SheepBytes

Quick Start Guide

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Alberta Agriculture and Rural Development
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Pictures by Tracy Hagedorn ARD

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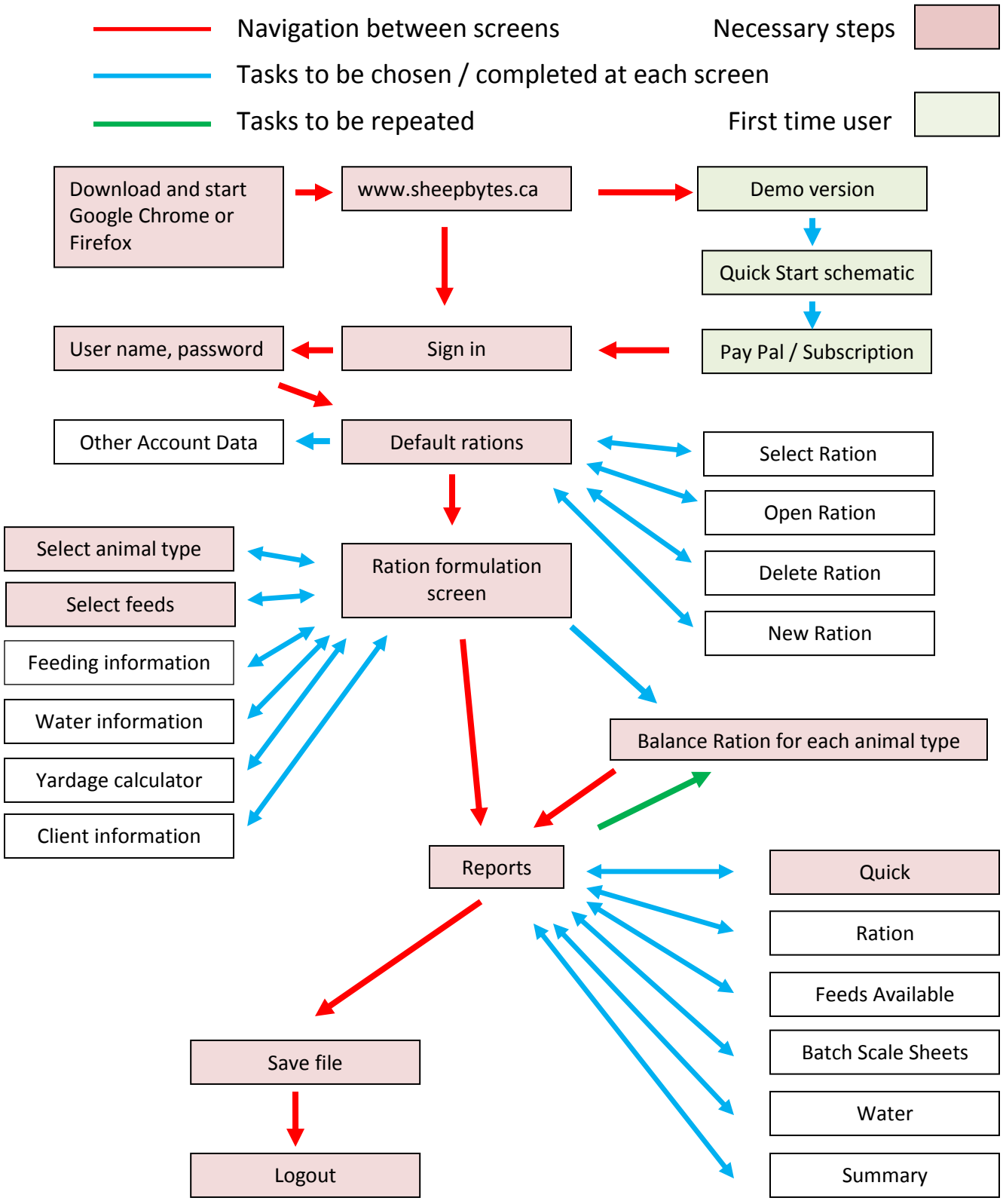
Schematic of SheepBytes ration balancing program

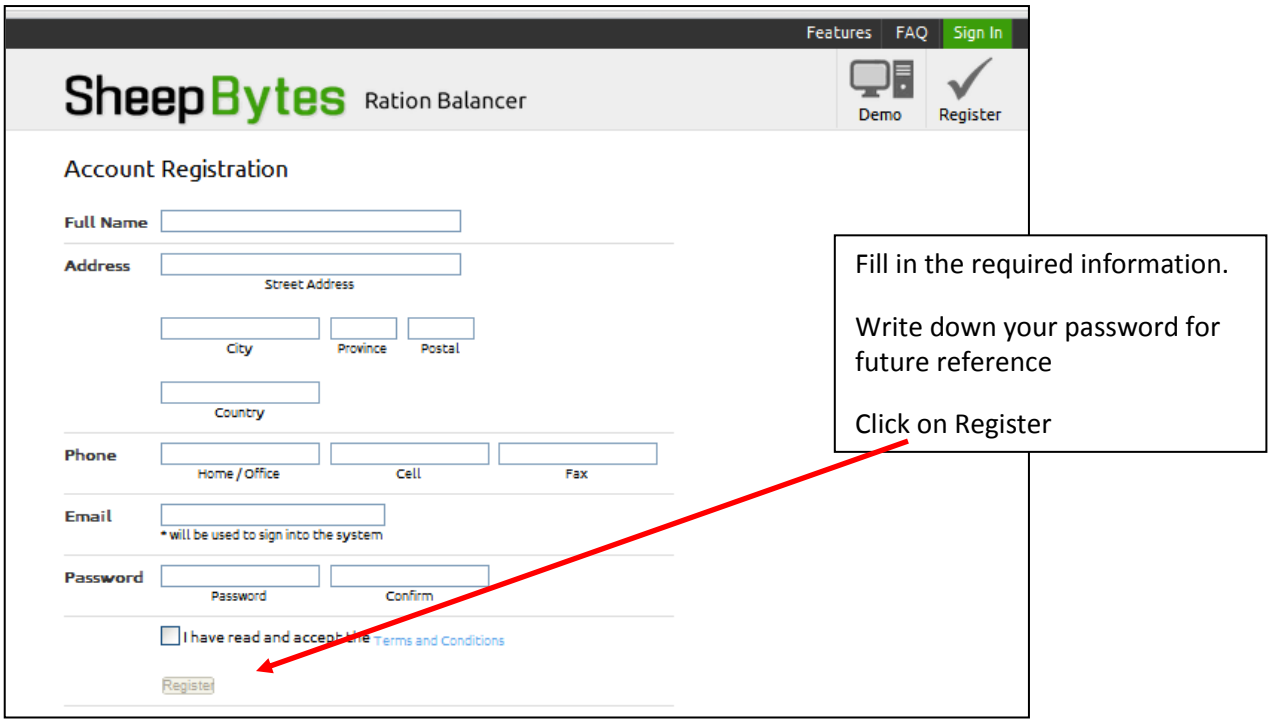


This introductory manual will help you navigate the SheepBytes program. Use the latest version of Google Chrome or Mozilla Firefox as your web browser. SheepBytes runs more efficiently with these web browsers.

Web site Address: www.SheepBytes.ca

To get an understanding of the program, a demo version is available. It allows for three feeds to be used on the ration page. The program is fully functional except that reports cannot be printed and files cannot be saved.

To purchase the program, return to the first screen and click ***Register***.

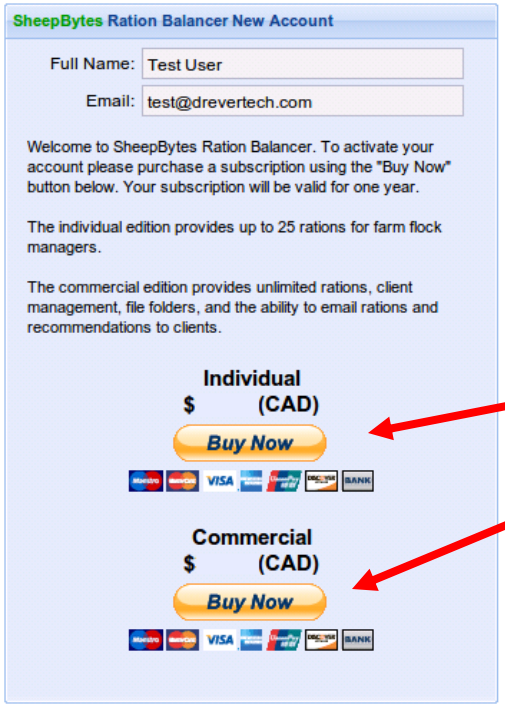


A subscription screen appears asking for payment. Individuals pay $100 for their first year, and a renewal fee of $50 per year after that. This subscription provides up to 25 rations a year for farm flock managers. Consultants or nutritionists pay a subscription fee of $200 per year for the first year and $100 each year after; which provides unlimited rations, account management files, and the ability to send and receive rations by e-mail.

We highly recommend you purchase your subscription using the automated credit card method. Once the subscription has been paid, you will have access to your account in minutes. Manual subscriptions may be made by sending a cheque for the subscription amount plus GST made out to:

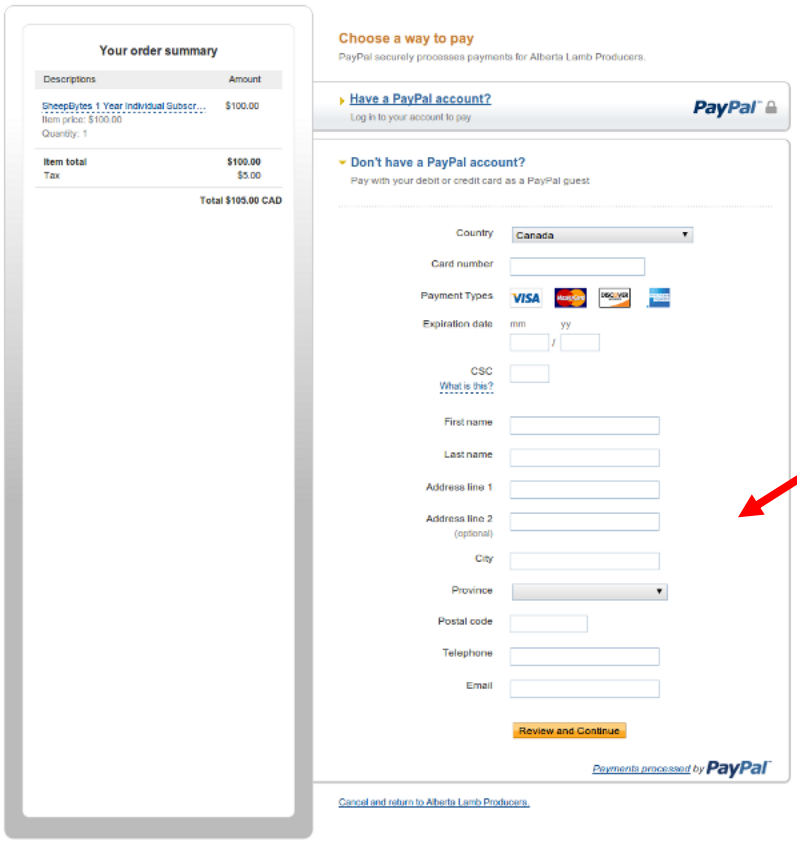
Alberta Lamb Producers
Agriculture Centre
97 East Lake Ramp NE
Airdrie AB T4V 0C3

Please include the email address you used to register for your SheepBytes account. For more information call 403-948-1522



Select your subscription type by clicking the corresponding ***Buy Now*** button.

After clicking **Buy Now** a PayPal screen appears asking for payment. This is a secure website and your information is protected.

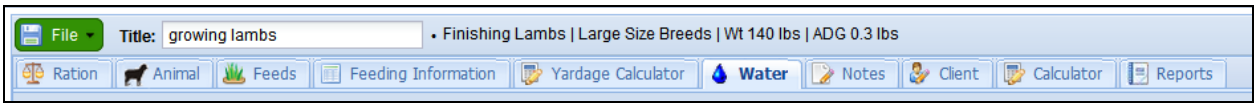


Fill in the required information.

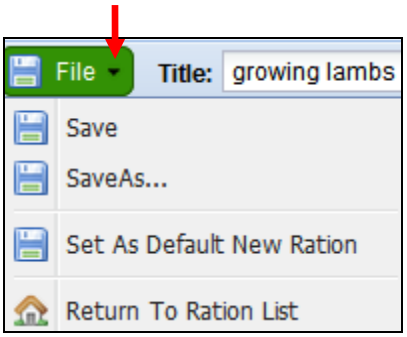
Click on ***Review and Continue***.

There are three different ways to navigate through the program:

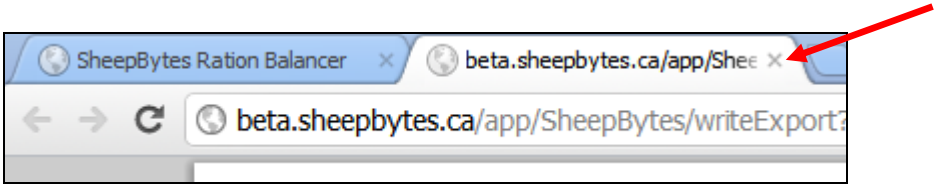
1) Move between the different sections of the program by clicking on the different tabs.



Some buttons have a drop down menu to provide options. These are indicated by an arrow. ▼



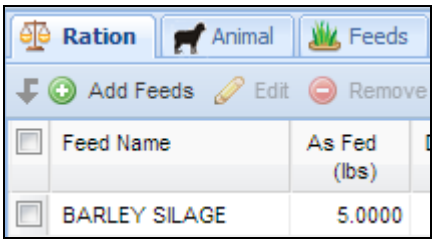
2) SheepBytes behaves like an internet program (Google Chrome, Firefox, etc.) Example: after viewing the water report, to get back to the program click on the "X" in the tab at the top of the screen. This will take you back to the previous screen.

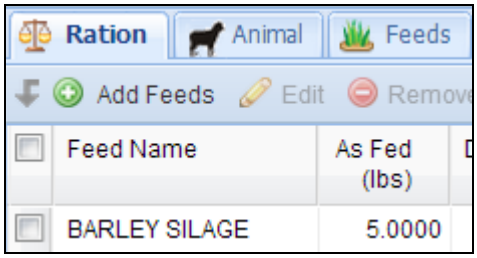


3) Move back and forth between the tabs (screens) using the back ← and → forward arrows found in the upper left corner of the screen. Example: A ration was selected from the ration list screen when the program was started. The program then advances to the ration screen. To go back to the ration list, click on the back arrow.

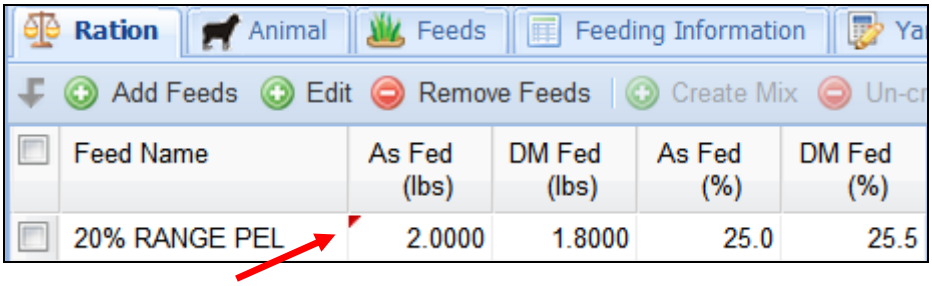
The font size on the screen is adjustable. To increase font size hold down the control key <Ctrl> and the plus sign key <+> at the same time. To reduce font size, hold down the control <Ctrl> key and the minus sign key <–> at the same time.

The screen shot below (left) illustrate the default font size loaded into the program and a 10% increase in size (right) when the control <Ctrl> <+> keys are struck once.





