

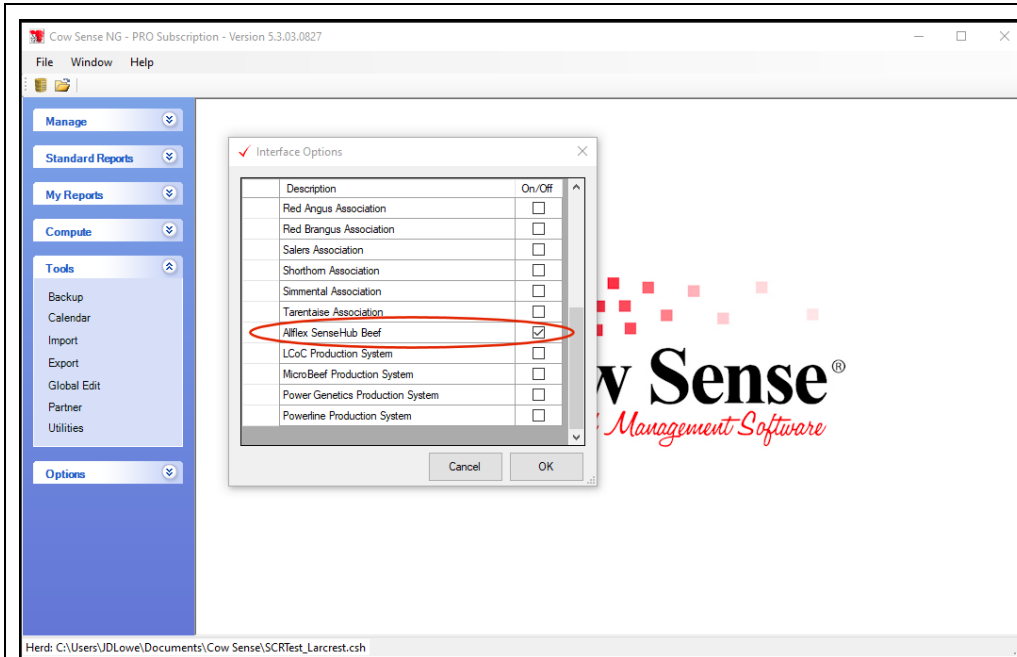
The purpose of this NxGen Guide will be to discuss the Partner Exchange Tool functionality and interface for the Allflex Livestock Intelligence (ALI) SenseHub Beef Monitoring System. With this partner exchange interface Cow Sense users can populate and update the SenseHub Beef database from their Cow Sense herd file. Conversely, a SenseHub Beef customer upon purchase of Cow Sense NxGen can populate a new Cow Sense herd file from their existing data. Either way it saves duplication of data entry and combines the powerful herd management tools of Cow Sense with the high-performance monitoring capabilities of the ALI SenseHub Beef.

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.

