



**Window Consulting Nutritionist**

# Reference Manual

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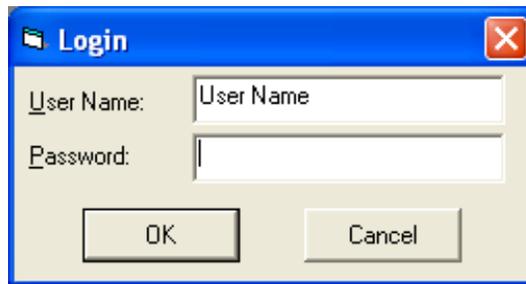
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## Logging in

Double clicking on the Consulting Nutritionist icon will launch the program. A login screen will appear within each of the species folders. With a new version of the generic program, the log-in name defaults to User Name with no password. Click on the OK button to login



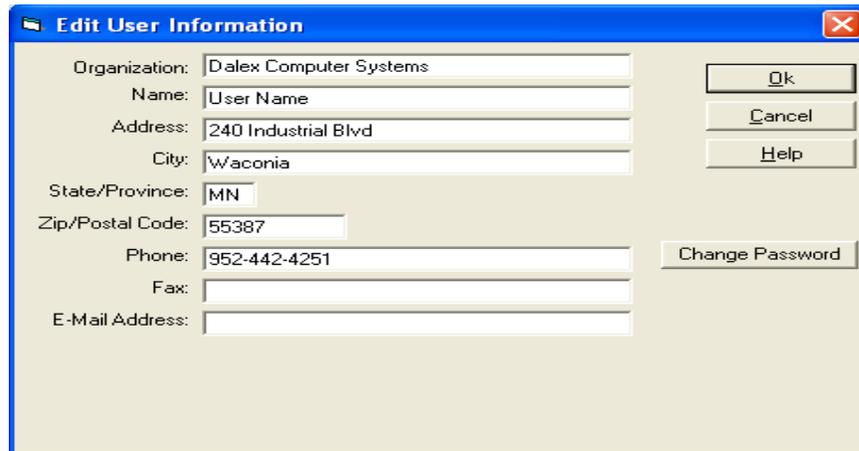
For corporate versions, contact your support representative for specific user names and passwords. Login names and passwords may vary across species folders.

## Change the User Name

The User Name and Password can be set by the user within the File Menu. Select File>Maintain>User Information.



An Edit User Information box will appear. The name that is displayed on this screen will be the user's login name. Therefore, it is important to remember exactly how you type in your User Name. Additional information can be added and it can be set to be printed on reports.



## Data Location

The data location path located in the lower left-hand corner of the screen indicates the species folder the program is currently operating in. In the example below, this program is referencing the Dairy species folder with the specific data path listed as C:\Program Files\DLX NRC\Data\DairyDD .

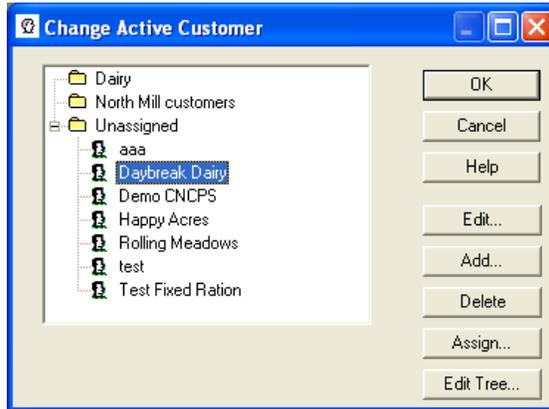
Customers, ingredient libraries, and animal models are specific to the species folder that is indicated in this path. In addition, data restored into the program is specific to these data paths.

Data paths should also be noted when using Window Explorer to search for species specific backups or files.

Data Location: C:\Program Files\DLX NRC\Data\DairyDD\	User Name	Happy Acres	Dairy
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## Change Active Customer

When starting the program, you will be presented with a Change Active Customer window. This screen will display one or more Demo rations or the Customers that exist within the program. This screen can be accessed at anytime by selecting the Customer icon in the Toolbar.