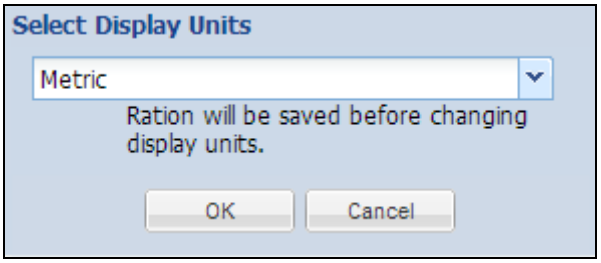
If you increase the font size, fewer nutrients will be displayed on the screen at one time.



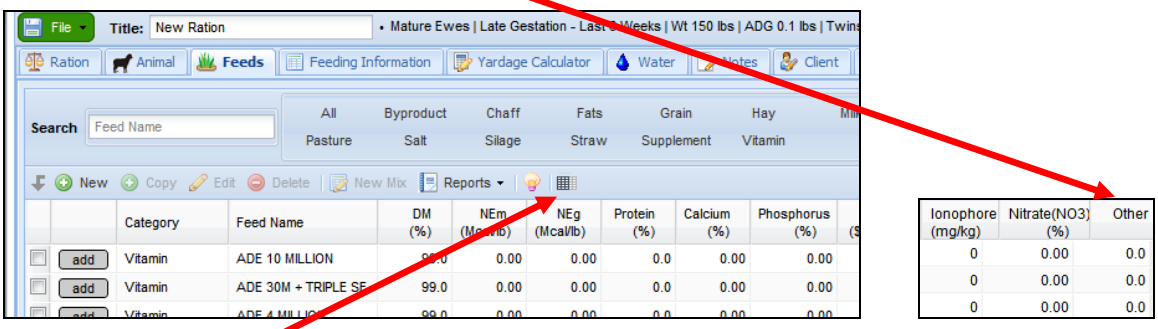
The red triangle in some of the boxes indicates the value in the cell has been changed from the value supplied from the feed table. A zero value in a field could be due to insufficient data to establish a value. Enter feed test results or feed tag specifications whenever possible. All nutrients are entered on a **dry matter** basis.

Changing nutrients displayed on the screen / viewing more of the screen:

To change between Imperial (Canadian), Metric and United States weight and volume measurement systems, click on the scale icon found on the Ration screen. When changing between weight systems, the program requires that the ration be saved. The pop up screen below appears when the symbol is chosen. Use the drop down arrow to select the system required. There is no opportunity to change the name of the ration during the process.

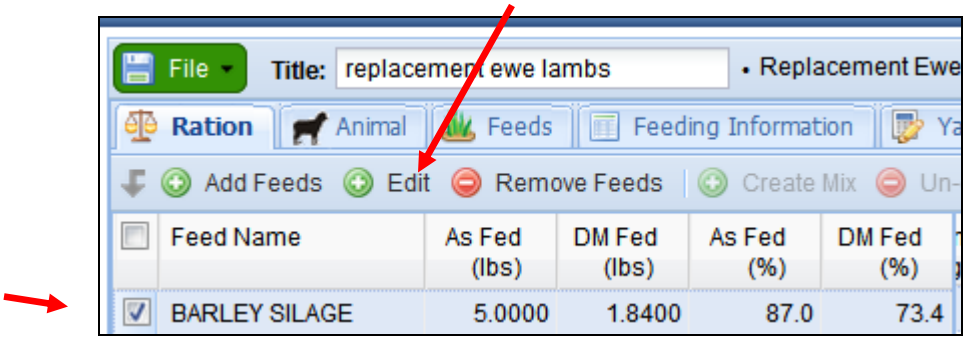


SheepBytes calculates nutrient values for macro nutrients and most of the micro nutrients and vitamins. It can also be used to calculate ionophore and nitrate concentrations. There is a spare column titled "***Other***" to calculate concentrations of different items such as an antibiotic or pro-biotic.

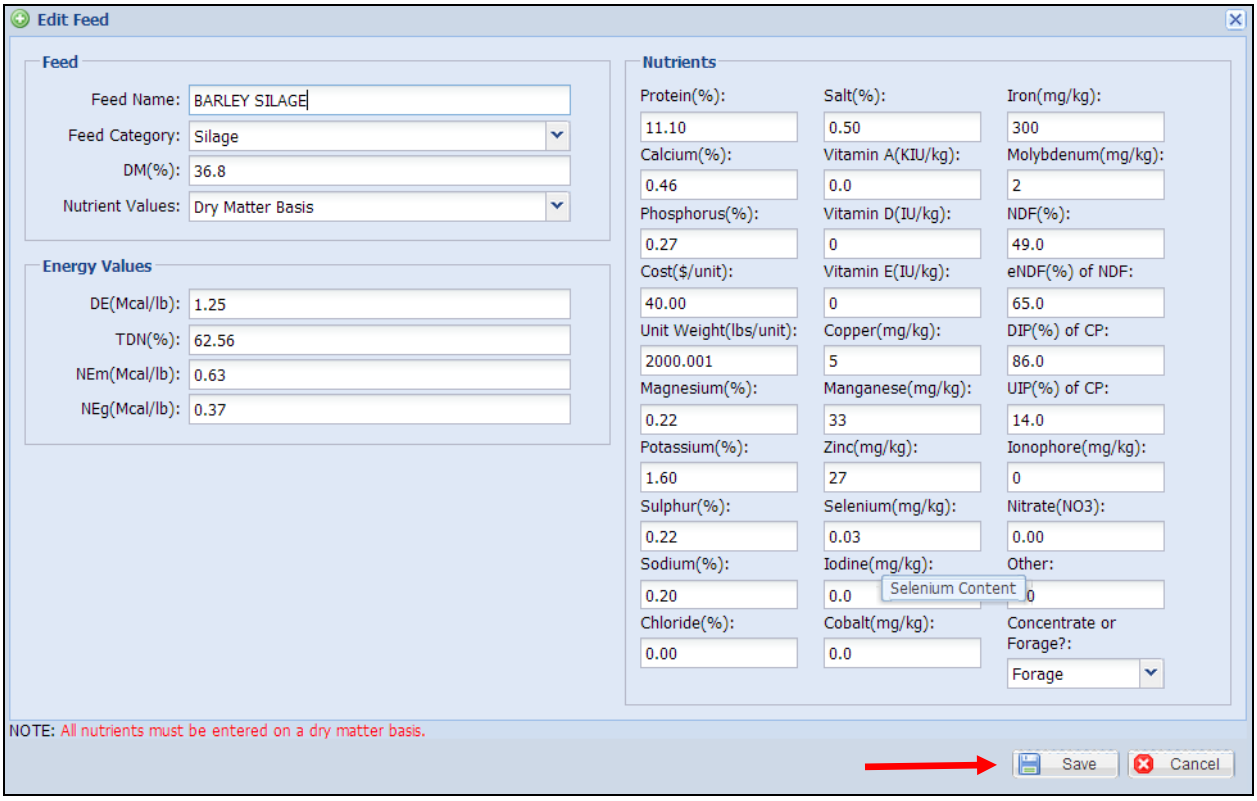


The  button, found on the feed table page, either expands or restricts the number of nutrients displayed in the feed table. All nutrients are displayed on the ration screen.

Entering data into the *Other* column or changing nutrient values: On the ration screen, left click the mouse button on the box to the left of the feed name that requires changes.



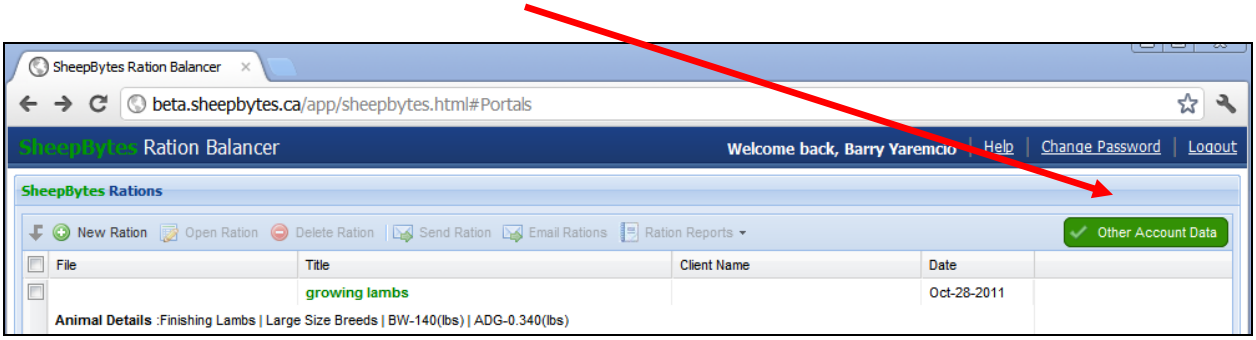
Change the value of the nutrients on the edit feed screen. Click ***Save*** when you are finished.



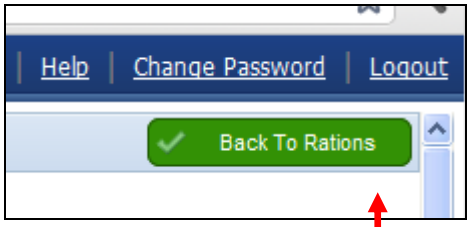
Getting Started:

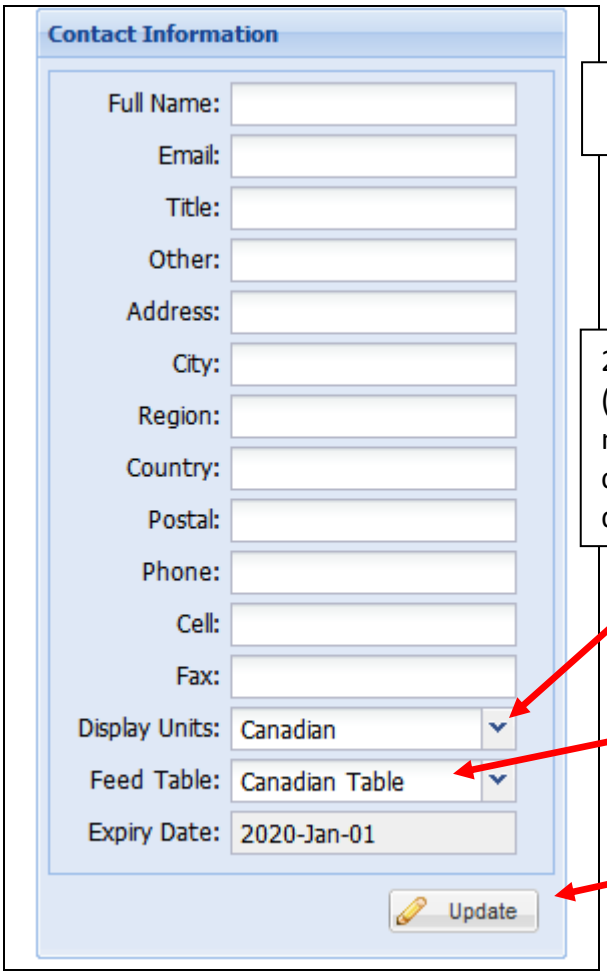
When you log onto the program, the first screen that appears is the ration lists screen. It contains all the rations held within your account. Set user information defaults by clicking ***Other Account Data***.

This information will be saved to your account and be present when you start the program in the future.



If you are using the consultant edition of SheepBytes your ***Contact Information*** will be printed on the top of some of the reports.





1) Fill in the contact information.

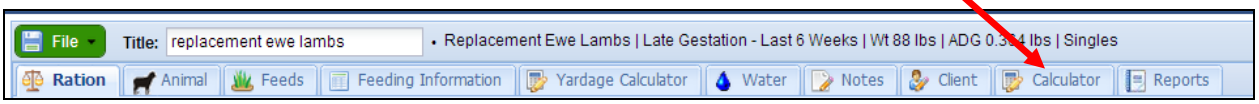
2) Select the units – Canadian (imperial), metric or American to make the reports more comfortable to use. Use the drop down arrows to select type.

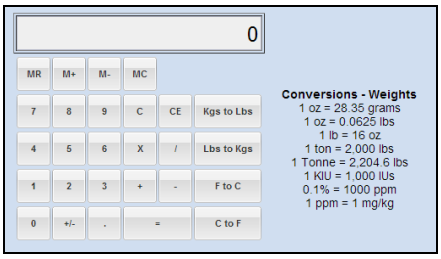
There is one feed table supplied in the program. Data for this was compiled from Canadian information. Other feed tables can be added to the program.

Click ***Update*** when finished. Click ***Back to Rations*** (the green box in the upper right corner of the screen) to return to the ration lists screen.

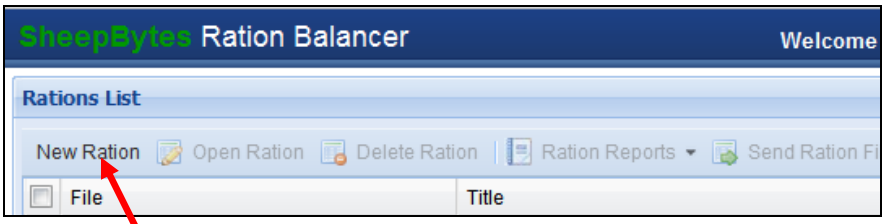
Calculator available:

SheepBytes has a built in calculator that is able to do basic functions.



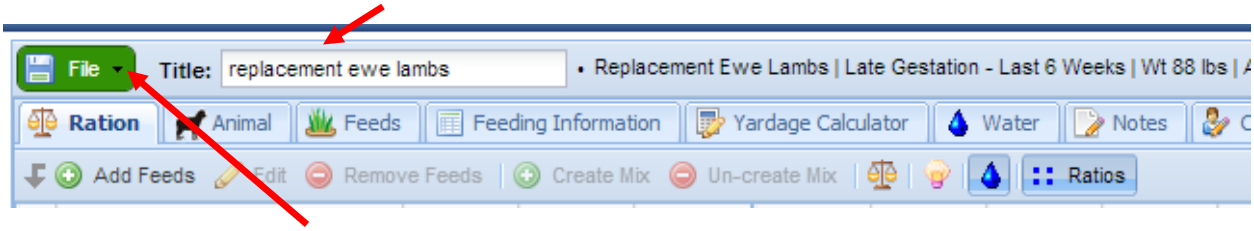


Create a new ration:

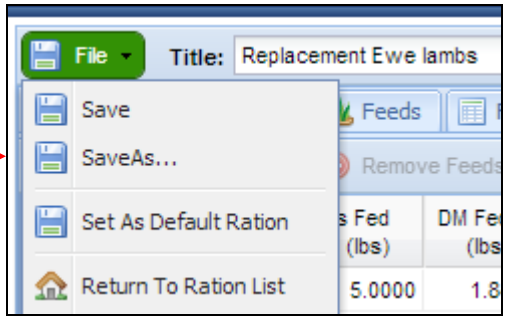


Click the ***New Ration*** button to create a new ration. The main **Ration** screen appears. This is where you do most of your work.

Type in a name for the ration in the ***Title*** box; you cannot save the ration or print reports without this section filled in. If the title is not changed between animal types, the work will be over-written and previous rations will be lost.



Save the new file. Click ***File*** in the upper left corner of the screen. A drop down menu provides options on how to save the file.