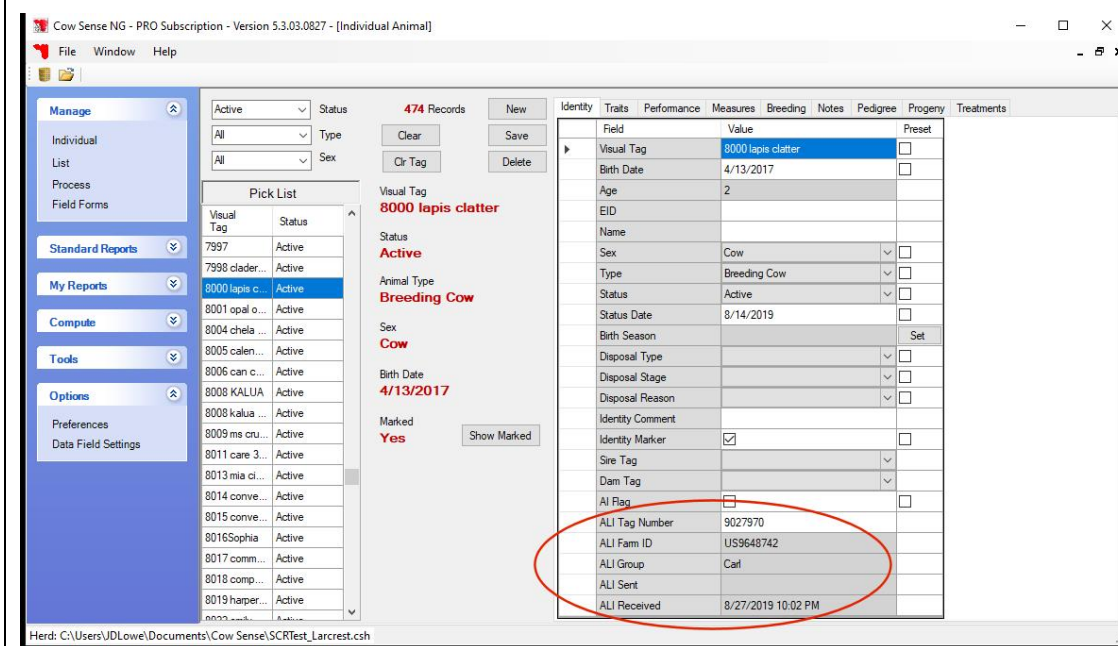
We suggest stepping through this entire document when first using the Partner Exchange Tool. Please note that there are a few processes that you will need to perform to initially set up your herd to submit and receive data from ALI SenseHub Beef. However, following initial submission you will not need to incorporate all steps.



To begin, from the Task Bar on the left select > Tools > Partner > Setup. This command opens the Interface Options list where any of the Cow Sense interfaces may be enabled.



Enable Allflex SenseHub Beef interface by checking (clicking on) the “On/Off” box. Then select the “OK” button to save and close the Interface Options window.



From the Task Bar on the left select Manage > Individual to navigate to the Individual Animal view:

Note, special fields are added to the Identity tab when Allflex SenseHub Beef interface is enabled:

ALI Tag Number (SCR tag)

ALI Farm ID

ALI Group

ALI Sent

ALI Received

The grey background indicates read-only.

Cow Sense NG - PRO Subscription - Version 5.3.03.0827 - [Individual Animal]

File Window Help

Manage Individual List Process Field Forms

Standard Reports My Reports Compute Tools Options Preferences Data Field Settings

Active Status 474 Records New Clear Cir Tag Save Delete Refresh Animal

Pick List Visual Tag Status

Visual Tag	Status
7997	Active
7998 clader...	Active
8000 lapis c...	Active
8001 opal o...	Active
8004 chela ...	Active
8005 calen...	Active
8006 can c...	Active
8008 KALUA	Active
8008 kalua ...	Active
8009 ms cru...	Active
8011 care 3...	Active
8013 mia ci...	Active
8014 conve...	Active
8015 conve...	Active
8016Sophia	Active
8017 comm...	Active
8018 comp...	Active
8019 harper...	Active

Visual Tag: 8000 lapis clatter

Status: Active

Animal Type: Breeding Cow

Sex: Cow

Birth Date: 4/13/2017

Marked: Yes

Measure Type	Measure Date	Measure Value	Measure Comment
ALI Health Index	8/27/2019	85.2	DR = 422
ALI Heat Index	8/27/2019	98	BW = 10; DSLB = 73; DSLH = 23
ALI Health Index	8/26/2019	85	DR = 451
ALI Heat Index	8/15/2019	98	BW = 1; DSLB = 74; DSLH = 24

Herd: C:\Users\JDLowe\Documents\Cow Sense\SCRTest\_Larcrest.csh

Individual Animal view, Measures:

When SenseHub status reports are imported the events are added as measures having the index as "Measure Value" and details in "Measure Comment".

Note, you will need to ensure that Measure Fields are toggled on from the Options Menu choose > Data Field Settings > Standard Fields.