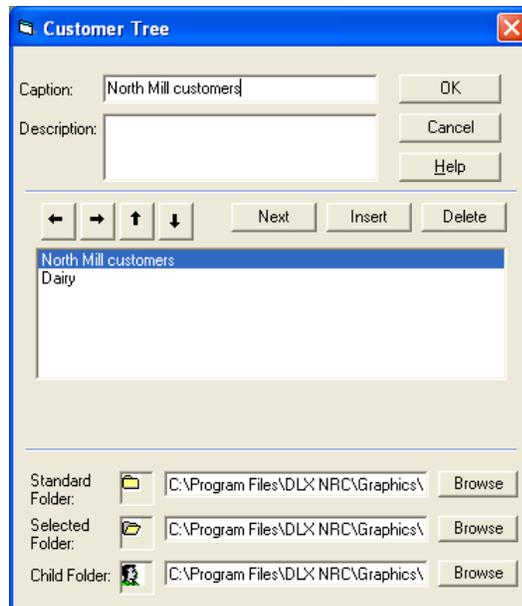


New customers can be added by clicking on the Add button. Customers can be deleted by clicking on the Delete button. However, you can not be in a customer that you are trying to delete.

See the Customer Maintenance section to use Assign customers to a folder or to use the Edit Tree box.

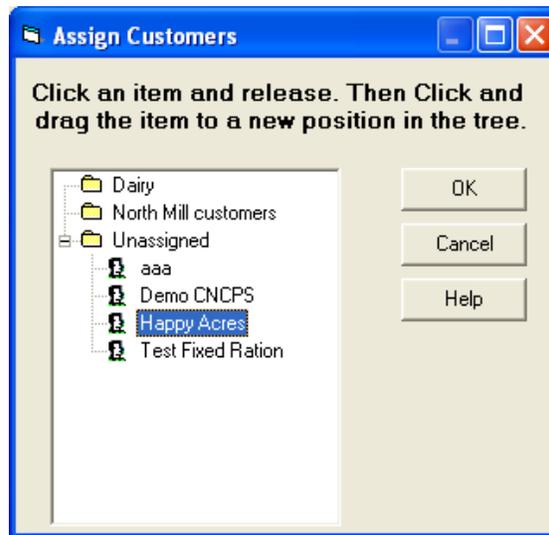
## Customer Maintenance

Customers can be assigned into specific folders. These folders are created to assist you with customer organization only. Folders can be created by clicking on the Edit Tree box within the Change Active Customer box. This will bring up the Customer tree box. Within this box, click on Insert and add a caption. This will



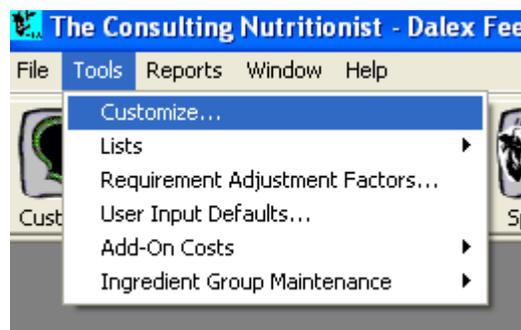
create a new folder to organize the customers. By using the arrows to the left of the Next button, the folders can be organized in order or by levels.

To move customers into the Customer Folders, return to the Change Active Customer menu and click Assign.