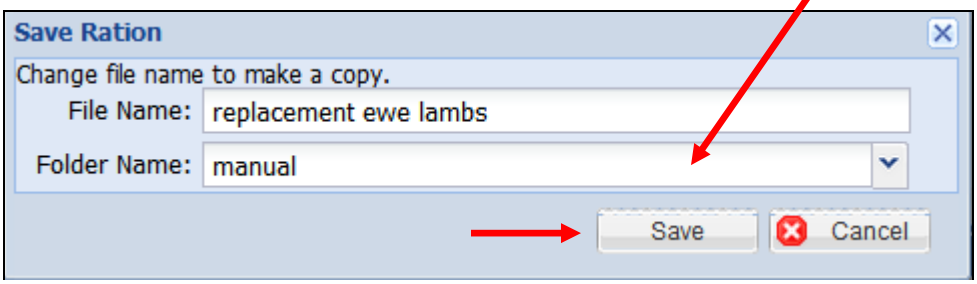


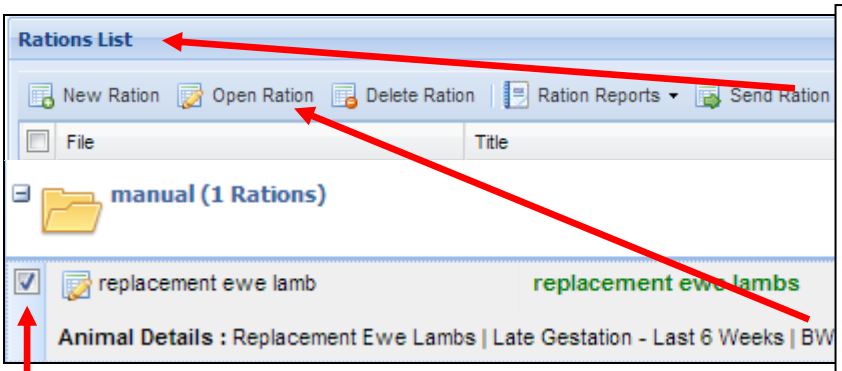
Save will label the file with the information in the title box. In this case, the file will be saved as "replacement ewe lambs".

Save as allows you to re-name the file.

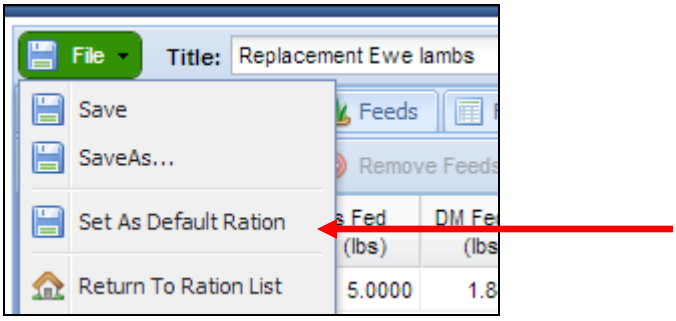
Set as Default Ration results in the information in this file to be displayed on the ration screen every time SheepBytes is started.

Keeping ration files in different folders to make organizing and retrieval easier. Creating folders by year (for a farmer) or by client name (for consultants) is suggested. To create separate folders, when saving the file, use the ***Save As*** feature. In the ***Folder Name*** box, change the name of the folder and save the file.





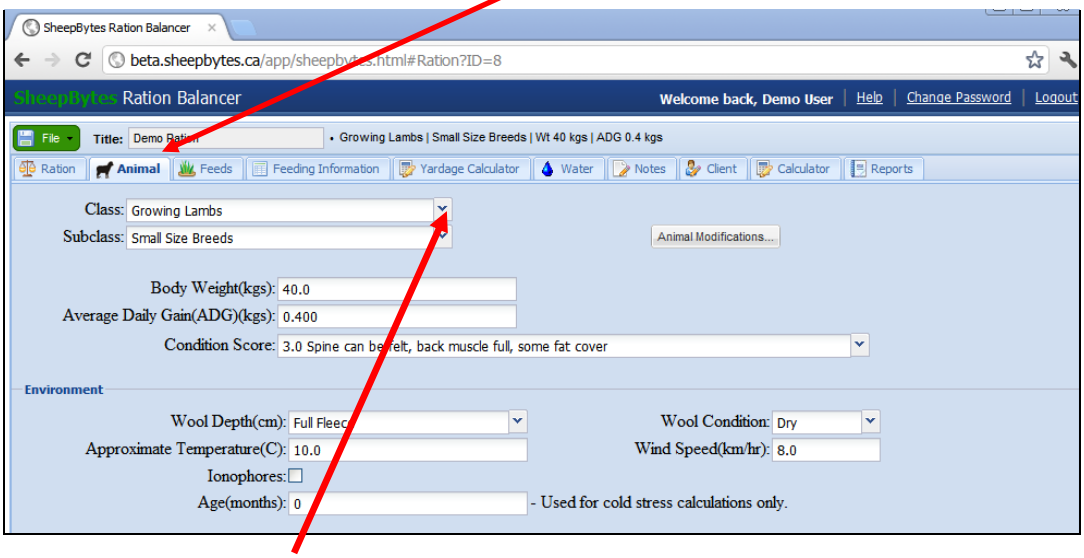
When the file is saved, the program returns to the ration list screen. If the file was saved in a folder, the folder will appear first. The saved file will be within the folder and contains a checkmark, indicating which file was saved. Click on ***Open Ration*** to return to the ration screen.



A default ration is the information that is uploaded when the program is started. Having the feeds, feeding and client information, water quality and animal type set within the default ration saves time when the program is used.

1. Select animal type by clicking on ***Animal***.

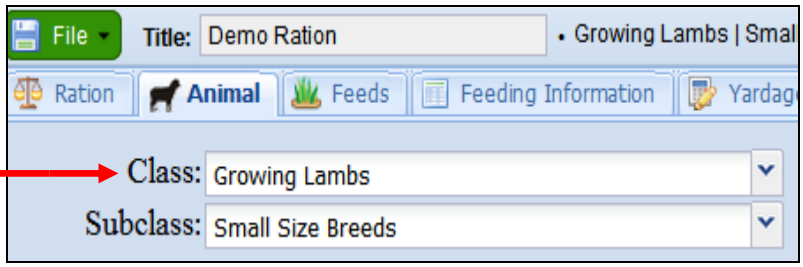
The animal information screen appears.

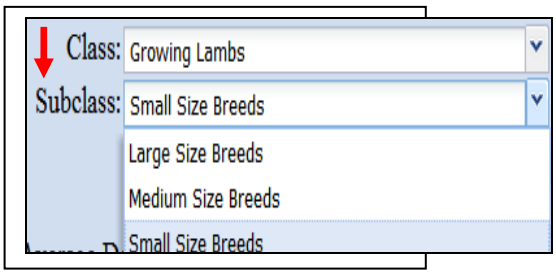


Use the drop down arrow to select animal type in the class and sub class categories

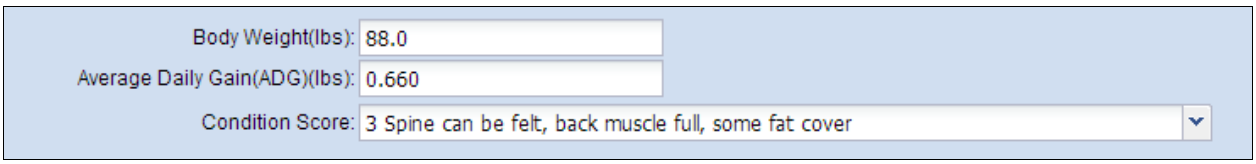
Class of animal is the overall description of the group: Mature ewes, mature rams, replacement ewes, replacement rams, growing lambs, finishing lambs, and early weaned lambs.

Subclass breaks the animals into small, medium or large frame animals, or stage of lactation.

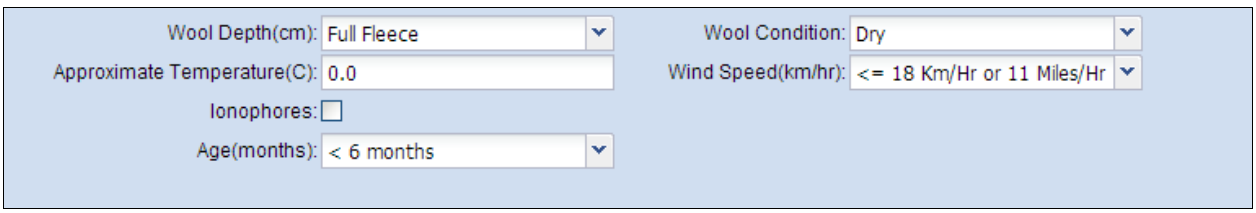




Enter animal body weight, average daily gain and body condition score. Use drop down arrows where appropriate.

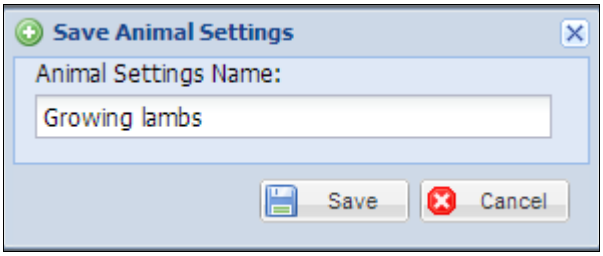


Enter environmental conditions, wool depth and age of the animal. If an ionophore is used, click the ionophore box.

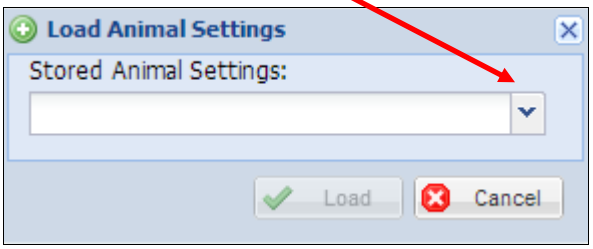


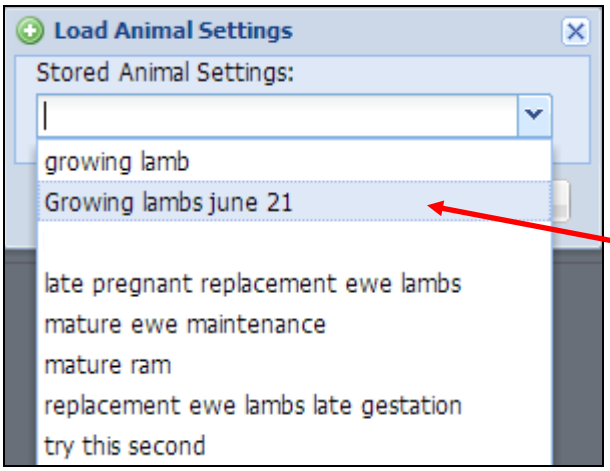
Further down the page, there is a ***Stored Animal Settings*** heading. Use these buttons to save information about a group of animals so it can be retrieved from a saved file in the future.

When the "Save button" is used, a pop up box requests a name for the file to be saved.



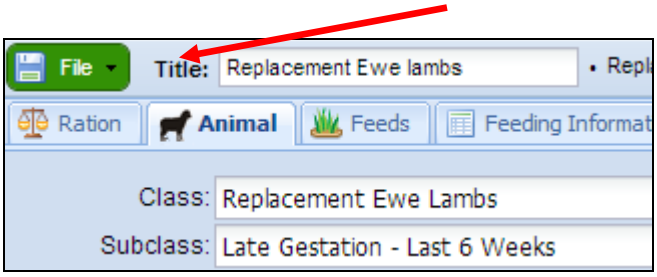
Once the animal information is saved, it can be loaded from the Stored Animal Settings box. From the Stored Animal Settings: click on the load box. The following pop up box appears. Click on the down arrow to retrieve the saved animal settings.



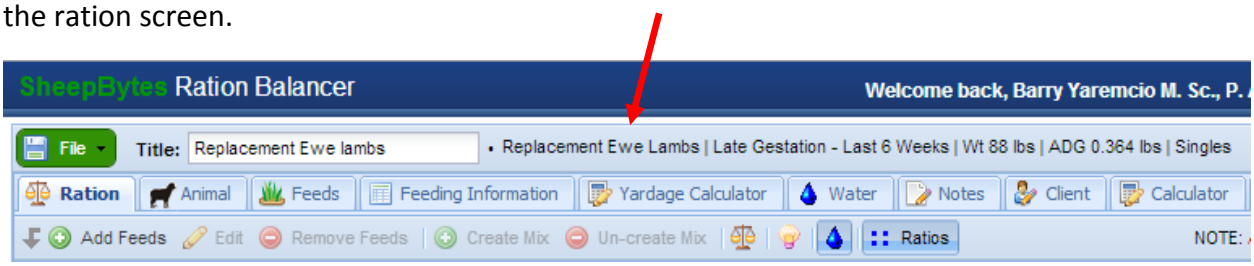


Click on the animal file to be retrieved.

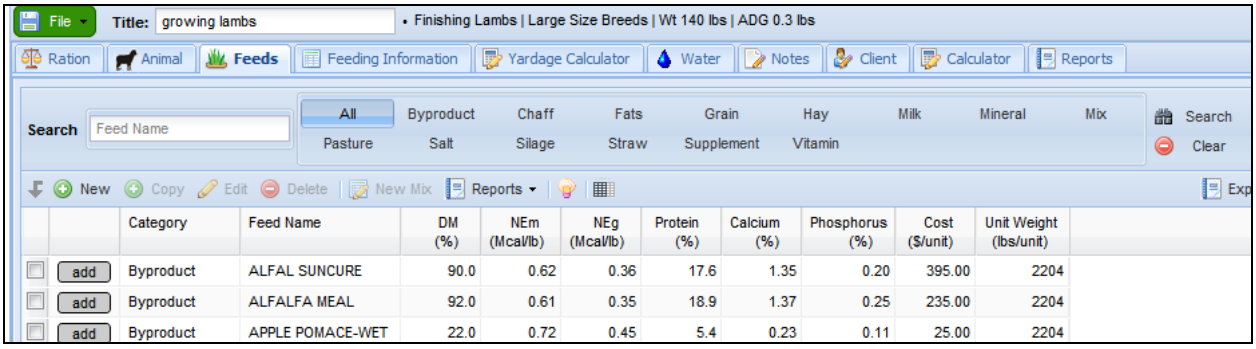
After the animal information is entered, or a stored animal setting file is loaded, click on the **Ration** tab located at the top left corner of the screen to return to the main formulation screen.



The animal information entered from the loaded in the last screen should appear at the top of the ration screen.



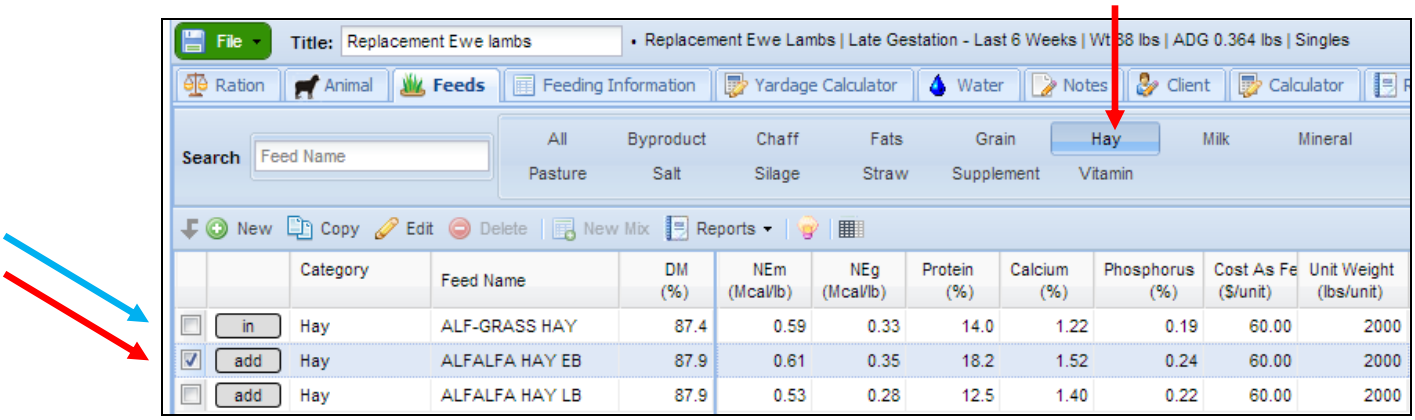
2. Select the feeds available for the ration by clicking on the ***Feeds*** tab. The screen below appears.



There are 154 feeds in the Canadian feed table.

Feeds are categorized by feed type (hay, silage, salt, mineral, etc.). Searching for the feed within each category is much easier than using the ***All*** category.