Cow Sense NG - PRO Subscription - Version 5.3.03.0827 - [Animal List]

File Window Help

Manage Individual List Process Field Forms

Standard Reports My Reports Compute Tools Options Backup Calendar Import Export Global Edit Partner Utilities

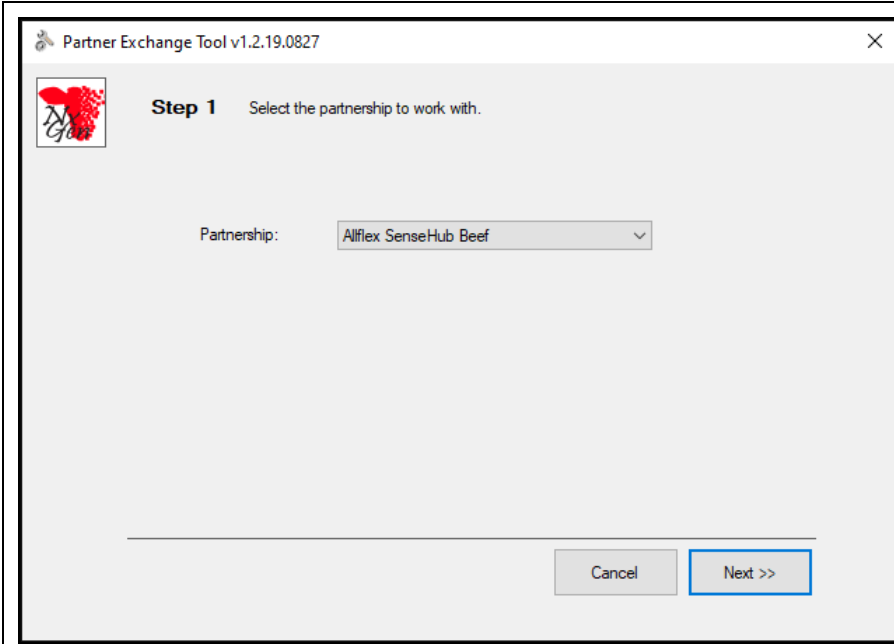
474 Records \*\* All Records \*\* Select Save Delete Clear Mark Unmark Print Report Layout SCR Review Setup New Delete Refresh Save Export

Visual Tag*	Birth Date*	Type	Status	ALI Tag Number	ALI Fam ID	ALI Group	ALI
12	9/3/2016	Breeding Cow	Active		US9648742	Bull	8/14
13	12/23/2016	Breeding Cow	Active	9005278	US9648742	CARL PG	8/14
14	5/3/2017	Breeding Cow	Active	9022766	US9648742	Bull	8/14
15	5/3/2017	Breeding Cow	Active	9025341	US9648742	Bull	8/14
16	5/3/2017	Breeding Cow	Active	9024984	US9648742	CARL PG	8/14
17	3/3/2017	Breeding Cow	Active	9008758	US9648742	CARL PG	8/14
18	12/12/2017	Breeding Cow	Active	9022923	US9648742	Carl	8/22
20	6/26/2017	Breeding Cow	Active	9005670	US9648742	Carl	8/14
898	9/3/2016	Breeding Cow	Active	9004070	US9648742	Bull	8/14
907	9/3/2016	Breeding Cow	Active	9005035	US9648742	Bull	8/14
3171	2/5/2016	Breeding Cow	Active		US9648742	Bull	8/14
3391	9/3/2016	Breeding Cow	Active		US9648742	Bull	8/14
3440 chop suey cale	9/3/2015	Breeding Cow	Active		US9648742	Larcrest Switch Cows	
3442	9/4/2015	Breeding Cow	Active	9013285	US9648742	Larcrest Switch Cows	8/14
3445	9/3/2015	Breeding Cow	Active	9008162	US9648742	Larcrest Switch Cows	8/14
3481	9/3/2016	Breeding Cow	Active		US9648742	Bull	8/14
3523	12/3/2016	Breeding Cow	Active	9025327	US9648742	Bull	8/14
3525	3/3/2015	Breeding Cow	Active	9012889	US9648742	Larcrest Switch Cows	8/14
3561	4/9/2015	Breeding Cow	Active	9009138	US9648742	Larcrest Switch Cows	8/14
3566	5/12/2015	Breeding Cow	Active	9012899	US9648742	Larcrest Switch Cows	8/14

Herd: C:\Users\JDLowe\Documents\Cow Sense\SCRTest\_Larcrest.csh

Animal List view:

Animal records are searchable in the Animal List. The layout is user-defined.

