connected plugs icon bottom, second from left).
- The reader should connect.
- You can now test scan an EID. The number should appear on screen in bold blue. - Click the Save to save the settings (Disk icon bottom right).

2. With AWR250, AWR300, APR600 set to BLE mode:

a. On AWR250, AWR300, APR600:

Menu- Setup - Interface Setup - Bluetooth - Set BT Profile = BLE.

b. On iPhone:

Make sure bluetooth is switch on. Not necessary to pair AWR250, AWR300, APR600.

c. In BenguFarm Mobile:

- Setup EID Reader.
- Check "Enable Bluetooth".
- Click on "Select Bluetooth Reader" drop down and select the AWR250, AWR300, APR600.

- Click the Connect button (Connected plugs icon bottom, second from left).
- The reader should connect.
- You can now test scan an EID. The number should appear on screen in bold blue.
- Click the Save to save the settings (Disk icon bottom right).

AWR250, AWR300, APR500, APR600 and Android:

a. On AWR250, AWR300, APR500, APR600:

Menu - Setup - Interface Setup - Bluetooth - Set BT Profile = SPP.

b. On Android:

- Make sure Bluetooth is switch on.
- Follow AWR250, AWR300, APR500, APR600 instructions to pair AWR250, AWR300, APR500, APR600 with Android Phone/Tablet.

c. In BenguFarm Mobile: (once APR600 is paired with your Android Device) :

- Setup EID Reader.
- Check "Enable Bluetooth".
- Click on "Select Bluetooth Reader" drop down and select the AWR250, AWR300, APR500, APR600.
- Click the Connect button (Connected plugs icon bottom, second from left).
- The reader should connect.
- You can now test scan an EID. The number should appear on screen in bold blue.
- Click the Save to save the settings (Disk icon bottom right).

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Appendix B

Detailed instructions to connect Tru-test SRS2 & XRS2 EID Readers to BenguFarm Mobile on Apple iOS and Android devices

SRS2/XRS2 and iPhone/iPad:

1. a. On SRS2:

- Settings - Bluetooth - Bluetooth = Auto
- Settings - Bluetooth - Advance - Connect Mode = Auto
- Settings - Tag Reading - Tag Format = Decimal or Decimal2 or ISO

1. b. On XRS2:

- Settings - Bluetooth - Bluetooth = Auto
- Settings - Bluetooth - Advance - Connect Mode = Default
- Settings - Bluetooth - Advance - Output = Default
- Settings - Tag Reading - Tag Format = Decimal or Decimal2 or ISO

2. On iPhone/iPad:

- Make sure Bluetooth is switch on.
- In the iPhone/iPad's Bluetooth settings screen, pair and connect to the reader. A blue light will appear on the reader when connected. This is very important. BenguFarm MOBILE cannot pick up the reader if it is not connected.

3. In BenguFarm Mobile: (once SRS2/XRS2 is CONNECTED – blue light on - to your iPhone/iPad):

- Setup EID Reader.
- Check "Enable Bluetooth".
- Uncheck "BLE Mode".
- Click on "Select Bluetooth Reader" drop down and select the SRS2 reader.
- Click the Connect button (Connected plugs icon bottom, second from left).
- The reader should connect.
- You can now test scan an EID. The number should appear on screen in bold blue.
- Click the Save to save the settings (Disk icon bottom right).

SRS2/XRS2 and Android smartphone/tablet:

1. a. On SRS2:

- Settings - Bluetooth - Bluetooth = Auto
- Settings - Bluetooth - Advance - Connect Mode = Auto
- Settings - Tag Reading - Tag Format = Decimal or Decimal2 or ISO

1. b. On XRS2:

- Settings - Bluetooth - Bluetooth = Auto
- Settings - Bluetooth - Advance - Connect Mode = Default

- Settings - Bluetooth - Advance - Output = Default
- Settings - Tag Reading - Tag Format = Decimal or Decimal2 or ISO

2. On Android:

- Make sure Bluetooth is switch on.
- Follow SRS2/XRS2 instructions to pair SRS2/XRS2 with Android Phone/Tablet.
- Once paired, the blue light on the reader may appear. This is an indication the reader is registered as an "Input Device". It should NOT be registered as an "Input Device". Click on the gear icon to the right of the reader name where it is listed in your paired device. Uncheck the "Input Device". The blue light should switch off.

3. In BenguFarm Mobile: (once SRS2/XRS2 is paired with your Android Device):

- Setup EID Reader.
- Check "Enable Bluetooth".
- Make sure "Reader Mode" is set as "Slave".
- Click on "Select Bluetooth Reader" drop down and select the SRS2/XRS2.
- Click the Connect button (Connected plugs icon bottom, second from left).
- The reader should connect.
- You can now test scan an EID. The number should appear on screen in bold blue.
- Click the Save to save the settings (Disk icon bottom right).

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