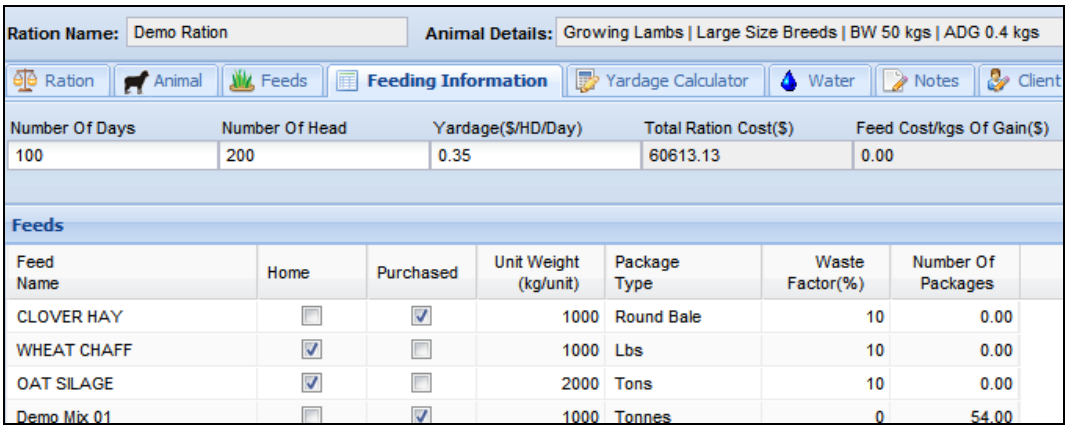
Select the feed type (vertical red arrow below), scroll down the list and click the ***add*** box to the left of the name of the feed required. A check mark will appear in the square box in line with the chosen feed. The feed is automatically moved to the ration screen and the button changes from ***add*** to ***in*** (blue arrow) when the transfer to the ration screen is complete.



3. The ***Feeding Information*** screen captures information about the group of animals being fed. Feeds used in a ration will appear on the feeding information screen.

Number of animals and days on feed indicated is used to calculate the total amount of feed required for the group. This information is then reported on a ration report and the summary report.

Feeds can be selected as home grown or purchased to break down feeding costs for the group. Set package size and type, waste factor and yardage cost information for the ***Ration*** and ***Summary*** reports.

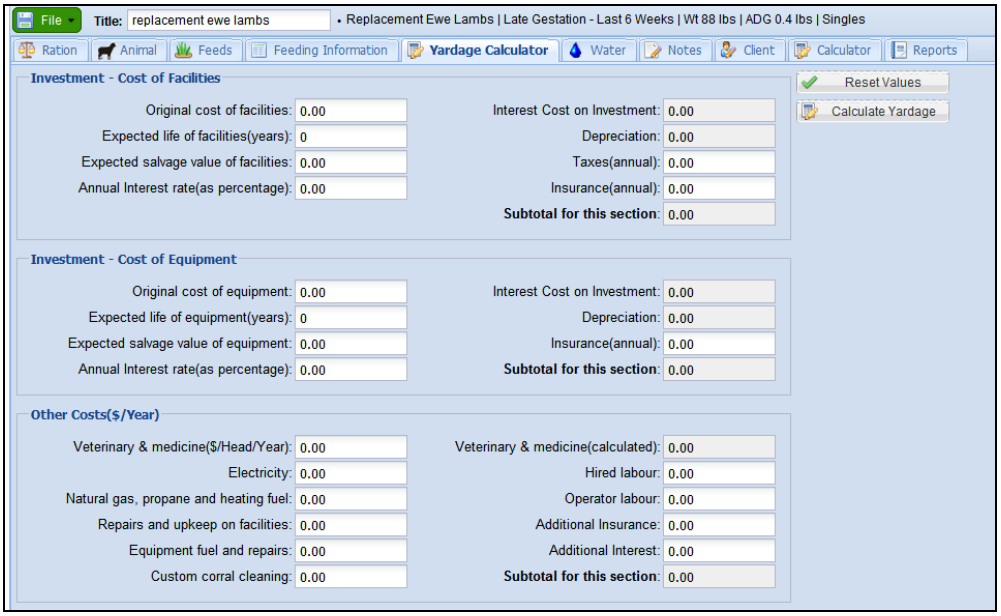


Feed waste occurs in any winter feeding program. In SheepBytes, the amount of feed consumed per head per day does not change, but total amount of feed supplied per group per day is adjusted according to the amount of waste specified. The total amount of feed (or inventory) needed for the operation including waste is reported in the summary report.

4. There is a ***Yardage Calculator*** included in the program. This step is optional.

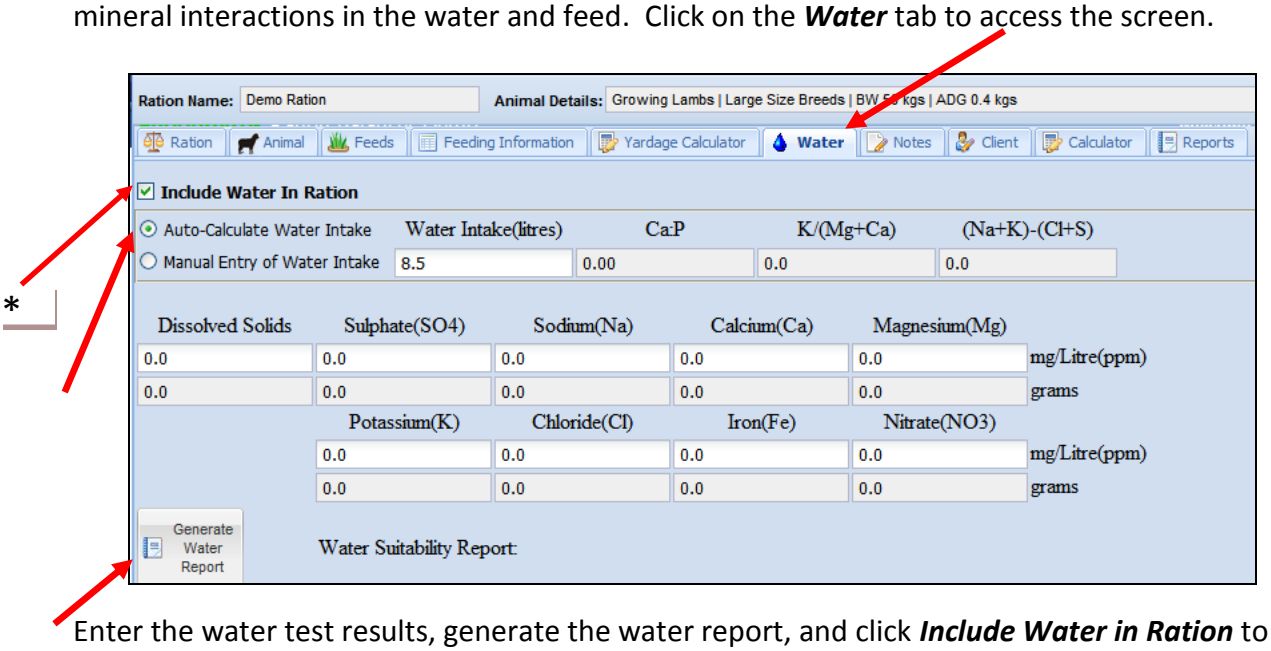
Yardage refers to the general operating and overhead costs in a livestock operation. Pens, feeders, taxes and depreciation are considered fixed or overhead costs because they do not change much from year to year. Feed, fuel, labour, veterinary costs, trucking, marketing, repairs and maintenance are considered variable costs because there can be large fluctuations.

Feeding programs that improve feed efficiency and/or rate of gain can reduce yardage costs per pound of gain … eg. Greater pounds of gain means a lower yardage cost per pound produced.

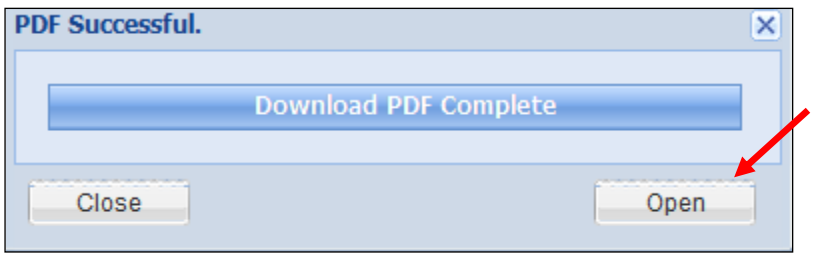


5. Including water test results in ration calculations is optional but can be very helpful when troubleshooting or fine tuning a ration.

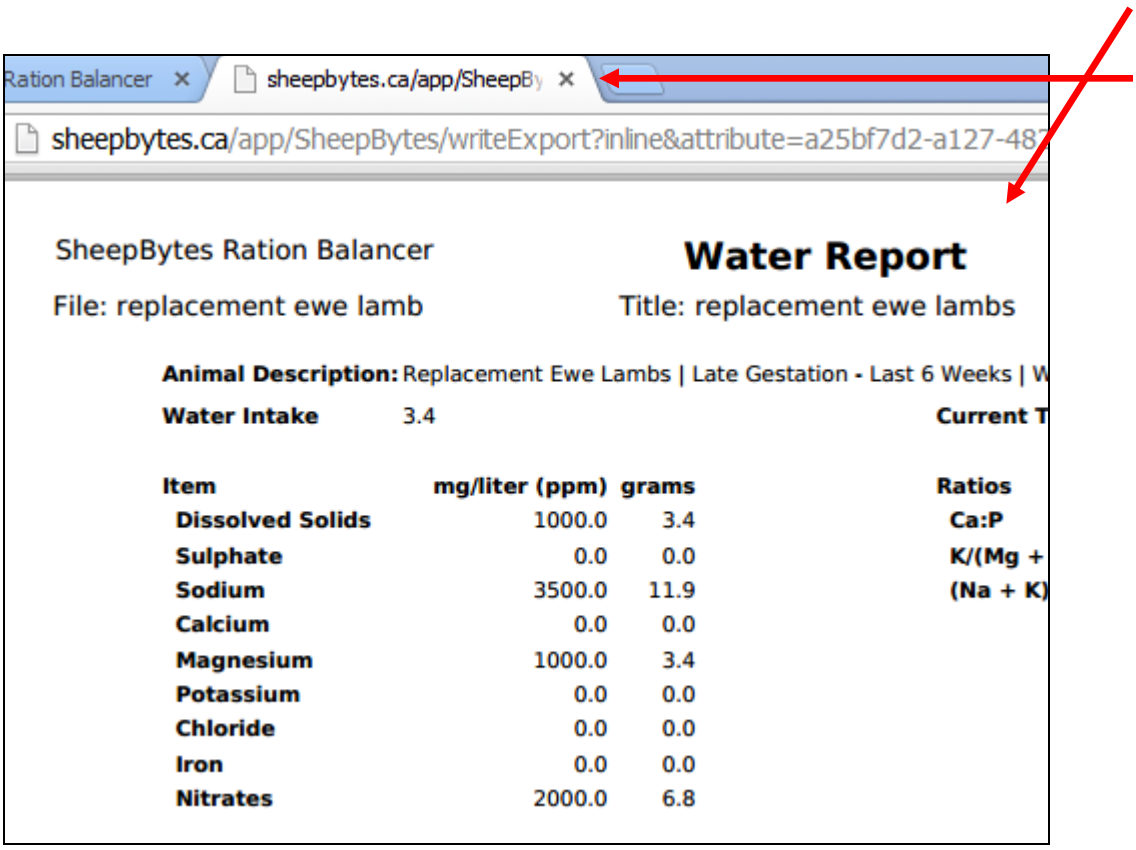
Production related problems such as poor reproduction or slow growth could be caused by mineral interactions in the water and feed. Click on the ***Water*** tab to access the screen.



Enter the water test results, generate the water report, and click ***Include Water in Ration*** to have nutrients included in the final ration. Auto calculation of water consumption is recommended unless environmental conditions or water quality impacts intake. Click ***Generate Water Report;*** button shown on previous page to print off a report.



This box appears when the generate water report button is clicked. Click ***Open*** to view the report. The water report appears. Part of the water report is shown below.



Move the mouse to the bottom right hand corner of the screen. An icon bar will appear. Click on the printer symbol to print off the report.

To close the water report, click on the "X" at the top of the screen.

The program will return to the water screen. Navigate to other parts of the program using the tabs within the SheepBytes program.

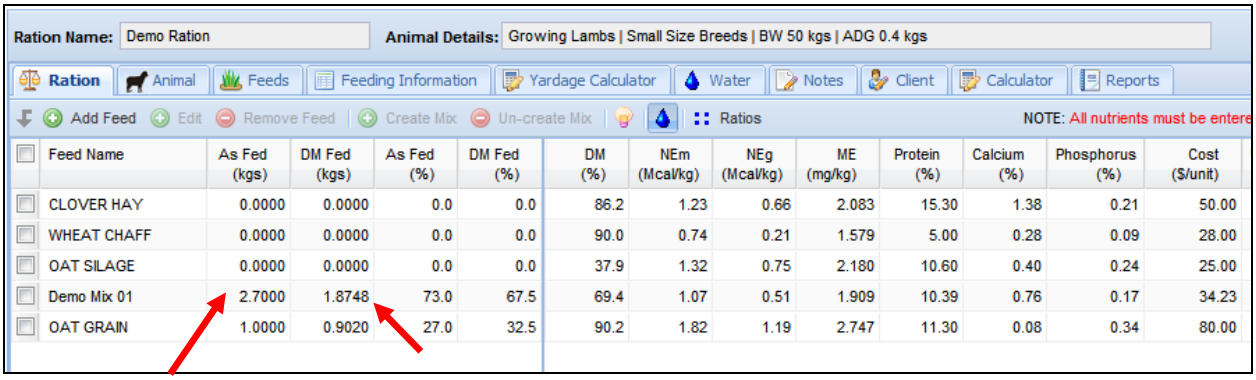
Balancing the ration:

After the first five setup steps are completed, you can balance the ration. Enter the amount of each feed either in pounds or kilograms to meet animal requirements listed at the bottom of the screen.


To change between Imperial (Canadian), Metric and United States weight and volume measurement systems, click on the scale icon found on the Ration screen. When changing between weight systems, the program requires that the ration be saved. There is no opportunity to change the name of the ration during the process.

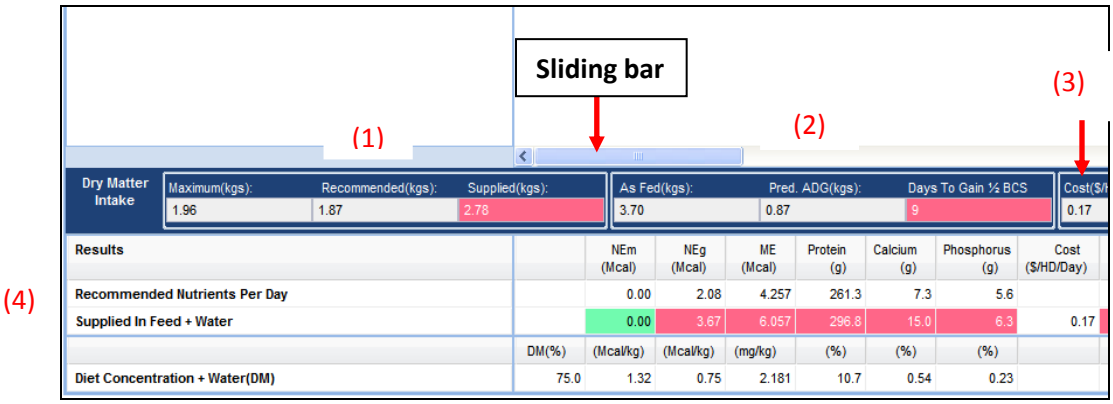
Feeds in the feed table show average values. The default average values can be changed on the ration screen to feed test report values. Click on the nutrient in question, and replace the value. This change will not change the default values of the feeds in the feed table.

After selecting feeds and setting the animal type, click in the ***As Fed*** or ***DM Fed*** column of the particular feed to enter the amount of the feed to be included in the ration (see the picture below). In this order; balance the ration for energy, protein, calcium, phosphorus, salt, macro- and trace minerals and finally vitamins. Adjust the amount of each feed or ingredient until the ration is balanced. Do not exceed the recommended dry matter intake for the ration!



