

The purpose of this NxGen Guide will be to discuss the Partner Exchange Tool functionality and interface for the Leachman Cattle of Colorado (LCoC) internal database. This interface provides cooperators as well as others desiring LCoC services to submit data recorded in Cow Sense on their animals to LCoC for processing and then retrieve data back and download directly to those animal's records in Cow Sense. This powerful new tool simplifies the task of sending and receiving verified data between your locally installed Cow Sense herd management system and LCoC.

The first step is to make sure you are using the most recent version of NxGen. As discussed in the Tutorial Videos the Auto Update function in Cow Sense will check for Updates on a schedule that you determine. However you can always perform this check manually from the Top Menu select > Help > Check for Update and follow the prompts to update NxGen.

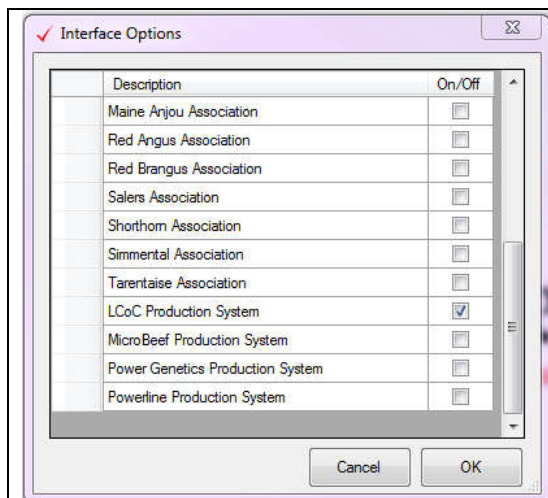
We suggest stepping through this entire document when first using the Partner Exchange Tool. Please note that there are a few processes that you will need to perform to initially set up your herd to submit and receive data from LCoC. However, following initial submission you will not need to incorporate all steps. Accordingly, we have provided a Table of Contents to assist you in locating the specific section related to the process at hand.

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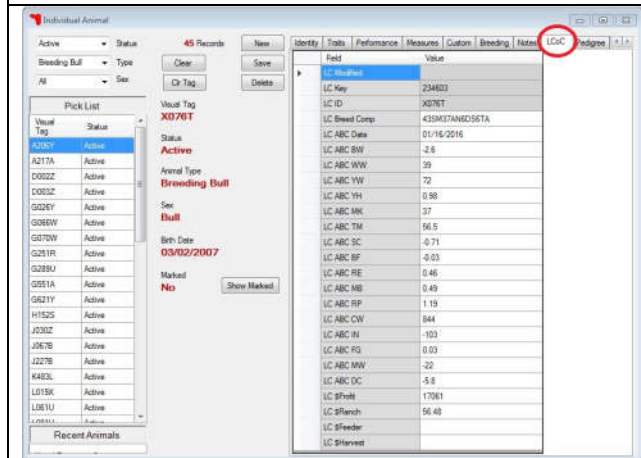
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I - Enable LCoC interface

First, you will need to enable the LCoC interface in NxGen.



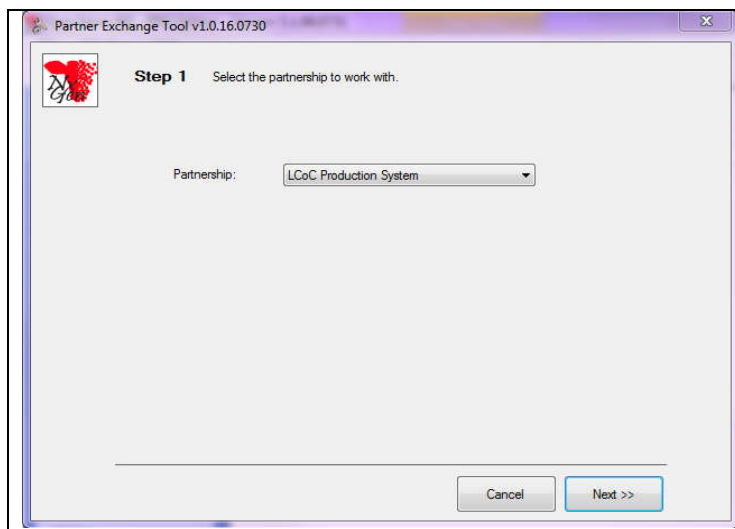
From the Tools section of the Task Pane on the left select Tools>Partner>Setup. An Interface Options window will open, scroll down to LCoC Production System field and click to mark the box on the right, and then click the OK button below.



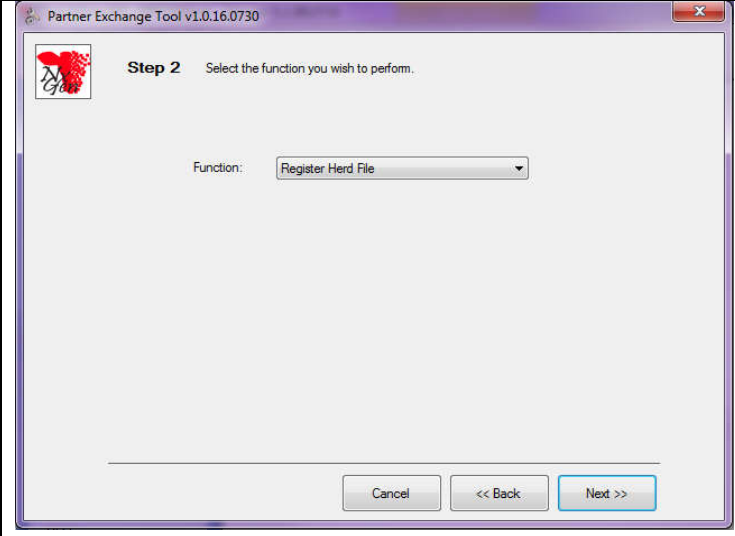
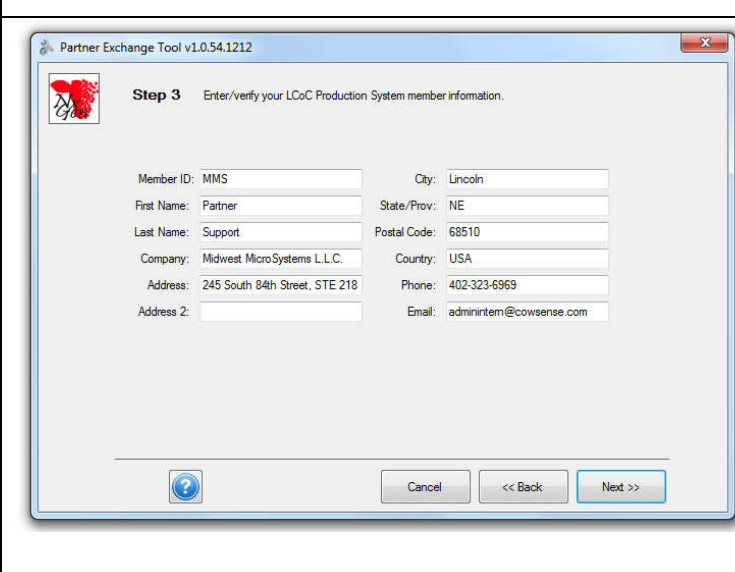
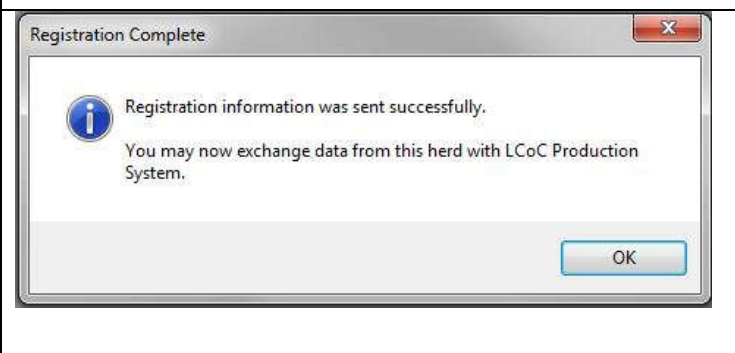
If you go to the Manage>Individual page you will see that you now have an LCoC tab. Once you start receiving data back from LCoC through the Partner Exchange Tool these fields will populate with that data.

II – Register Herd with LCoC

Next you will need to register your herd with Leachman Cattle of Colorado. This is a very simple, one time process.



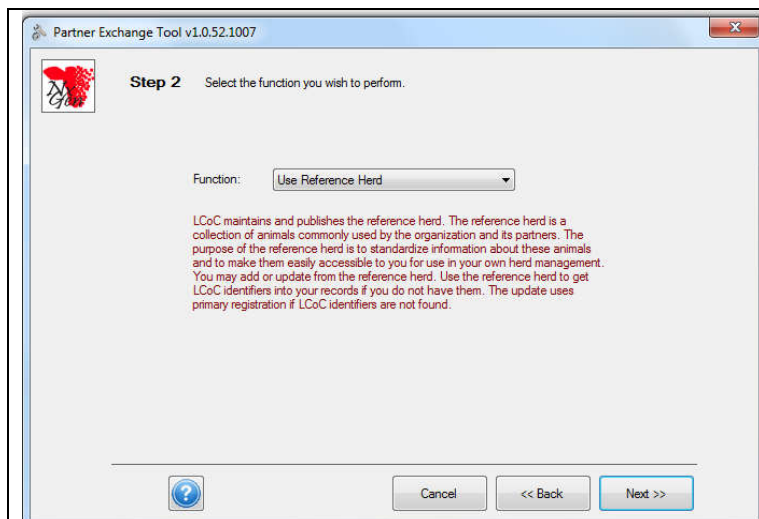
From the NxGen Task Pane on the left, select Tools>Partner>Run. The Partner Exchange Tool (also known as the acronym PET) Step 1 window will open. Verify that the LCoC Production System appears in the Partnership field. If LCoC Production System is not in the field, you can use the drop down arrow to select it. Now click Next.

	<p>From the PET Step 2 Function Window of this process, you will want to select Register Herd File. This will be the only option UNTIL you’ve registered your herd with LCoC. Then click Next.</p>
	<p>The PET Step 3 Register Window will appear. You will need to enter your LC Customer ID, name, address, and contact information. (If you don’t know or have a LCoC Member Number or ID, insert your Last Name in that field). Confirm the information is correct and click Next.</p>
	<p>NxGen will then upload this information to LCoC, once it has finished a “Registration Complete” box will open saying your registration information was sent successfully. You may now proceed to the submit and receive data functions with LCoC. Click OK on this message. PET will now revert back to the Step 2 window for further activity you would like to accomplish.</p>

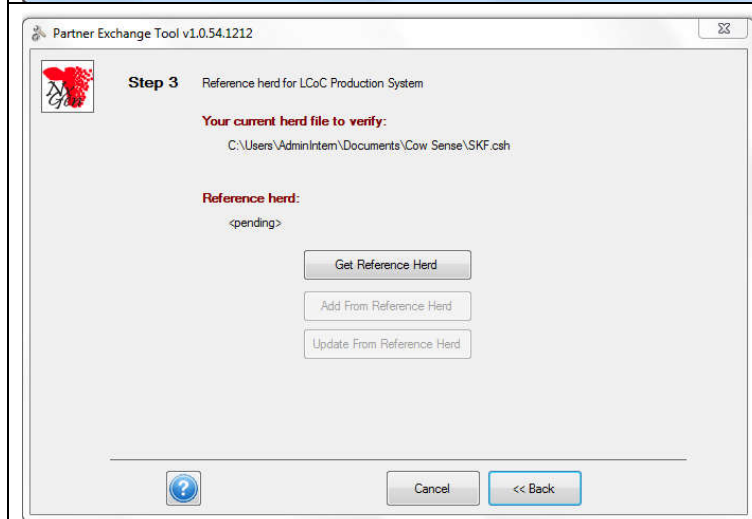
III - Verify Animals from LCoC Reference Herd

This is a **VERY IMPORTANT** process that is necessary to correctly identify sires and donor dams that pre-exist in your Cow Sense herd file against the LCoC database. This step ensures breeding animals are correctly identified, prevents the potential of adding duplicate animal records and correctly links them to their progeny. An LCoC Reference herd has been created and is systematically updated to provide you a tool to check your animals against those which already exist

in the LCoC database. It is important to the integrity of the data that will be returned to you, that you verify your animals against those in the reference herd before you exchange any data between your herd and LCoC. This process compares the data in the Registration - Primary (number) and Reg Assoc – Primary (Association Code – see Appendix A. Cow Sense PET LCoC Reference Table and Appendix B Breed Association Codes) from your herd against those in the LCoC Reference Herd.