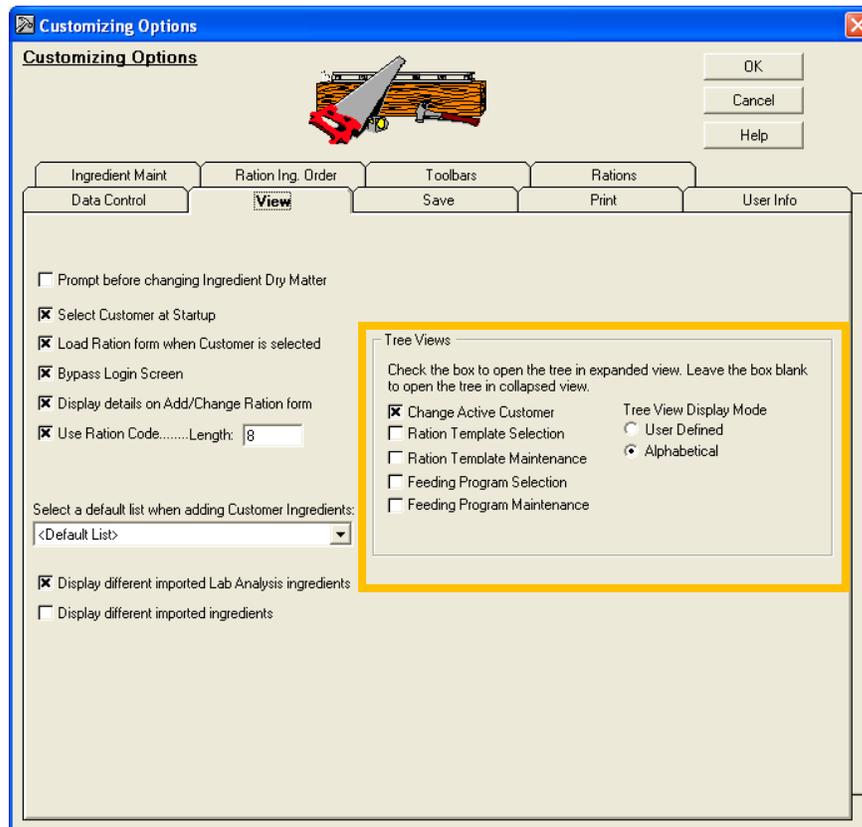


Single click a customer and release it. Then, drag the customer into the Customer folder. When the folder is highlighted, release the button to drop the customer into the folder.

Within the folders, customers can be organized alphabetically or manually. To change this setting, go to Customized settings by going to Tools>Customize. Open the View tab.



The Tree View on the left side of this tab will allow the user to change the display to Alphabetical or User Defined.



## Adding Customer Ingredients

When a customer is created, you will be presented with a screen to select ingredients from the Master Ingredient Library and put them into the Customer Ingredient Library. The Customer Ingredient Library can be accessed at any time by clicking on the Customer Ingredient icon.

Within the Customer Ingredients, there are various tabs. The Select Ingredient tab will allow users to select ingredients from the Master Ingredient library and bring them into the Customer Ingredient library.

Ingredients can be added in various ways. The ingredients that are listed can be filtered by Ingredient Type. The setting for the Ingredient Type that is displayed is found in a drop down button above the list of ingredients.

When the ingredient type is set to ALL, all ingredients will display. By selecting a different type, only ingredients from that specific ingredient type will display and can be selected for the Customer Library.

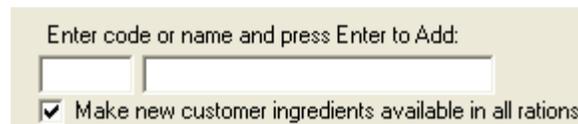


The screenshot shows a window titled "Ingredient Description". It contains two dropdown menus. The first is labeled "Ingredient Type:" and is currently set to "ALL". The second is labeled "Select Ingredient List:" and is currently set to "< Dairy Ingredients >".

Ingredients can also be selected from specified Ingredient Selection Lists. See the Lists section to create these lists.

To move the ingredients into the Customer Ingredient library, select the ingredient and click the arrow button to move it from the left side to the right. To select multiple ingredients at one time, hold the control key while individually selecting ingredients. To select a group of ingredients, select an ingredient and hold the shift key and select another ingredient. The group of ingredients between the first and last one will be highlighted and they can be moved over into the customer ingredient library.

Ingredient codes or names can also be entered into the first or second field, respectively, of the ingredient search boxes. If the ingredient is found within the Ingredient Type or Ingredient Selection list that is currently being displayed, it will be highlighted and can be moved over with the arrow.



The screenshot shows a search area with the text "Enter code or name and press Enter to Add:" above two input fields. Below the input fields is a checkbox that is checked, with the text "Make new customer ingredients available in all rations".

## Customer Ingredient Maintenance

### *Ingredient Description*

Within the Customer Ingredient section of the program, ingredient nutrients, names, prices, and additional information can be viewed or edited. The Ingredient Description tab displays the details of individual ingredients which are noted below. Access or visibility of these features may vary with user licensing.