Feed Name	As Fed (kgs)	DM Fed (kgs)	As Fed (%)	DM Fed (%)	DM (%)	NEm (Mcal/kg)	NEg (Mcal/kg)	ME (mg/kg)	Protein (%)	Calcium (%)	Phosphorus (%)	Cost ($/unit)
CLOVER HAY	0.0000	0.0000	0.0	0.0	86.2	1.23	0.66	2.083	15.30	1.38	0.21	50.00
WHEAT CHAFF	0.0000	0.0000	0.0	0.0	90.0	0.74	0.21	1.579	5.00	0.28	0.09	28.00
OAT SILAGE	0.0000	0.0000	0.0	0.0	37.9	1.32	0.75	2.180	10.60	0.40	0.24	25.00
Demo Mix 01	2.7000	1.8748	73.0	67.5	69.4	1.07	0.51	1.909	10.39	0.76	0.17	34.23
OAT GRAIN	1.0000	0.9020	27.0	32.5	90.2	1.82	1.19	2.747	11.30	0.08	0.34	80.00

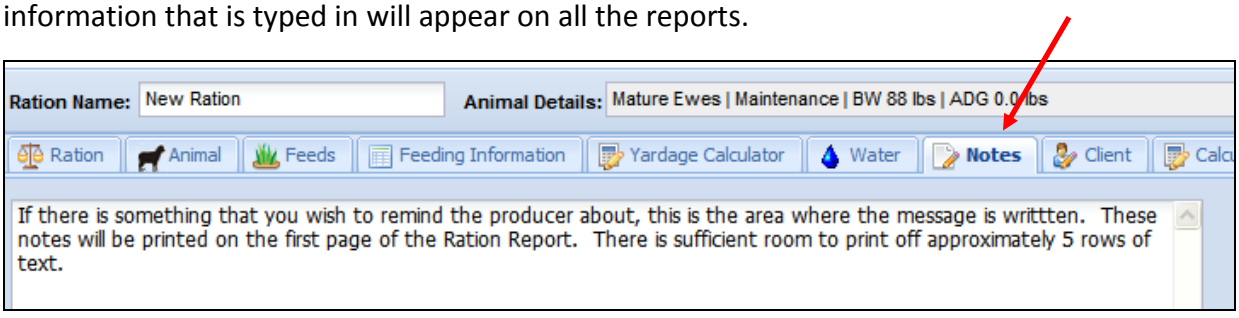
The ration screen provides recommended feed intake limits (1), predicted rate of gain (2) and cost of the ration (3). Recommended nutrient intake, and nutrients supplied by the feed or feed + water is shown in the results box (4).



Results		NEm (Mcal)	NEg (Mcal)	ME (Mcal)	Protein (g)	Calcium (g)	Phosphorus (g)	Cost ($/HD/Day)
Recommended Nutrients Per Day		0.00	2.08	4.257	261.3	7.3	5.6	
Supplied In Feed + Water		0.00	3.67	6.057	296.8	15.0	6.3	0.17
	DM(%)	(Mcal/kg)	(Mcal/kg)	(mg/kg)	(%)	(%)	(%)	
Diet Concentration + Water(DM)	75.0	1.32	0.75	2.181	10.7	0.54	0.23	

Above the ***As Fed*** box in the dark blue area of the screen, a sliding bar allows the right half of the visible screen to scroll from left to right. Nutrients listed to the right of the screen limit become visible when the bar is moved. The left half of the screen is fixed and does not move.

Notes about the ration can be entered in the notes section by clicking on the notes tab. These comments are included in the Ration Report. If not removed between different rations, the information that is typed in will appear on all the reports.

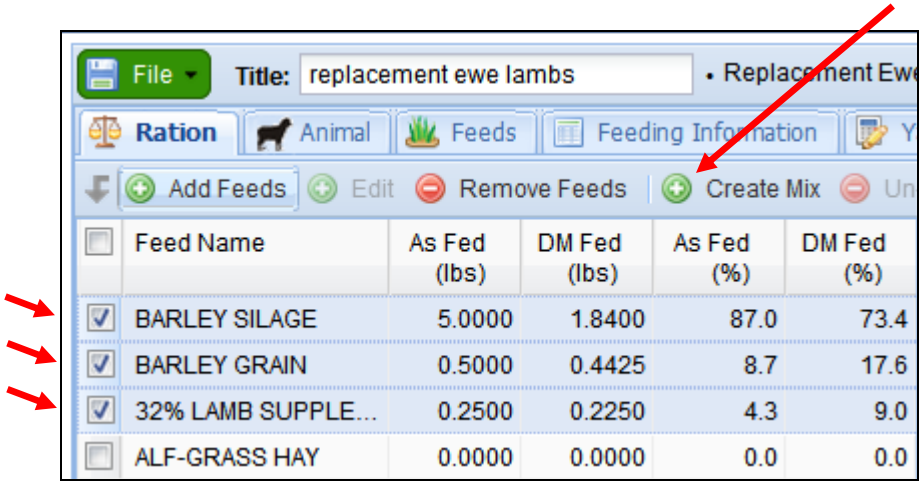


Special functions within the program:

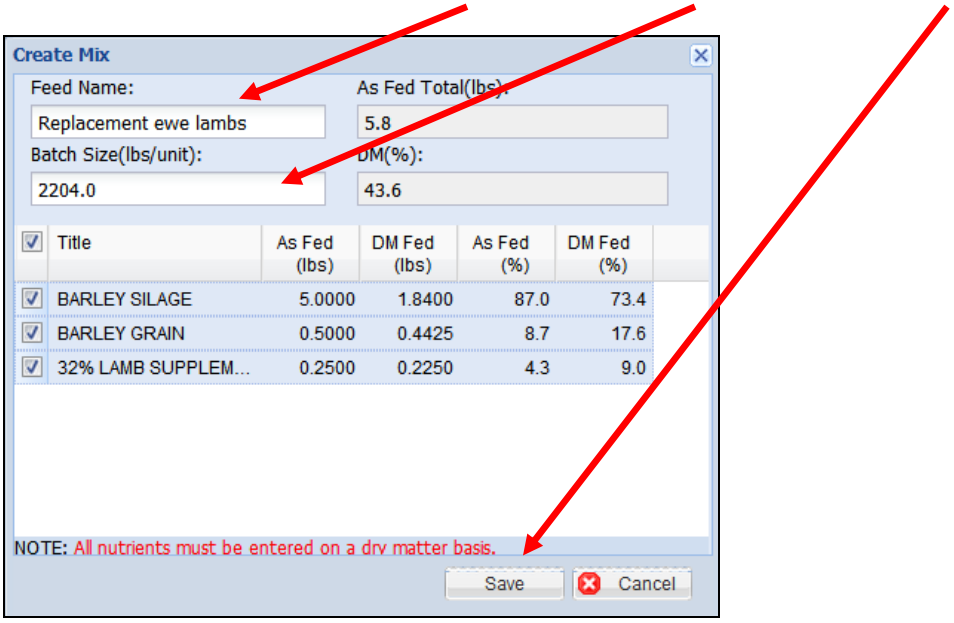
Feed mixes can be developed in SheepBytes to create a total mixed ration, a grain mix, or a salt / mineral mix that is separate from the forage. The feed mix must be made before a batch scale report can be generated. More than one mix can be included in a ration.

Why is the mix function important? If mixing grain, supplement, salt and vitamins on farm, in a feed mill or other equipment; knowing how much of each ingredient to add to a load is essential. The mix function calculates how much of each ingredient to add to the load to meet nutritional requirements for a group of animals. The percentage of each ingredient is kept constant, no matter what the size of the mix.

To create a mix: After the ration is balanced, a mix can be created. On the ration screen, select the feeds to be included in the mix by clicking on the box or boxes at the left hand side of the screen. Once the feeds are selected as indicated by the check marks, click ***Create Mix***.

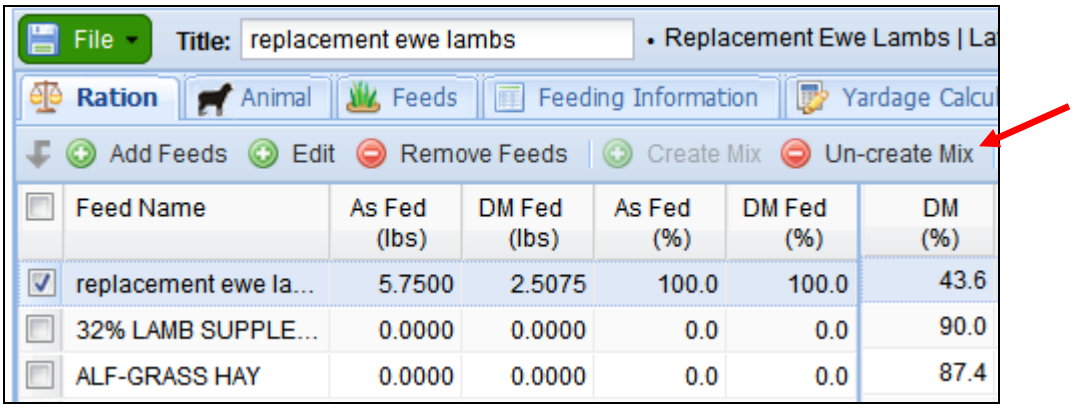


The ***Create Mix*** screen appears. Name the mix, set the batch size; then click ***Save***.



All feeds placed into the mix have a feeding value of zero on the ration page. The mix is added to the top line of the ration page with the total amount of the mix to be provided per head per day.

If you need to break apart a mix, click on the box to the left of the mix name and then click on ***Un-create Mix***.



The ration report displays the feed mix information towards the bottom of the first page.

Mix Breakdowns

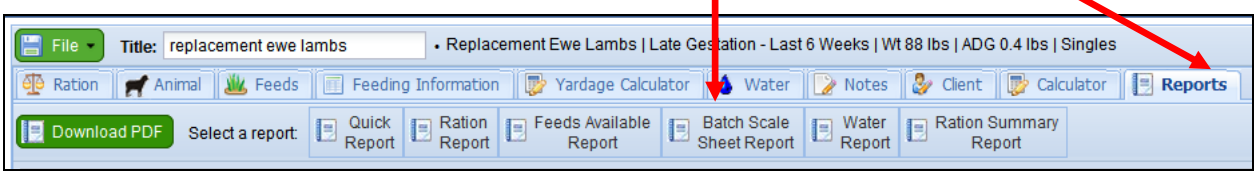
Mix Name	As Fed (lbs)	DM Fed (lbs)	As Fed (%)	DM Fed (%)	Weight / Batch (lbs)	Weight / Batch / Day(lbs)
Replacement Ewe Lambs	5.750	2.507	100.00	100.00	2204.0	1437.5
BARLEY SILAGE	5.000	1.840	86.96	73.38	1916.6	1250.0
BARLEY GRAIN	0.500	0.442	8.70	17.65	191.7	125.0
32% LAMB SUPPLEMENT	0.250	0.225	4.35	8.97	95.9	62.5

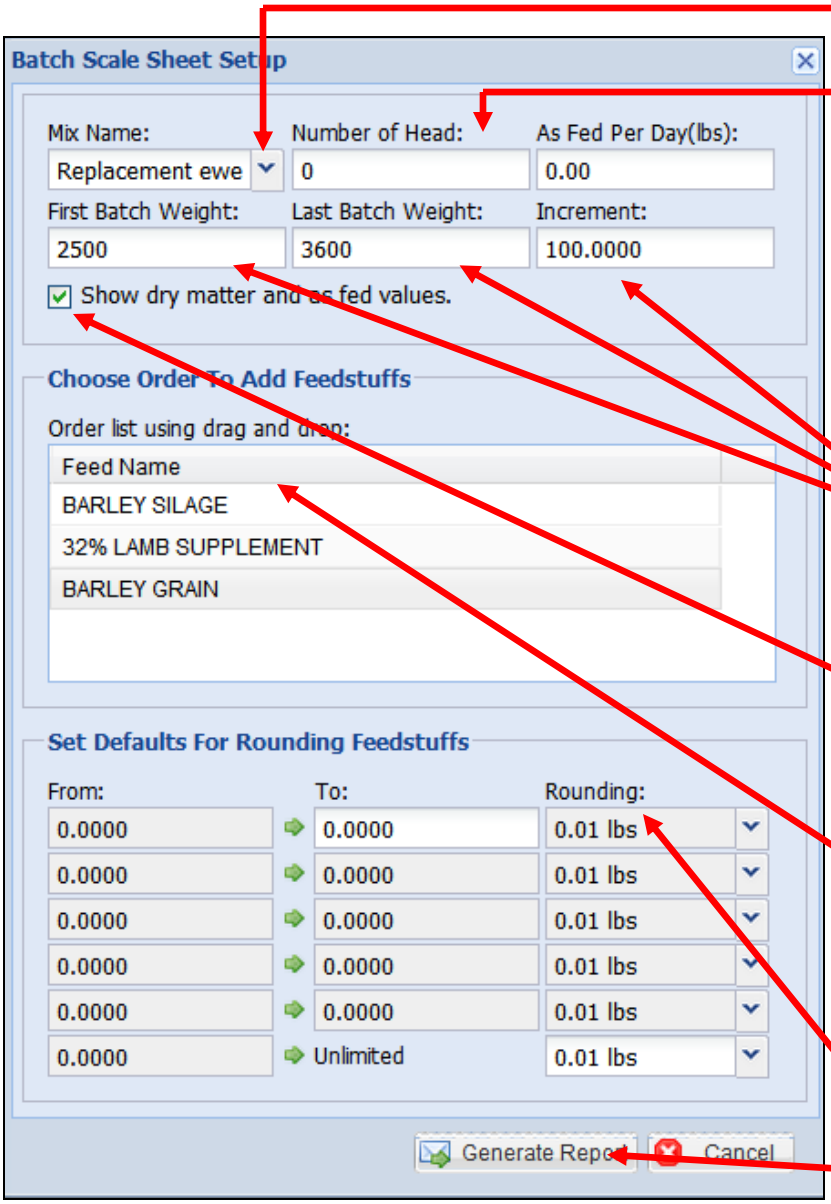
Ingredients included in the mix are listed by percent both on an as fed and dry matter basis. The amount of each ingredient in the "load" is also displayed.

Feed consumption by individual animals or a group of animals can change for a number of reasons. For example; as weather becomes colder, feed intake increases. If the animals are sick, feed intake decreases. Keeping the amount of each ingredient constant within the mix is necessary to prevent metabolic problems or animals going off feed when intake changes.

Batch Scale Sheets are created from a feed mix. The batch scale report provides a ration with a constant proportion for each feed over a range of batch weights to account for the changes in the day to day feed intake.

To create a batch scale sheet, click on the reports tab and select the batch scale sheet report.





The batch scale sheet setup:

Choose the mix to be included in the batch sheet. Use down arrow if more than one mix exists.

Indicate the number of animals in the group. The total amount of feed provided per day is calculated from the number of animals.

Set the minimum and maximum weight of the mix and the quantity of change or increments between batches.

Mix nutrient content can be printed out as part of the batch sheet. Click the box to include information.

The order in which the feeds are added to the mix can be changed by clicking on the name and dragging it to the correct order the feed will be added to the load.

Set rounding defaults for accuracy

Generate the report

The batch scale sheet indicates the amount of each ingredient to be added to a specific size mix. This is very helpful when feeding a total mixed ration to a group of animals.

An example of a batch scale sheet is shown at the top of the next page.