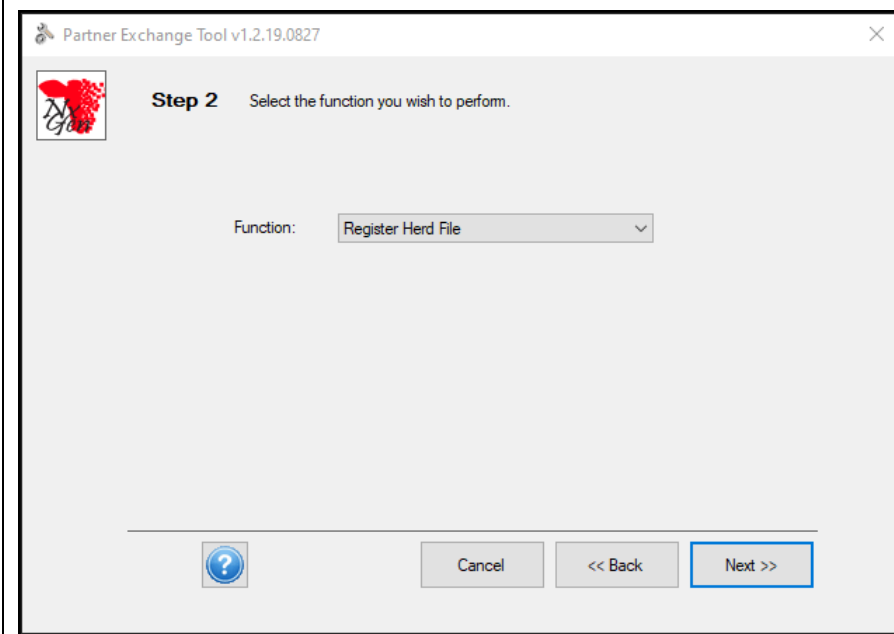


**Partner Exchange Tool (PET):**

Integration functionality is embedded in the Partner Exchange Tool. PET is launched from the Task Bar on the left choose Tools > Partner > Run.

PET uses a wizard format that guides the user through the functions of the selected interface.

Step 1. If the Allflex SenseHub Beef interface is not displayed to the right of Partnership, select it from the dropdown. Select the “Next” button at the lower right to proceed.



**Function: Register Herd File:**

Step 2. The herd file must be registered for use with Allflex SenseHub beef before any other function will run. Choose “Register Herd File” from the dropdown to the right of Function. Select the “Next” button at the lower right to proceed.

Partner Exchange Tool v1.2.28.1011

**Step 3** Enter/verify your Allflex SenseHub Beef member information.

Farm ID:  City:

First Name:  State/Prov:

Last Name:  Postal Code:

Company:  Country:

Address:  Phone:

Address 2:  Email:

Buttons: ? Cancel << Back Next >>

The registration screen includes Farm ID. The ALI Farm ID is assigned from Allflex when you subscribed to SenseHub Beef. The registered Farm ID is the default for the herd, although Farm ID is stored on each animal and we have designed to enable use of a single herd with more than one farm. While not common practice it may be applicable for consultants or veterinarians.

Upon registration the integration functions become available. Each function will have subsequent steps appropriate to the operation, thus will vary with the function selected.

Partner Exchange Tool v1.2.19.0827

**Step 2** Select the function you wish to perform.

Function:

Options: Export - Full Sync, Import - Animal Records, Import - Unassigned Tags, Register Herd File