	Code	Name	O/L	\$/Ton	Order	Type	Is A Supplement	Exclude on Batch Mix	Batch Mix Rounding	Compute Add-On Costs	Date	DM Variat	Synch
	113E	AlfHy20Cp40Nd17LNdf	<input type="checkbox"/>	80.000	10	Forage-Alfalfa	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	1/1/2008	<input type="checkbox"/>	Not Synchronized
	1238	GrssSf16Cp55Nd6Lndf	<input type="checkbox"/>	0.000	150	Forage-Other	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	2/17/2008	<input type="checkbox"/>	Not Synchronized
	1178	CmsSf135Dm4NdMdf	<input type="checkbox"/>	25.000	56	Forage-Corn Silage P	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	2/17/2008	<input type="checkbox"/>	Not Synchronized
	1070	ComGrain2m4Fine	<input type="checkbox"/>	0.000	205	Energy-Corn	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	1/3/2008	<input type="checkbox"/>	Not Synchronized
	1306	CanolaMealTechExt	<input type="checkbox"/>	150.000	407	Protein-Plant	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	2/17/2008	<input type="checkbox"/>	Not Synchronized
	1566	SoybeanM1.47.55olv	<input type="checkbox"/>	300.000	437	Protein-Plant	<input type="checkbox"/>	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>	2/17/2008	<input type="checkbox"/>	Not Synchronized

**Code:** Every ingredient has a unique code. These codes can be alpha-numeric characters.

**Name:** Ingredient names are inherited from the Master Ingredient library. These can be modified as necessary.

**O/L:** Overlay. If this box is checked, it indicates that the customer ingredient has “overlay” values. Overlay values indicate that a nutrient value is different in the customer than that nutrient found for the same ingredient within the Master.

**Abbr:** Ingredient abbreviations are added or edited within this field. Ingredient abbreviations are used in the graphing portion of this program.

**\$/Ton:** This field indicates the price for this ingredient. This is normally defaulted to \$/ton. However, changing the price default globally will change this column and price. See the setups for the Data Control tab to change the default of this display.

**Order:** The number in this field determines the ingredient order for those places where ingredients are set to sort using the User Defined sort order. Values in here are inherited from the Species ingredient set up, but can be modified for individual customers.

**Type:** The Ingredient Type indicates what type a particular ingredient is assigned to. When it is necessary to change this, put your cursor in the box and a drop-down arrow will appear with the types that are setup for the ingredients.

**Is A Supplement:** If this box is checked, the ingredient will appear in a supplement grid on the ration work screen. Users using the Mix/Unmix feature should not check this box.

**Exclude on Batch Mix:** If this box is checked, the ingredient will not be included with the total calculations of other ingredients for batch mix reports. Ingredients can also be excluded on the Batch Mix set up parameters

**Compute Add-on Costs:** Add-on costs are applied to ingredients with this box checked when these costs are printed on a ration report.

**Date:** The date field will change automatically when changes are made to an ingredient or it can be manually changed by the user.

**DM Variation:** If this box is checked, the ingredient will be included in the dry matter variation section of a batch mix report regardless of the dry matter inclusions set within the batch mix set-ups.

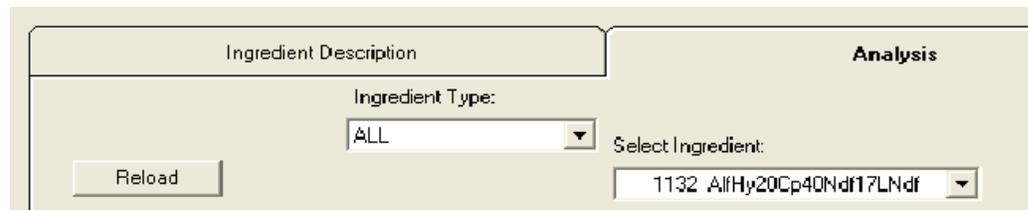
**Synch:** Ingredients will either be synched to another ingredient or Not-synched. If the ingredient is synched, it will inherit the nutrients and price of that ingredient to which it is synched. This is important for those ingredients that are within a mix, but the main ingredient is controlling the nutrients of that ingredient. More information on this will be in the Creating a mix section.

Ingredients can be Added and Deleted from this tab. Click ADD to add an ingredient. A New Ingredient window will appear that allows you to define the necessary detail information on this ingredient.

To Delete an ingredient, highlight the ingredient on the grid and click DELETE. If the ration is in use, you will be prompted and you can proceed as necessary.