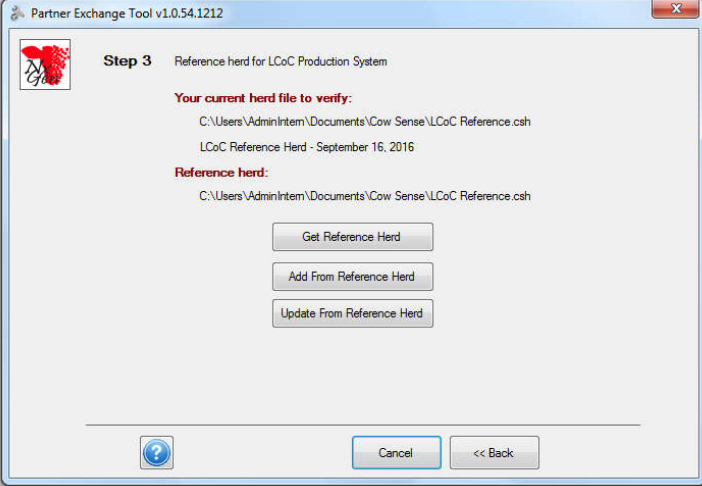
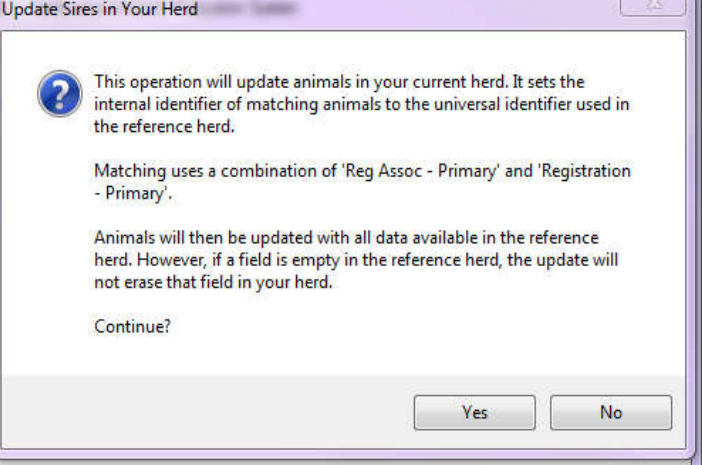
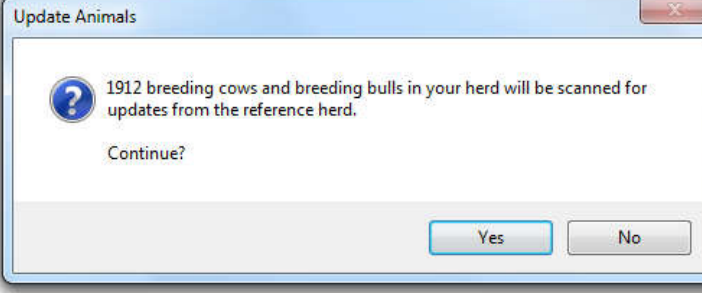
Initiate this process from the PET Step 2 Function Window. From the drop down arrow, select 'Use Reference Herd, then click Next.

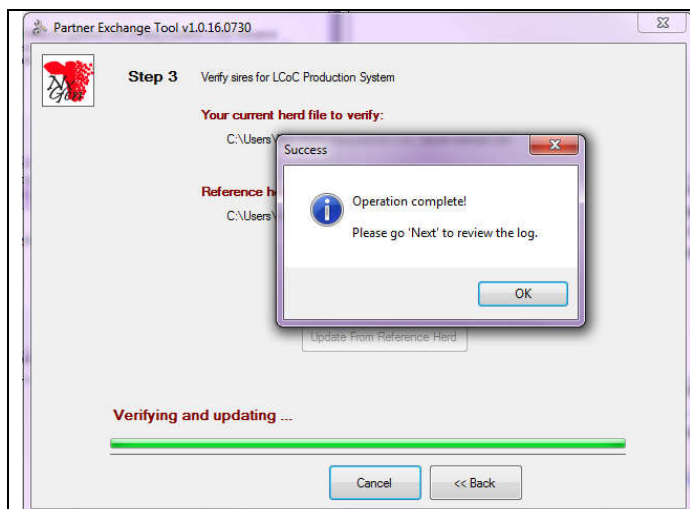


The PET Step 3 Verify Window will appear. From this screen select the “Get Reference Herd” button. This function will use the Midwest MicroSystems’ BeefSTAR™ application to retrieve the Reference Herd from the LCoC system.

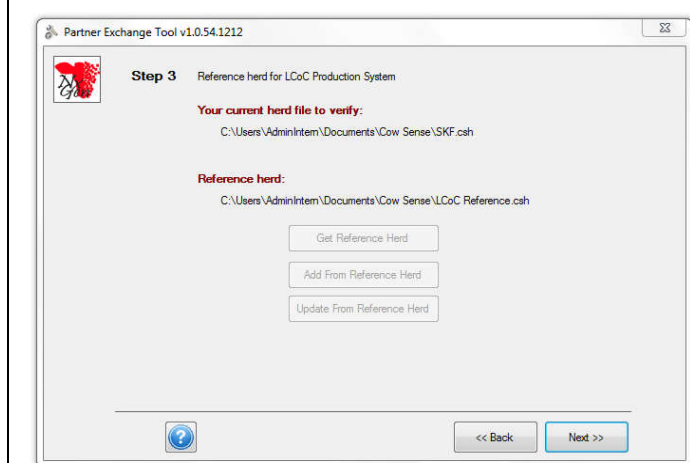
You will likely want to click No if asked if you would like to use the copy of the Reference Herd that already exists, to ensure that you are using the most recent herd file.

A green progress bar will appear across the bottom of the window to show the status of downloading the LCoC Reference herd file.

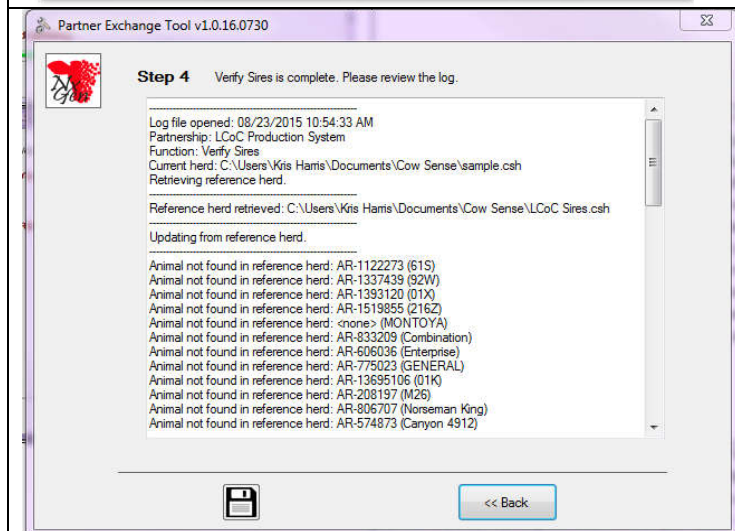
	<p>Once the download is complete click the 'Update From Reference Herd' button.</p>
	<p>An "Update Sires in your Herd" window will open, click Yes to continue.</p>
	<p>An "Update Animals" window will appear, notifying you of the number of breeding cows and bulls in your herd that will be compared against the Reference Herd. Click Yes to continue.</p>



A green progress bar will be displayed to show the processing of your records. When verification is finished a message will be displayed indicating the “Operation is complete!” click OK to continue.



Back on the PET Step 3 Verify Window, click Next to view your log file for any records that were found and updated and just as importantly those that were not found.



The Step 4 Verify Window will appear displaying the results of the verification in a log. This log lists the results by animal. The Primary Association (breed) Code for the animal is listed first, then the Primary Registration Number followed by the Animal ID (if any).

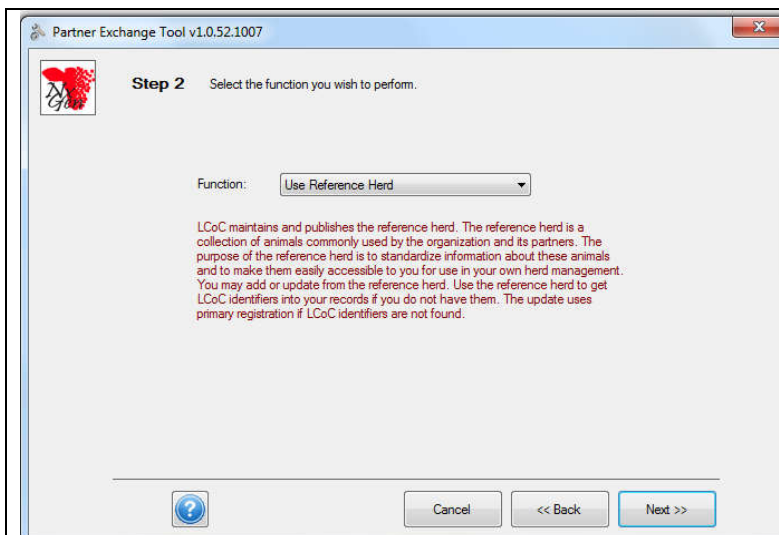
If you find you have animal records flagged as “Animal not found in reference herd” in this log, you should return to Cow Sense, locate that animal’s record, and determine if there has been any errors or data missing in either the “Registration – Primary” field or “Reg Association – Primary”.

If you find and correct flagged records you will need to rerun the “Update From Reference Herd” function and review the log file. If you want to save this file you can click the Save button (the icon representing a floppy disk). If you elect to save the file, by default it will be saved in “My Documents > Cow Sense > Logs > LCoC” (however you can elect to save it wherever you wish). It may be helpful to open this file with Notepad and you

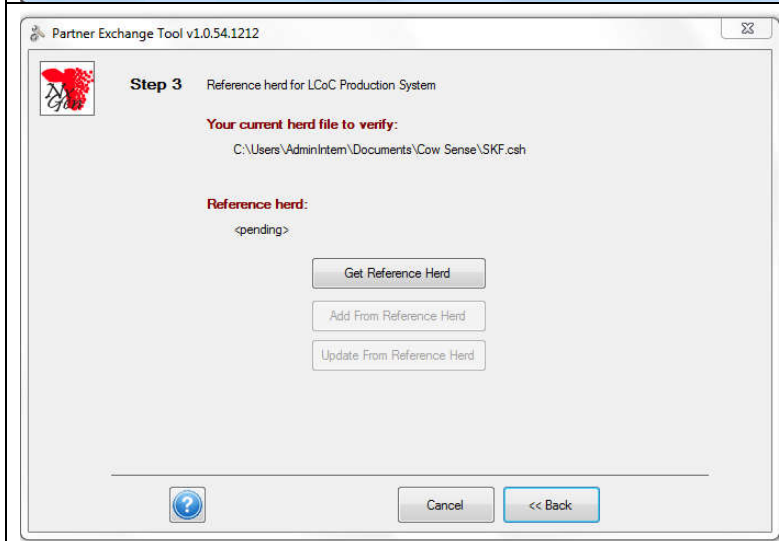
may even print it to hard copy.

IV - Add Animals from LCoC Reference Herd

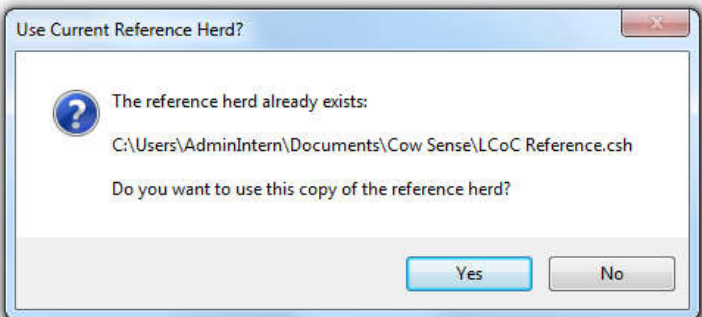
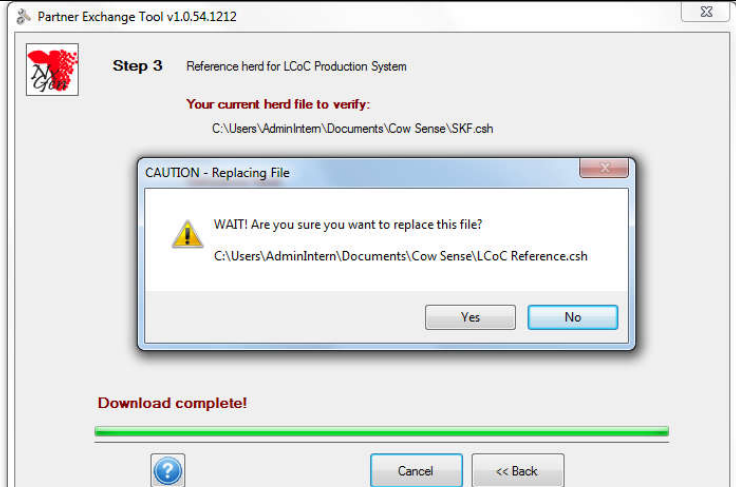
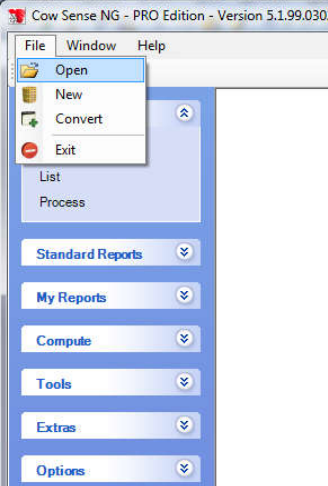
A LCoC Reference Herd has been created to provide an easy way of adding and verifying animal records that are common to many herds. If there are animal records in the LCoC Reference Herd that are not in your herd file and need to be, the LCoC Interface tool can be useful to add them into your herd. This may be the case of a new AI Sire used or pedigree reference animals.