SheepBytes Ration Balancer

Batch Scale Sheets

Report Date: 06/19/2012

Number Of Head:250 As Fed Per Day: 3169.15 lbs

Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	2173.91	2173.91	2260.87	2260.87	2347.83	2347.83	2434.78	2434.78
BARLEY GRAIN	8.70	217.39	2391.30	226.09	2486.96	234.78	2582.61	243.48	2678.26
32% LAMB SUPPLEMENT	4.35	108.70	2500.00	113.04	2600.00	117.39	2700.00	121.74	2800.00
Batch Total		**2500.00**		**2600.00**		**2700.00**		**2800.00**	

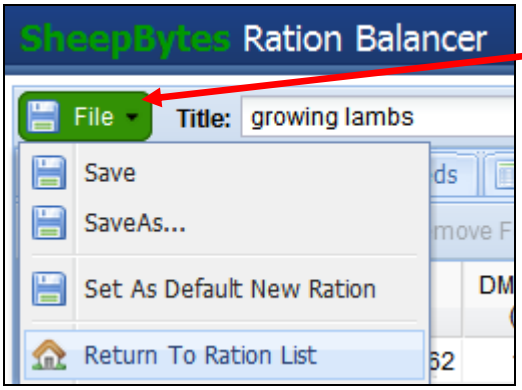
Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	2521.74	2521.74	2608.70	2608.70	2695.65	2695.65	2782.61	2782.61
BARLEY GRAIN	8.70	252.17	2773.91	260.87	2869.57	269.57	2965.22	278.26	3060.87
32% LAMB SUPPLEMENT	4.35	126.09	2900.00	130.43	3000.00	134.78	3100.00	139.13	3200.00
Batch Total		**2900.00**		**3000.00**		**3100.00**		**3200.00**	

Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	2869.57	2869.57	2956.52	2956.52	3043.48	3043.48	3130.43	3130.43
BARLEY GRAIN	8.70	286.96	3156.52	295.65	3252.17	304.35	3347.83	313.04	3443.48
32% LAMB SUPPLEMENT	4.35	143.48	3300.00	147.83	3400.00	152.17	3500.00	156.52	3600.00
Batch Total		**3300.00**		**3400.00**		**3500.00**		**3600.00**	

Reports:

Having a paper record of feed quality used to formulate the rations and the final recommendations is a good backup in case the electronic information is lost. It is also helpful to have printed reports to refer to when mixing the feed or discussing the information with a nutritionist or feed salesman, veterinarian or client.

There are a number of reports available in the SheepBytes program. All rations must be saved to a file prior to printing a report. Examples of all the reports are in the appendix starting on page 29.



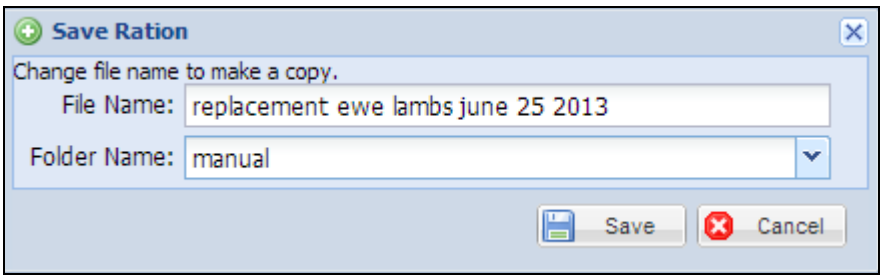
On the Ration screen, click ***File*** to save the ration

Select one of the options from the drop down menu to save the file

Using ***Save As*** allows the user to set the name of the ration.

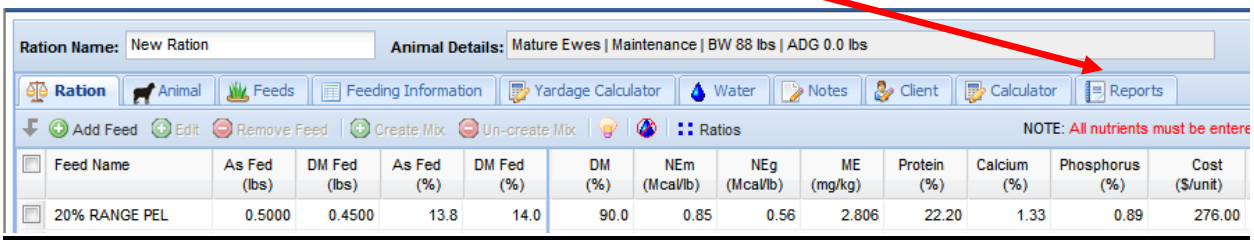
When the "Save" button is used; the new ration is placed into the same file and folder that you opened at the start of the session. The original information is over written lost and cannot be retrieved.

In order to preserve the previous file and the modifications made to the new ration, the "Save as" button is used. The pop up box below appears on the screen.

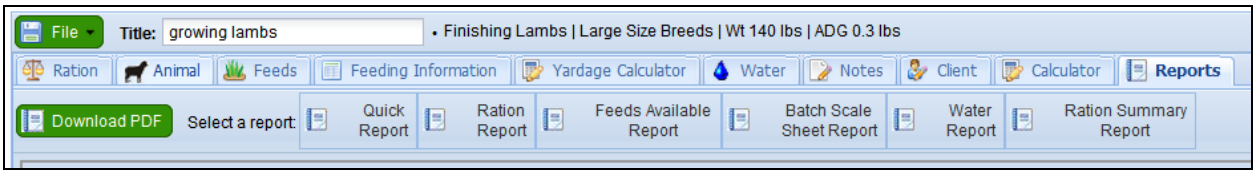


Each ration must have a unique name to prevent copying information on top of an existing file. It might be useful to include the date in the file name to identify different rations for the same group or type of animals.

Reports are generated by clicking on the reports tab.



There are 6 different reports listed on the reports menu. To select a report, click on the name of the report required. Samples of all the reports are included in the appendix.



Quick Report provides the basic information about the ration that has been formulated. It contains the amount of feed or feeds required by one animal for one day. It also provides the cost of the ration. Cost of gain by feed cost and cost of gain for feed plus yardage are listed. Nutrient requirements and nutrients supplied for the specified animal is also in the report.

Ration Report contains more information than the quick report. Along with what is contained in the quick report, the ration report includes feed inventory requirements for the group on a daily basis and for the feeding period. Ratios used by nutritionists to evaluate the ration such as: calcium to phosphorus, tetany ration, NDF as a % of body weight, copper to molybdenum, dietary cation / anion, concentrate to forage, and dry matter intake as a % of body weight are included.

Feed Available Report displays the nutrient content of the feeds available to formulate the ration. If feed test reports are lost or the information needs re-entering because of computer problems, this report contains the required data.

Batch Scale Sheet Report includes all the feeds included in a feed mix. Especially handy when making total mixed rations. Each feed is listed as a constant percentage of the total mix. When

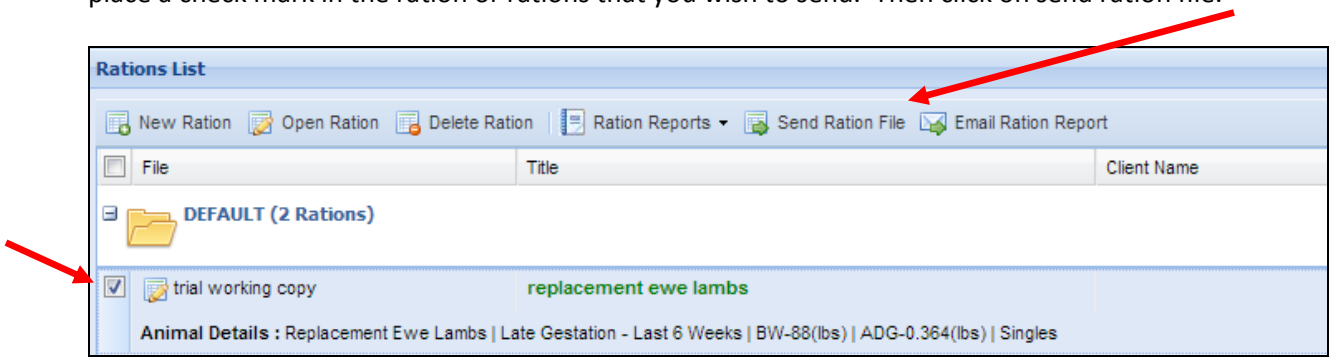
a group of animals requires a larger or smaller amount of a mixture due to a weather change or increased consumption by growing animals, the amount of each ingredient in the batch or load is listed. Nutrient content of the mix can be included in the report on a dry and as fed basis.

Water Report interprets a water test results, and provides information on the suitability of the water for livestock use.

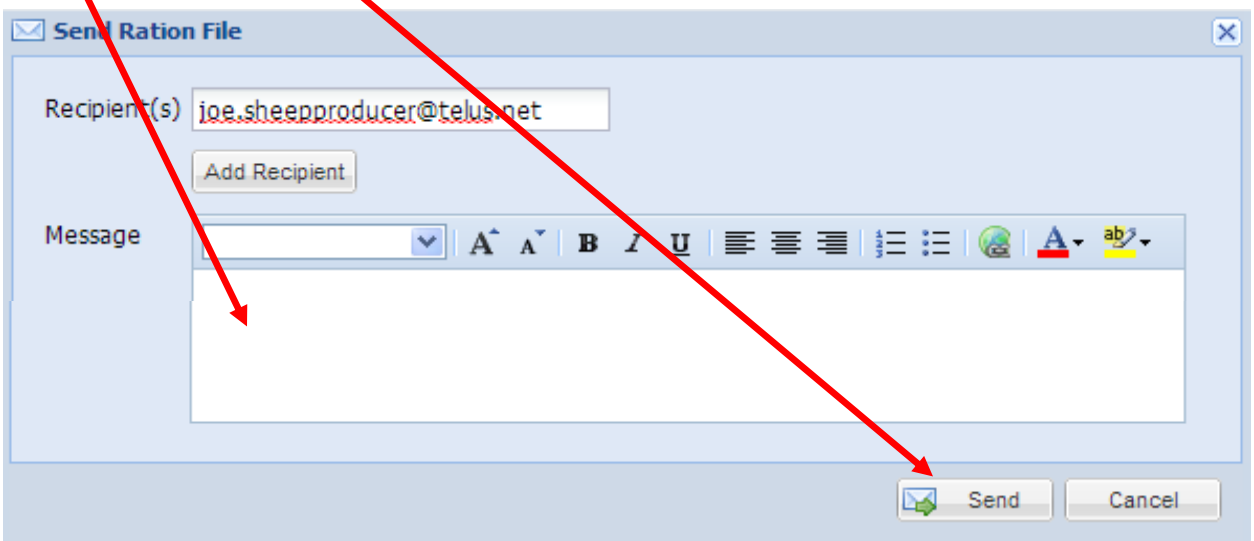
Summary Report compiles the total amount of feed used in the rations. Number of animals and days on feed for each group is itemized and the feed consumed by each group is provided. Costs are divided between home grown and purchased feeds. A grand total of each feed ingredient is calculated along with the cost. Helpful to reconcile feed inventory against feed requirements for the year.

Send ration files or a ration report by e-mail:

A saved ration file or ration report can be sent to another person by e-mail. From the Ration List screen, place a check mark in the ration or rations that you wish to send. Then click on send ration file.

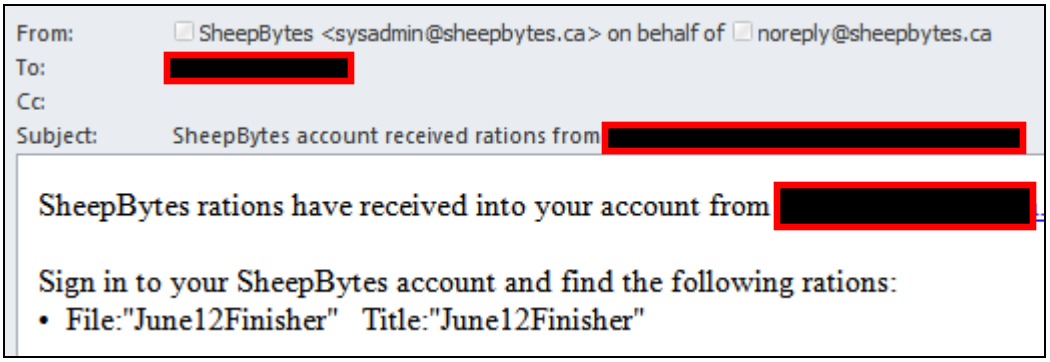


The pop up box appears. Put the e-mail address into the recipients' box and type in a message if required. Click on the "Send" box when the information is complete.

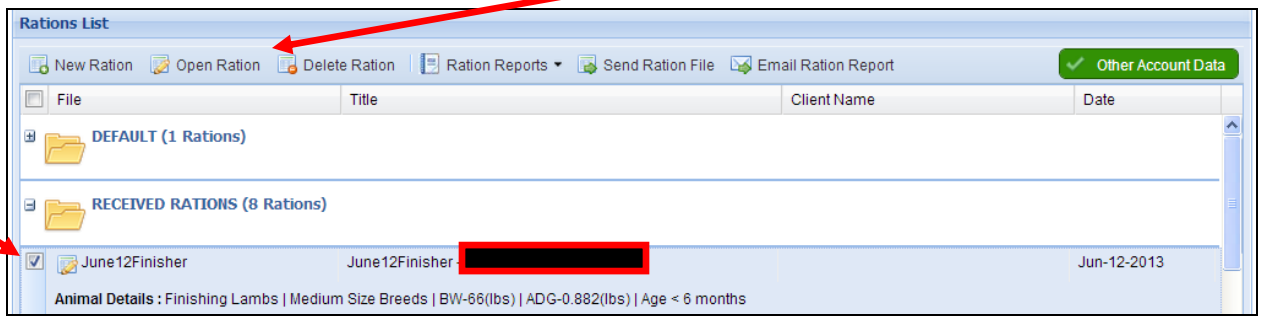


Receiving a ration by e-mail:

An e-mail notice is sent from the SheepBytes server to the person receiving a ration file. This is the e-mail account that was set up under the Other Account Data (page 8).



When SheepBytes is opened; under the "Ration List" tab, there is a folder titled "Received Rations" Any file by received by e-mail is automatically placed in this folder. To open the file, place a checkmark in the file box and click on "Open Ration" button.



The file is opened in the Ration Screen. Treat the file the same as you would any other file in SheepBytes.

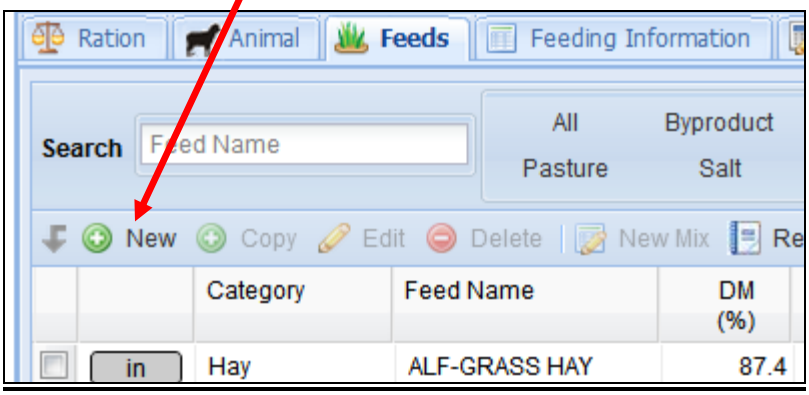
Receiving a ration report by e-mail:

When a ration report is received, it is in the Adobe Acrobat format. The information is contained in an attached file. This is a "read only" application.