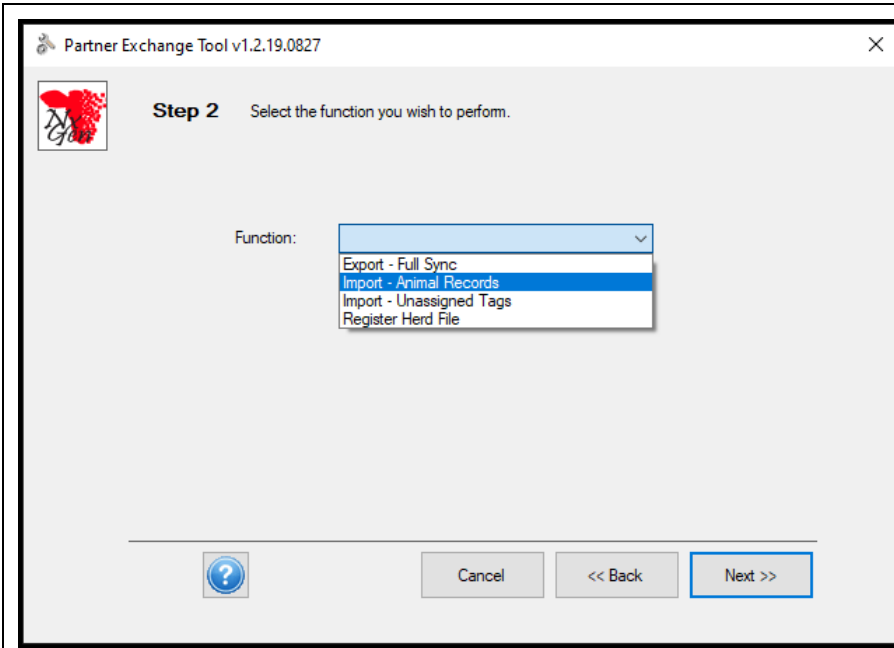
Buttons: ? Cancel << Back Next >>

**Function: Export - Full Sync:**

Following registration, three additional functions are available. ‘Export – Full Sync’ must be completed successfully before the full function list becomes available.

Full sync transmits all Cow Sense records having an SCR tag OR are ‘marked’ (a user-selected flag set on animal records). Before sending, we retrieve a list of animals already in SenseHub and search the pending sync to alert the user for unintended culling. Correlation ID is captured and sync issues reported in the log displayed following the Full Synchron process.

Full Sync must be completed either for a new SenseHub user establishing their herd or for an existing SenseHub user setting up Cow Sense for herd management.

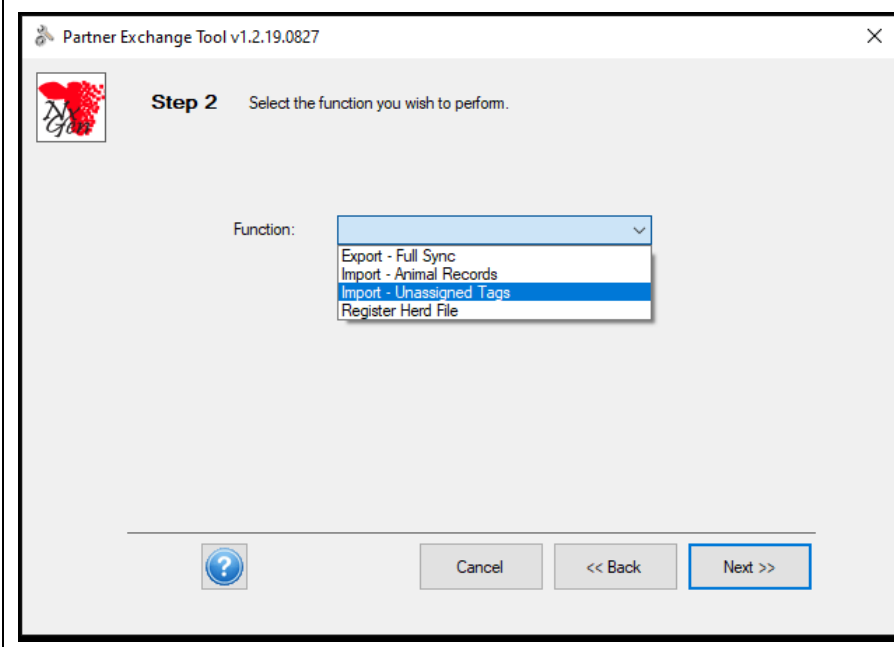


**Function: Import - Animal Records:**

This function updates Cow Sense from SenseHub. Each animal is searched by ExternalId (if present), SCRTagNumber, EID and CowNumber. If there is a match, then update is performed. If there is not a match the animal is added to Cow Sense.