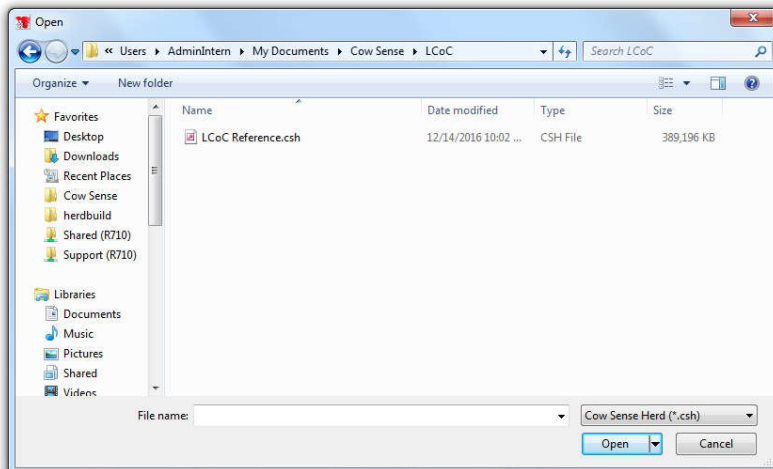


Initiate this process from the PET Step 2 Function Window. From the drop down arrow, select 'Use Reference Herd', then click Next.



The PET Step 3 Verify Window will appear. From this screen select the "Get Reference Herd" button. This function will use the Midwest MicroSystems' BeefSTAR™ application to retrieve the Reference Herd from the LCoC system. A green progress bar will appear across the bottom of the window to show the status of downloading the LCoC Reference Sires herd file.

	<p>If the Reference Herd has been downloaded previously, a message will appear saying that this reference herd already exists.</p> <p>Since the Reference Herd is always changing, you will likely want to download a new copy for this step. Click No if you would like to use a new copy of the reference herd, or Yes if you need to return to the file already on your computer.</p> <p>If you have not downloaded the reference herd previously, this message will not appear.</p>
	<p>After the Reference Herd downloads, it is ready to use. If a copy is being replaced on your computer (if you have worked in the Reference Herd at a previous time) another message box will appear confirming that you want to replace this herd file. Click Yes if you want to add new animals from the most current Reference Herd.</p>
	<p>Next, you need to identify the animals in the LCoC Reference Herd that you want to add to your herd. Open the reference herd file from the Cow Sense Top Menu select File > Open.</p>

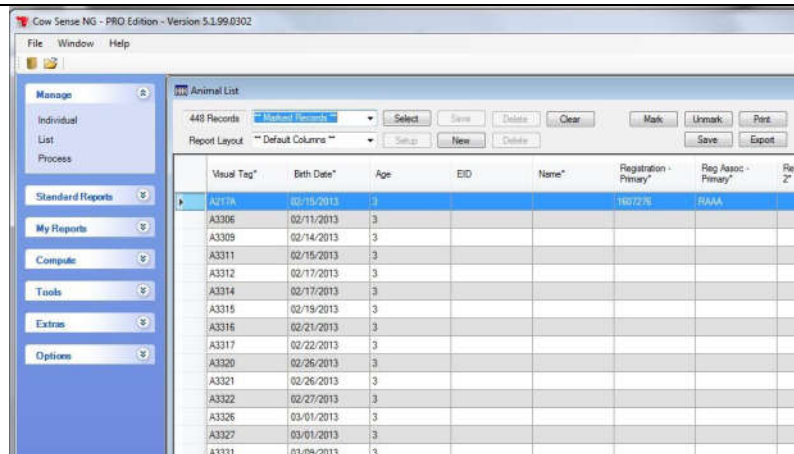


An 'Open File' window will appear, with your Cow Sense file directory being displayed. Select the LCoC Reference.csh file and click Open.

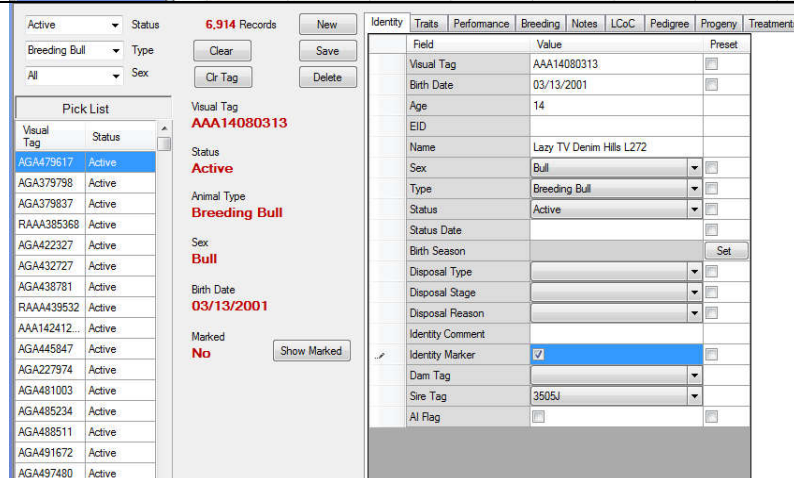
The Reference Herd may need updated to the current version of Cow Sense. If this is the case, Cow Sense will display a message box prompting a herd file Update. Click Yes to update the herd file to the current version.

Path: C:\Users\AdminIntern\Documents\Cow Sense\LCoC Reference.csh)

To confirm that you are in the correct herd file you can look at the bottom left of the Cow Sense window to see the name of the active herd file. In this case we want to see the LCoC Reference.csh file.



You can add an animal record from the LCoC Reference Herd by “Marking” it or flagging it so this function knows what records you would like to add. First make sure there are no records already flagged in the Reference herd. From the Manage > List view click the “Marked Records” from the drop down to the left of the Select button. If there are no records displayed close the list view. If there are records displayed, click the “Unmark” button to remove this flag and close the List view.

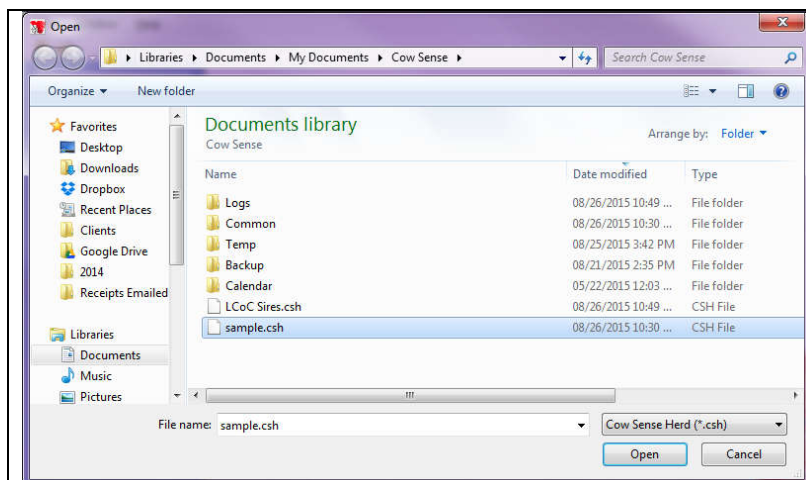


Go to Manage>Individual. Select the cow or bull record from the Pick List that you want to add to your herd.

Locate the Identity Marker field from the Identity tab. Click (check) the box to mark the animal that you want to add to your herd.

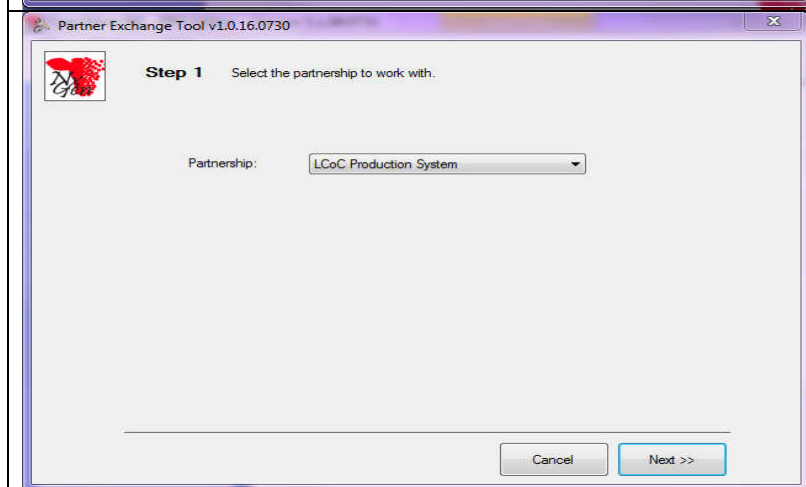
Repeat this process for all the animals you want to add.

When finished close the Individual window by clicking the Red X in the top right corner.

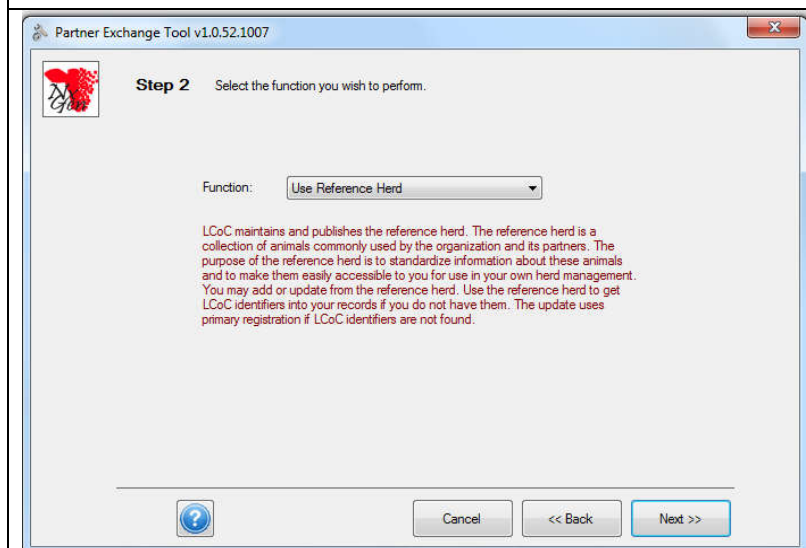


Once you are finished selecting animal records to add from the LCoC Reference Herd, click on the File Menu in the top left of the Cow Sense window and choose Open. Then select your herd file and click the “Open” button.

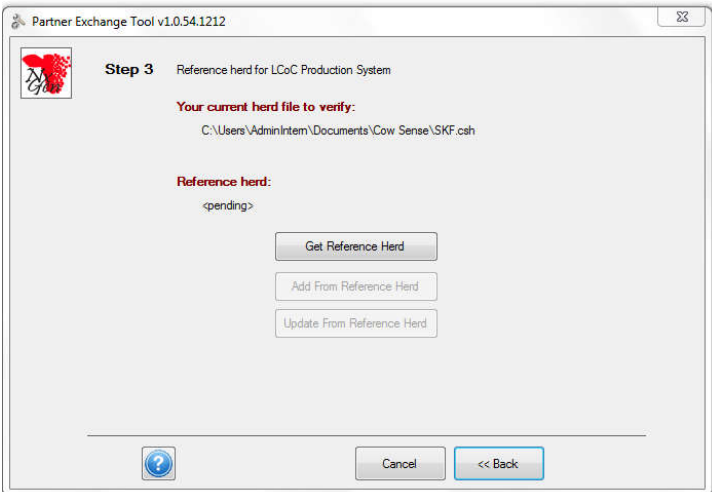
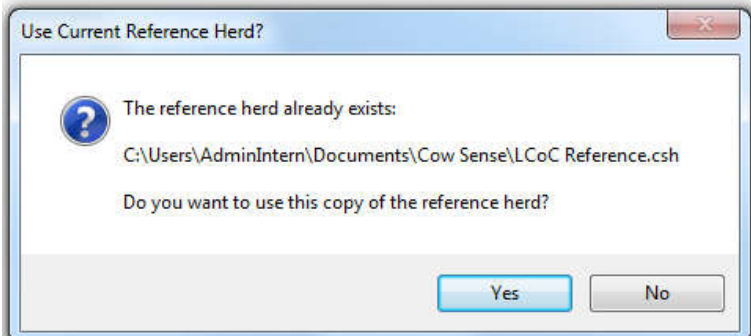
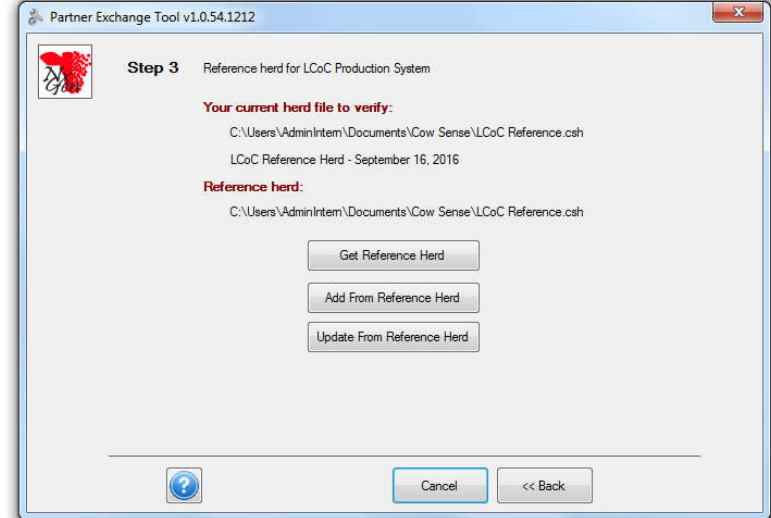
Prior to adding animal records from the Reference Herd, you should always make a backup of your herd file. See the [NxGen Guide to Backup Restore](#)