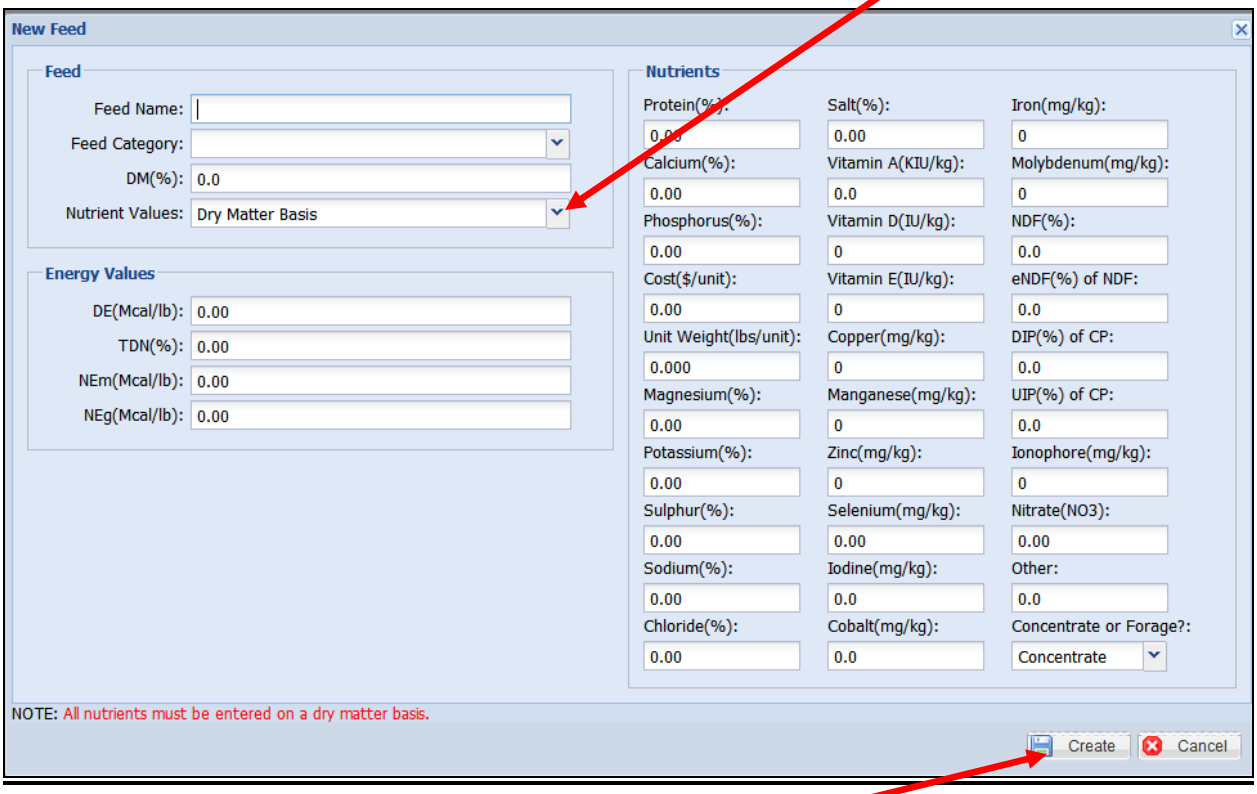
Other features of the SheepBytes Program:

Adding feeds to the feed table:

Feed tags, feed test results, or medication labels can be added to the feed table. With the feed tab open, click ***New***.

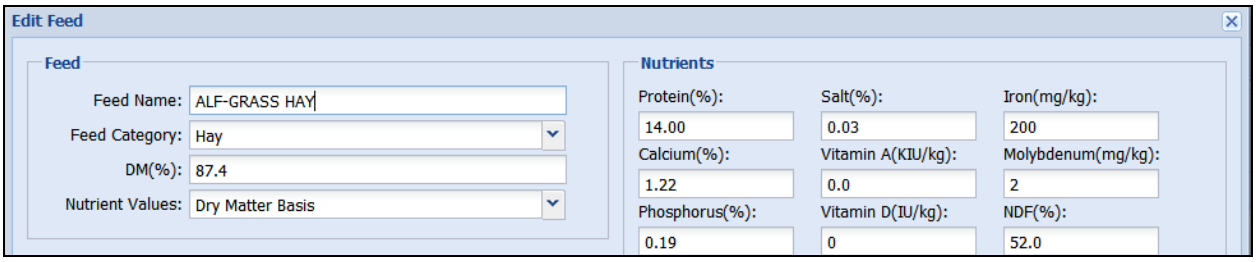


Enter as much information that is available. Nutrient levels listed on feed labels or medications are listed on the tag on an as-fed basis. Change the ***Nutrient Values*** to ***As Fed*** (by clicking on the arrow), to eliminate the need to convert the values to a dry matter basis.

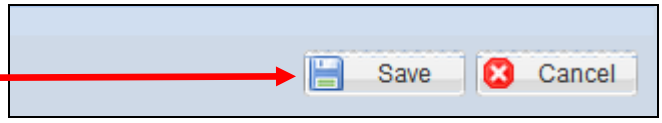


Once all the information is entered, click on the create button. The feed will be added to the feed table.

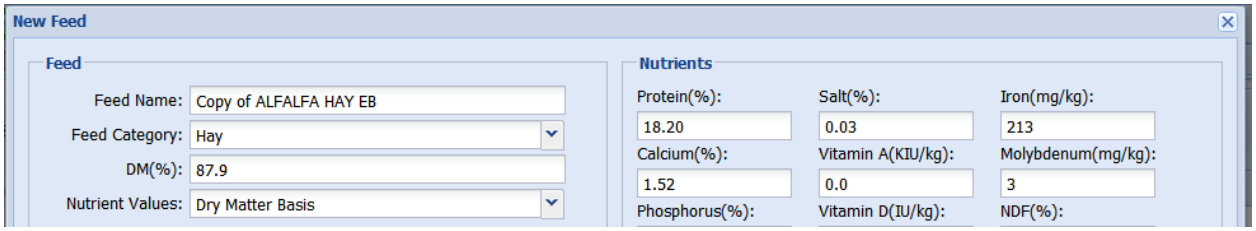
Editing an existing feed in the feed table With the feed tab open, click on the box to the left of the feed name. A screen will appear. Change the values in question and save the information. The values that were changed are lost and cannot be retrieved. It is recommended to make a copy of the feed and re-name it. That way the original data is not lost.



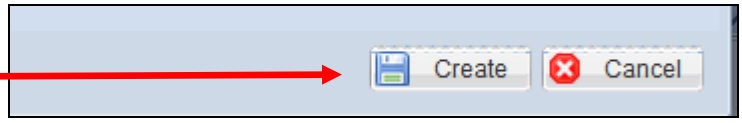
After the information has been changed, click ***Save***



To copy an existing feed, from the feed table tab, click on the box to the left of the feed name. When the screen opens, re-name the feed, change the nutrient values as required and create the new feed. A field name, year information may be helpful in identifying different feeds.

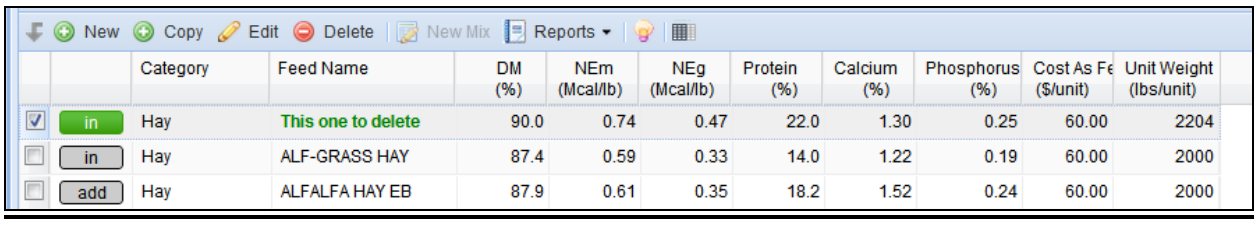


After all the information has been changed, click ***Create***.



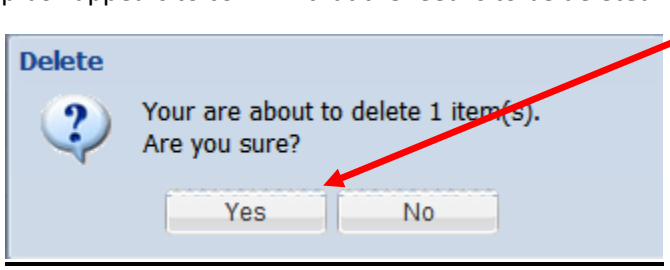
Deleting an existing feed from the feed table tab can only be done if it is a feed that was added to the default table. Feeds from the original feed table cannot be deleted.

A feed that was added to the program has a green color compared to a black color for feeds included in the default table. Click on the box to the left of the feed name (green color). Then click ***Delete***.



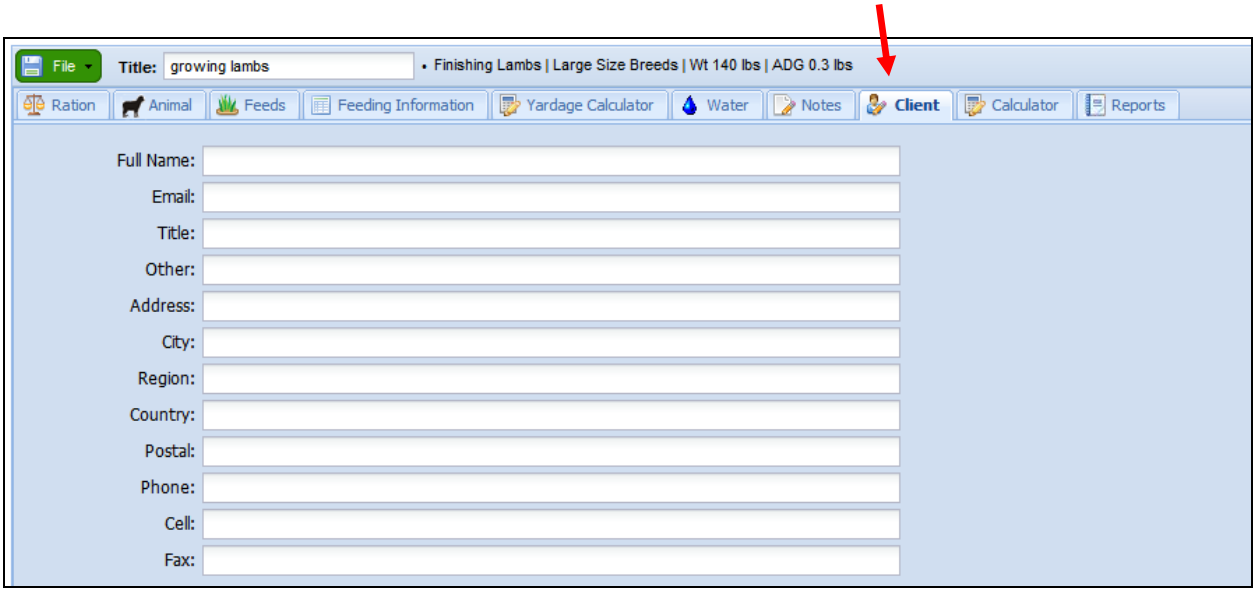
		Category	Feed Name	DM (%)	NEm (Mcal/lb)	NEg (Mcal/lb)	Protein (%)	Calcium (%)	Phosphorus (%)	Cost As Fe ($/unit)	Unit Weight (lbs/unit)
☑	in	Hay	This one to delete	90.0	0.74	0.47	22.0	1.30	0.25	60.00	2204
☐	in	Hay	ALF-GRASS HAY	87.4	0.59	0.33	14.0	1.22	0.19	60.00	2000
☐	add	Hay	ALFALFA HAY EB	87.9	0.61	0.35	18.2	1.52	0.24	60.00	2000

A pop up box appears to confirm that the feed is to be deleted. Click ***Yes***.



Commercial application – customer data entry

Identifying client information is necessary when keeping a copy of your work. Click on the client information tab to enter relevant information. This information will appear on the quick report and the ration report.



Appendix :

Quick report: Page 1 of 2

SheepBytes Ration Balancer

Quick Report

File: trial working copy

Title: replacement ewe lambs

Report Date: 06/21/2012

Prepared By:

Name: [redacted]
Title:
Other:
Address:
Phone:
Cell:
Fax:
Email:

Client:

Name:
Title:
Other:
Address:
Phone:
Cell:
Fax:
Email:

Animal Information

Animal Details: Replacement Ewe Lambs | Late Gestation - Last 6 Weeks | Wt 88 lbs | ADG 0.4 lbs | Singles
Predicted ADG: 0.51
Days To Gain ½ BCS: 13.00
Wool Depth: Full Fleece - > 1cm
Approximate Temperature (C): 0
Wind Speed (km/hr): <= 18 Km/Hr or 11 Miles/Hr

Number Of Head: 250
Number Of Days: 50

Feed Name	As Fed lbs/Head/Day	Wastage %	% of Ration	$/Head /Day	lbs
BARLEY SILAGE	5.0000	10.00	86.96	$0.12	2000.00
BARLEY GRAIN	0.5000	10.00	8.70	$0.05	48.00
32% LAMB SUPPLEMENT	0.2500	5.00	4.35	$0.04	2204.00
Feed Total:	**5.7500**			**$0.21**	
Yardage Cost Total:				**$0.15**	
			Total:	**$0.36**	
			Feed Cost/lb Of Gain:	**$0.98**	
			Total Cost/lb Of Gain:	**$1.63**	

* waste factor not included

Responsibility for interpretation of the reports provided by this program rests with the user.

06/21/2012

All nutrients are on a dry matter basis.

Page 1 of 2

Quick Report Page 2 of 2

Nutrients (DM basis)	Supplied Feeds+Water		Recommended	Diet Concentration
DM Intake	3		2.5 (lbs)	43.6 (%)
DE	3.37	**	5.02 (Mcal)	2.96 (Mcal/lb)
TDN	0.77	**	1.14 lbs	67.30 (%)
NEmTot	1.04		1.04 (Mcal)	1.54 (Mcal/lb)
NEg	0.44	**	0.94 (Mcal)	0.94 (Mcal/lb)
Protein	164	*	120 (grams)	14.4 (%)
Calcium	9		5 (grams)	0.82 (%)
Phosphorus	4	*	3 (grams)	0.33 (%)
Magnesium	6	**	1 (grams)	0.51 (%)
Potassium	15	*	5 (grams)	1.34 (%)
Sulphur	2		2 (grams)	0.21 (%)
Sodium	15	**	1 (grams)	1.30 (%)
Chloride	0		0 (grams)	0.00 (%)
Salt	34	**	1 (grams)	7.08 (%)
Vitamin A	5950		6067 (IU)	5.2 (KIU/kg)
Vitamin D	595		607 (IU)	523.4 (IU/kg)
Vitamin E	11	**	224 (IU)	10 (mg/kg)
Copper	5	**	6 (mg)	5 (mg/kg)
Manganese	59		22 (mg)	52 (mg/kg)
Zinc	84		34 (mg)	74 (mg/kg)
Selenium	0.20		0.19 (mg)	0.18 (mg/kg)
Iodine	0.3	**	0.6 (mg)	0.3 (mg/kg)
Cobalt	0.1	**	0.1 (mg)	0.1 (mg/kg)
Iron	269		33 (mg)	237 (mg/kg)
Molybdenum	2.1	*	0.6 (mg)	1.8 (mg/kg)
NDF	40.0		0.0 (%)	40.0 (%)
eNDF	24.8		20.0 (%)	61.9 (% of NDF)
DIP	96		148 (grams)	59.0 (% of CP)
UIP	67		-28 (grams)	41.0 (% of CP)
Ionophore	0		0 (mg)	0 (mg/kg)
Other	0.00		0.00	0.0
Nitrate(NO3)	2	**	0 (grams)	0.00 (%)

(*)- Caution(Yellow) supplied value is not in range of acceptible required value.

(**)- Warning(Red) supplied value is far out of range of acceptible required value.