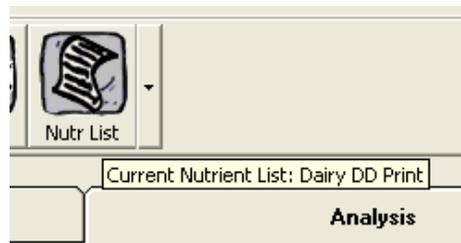
### *Analysis*

Individual ingredient nutrients can be modified in this section. When you click on this tab, the default ingredient type is set to ALL. Ingredients within the drop down button

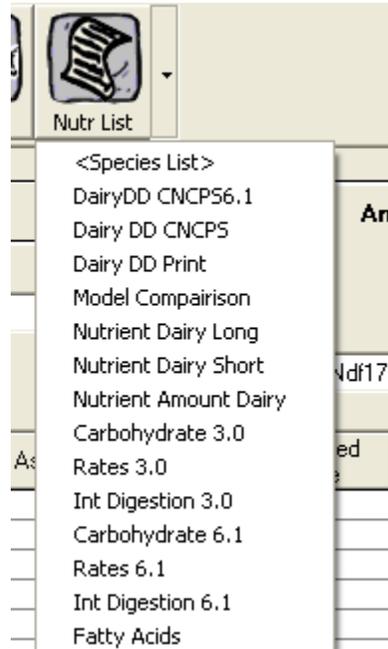


of the Select Ingredient box reference those ingredients that are within the Ingredient Type that is displayed.

When the ingredient is selected, modifications can be done. The nutrients that are displayed are controlled by a Nutrient List. If you place your cursor over the Nutrient List icon, a pop-up will display with the current nutrient list.



By clicking the arrow to the right of the box, a different nutrient list can be selected and will change the nutrient display of ingredients.



See the Using Lists section to set the default nutrient list.

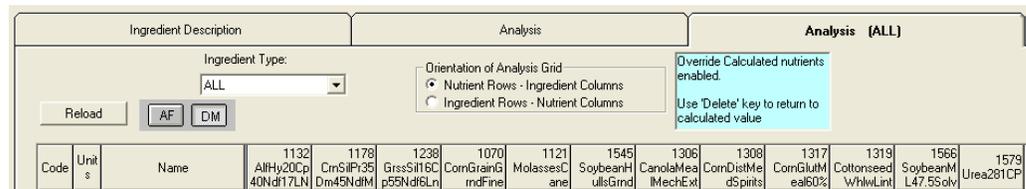
To edit the ingredient, place the cursor in the desired nutrient for either the As Fed or Dry Matter column and key in the new value. The original value that was in the field will display in the Overlay Value column.

Nut #	Nutrient	Conc. Unit	As Fed	Dry Matter	Overlayed Value
	Dry Matter	%	90.000	90.000	
47	Forage DM	%	90.000	100.000	
2	Protein	%	18.000	20.000	
121	RUP (%CP) CNCPS	%	31.041	31.041	
122	RDP (%CP) CNCPS	%	68.959	68.959	
124	RDP (%DM) CNCPS	%	12.413	13.792	
5	SOL (%CP)	-	40.000	40.000	
7	ME CNCPS	Mcal/lb	0.936	1.040	
8	NEI CNCPS	Mcal/lb	0.603	0.669	
11	ADF	%	28.800	32.000	
12	NDF	%	36.000	40.000	
120	Roughage NDF	%	32.400	40.000	
13	eff-NDF	%	30.600	34.000	
44	Lignin	%	6.120	6.800	
15	NFC CNCPS	%	28.980	32.200	
19	Calcium	%	1.377	1.530	
20	Phosphorus	%	0.279	0.310	
24	Magnesium	%	0.279	0.310	
22	Potassium	%	2.313	2.570	
31	Selenium	ppm	0.180	0.200	

Several nutrient values are gray. This indicates that a nutrient value is derived from a calculation of different nutrients. The customized setups will determine if you have access to change this field. To see the calculation for particular nutrients, go to the Master Ingredient, Nutrient Description tab.

### *Analysis All*

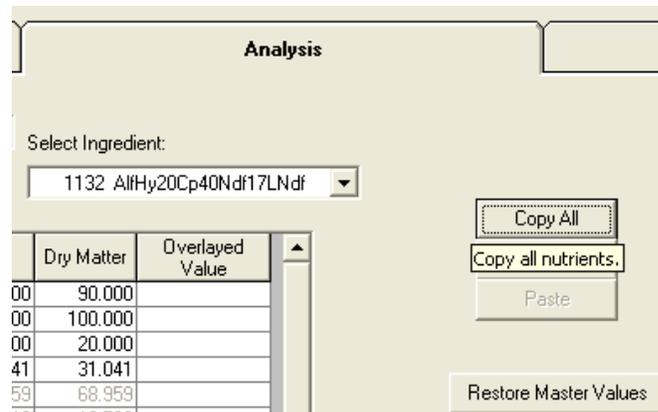
The Analysis All tab works similarly to the Analysis tab in respect to nutrient lists.