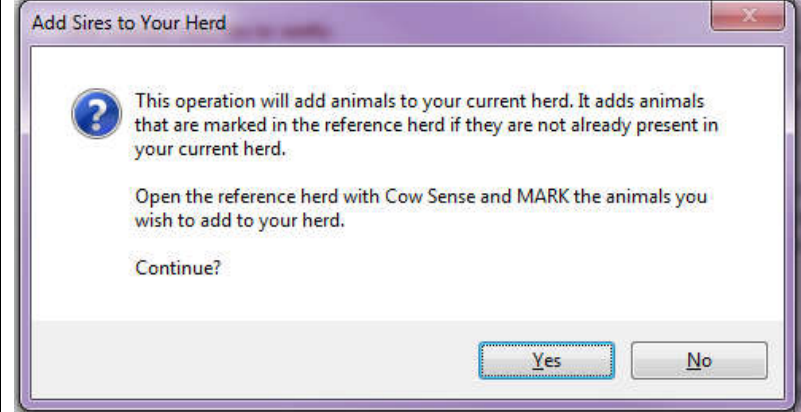
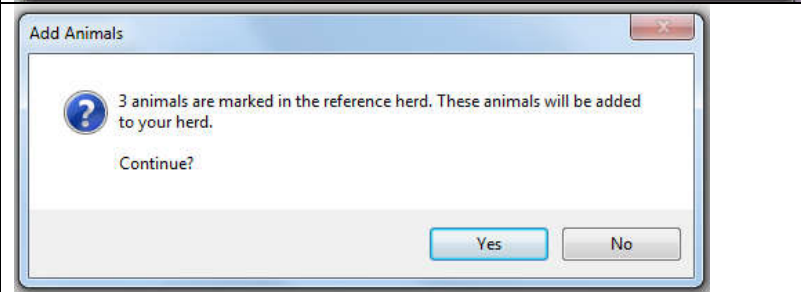
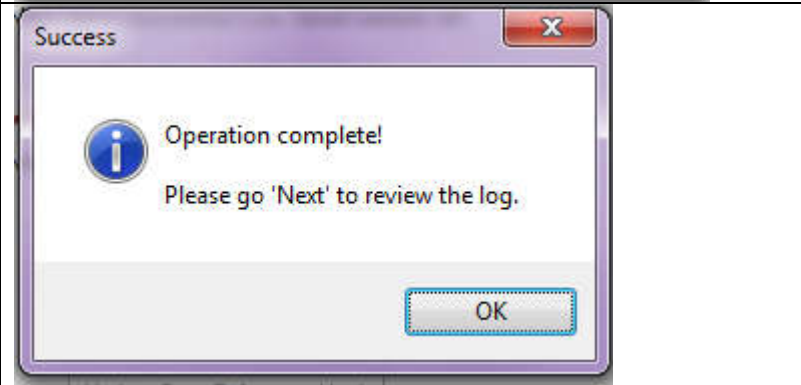
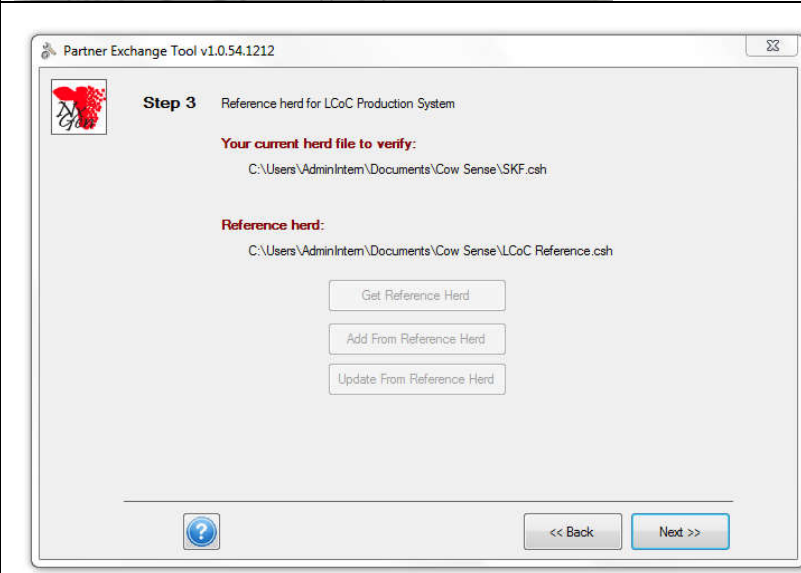


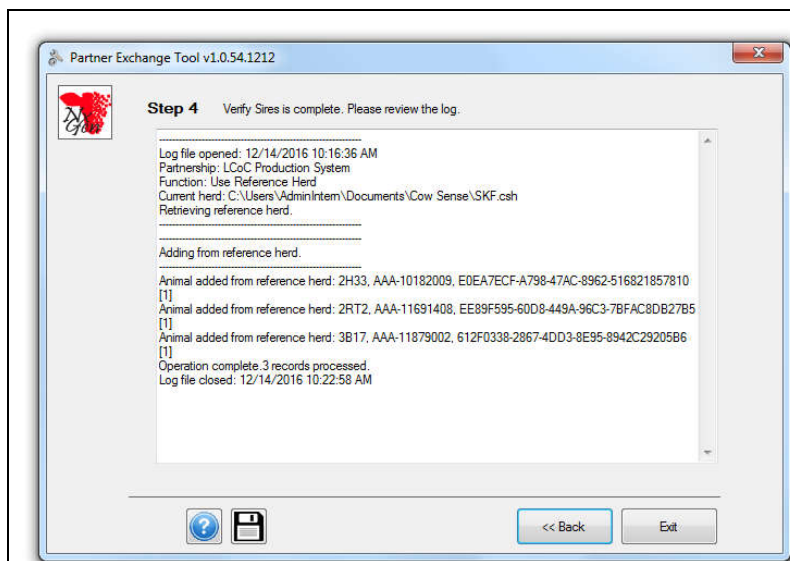
Then go to Tools>Partner>Run. The PET Step 1 Function Window will open. Make sure you see LCoC Production System in the Partnership field. If LCoC Production System is not in the field you can use the drop down arrow to select it. Now click Next.



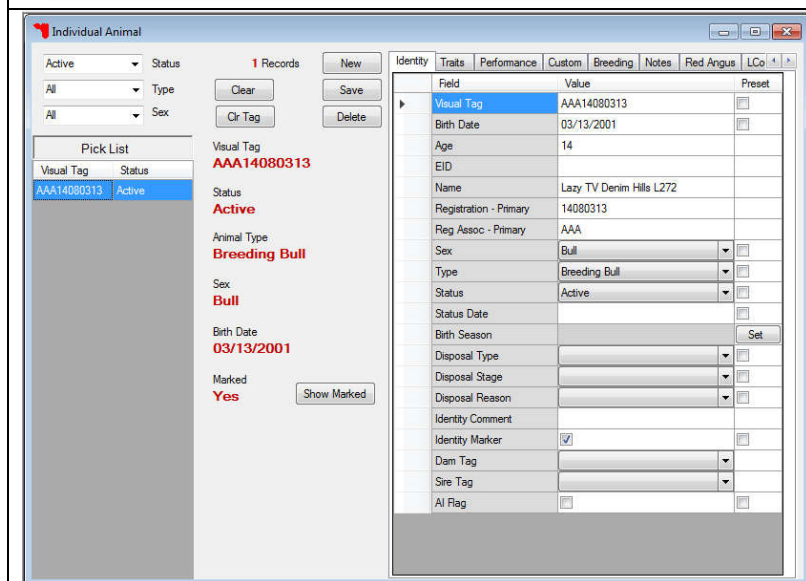
The PET Step 2 Function Window will appear. From the drop down arrow, select ‘Use Reference Herd’, then click Next.

	<p>From the PET Step 3 Function Window, select the “Get Reference Herd” button.</p>
	<p>A 'Use Current Reference Herd' window will open indicating a reference herd already exists and asks if you want to use this copy of the reference herd. You will want to click Yes this time.</p> <p>You will want to use the current reference herd file and not overwrite it with a new one. Otherwise the animals you marked will get overwritten with the updated reference herd file.</p>
	<p>You will be returned to the PET Step 3 Function Window and the “Add From Reference Herd” button will be active.</p> <p>Click the “Add From Reference Herd” button.</p>

	<p>A widow will appear explaining that you are about to add animals from the reference herd to your herd. Click Yes if you want to proceed.</p>
	<p>An Add Animals window will appear confirming that you want to add x number of animals to your herd from the reference herd. Click Yes if you want to continue.</p>
	<p>PET will add the marked records to your herd. When it is finished an 'Operation Complete' window will open letting you know the operations is complete. Click OK</p>
	<p>You will be returned to the PET Step 3 Function Window. Click Next</p>



In PET Step 4 Function Window there will be a log for you to review. This log displays if the operation was complete and animals added. You can save this file by clicking the icon representing a floppy disk. Click the red X to leave the PET Interface tool.



After closing PET you will want to go to Manage>Individual and select the animal record you just imported from the reference herd. Verify the data is complete and make any adjustments (i.e.: Type, Status, VID, etc) as necessary. (If they are AI Sire(s) we recommend changing Status to Reference and check the AI Flag.)

V – Export Dam and Sire Data to be recorded with LCoC

In preparation for submitting initial progeny performance information to LCoC, you will need to confirm that their parents are recorded with LCoC. If a Sire or Dam is not recorded (does not have an LCoC Key), you will need to record them with LCoC before you can submit any progeny data. The following illustration depicts initial submission of data to be at, or soon after calving. (If your initial submission is at a different stage of the animal's life, you will use selection criteria appropriate to display those records.)

Cow Sense NxGen Guide PET –LCOC Interface

The screenshot shows the 'Animal List' application. The sidebar on the left contains a 'Message' button and a list of navigation options: Individual, List, Process, Standard Reports, My Reports, Compare, Tools, and Options. The main window displays a table of animal records. The table has columns for Age, Visual Tag, Birth Date, EID, Name, Sex, Type, and Status. The records include various animals, such as breeding bulls, disposal animals, and cows, with their respective IDs and dates.

Age	Visual Tag	Birth Date	EID	Name	Sex	Type	Status
6	616	02/12/2000		QMD INTENSIFRO	Bull	Breeding Bull	Disposal
6	61X	12/25/2009		QMD Trump 61X	Bull	Breeding Bull	Active
6	615	03/01/2006		QMD Stonewall 715	Bull	Breeding Bull	Disposal
6	62	02/12/2006		QMD Redline 62S	Bull	Breeding Bull	Disposal
4	62W	01/27/2009		QMD Accelerator 719	Bull	Breeding Bull	Disposal
4	68W	02/15/2009		QMD Powerhouse 68W	Bull	Breeding Bull	Disposal
4	213Z	02/14/2012		QMD Brendish 7119	Bull	Breeding Bull	Active
	213Z & 216Z				Mult Sex		Disposal
3	216Z	03/10/2012		QMD Catalyst 216Z	Bull	Breeding Bull	Active
	AH82			QMD BLACK 821 in the box	Cow	Breeding Cow	Reference
	AJ96			QMD Michalotte 96 in the box	Cow	Breeding Cow	Disposal
	AK06			QMD NADIA 06	Cow	Breeding Cow	Reference

Return to Cow Sense and from the Task Pane on the left select Manage>List. From the drop down arrow to the left of "Select" choose "All Records".

Animal List

437 Records ** Unsaved Selection ** **Select** Save Delete Clear Mark Unmark

Record Selection [Close]

Find Records Where

	Field Name	Operator	Criteria	And/Or
▶	Birth Date	Year Equals	2016	
*				

Sort By

	Field Name	Sort
*		

Clear Find Clear Sort

Cancel **OK**

Then click the “Select” button to the right and create the filter or criteria to sort out the records you intend to submit. In this example it is 2016 born calving data:

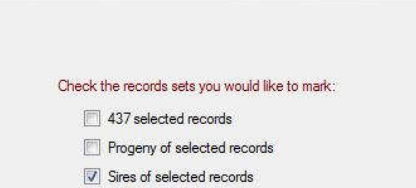
Field Name	Operator	Criteria	And/Or
Birth Date	Year Equals	2016	(left blank)

Click the “OK” button

[illegible]

This selection will display all your calves for which you wish to submit initial data. You can save this selection of records by clicking the “Save” button that is to the right of the Select button to the top left of this screen. You will be prompted to Name the saved selection. You may wish to enter a name such as “2016 Calves” (for this example).

Now click the "Mark" button. If there are already records Marked, you will be asked if you want to "Unmark" those records first. Select the "Yes" button to clear this flag on previously "Marked" records.



✓ Mark Options

Check the records sets you would like to mark:

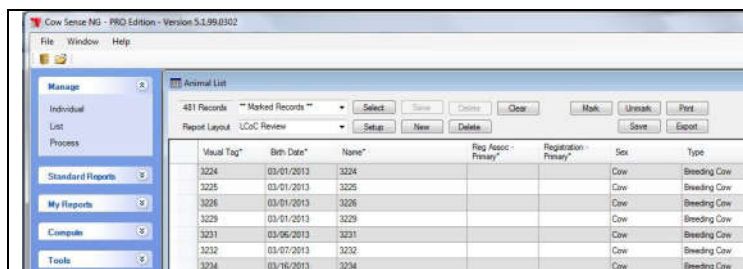
- ☐ 437 selected records
- ☐ Progeny of selected records
- ☒ Sires of selected records
- ☒ Dams of selected records
- ☐ ET progeny of selected recip dams
- ☐ ET recipient dams of selected records

Cancel OK

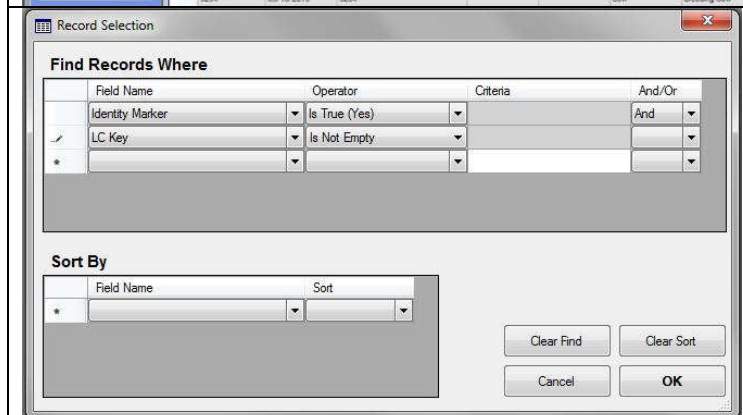
A “Mark Options” window will open. By default the selected records will be checked, **uncheck** this box as we must first verify all parent records have been recorded by LCoC.