This method is used to populate a Cow Sense herd from established SenseHub user. The user would then 'Export – Full Sync' to establish the GUID <> ExternalId link.

Since SenseHub groups are managed in SenseHub it is important to import animal records **AFTER** group edits to store the changes in Cow Sense. Otherwise old groups will be restored on the next export from Cow Sense.

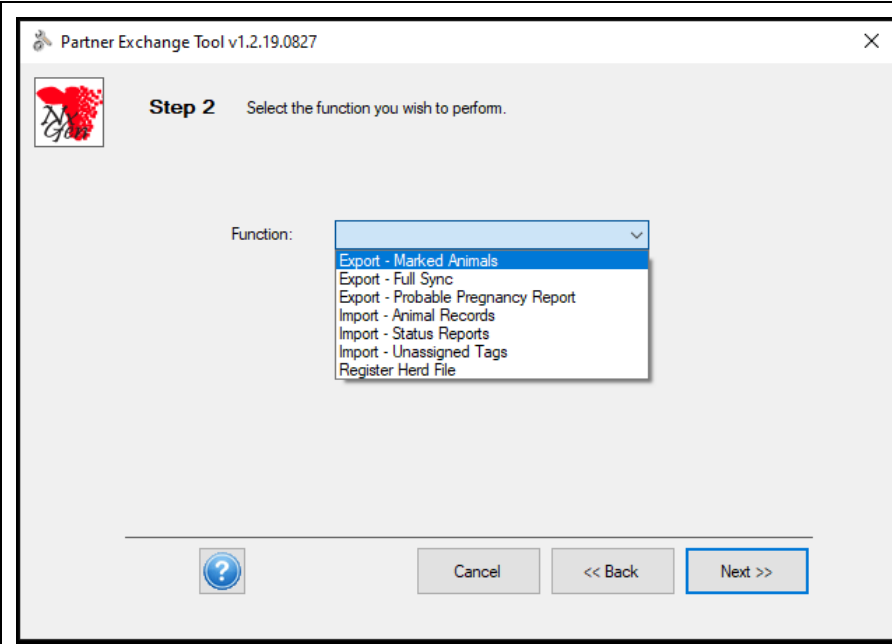


**Function: Import - Unassigned Tags:**

This function downloads the list of unassigned tags from SenseHub, saves them to a worksheet and opens for the user. User may then add the Visual Tag of the animal, making the assignment. The Cow Sense Import Tool then loads the list into Cow Sense and establishes the link in the herd file.

Chuteside, our companion application for processing animals with EID, may also be used to apply the SCR tags to the animal record.

Finally, user may reference the tag list and record the tag numbers manually in ALI Tag Number field (Identity tab, Individual Animal form).