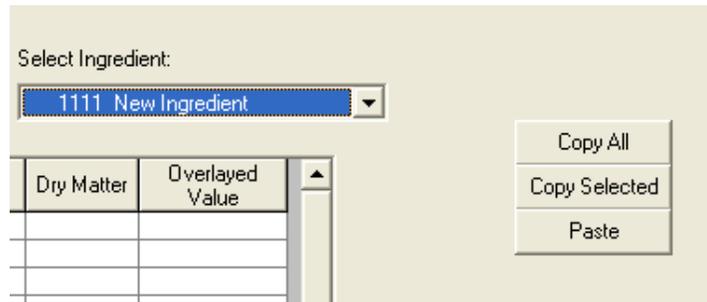
Click on either the AF or DM button to show the nutrients on an As Fed or Dry Matter basis. Orientation of the grid can be changed by clicking on Nutrient Rows or Ingredient Rows.

### *Copy Ingredients*

To copy an ingredient, you will first need to add an ingredient using the ADD button of the Ingredient Description tab. The Ingredient code and name can be entered at this point. Then, go to the Analysis tab and select a similar ingredient that you will be copying the analysis of. Click Copy All to copy the nutrient analyses.



Within the Analysis tab, call up the blank ingredient. The Paste button will be active.



By clicking on Paste, all the nutrients will be copied into the As Fed and Dry Matter columns. At this point, other nutrients can be edited.

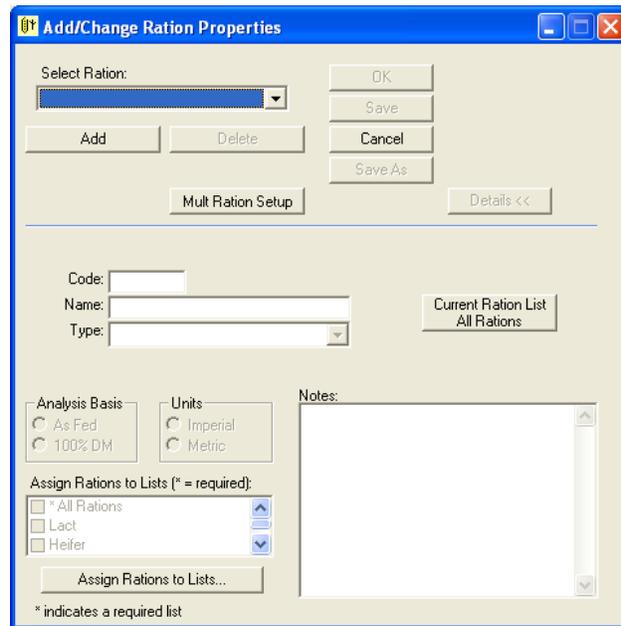
A similar method of copying and pasting can be done by clicking on the box to the left of each nutrient and selecting it. Additional nutrients can be selected by holding the control key and selecting other nutrients.

Ingredient Description			Analysis			
Ingredient Type:			Select Ingredient:			
ALL			1325 FishMealMenhaden			
Reload						
	Nut #	Nutrient	Conc. Unit	As Fed	Dry Matter	Overlaid Value
▶	1	Dry Matter	%	90.000	90.000	
	47	Forage DM	%			
	2	Protein	%	61.110	67.900	
	121	RUP (%CP) CNCPS	%	71.168	71.168	
	122	RDP (%CP) CNCPS	%	28.832	28.832	
	124	RDP (%DM) CNCPS	%	17.619	19.577	
	5	SOL (%CP)	-	21.000	21.000	
	7	ME CNCPS	Mcal/lb	1.306	1.451	
	8	NEI CNCPS	Mcal/lb	0.841	0.935	
	11	ADF	%	0.900	1.000	
	12	NDF	%	18.540	20.600	
	120	Roughage NDF	%			
	13	eff-NDF	%	1.854	2.060	
	44	Lignin	%			
	15	NFC CNCPS	%	0.025	0.027	
	19	Calcium	%	4.914	5.460	

Click Copy Selected and then Paste for the new ingredient and only those nutrients highlighted will be copied into the analysis.