Check the boxes to the left of both Sires AND Dams of selected records and click OK. (Also select ET recipient dams of selected records if you are sending records on ET calves). This will set the Identity Marker flag on the specified parent animal records.

Cow Sense NxGen Guide PET –LCOC Interface



From the List View select “Marked Records” from the drop downs to the left of the “Select” button. This will display all Sires and Dams of the calf records you ultimately wish to submit to LCoC.

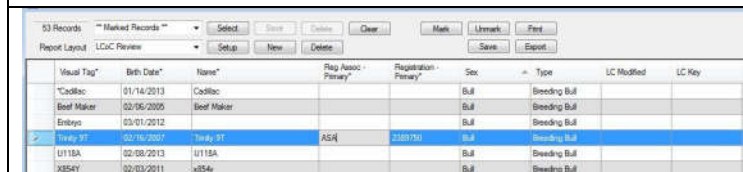


Now we need to remove any Sires and Dams from this list that have a pre-existing LC Key and just focus on any records that do not have an LC Key. To do so, click the “Select” button. A “Find Records Where” screen will appear. Add to the selection for marked records the selection for Sires and Dams that do have a LC Key:

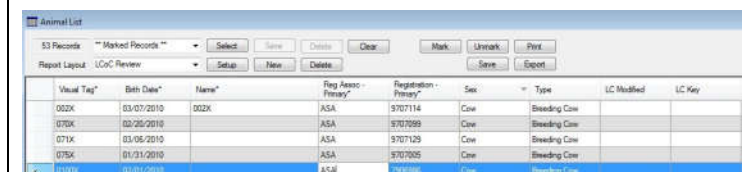
Field Name	Operator	Criteria	And/Or
Identity Marker	is True (Yes)		And
LC Key	Is Not Empty		



As the objective is to just submit parents that **DO NOT** have LC Keys, then we can unmark the Sires and Dams that **DO** have LC Keys. As we have previously selected for these records we can now simply click the “Unmark” Button to exclude these records.



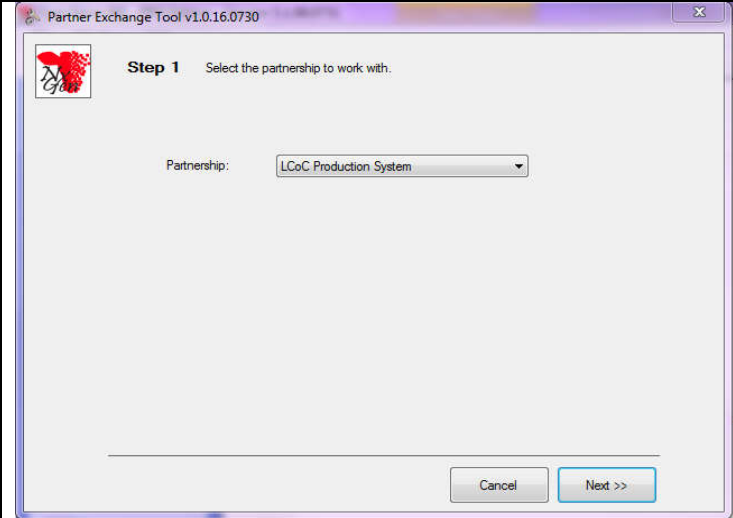
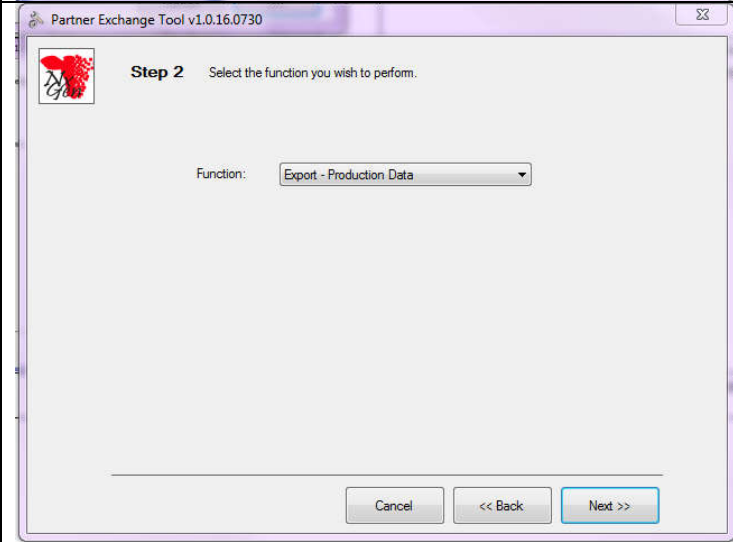
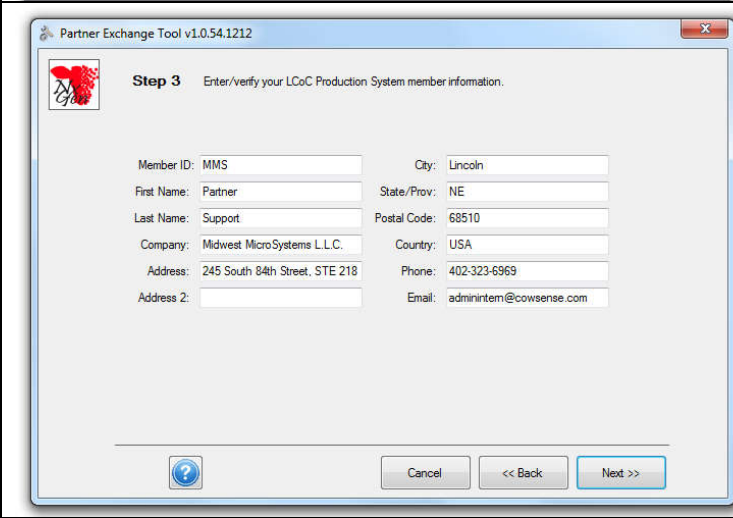
When you return to your selection of “Marked Records” the result is now just Sires and Dams **WITHOUT** an LC Key. These are the parental records that must be submitted prior to their progeny.

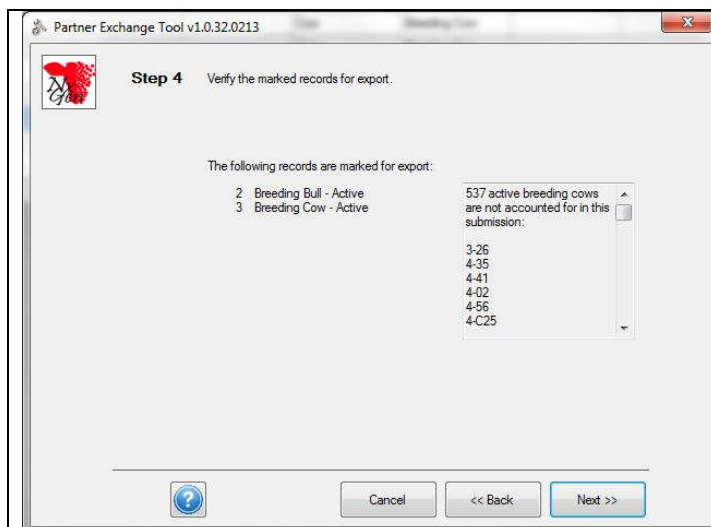


Check the LCoC Reference Herd to see if that animal record exists. See Process IV “Add Animals from LCoC Reference Herd”.

If any of these records are registered with a Breed Association, add the Primary Association Code (see Appendix B) and Primary Registration Number to those animal records. This information can be added either in the “List” view or “Individual” view.

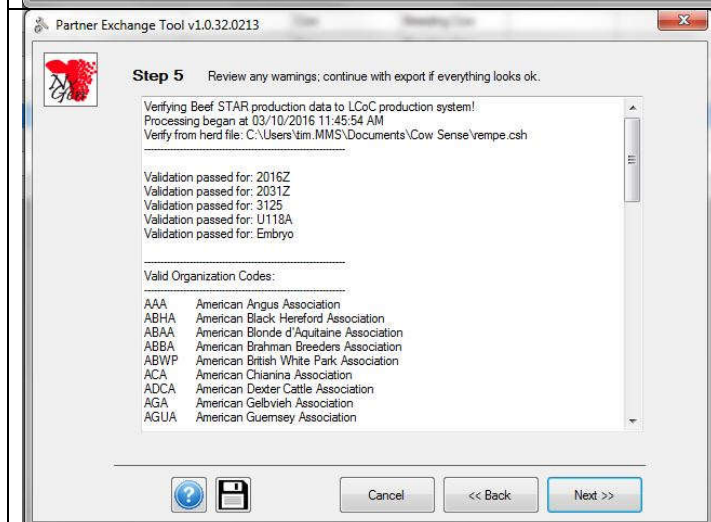
In the event that the animal **IS NOT** registered with a Breed Association, **IS NOT** included in the LCoC Reference Herd, however **IS** recorded with LCoC (as you know it has an LCoC ID) the following procedure should be followed. In this case enter the LCoC ID in the Registration Primary field and enter “LCoC” in the Reg Assoc – Primary field.

	<p>You are now ready to submit the Sires and Dams that DO NOT have an LC Key in your herd file. From the Cow Sense Home Screen go to the Task Pane on the left and choose Tools > Partner > Run.</p> <p>This will open the Partner Exchange Tool. From PET Step 1, select “LCoC Production System” if it is not already in the Partnership field. Then choose Next.</p>
	<p>The PET Step 2 Window will appear. From the Function dropdown Select “Export – Production Data” and click Next.</p>
	<p>From the PET Export Verify Step 3 Window confirm your personal details are correct and click Next.</p>



This will lead you to PET Export Verify Step 4. Verify the numbers of marked records for export are correct and click Next.

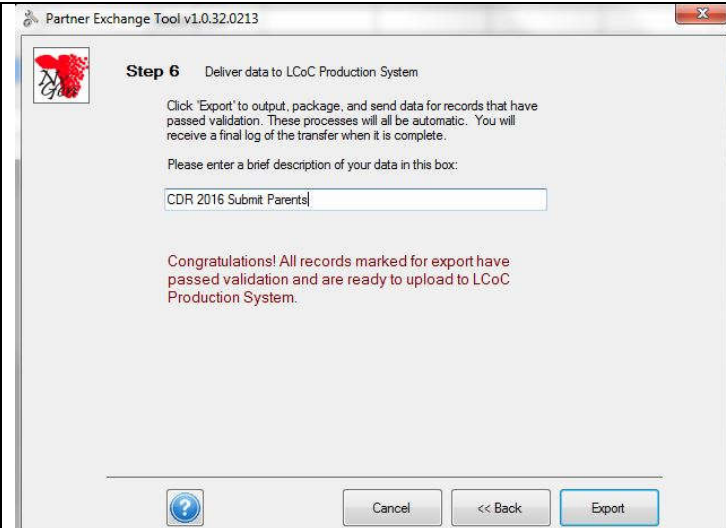
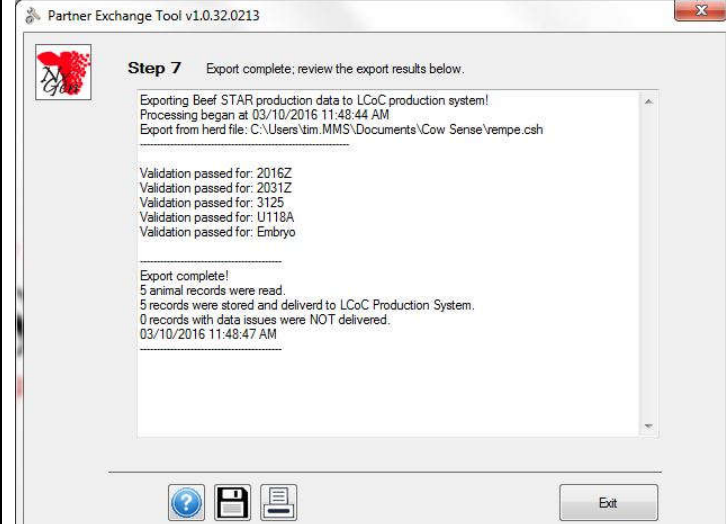
Note the Pane to the right of this screen reflects the number of Active Breeding Cows for which there are no progeny records being submitted. This is not relevant to submission of parent records in this example and can be ignored. However when submitting progeny records this is a good reference for you to verify you have accounted for all progeny of Active Breeding Cows.



The PET Export Step 5 Window will verify that all needed information for LCoC registration is available. When it is finished verifying you will see a verification log.