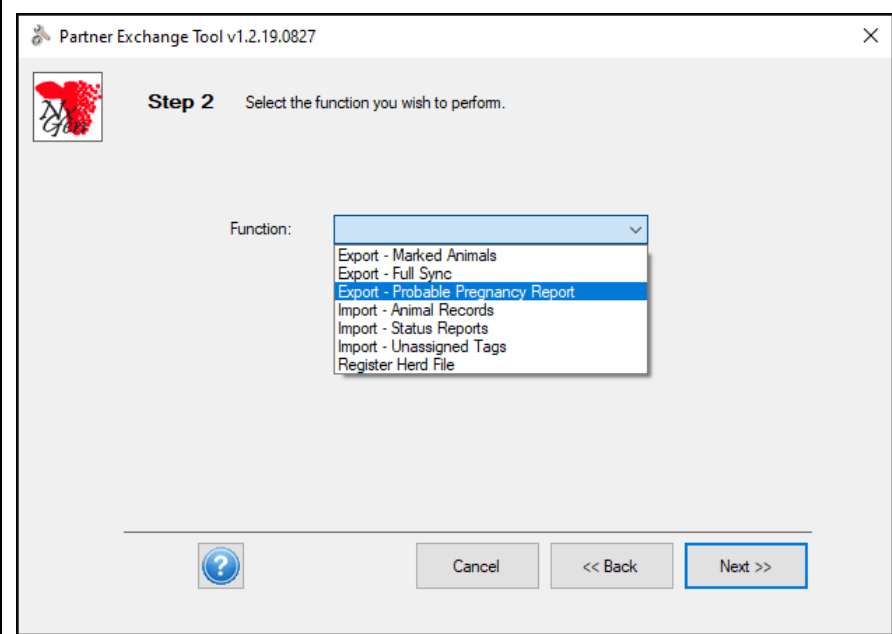
**Function: Export - Marked Animals:**

This function is used to update SenseHub from Cow Sense, posting each marked animal. This is a periodic update following tag management or herd management activities. A full sync may be performed as well.

ExternalId is linked to the Cow Sense animal GUID.

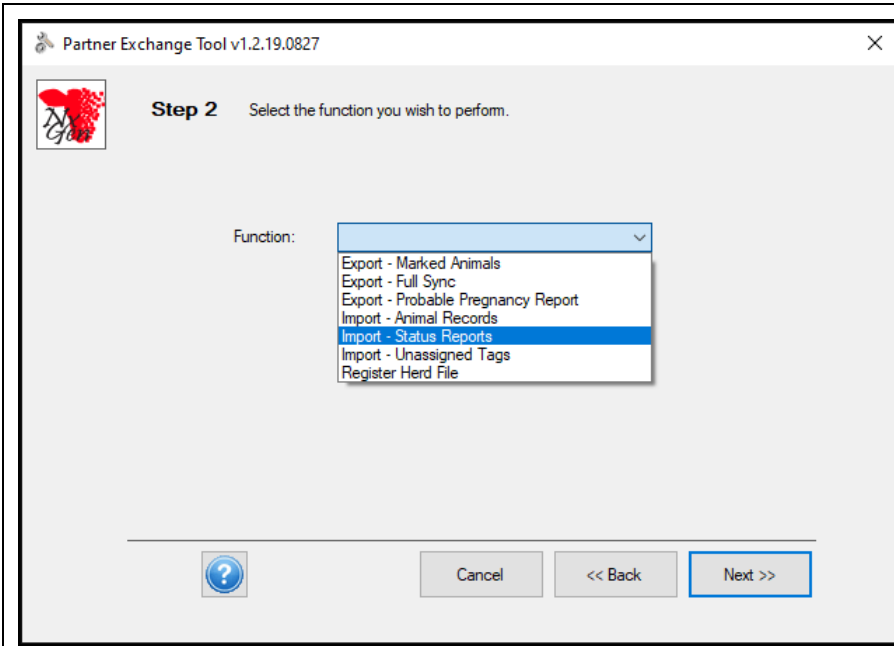
If the animal Status is Disposed, then CullingDate is sent.

Correlation ID is captured for each animal. When the update stream finishes there is a pause and then GET /api/Report/AnimalSyncStatus is sent for each animal and the status report logged for the user.



**Function: Export - Probable Pregnancy Report:**

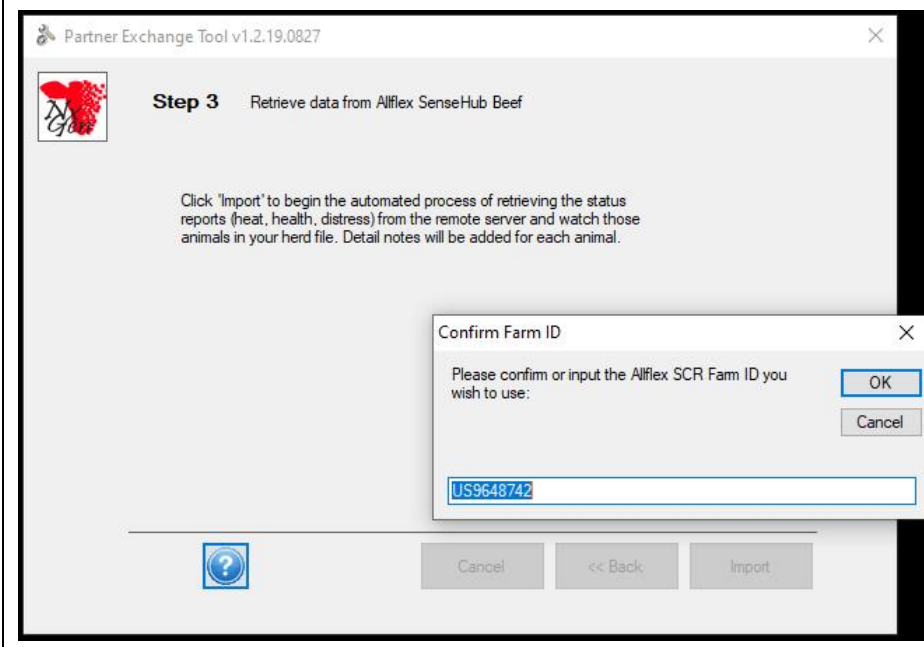
This report is not a SenseHub interface function. Rather Cow Sense processes data received from SenseHub to analyze animals' probable pregnancy status. Cow Sense defaults the period since last heat of a bred animal to 45 days, but the user may input a preferred duration to change the sensitivity of the analysis. Results are exported to a worksheet.