Ration Report: Page 1 of 2

SheepBytes Ration Balancer

Ration Report

File: trial working copy | Title: replacement ewe lambs | Report Date: 06/21/2012

Prepared By:

Name: [redacted]
Title:
Other:
Address:
Phone:
Cell:
Fax:
Email:

Client:

Name:
Title:
Other:
Address:
Phone:
Cell:
Fax:
Email:

Notes

Number Of Head:250 **Number Of Days:**50

Feed Name	As Fed Weight lbs	Wastage %	% of Ration	$/Head /Day	Type	lbs	By Group per One Day * Packages	Cost	By Group per 50 Day(s) * Packages	Cost
BARLEY SILAGE	5.000	10.0	86.96	$0.12	Tons	2000.001	34.375	$1,615.62	34.375	$1,615.62
BARLEY GRAIN	0.500	10.0	8.70	$0.05	Bushels	48.000	143.229	$716.15	143.229	$716.15
32% LAMB	0.250	5.0	4.35	$0.04	Tonnes	2204.001	1.489	$521.07	1.489	$521.07
Feed Total:	**5.7500**			**$0.21**				**$2,852.84**		**$2,852.84**
Yardage Cost Total:				**$0.15**				**$37.50**		**$1,875.00**
Total:				**$0.36**				**$2,890.34**		**$4,727.84**

Total Feed Cost: $2,852.84 **Feed Cost/lb Of Gain: $0.98**

Total Yardage Cost: $1,875.00 **Total Cost/lb Of Gain: $1.63**

* waste factor included

Ration Report: Page 2 of 2

Nutrients (DM basis)	Supplied Feeds+Water		Recommended	Diet Concentration
DM Intake	3		2.5 (lbs)	43.6 (%)
DE	3.37	**	5.02 (Mcal)	2.96 (Mcal/lb)
TDN	0.77	**	1.14 lbs	67.30 (%)
NEmTot	1.04		1.04 (Mcal)	1.54 (Mcal/lb)
NEg	0.44	**	0.94 (Mcal)	0.94 (Mcal/lb)
Protein	164	*	120 (grams)	14.4 (%)
Calcium	9		5 (grams)	0.82 (%)
Phosphorus	4	*	3 (grams)	0.33 (%)
Magnesium	6	**	1 (grams)	0.51 (%)
Potassium	15	*	5 (grams)	1.34 (%)
Sulphur	2		2 (grams)	0.21 (%)
Sodium	15	**	1 (grams)	1.30 (%)
Chloride	0		0 (grams)	0.00 (%)
Salt	34	**	1 (grams)	7.08 (%)
Vitamin A	5950		6067 (IU)	5.2 (KIU/kg)
Vitamin D	595		607 (IU)	523.4 (IU/kg)
Vitamin E	11	**	224 (IU)	10 (mg/kg)
Copper	5	**	6 (mg)	5 (mg/kg)
Manganese	59		22 (mg)	52 (mg/kg)
Zinc	84		34 (mg)	74 (mg/kg)
Selenium	0.20		0.19 (mg)	0.18 (mg/kg)
Iodine	0.3	**	0.6 (mg)	0.3 (mg/kg)
Cobalt	0.1	**	0.1 (mg)	0.1 (mg/kg)
Iron	269		33 (mg)	237 (mg/kg)
Molybdenum	2.1	*	0.6 (mg)	1.8 (mg/kg)
NDF	40.0		0.0 (%)	40.0 (%)
eNDF	24.8		20.0 (%)	61.9 (% of NDF)
DIP	96		148 (grams)	59.0 (% of CP)
UIP	67		-28 (grams)	41.0 (% of CP)
Ionophore	0		0 (mg)	0 (mg/kg)
Other	0.00		0.00	0.0
Nitrate(NO3)	2	**	0 (grams)	0.00 (%)

(*)- Caution(Yellow) supplied value is not in range of acceptible required value.

(**)- Warning(Red) supplied value is far out of range of acceptible required value.

SheepBytes Ration Balancer

Feeds Available

File: June 7

Title: growing lambs

Report Date: 06/07/2012

Feed Name	Dry %	NEm Mcal/lb	NEg Mcal/lb	Protein %	Ca %	P %	Mg %	K %	S %
BRLY GREENFEED	85.9	0.57	0.31	11.80	0.41	0.22	0.23	1.83	0.12
BARLEY GRAIN	88.5	0.92	0.62	12.50	0.07	0.38	0.14	0.54	0.02
ALFALFA HAY EB	87.9	0.61	0.35	18.20	1.52	0.24	0.33	1.72	0.03
20% RANGE PEL	90.0	0.85	0.56	22.20	1.33	0.89	0.17	0.33	0.22
1:1 MINERAL NO	99.0	0.00	0.00	0.00	17.00	17.00	0.50	0.00	0.00
EWE'S MILK	18.2	1.65	1.20	24.70	0.20	0.15	0.02	0.15	0.04
OAT CHAFF	89.0	0.47	0.22	6.50	0.51	0.15	0.17	1.55	0.20
OAT HULLS	90.0	0.29	0.05	4.50	0.10	0.18	0.12	0.59	0.01
SUNFLOWER OIL	99.0	2.57	1.92	0.00	0.00	0.00	0.00	0.00	0.00

Feed Name	Unit Price	Unit Weight(lbs)	Na %	Cl %	Salt %	Vit. A KIU/kg	Vit. D IU/kg	Vit. E IU/kg	Cu mg/kg	Mn mg/kg
BRLY GREENFEED	45.00	1250	0.12	0.00	0.30	0	0	0	7	35
BARLEY GRAIN	3.90	48	0.02	0.00	0.05	0	0	0	6	17
ALFALFA HAY EB	60.00	1400	0.03	0.00	0.08	0	0	0	6	40
20% RANGE PEL	276.00	2204	0.22	0.00	0.55	44	44	56	78	111
1:1 MINERAL NO	24.00	55	0.00	0.00	0.00	560	560	400	25	6000
EWE'S MILK	1.00	2	0.04	0.10	0.10	0	0	15	0	0
OAT CHAFF	32.00	2000	0.20	0.00	0.50	0	0	0	3	34
OAT HULLS	40.00	2000	0.01	0.00	0.02	0	0	0	3	34
SUNFLOWER OIL	920.00	2204	0.00	0.00	0.00	0	0	0	0	0

Feed Name	Zn mg/kg	Se mg/kg	I mg/kg	Co mg/kg	Fe mg/kg	Mo mg/kg	NDF %	eNDF % of NDF	DIP % of CP	UIP % of CP
BRLY GREENFEED	29	0.03	0.00	0	250	2.0	58	92	70	30
BARLEY GRAIN	40	0.03	0.00	0	80	2.0	23	34	67	33
ALFALFA HAY EB	23	0.03	0.00	0	213	3.0	47	92	81	19
20% RANGE PEL	167	1.11	2.00	1	0	0.0	0	6	68	32
1:1 MINERAL NO	8000	30.00	140.00	45	5500	0.0	0	0	0	100
EWE'S MILK	3	0.03	0.00	0	1	0.0	0	0	81	19
OAT CHAFF	11	0.03	0.00	0	300	1.0	65	50	45	55
OAT HULLS	11	0.03	0.00	0	300	1.0	78	35	72	28
SUNFLOWER OIL	0	0.00	0.00	0	0	0.0	0	0	100	0

Feed Name	Ionophore mg/kg	Other	Nitrate
BRLY GREENFEED	0	0	0
BARLEY GRAIN	0	0	0
ALFALFA HAY EB	0	0	0
20% RANGE PEL	0	0	0
1:1 MINERAL NO	0	0	0
EWE'S MILK	0	0	0
OAT CHAFF	0	0	0
OAT HULLS	0	0	0
SUNFLOWER OIL	0	0	0

Batch Scale Report: Page 1 of 2

SheepBytes Ration Balancer

Batch Scale Sheets

Report Date: 06/21/2012

Number Of Head:250

As Fed Per Day: 3169.15 lbs

Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	2434.78	2434.78	2521.74	2521.74	2608.70	2608.70	2695.65	2695.65
BARLEY GRAIN	8.70	243.48	2678.26	252.17	2773.91	260.87	2869.57	269.57	2965.22
32% LAMB SUPPLEMENT	4.35	121.74	2800.00	126.09	2900.00	130.43	3000.00	134.78	3100.00
Batch Total		**2800.00**		**2900.00**		**3000.00**		**3100.00**	

Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	2782.61	2782.61	2869.57	2869.57	2956.52	2956.52	3043.48	3043.48
BARLEY GRAIN	8.70	278.26	3060.87	286.96	3156.52	295.65	3252.17	304.35	3347.83
32% LAMB SUPPLEMENT	4.35	139.13	3200.00	143.48	3300.00	147.83	3400.00	152.17	3500.00
Batch Total		**3200.00**		**3300.00**		**3400.00**		**3500.00**	

Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	3130.43	3130.43	3217.39	3217.39	3304.35	3304.35	3391.30	3391.30
BARLEY GRAIN	8.70	313.04	3443.48	321.74	3539.13	330.43	3634.78	339.13	3730.43
32% LAMB SUPPLEMENT	4.35	156.52	3600.00	160.87	3700.00	165.22	3800.00	169.57	3900.00
Batch Total		**3600.00**		**3700.00**		**3800.00**		**3900.00**	

Feed Name	As Fed % of Mix	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading	Amount	Scale Reading
BARLEY SILAGE	86.96	3478.26	3478.26	3565.22	3565.22	3652.17	3652.17	3739.13	3739.13
BARLEY GRAIN	8.70	347.83	3826.09	356.52	3921.74	365.22	4017.39	373.91	4113.04
32% LAMB SUPPLEMENT	4.35	173.91	4000.00	178.26	4100.00	182.61	4200.00	186.96	4300.00
Batch Total		**4000.00**		**4100.00**		**4200.00**		**4300.00**	

Responsibility for interpretation of the reports provided by this program rests with the user.

06/21/2012

All nutrients are on a dry matter basis.

Page 1 of 1

SheepBytes Ration Balancer

Water Report

File: trial working copy | Title: replacement ewe lambs | Report Date: 06/21/2012

Animal Description: Replacement Ewe Lambs | Late Gestation - Last 6 Weeks | Wt 88 lbs | ADG 0.4 lbs | Singles

Water Intake 3.4 **Current Temperature** 0.0

Item	mg/liter (ppm)	grams
Dissolved Solids	7500.0	25.5
Sulphate	0.0	0.0
Sodium	3500.0	11.9
Calcium	0.0	0.0
Magnesium	1000.0	3.4
Potassium	0.0	0.0
Chloride	0.0	0.0
Iron	0.0	0.0
Nitrates	2000.0	1.5

Ratios	Feed Only	Water + Feed
Ca:P	0	
K/(Mg + Ca)	0	
(Na + K) - (Cl + S)	0	

Suitability for sheep

Dissolved Solids
(Approximate electrical conductivity from 10,448 ? 14,925 ?s/cm). Poor - Not recommended for pregnant, lactating or young lamb. Avoid using this type of water if possible, especially for extended periods of time. Likely to cause diarrhea in young lamb especially upon introduction. Older lamb may be able to survive for short terms of time on this water but water intake issues and or water refusal could affect overall acceptability and or feed intake and productivity. Significant trace mineral related production and/or health issues are likely to occur. production and/ or health issues are likely to occur.

Sulphate(SO4)
Satisfactory for lamb. Greater than 500 mg/litre (ppm) may cause a temporary laxative effect in lamb, especially in young lamb until they become accustom to it. Levels greater than 500 mg/litre may also increase the severity of deficiencies in copper, zinc, manganese or iron. Sulphate has an additive effect with chloride as a laxative but sulphate has twice the effect of chloride. The tolerance of this level of sulphate in water will depend on the total dietary sulphur intake including that contained in the feed.

Calcium(Ca)
No Problem

Sodium(Na) and Potassium(K)

Nitrate(NO3)
Unsuitable and Toxic. Abortions and lamb death highly likely. Should not be used as a source of water for lamb.

Nitrate(NO3)
Unsuitable and Toxic. Abortions and lamb death highly likely. Should not be used as a source of water for lamb.

Iron(Fe)

Magnesium(Mg)

Chloride(Cl)

Responsibility for interpretation of the reports provided by this program rests with the user.

SheepBytes Ration Balancer

Ration Summary Report

Report Date: 06/27/2012

Ration: **File: Growing lamb** **Title: growing lamb demo** **No. Head:** 250 **No. Days:** 50

Growing Lambs | Large Size Breeds | Wt 65 lbs | ADG 0.400 lbs

	Daily		Period		
Feed Name	**Weight(lbs)**	**Packages**	**Weight(lbs)**	**Packages**	**Package Type**
BARLEY SILAGE	962.50	0.48	48125.00	24.06	None
OAT GRAIN	302.50	8.90	15125.00	444.86	None
32% LAMB SUPPLEMENT	131.25	0.06	6562.50	2.98	None

Ration: **File: mature ewe late** **Title: Mature ewe late** **No. Head:** 20 **No. Days:** 35

Mature Ewes | Late Lactation - After 6 Weeks | Wt 150 lbs | ADG 0.000 lbs | Triplets

	Daily		Period		
Feed Name	**Weight(lbs)**	**Packages**	**Weight(lbs)**	**Packages**	**Package Type**
ALFALFA HAY EB	77.00	1.18	2695.00	41.46	Square Bale
CORN GRAIN	44.00	0.02	1540.00	0.70	Tonnes
SOYBEAN MEAL-44%	4.72	0.00	165.17	0.07	Tonnes

Ration: **File: Mature Ram TMR** **Title: mature rams** **No. Head:** 10 **No. Days:** 150

Mature Rams | Maintenance | Wt 200 lbs | ADG 0.000 lbs

	Daily		Period		
Feed Name	**Weight(lbs)**	**Packages**	**Weight(lbs)**	**Packages**	**Package Type**
Mature ram TMR	88.53	0.04	13279.55	6.64	Mix
- 2:1 MINERAL W SALT	0.53	0.01	79.55	1.45	Bag
- BARLEY SILAGE	88.00	0.04	13200.00	6.60	Tons
- PEA STRAW	0.00	0.00	0.00	0.00	Round Bale
- 2:1 MINERAL W SALT	0.53	0.01	79.55	1.45	Bag
- PEA STRAW	0.00	0.00	0.00	0.00	Round Bale
- BARLEY SILAGE	88.00	0.04	13200.00	6.60	Tons
- BARLEY SILAGE	88.00	0.04	13200.00	6.60	Tons
- BARLEY SILAGE	88.00	0.04	13200.00	6.60	Tons
- 2:1 MINERAL W SALT	0.53	0.01	79.55	1.45	Bag
- 2:1 MINERAL W SALT	0.53	0.01	79.55	1.45	Bag
- PEA STRAW	0.00	0.00	0.00	0.00	Round Bale
- PEA STRAW	0.00	0.00	0.00	0.00	Round Bale

Ration: **File: pregnant ewe** **Title: pregnant ewe demo** **No. Head:** 100 **No. Days:** 45

Mature Ewes | Early Gestation - First 15 Weeks | Wt 155 lbs | ADG 0.000 lbs | Twins

	Daily		Period		
Feed Name	**Weight(lbs)**	**Packages**	**Weight(lbs)**	**Packages**	**Package Type**
ALF-GRASS HAY	503.43	0.39	22654.46	17.43	Round Bale
BARLEY GRAIN	24.86	0.52	1118.64	23.31	Bushels
11 - 11 MINERAL PREMIX	2.12	0.04	95.45	1.74	Bag

Summary Report page 2 of 2

Total Amounts and Costs

Feed Name	Weight (lbs)	Packages	Home Cost	Purchase Cost	Total Cost
BARLEY SILAGE	100925.00	50.46	$2,018.50	$0.00	$2,018.50
OAT GRAIN	15125.00	444.86	$1,334.57	$0.00	$1,334.57
32% LAMB SUPPLEMENT	6562.50	2.98	$893.26	$0.00	$893.26
ALFALFA HAY EB	2695.00	41.46	$207.30	$0.00	$207.30
CORN GRAIN	1540.00	0.70	$0.00	$90.83	$90.83
SOYBEAN MEAL-44%	165.17	0.07	$0.00	$34.47	$34.47
2:1 MINERAL W SALT	318.18	5.79	$0.00	$133.06	$133.06
PEA STRAW	0.00	0.00	$0.00	$0.00	$0.00
ALF-GRASS HAY	22654.46	17.43	$1,045.59	$0.00	$1,045.59
BARLEY GRAIN	1118.64	23.31	$90.89	$0.00	$90.89
11 - 11 MINERAL PREMIX	95.45	1.74	$0.00	$67.68	$67.68
			$5,590.12	**$326.05**	**$5,916.17**