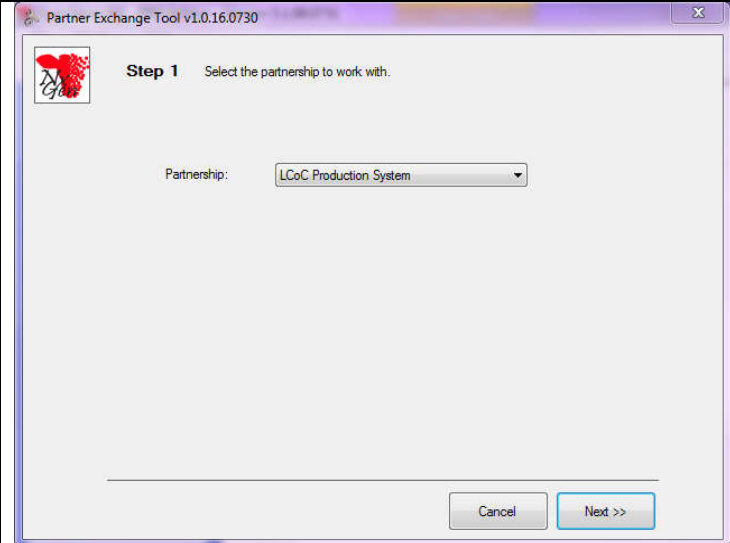
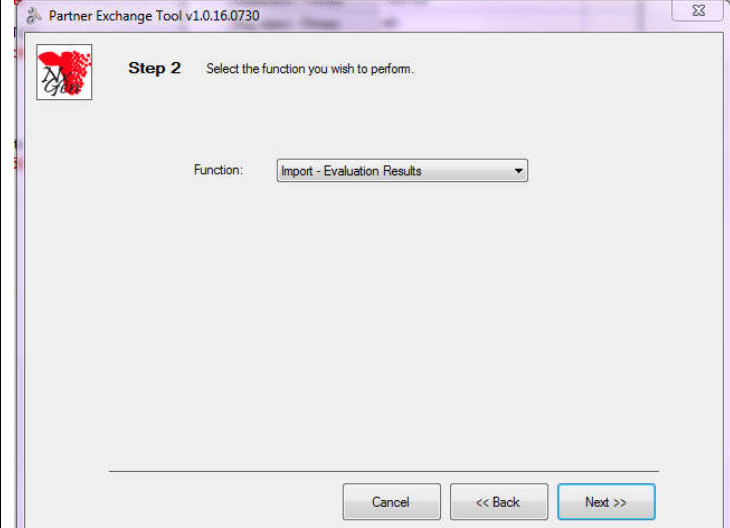
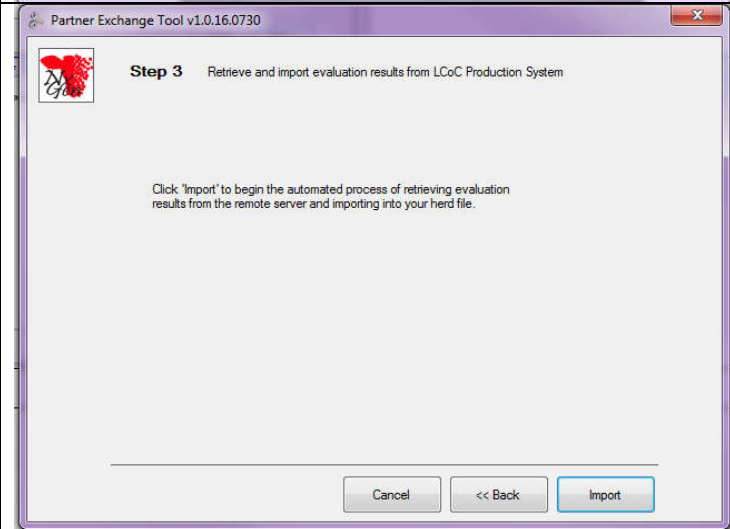
Cow Sense NxGen requires that only the fields of Animal Type and Status be complete in order to enter an animal record. However it is important to recognize that LCoC has specific requirements for submitting data to be recorded. Appendix A lists those fields that are required to be completed for submission to LCoC. The Partner Exchange Tool will review all marked records to determine if they meet the minimum requirements to be submitted. If a record fails to meet these requirements, it will not be submitted to LCoC.

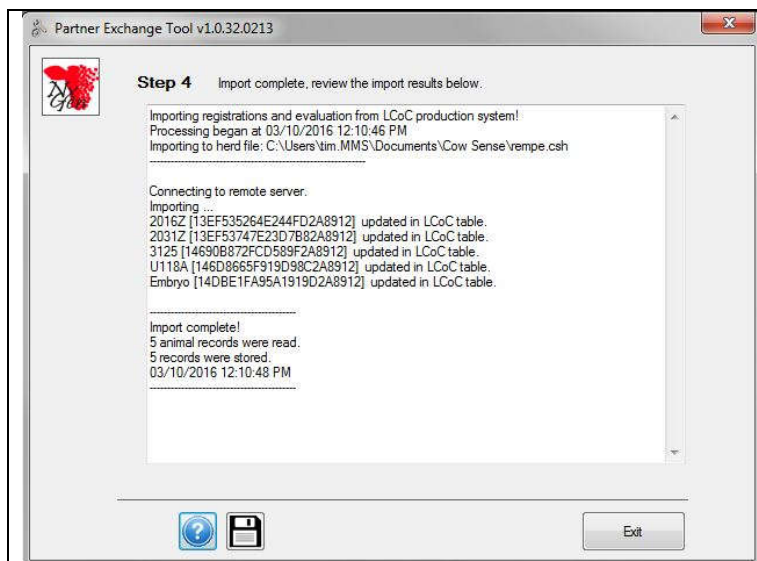
If you received any notification of flagged records you need to cancel out of PET and correct any issues with those records. You can save this file by clicking the icon representing a floppy disk. Once the issues are resolved run PET Step 4 Verify again. When you receive a flag free log (all records passed validation) you can continue the exporting process by clicking Next.

	<p>From PET Export Step 6 you can enter a brief description of the data you are sending to LCoC (such as CDR 2016 Submit Parents). When ready click the Export button. The NxGen Partner Exchange Tool will export and upload your file to BeefSTAR at LCoC.</p>
	<p>When the PET Export is complete, there will be a Log for you to review. You can save this file by clicking the icon representing a floppy disk, should you wish to print a hard copy, click on the icon representing a printer. When done, click Exit to leave PET.</p>

VI – Retrieve Dam and Sire Data from LCoC

After you have submitted your Dam and Sires to be recorded by LCoC, BeefSTAR™ will process your data and within 2 hours you will receive an email from postmaster@webserver.mmsweb.us. The subject of the e-mail will be “LCoC Data Notification” reporting that your records are ready to be retrieved from LCoC. Please “White List” this Sender address and Subject in your Spam Filter to prevent it from being filtered into a junk folder. If you do not receive this e-mail within 2 hours of submission, please e-mail support@cowsense.com.

	<p>To retrieve your data go to Tools>Partner>Run, select “LCoC Production System” if it is not already in the Partnership field and click Next.</p>
	<p>From the PET Step 2 Function Window, select “Import – Evaluation Results” as the function you wish to perform and click Next.</p>
	<p>From the PET Step 3 Retrieve Window, click the “Import” button</p>



When the data has been downloaded and imported into Cow Sense you will receive a log file. Review this file for a report of the records that were updated as well as any records with issues. You can save this file by clicking the icon representing a floppy disk and then click Exit to leave PET.

Visual Tag#	Birth Date	Name	Reg Assn	Privacy	Registration Privacy	Sex	Type	LC Modified	LC Key	LC ID	LC ABC Date	Status
2031Z	01/23/2013	2031Z				Cow	Breeding Cow	03/10/2016 12:10 PM	00020422	Pending	03/10/2016	P
3125	02/14/2013	3125				Cow	Breeding Cow	03/10/2016 12:10 PM	00020423	Pending	03/10/2016	P
U118A	03/01/2012					Bull	Breeding Bull	03/10/2016 12:10 PM	00020425	Pending	03/10/2016	P
Embryo	03/06/2013	U118A				Bull	Breeding Bull	03/10/2016 12:10 PM	00020424	Pending	03/10/2016	P

To confirm an animal has been recorded, go to **Manage>List**. If you have NOT unmarked the Records submitted you can Select “Marked Records”. Note you will see that there is now an LC Key and LC Modified Date. The LC ID Field will have the text “Pending” if the animal was not found to have been previously recorded. The LC ID will be returned and populated when the next Genetic Evaluation is retrieved from LCoC.

These fields are not editable, however they can be included in any record selection or query as well as any report you create. You can also review this information in the Individual View and navigate to the LCoC tab.

Refer to Appendix D (LCoC Report Supplement) for more information on creating and saving a list view layout that displays retrieved data.

VII – Export Progeny data

Now that all your Dams and Sires are recorded you can now submit the calves you intend to record (Active and Disposed).

Cow Sense NxGen requires that only the fields of Animal Type and Status be complete in order to enter an animal record. However it is important to recognize that LCoC has specific requirements for submitting data to be recorded. Appendix A (LCoC Interface Reference Table) lists those fields that are required to be completed for submission to LCoC. The Partner Exchange Tool will review all marked records to determine if they meet the minimum requirements to be submitted. If a record fails to meet these requirements, it will not be submitted to LCoC.

Animal List

437 Records ** Unsaved Selection **

Report Layout: Culling Data Review

Visual Tag	Birth Date	Birth Weight	Sex	Color Code	Dealing Ease	Identity Comment	Tattoo 1	Type	Status	Status Date	Disposal Type	Disposal Date	Disposal Reason	Source Code	Owner Code	Owner Name	Owner Address	Owner City	Owner State	Owner Zip
252	02/29/2016	59	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
210	02/29/2016	62	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
342	02/29/2016	62	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
444	02/29/2016	72	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
345	02/29/2016	81	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
446	02/29/2016	78	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
383	02/29/2016	58	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
427	02/29/2016	81	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
386	02/29/2016	74	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
379	02/29/2016	69	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
391	02/29/2016	60	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
421	02/29/2016	65	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
392	02/29/2016	61	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
434	02/29/2016	61	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
395	02/29/2016	77	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
438	02/29/2016	79	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
437	02/29/2016	50	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
438	02/29/2016	60	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
396	02/29/2016	70	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
439	02/29/2016	68	Bull	B	1			Nursing Calf	Active					AS	Single	Owner				
436	02/29/2016	78	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
437	02/29/2016	69	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
438	02/29/2016	60	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
439	02/29/2016	70	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
440	02/29/2016	71	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
441	02/29/2016	72	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
442	02/29/2016	73	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
443	02/29/2016	74	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
444	02/29/2016	75	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
445	02/29/2016	76	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
446	02/29/2016	77	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
447	02/29/2016	78	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
448	02/29/2016	79	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
449	02/29/2016	80	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
450	02/29/2016	81	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
451	02/29/2016	82	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
452	02/29/2016	83	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
453	02/29/2016	84	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
454	02/29/2016	85	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
455	02/29/2016	86	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
456	02/29/2016	87	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
457	02/29/2016	88	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
458	02/29/2016	89	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
459	02/29/2016	90	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
460	02/29/2016	91	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
461	02/29/2016	92	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
462	02/29/2016	93	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
463	02/29/2016	94	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
464	02/29/2016	95	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
465	02/29/2016	96	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
466	02/29/2016	97	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
467	02/29/2016	98	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
468	02/29/2016	99	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				
469	02/29/2016	100	Heifer	B	1			Nursing Calf	Active					AS	Single	Owner				

Same as in Process V, you will need to “Mark” or identify the progeny records you wish to submit by navigating to the Cow Sense Task Pane on the left and select Manage>List. From the drop down arrow to the left of the “Select” button choose “All Records”. Then click the “Select” button and create a filter or selection of records to meet your needs. Refer to page 3 of this document for review.

Animal List

437 Records ** Unsaved Selection **

Report Layout: Culling Data Review

Visual Tag	Birth Date	Birth Weight	Sex	Color Code	Dealing Ease	Identity Comment	Tattoo 1	Type	Status	Status Date	Disposal Type	Disposal Date	Disposal Reason	Source Code	Owner Code	Owner Name	Owner Address	Owner City	Owner State	Owner Zip
1	01/30/2016	54	Bull	B	1			CG	Nursing Calf	Disposed										
2	01/31/2016	64	Bull	B	1			CG	Nursing Calf	Active										
3	01/31/2016	65	Bull	B	1			CG	Nursing Calf	Active										
4	02/01/2016	65	Bull	B	1			CG	Nursing Calf	Active										
5	02/02/2016	65	Bull	B	1	B		CG	Nursing Calf	Active		02/12/2016								
6	02/04/2016	61	Bull	B	1			CG	Nursing Calf	Active										
7	02/04/2016	66	Heifer	B	1	B		CG	Nursing Calf	Active		02/12/2016								
8	02/05/2016	63	Bull	B	2	B		LG	Nursing Calf	Active		02/12/2016								
9	02/05/2016	66	Bull	B	1	B		LG	Nursing Calf	Active		02/12/2016								
10	02/05/2016	66	Bull	R	1	R		LG	Nursing Calf	Active		02/12/2016								
11	02/05/2016	61	Bull	B/R	1	B		LG	Nursing Calf	Active		02/12/2016								
12	02/05/2016	63	Bull	B	3	B		CG	Nursing Calf	Active		02/12/2016								
13	02/05/2016	75	Bull	B	1			CG	Nursing Calf	Active										
14	02/05/2016	78	Bull	B	1	B		CG	Nursing Calf	Active		02/12/2016								
15	02/06/2016	80	Bull	B	1	B		LG	Nursing Calf	Active		02/12/2016								
16	02/05/2016	69	Bull	B	1			CG	Nursing Calf	Active										
17	03/06/2016	68	Bull	B	1	B		CG	Nursing Calf	Active		03/13/2016								

Once you have made your selection of the progeny records to be recorded with LCoC, click the “Mark” button.