**Function: Import - Status Reports:  
(Distress, Health and Heat)**

This function requests the SenseHub Distress, Health and Heat reports in turn. Each report is inserted to a record in the Cow Sense Measures tab for the animal having the index and report details (Measures tab, Individual Animal form).

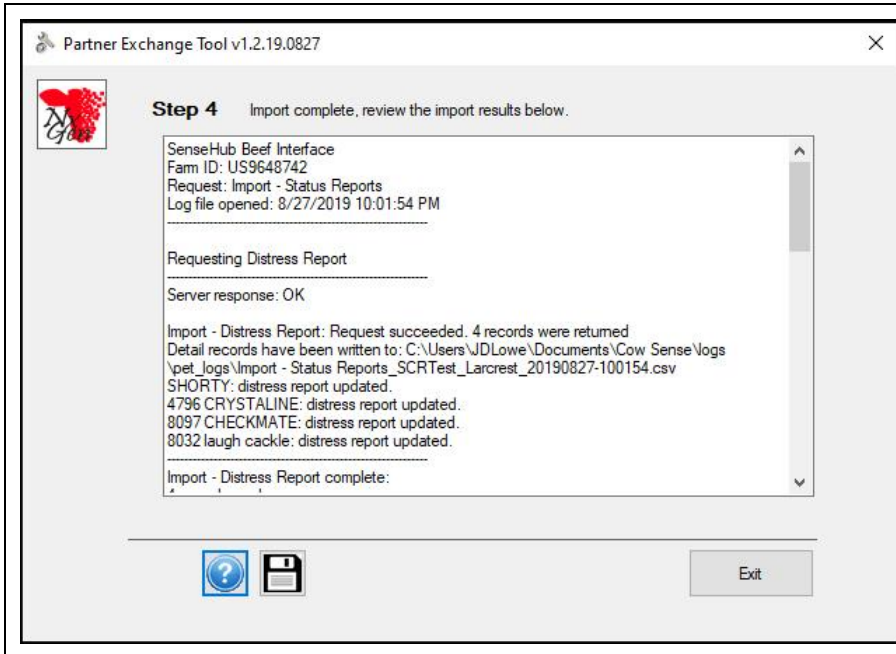
Each animal having a report is added to the Cow Sense 'watch list' by setting the Watch flag. Last Heat in traits is updated with the current date for those having a heat report (Traits tab, Individual Animal form).



After selecting a function, the user proceeds through the wizard. Confirmation of the Farm ID enables the user to manage more than one farm within a Cow Sense herd if applicable.

PET submits Midwest MicroSystems' company credentials to the SenseHub API automatically in the background to get authorization and proceeds with the API requests.





PET logs information about interaction with the remote server and updates into the herd. User may request detailed or simple logging. PET presents the log to the user upon completion of the function. The incoming data stream and the log are saved on the computer, and Cow Sense Customer Service personnel can retrieve them if questions arise. User may also save the log to a personal folder using the diskette button at the bottom of the screen.