If there are already records Marked, you will be asked if you want to “Unmark” those records first. Select the “Yes” button.

✓ Mark Options

Check the records sets you would like to mark:

- ☒ 437 selected records
- ☐ Progeny of selected records
- ☐ Sires of selected records
- ☐ Dams of selected records
- ☐ ET progeny of selected recip dams
- ☐ ET recipient dams of selected records

Cancel OK

A “Mark Options” window will open. Select the first box “(X number) of selected records” and click OK.

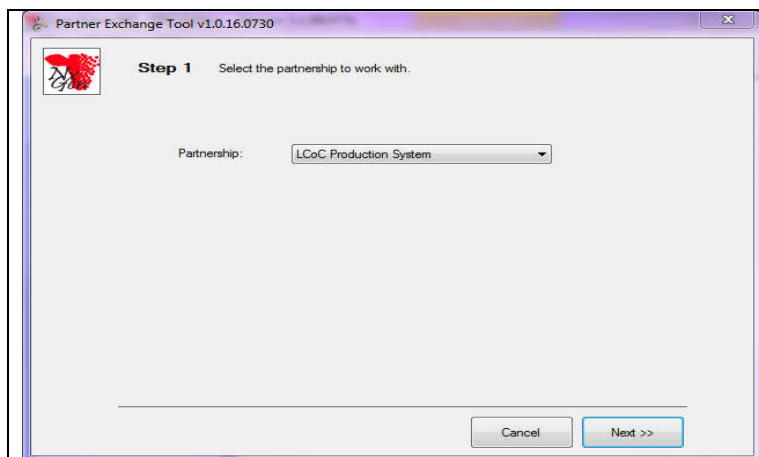
Follow the same steps in Process V pages 13-18 to submit data to LCoC to be recorded.

VIII – Retrieve Progeny Data from LCoC

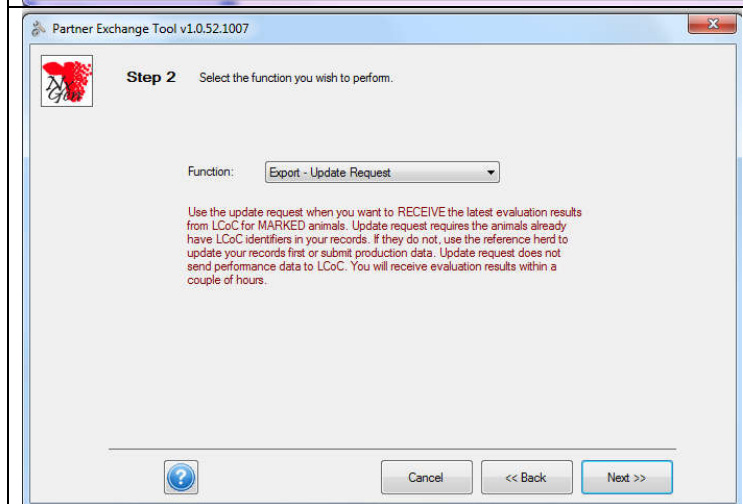
You will receive an email from postmaster@webserver.mmsweb.us; the subject will be “LCoC Data Notification”. This notification will inform you that your records are ready to be retrieved from Leachman Cattle of Colorado. Follow the same steps in Process VI pages 18-20 of this document to retrieve data for progeny records submitted.

IX - Export-Update Request

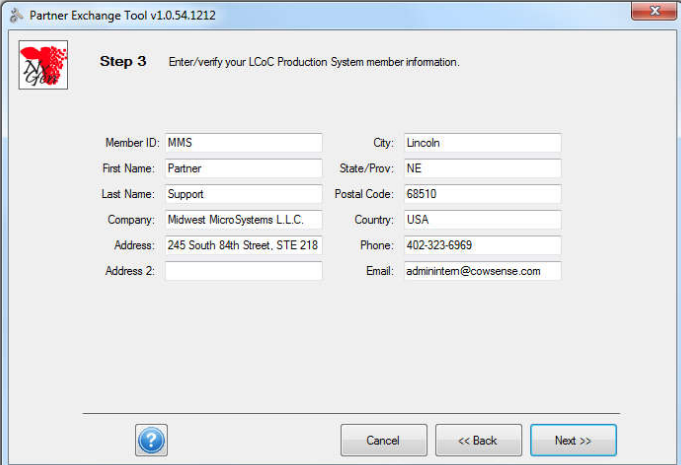
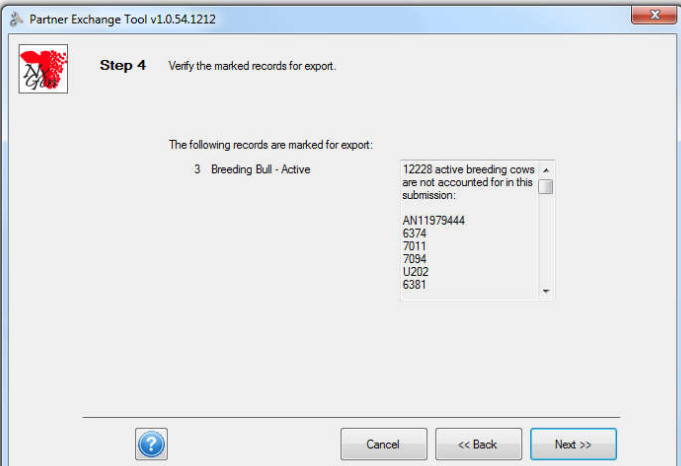
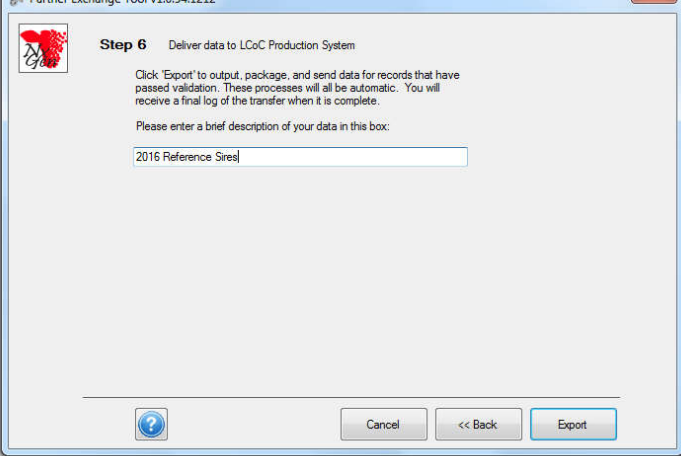
The Update Request function allows you to update LCoC data for animals already in your herd. LCoC routinely updates ABC values for animals in the system, and you may request this updated information at any time. This process is driven off of Marked Records. Records can either be Marked individually in the Individual Animal View, or selected in the List View to mark a group of animals. Refer to Process 5 for more information on marking animal records.

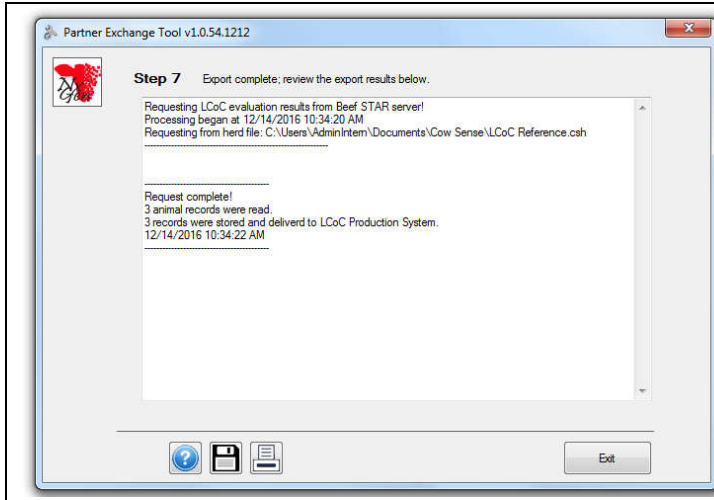


Then go to Tools>Partner>Run. The PET Step 1 Function Window will open. Make sure you see LCoC Production System in the Partnership field. If LCoC Production System is not in the field you can use the drop down arrow to select it. Now click Next.



First, select the records you wish to have updated by Marking them, as explained previously in Process V. Next, open the Partner Exchange Tool, make sure LCoC Production System is selected in Step 1, and select Export-Update Request from the Step 2 screen. Click Next.

	<p>Verify your personal details in Step 3 are correct and click Next.</p>
	<p>This will lead you to PET Export Verify Step 4. Verify the numbers of marked records for export are correct and click Next.</p> <p>Refer to Step III for more information on marking records in the Animal List view.</p>
	<p>Enter a brief description of the data being sent (such as 2016 Reference Sires). When ready click the Export Button, and the NxGen Partner Exchange Tool will export and upload your file to our BeefSTAR® server.</p>



When the data has been exported from Cow Sense you will receive a log file. Review this file for a report of the records submitted to be updated as well as any records with issues. You can save this file by clicking the icon representing a floppy disk and then click Exit to leave PET.

If there were any issues that you can not resolve, e-mail support@cowsense.com and attach a copy of the log file. A Customer Service Representative will be in contact shortly.

X- Retrieve Update Request

You will receive an email from postmaster@webserver.mmsweb.us; the subject will be “LCoC Data Notification”. This notification will inform you that your records are ready to be retrieved from LCoC. Follow the same steps in Process VI of this document to retrieve Updated ABC data for all records you had submitted requesting an Update.



Appendix A. Partner Exchange Tool LCoC Interface Reference Table

Parent Requirements

Entry Form	Cow Sense Field Description	Required	Description/Use
Individual Animal Identity	Visual Tag	Required	Required for all Breeding Cows or Bulls
Individual Animal Identity	Birth Date	Required	Required for all Breeding Cows or Bulls
Individual Animal Identity	Name	*Required	Only applies to registered animals. If animal is registered with a breed association their registration name goes in this field
Individual Animal Identity	Registration - Primary	*Required	*Only applies to registered animals. If animal is registered with a breed association their registration number goes in this field
Individual Animal Identity	Reg Assoc - Primary	*Required	*Only applies to registered animals. If animal is registered with a breed association the breed's association code goes in this field (see Appendix B)
Individual Animal Identity	Tattoo	Optional	Only applies to animals that carry a tattoo and assists in resolving identity
Individual Animal Identity	Sex	If Type is: Breeding Cow Breeding Bull	Parents sex required, Bull or Cow
Individual Animal Identity	Type	Required	Parents Type is required, Breeding Cow, Breeding Bull, or Replacement
Individual Animal Identity	Status	Required	Parents Status is required, Active, Disposed, or Reference
Individual Animal Trait	Breed Composition	Required	Breed Code(s) (reference Appendix C) and appropriate Breed Percentage(s) is required for all Breeding Bulls and Breeding Cows.



Appendix A. Partner Exchange Tool LCoC Interface Reference Table

Progeny Requirements

Entry Form	Cow Sense Field Description	Required	Description/Use
Individual Animal Identity	Visual Tag	If Type is: Nursing Calf Weaned Calf Yearling	Calf's visual identification
Individual Animal Identity	Sire LCoC Key	All Progeny	Sire's LCoC Key is required for all progeny
Individual Animal Identity	Dam LCoC Key	All Progeny	Dam's LCoC Key is required for all progeny
Individual Animal Identity	Sex	If Type is: Nursing Calf Weaned Calf Yearling	Calf's sex is required, Bull, Heifer, Spayed Heifer, Steer, or Unknown
Individual Animal Identity	Birth Date	If Progeny	Calf's birth date and year are required
Individual Animal Trait	Twin Code	If Type is: Nursing Calf Weaned Calf Yearling	Twin Code is required: Single, Twin to Heifer, Twin to Bull, Twin, or Multiple Birth
Individual Animal Trait	Nurse Code	If Type is: Nursing Calf Weaned Calf Yearling	Nurse Code is required: Own dam only, Foster dam, Artificial, or Nurse cow + own dam
Individual Animal Performance	Birth Weight	Optional	Calf's birth weight – If used weights between 10lbs and 150lbs
Individual Animal Performance	Weaning Date	If Weaned Calf	Date of weaning weight
Individual Animal Performance	Weaning Weight	If Weaned Calf	Calf's weaning weight - Weights between 100lbs and 1000lbs
Individual Animal Performance	Yearling Date	If Yearling	Date of yearling weight
Individual Animal Performance	Yearling Weight	If Yearling	Calf's yearling weight - Weights between 300lbs and 2000lbs
Individual Animal Performance	Supp 1 Weight	Optional	Calf's Supp 1 Weight - If used weights between 100lbs and 1500lbs



Appendix A. Partner Exchange Tool LCoC Interface Reference Table

Entry Form	Cow Sense Field Description	Required	Description/Use
Individual Animal Performance	Supp 2 Weight	Optional	Calf's Supp 2 Weight - If used weights between 100lbs and 1500lbs
Individual Animal Performance	Weaning Hip Height	Optional	Calf's Weaning Hip Height - If used measurement between 30 and 50
Individual Animal Performance	Scrotum	Optional	Calf's Scrotum measurement - If used measurement between 20 and 50
Individual Animal Performance	Pelvis Vertical	Optional	Calf's Vertical Pelvis measurement - If used measurement between 10 and 20
Individual Animal Performance	Pelvis Horizontal	Optional	Calf's Horizontal Pelvis measurement - If used measurement between 10 and 20
Individual Animal Feeding	GY In Weight	Optional	Calf's GY In Weight - If used weights between 300lbs and 1000lbs
Individual Animal Harvest	Live Weight	Optional	Calf's Live Weight - If used weights between 500lbs and 2500lbs
Individual Animal Ultrasound	US Weight	Optional	Calf's Ultrasound Weight - If used weights between 500lbs and 1500lbs

Appendix B. Breed Association Codes

Code	Breed Association
AACAS	Aberdeen-Angus Cattle Society
AAA	American Angus Association
ABHA	American Black Hereford Association
ABAA	American Blonde d'Aquitaine Association
ABBA	American Brahman Breeders Association
ABWP	American British White Park Association
ACA	American Chianina Association
ADCA	American Dexter Cattle Association
AGA	American Gelbvieh Association
AGUA	American Guernsey Association
AHA	American Hereford Association
AHCA	American Highland Cattle Association
AICA	American International Charolais Association
AJCA	American Jersey Cattle Association
ALR	American Lowline Registry
AMAA	American Maine Anjou Association
APA	American Pinzgauer Association
ARBA	American Red Brangus Association
ASLRA	American Salers Association
ASHA	American Shorthorn Association
ASA	American Simmental Association
ATA	American Tarentaise Association
AWA	American Wagyu Association
AUSSA	Angus Society of Australia
ARGAA	Argentina Angus Association
ABA	Ayrshire Breeders Association
BIR	Beef Improvement Records
BBU	Beefmaster Breeders United
BAA	Braunvieh Association of America
BLCS	British Limousin Cattle Society
BSCS	British Simmental Cattle Society
BSA	Brown Swiss Association
CAA	Canadian Angus Association
CGA	Canadian Gelbvieh Association
CSA	Canadian Simmental Association
GGA	German Gelbvieh Association
HAUSA	Holstein Association USA
IBBA	International Brangus Breeders Association
IRBBA	International Red Brangus Breeders Association
IAAA	Irish Aberdeen-Angus Association
JCSUK	Jersey Cattle Society of the United Kingdom
NZAA	New Zealand Angus Association
NALF	North American Limousin Foundation
NAPA	North American Piedmontese Cattle Association
NASDA	North American South Devon Association
PAUS	Piedmontese Association of the U.S.
PDCA	Purebred Dexter Cattle Association
RAAA	Red Angus Association of America
RJAHS	Royal Jersey Agricultural and Horticultural Society
SGBI	Santa Gertrudis Breeders International
SCBA	Senepol Cattle Breeders Association
SDHBS	South Devon Herd Book Society
TLBA	Texas Longhorn Breeders Assoc of America
UKSCS	UK Salers Cattle Society



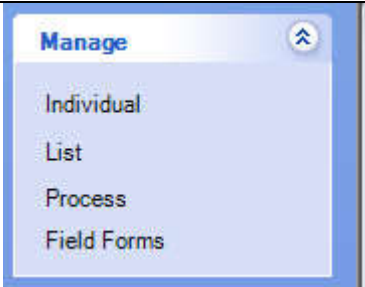
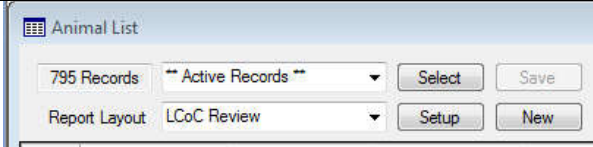
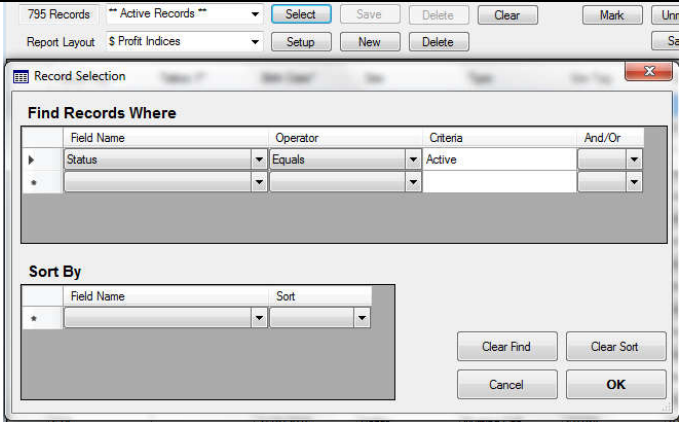
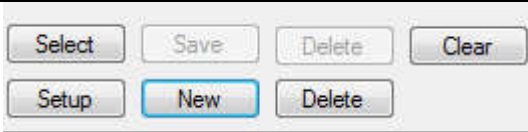
Appendix C. Cow Sense Breed Codes

Breed Name	Breed Code
Africander	AF
American Breed	AE
Amerifax	AM
Angus	AN
Ankina	AK
Ankole-Watusi	AW
Barzona	BA
Beef Frieson	BF
Beefalo	BE
Beefmaster	BM
Belgian Blue	BB
Belted Galloway	BG
Blonde d'Aquitaine	BD
Braford	MO
Brahman	BR
Brahmental	BH
Brahmousin	BI
Braler	BL
Brangus	BN
Braunvieh	BV
Brown Swiss (Beef)	SB
Canadienne	CN
Charbray	CB
Charolais	CH
Chi-Angus	CG
Chianina	CA
Crossbreeds	XX
Danish Red & White	RW
Devon	DE
Dexter	XR
Dutch Belted	DL
Eringer	ER
Flamand	FA
Fribourg	FR
Galloway	GA
Gelbvieh	GV
Gronninger	GR
Guzerat	GZ
GYR (Gir)	GY
Hays Converter	HC
Hereford (Horned)	HH
Hereford (Polled)	HP
Highland (Scotch)	SH
Hybrid (Alberta)	HY
Indu Brazil	IB
Kobe (Wagyu)	KB
Limousin	LM
Lincoln Red	LR
Luing	LU
Maine-Anjou	MA

Breed Name	Breed Code
Mandalong Special ML	ML
Marchigiana	MR
Maremmana	ME
Muese-Rhine-Issel	MI
Murray Grey	MG
Nellore	NE
Normande	NM
Norwegian Red	NR
Parthenaise	PA
Piedmont	PI
Pinzgauer	PZ
Ranger	RA
Red Angus	AR
Red Brahman	RR
Red Brangus	RB
Red Dane	RD
Red Poll	RP
Rotbunte	RO
Salers	SA
Santa Gertrudis	SG
Senapol	SE
Shorthorn (Beef Scotch)	SS
Shorthorn (Illwars)	IS
Shorthorn (Polled)	SP
Simbrah	SI
Simmental	SM
South Devon	DS
Sussex	SX
Tarentaise	TA
Texas Longhorn	TL
Welsh Black	WB
West Flemish Red	WF
White Park	WP
Baron	BK
Milking Shorthorn	MS
Holstein	HO
Belmont Red	BT
Jersey	JE
Unknown	UN
Other beef breed	OB

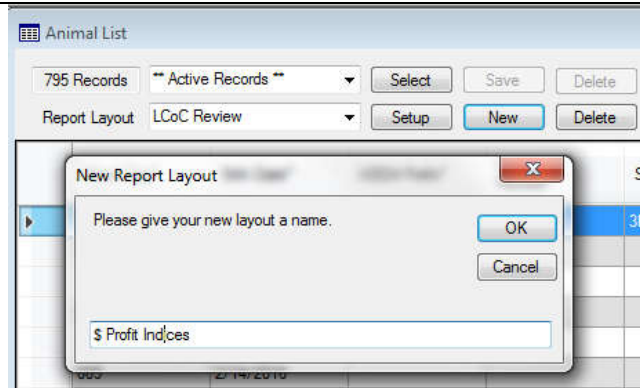


Guide to Creation of a Sample Report to Display LCoC Specific Data

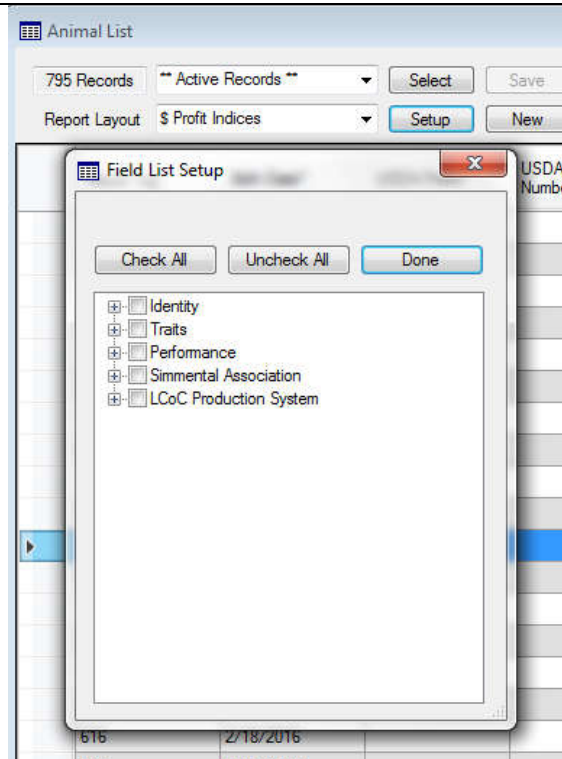
<p>From Cow Sense Side Bar Menu select > Manage > List</p>	
<p>From the Animal List View select the records you wish displayed. If these records have been previously filtered and saved they will appear in the Dropdown to the left of the Select Button (ex. **Active Records**)</p>	
<p>Should you wish to filter the records to be displayed by a different criterion (that has not previously been saved and displays on the dropdown), you can do so by choosing the “Select” button. Refer to the NxGen Video Tutorial and Script Notes related to Animal List for further detail.</p>	
<p>The Video referenced in the previous step will also guide you through Setup of what fields of data you wish displayed in List View. In this example we will create a new list to display fields associated with the LCoC \$ Profit Indices by clicking the “New” button.</p>	

Cow Sense NxGen
LCoC Report Supplement (Continued)

This will open a “New Report Layout” window. Give the new layout a name that will be indicative of the information it will display. In this example we called it \$ Profit Indices. Then click the “OK” button.



Notice the name now appears in the field to the right of “Report Layout”. Now click the “Setup” button. A Field List Setup” window will appear. Categories and related fields appearing in this window are driven by what you have turned on from the Side Bar Menu > Options > Data Field Settings. Toggle on those fields relevant to the information you wish displayed.



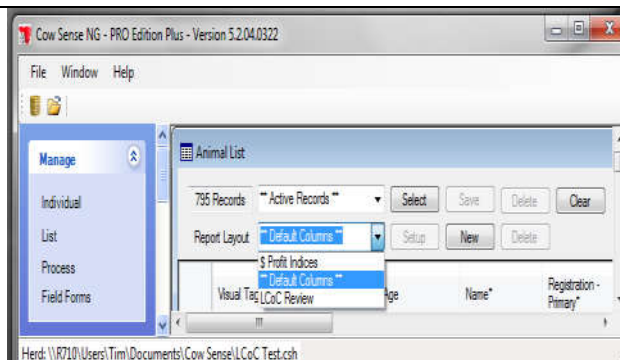
That information will then be displayed. Drag the columns into the order in which you prefer to view them. You can sort by any of the columns by simply clicking on the column header.

The screenshot shows the final report layout in the 'Animal List' window. The columns are: Visual Tag, Tattoo ID, Birth Date, Sex, Type, Sire Tag, Dam Tag, LCoC ID, LCoC Profit, LCoC \$Purch, and LCoC \$Feeder. The data is sorted by Birth Date.

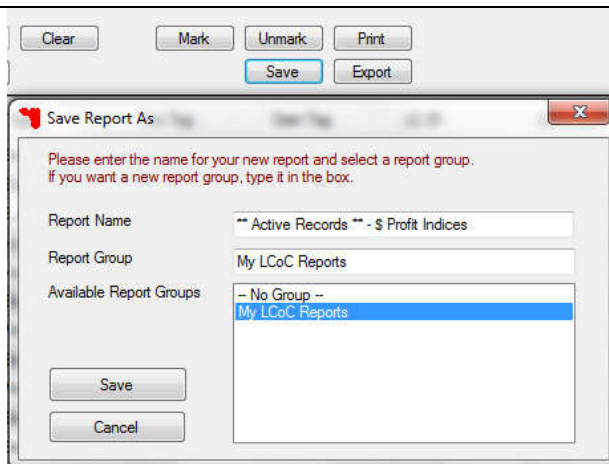
Visual Tag	Tattoo ID	Birth Date	Sex	Type	Sire Tag	Dam Tag	LCoC ID	LCoC Profit	LCoC \$Purch	LCoC \$Feeder
4002		2/10/2012	Bull	Breeding Bull	L1067	L6136	4002	1718	52.14	
6621Y		3/14/2011	Bull	Breeding Bull	AM15300743	56237	6621Y	16947	56.37	
52154		2/25/2013	Bull	Breeding Bull	6070W	X5533	52154	14881	55.42	

Cow Sense NxGen
LCoC Report Supplement (Continued)

The Name you had given the Report Layout will be available for you to recall from the Dropdown to the left of the “Setup” button.



You can Print the report, Export it to a spreadsheet format, or Save it by selecting the appropriate button. In this example we will choose to “Save” the report. You can assign the report to a “Report Group” so as to group like reports. In this example we created a group for “My LCoC Reports”.



By Naming and Grouping the report it is now available from the customizable “My Reports” Menu (from the Side Bar Menu). The Report can be recalled with a single click of your mouse and can be printed or exported to a spreadsheet!