## Adding Rations

After you have added ingredients to the customer, you will be presented with the Add/Change Ration Properties screen. This screen will allow you to add or delete rations or edit the ration information. This section can also be opened by clicking on the Add/Change/Delete Rations button that is found on the Ration work screen.



To add the ration, click on the Add button. At this point, you can give the ration a name. Adding a ration code is suggested and will be necessary if rations will be exported at a later date. (Rations can be given a code during the export process).

There are various choices for the ration type listed in the drop-down menu. These are helpful to use if suggested nutrients have been set up for the different types of rations.

Analysis basis and units can be changed for individual rations at this screen.

## Balancing Rations

At this point, you will be presented with the Ration Work Screen. The left grid displays the ingredients that are present in the customer. The right screen displays the nutrients.

There are two ways that this screen can be utilized for ration balancing. Ingredient amounts can be manually keyed in the ingredient grid to do a calculated analysis of ingredient nutrients. Rations can also be balanced by using a least-cost solver that utilizes the latest animal ration balancing models available within the species folder that the program version supports.

Information on the particular models that your species or program version support can be found near the middle of your screen right below the Multiple Ration tab. The drop down menu will display the different animal model that are supported in the system. When the model is selected and Animal Specs is clicked, you will be presented with detailed information on the animal or feeding situations that the various animal models take into account for the formulations.

Multiple Ration Input	
As Fed	Dry Matter
0.000	0.000
0.000	0.000
0.000	0.000
0.000	0.000

Buttons: Animal Specs., NRC1989 Eval., CNCPS Mode (dropdown), CNCPS Eval.

Rations sizes can also be selected through this section. In addition to a daily ration that is formulated to a specific animal intake, rations can be built on a percent basis (100 lbs As Fed) or a Ton basis (2000 lbs As Fed). However, for advanced modeling to be functional, the ration size needs to be set to Daily Ration as this will predict individual animal intake.

Ration Size: **Daily Ration** (selected)

- Daily Ration
- Percent
- Ton

Animal Desc: Full Body W

Information on particular feeding situations should be as complete as possible for advanced modeling to accurately match animal performance.

## Ration Optimization

When the Animal Specs screen is completed and the user clicks OK to leave, the ration will optimize. Rations will optimize using a least-cost solver using any minimum or maximum restrictions set within the ingredients or nutrients. Restrictions can be continued to put on the ingredients or nutrients and when the Optimize button is clicked, a new solution for the ration will be calculated.

If a ration is feasible, no message will display and you may see a series of pink cells.

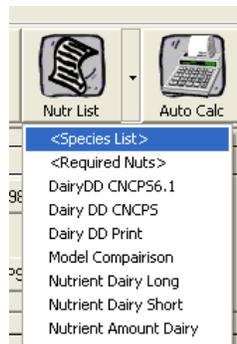
*Pink* cells indicate that the solver is hitting a minimum, maximum or ratio restriction on a particular ingredient or nutrient

If a ration is non-feasible, a red box will appear in the upper left hand corner. You may see one or more cells that are flagged red.



*Red* cells indicate that the solver has quit because of something about this field. The first thing that causes the solver to go non-feasible will result in the entire ration to be non-feasible; therefore you should assume the entire ration is not optimized. Ingredients or nutrient conflicts within the parameters of what the solver is trying to use can cause a ration to go non-feasible.

It is important to note that nutrients not displayed in the displayed nutrient list may still cause the ration to be non-feasible. Therefore, if you are questioning a non-feasible ration, you will need to change the nutrient list display by clicking on the Nutrient list icon and either selecting the <Species List> which displays all nutrients or the <Required Nuts> which displays only those nutrients that contain a value in the minimum, maximum, or ratio field.



## Ingredient Grid and Requirements

The left grid on the Ration Work Screen displays the information pertinent to the ingredients of the ration. For information on adding or deleting columns to this grid, see the Grid Preferences section.

<input type="checkbox"/> Hide Unavailable		Ingredient Requirements										
Sub Rat	a/u	Code	Ingredient	SR Item	Amount	DM Amount	\$/Ton	Shadow	Lower Price	Upper Price	Req Type	Minimu
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1178	CrnSilPr35Dm45NdfM	<input type="checkbox"/>	85.365	29.878	25.000		4.828	26.455	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1306	CanolaMealMechExt	<input type="checkbox"/>	10.580	9.522	150.000		117.527	157.71	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1308	CornDistMedSpirits	<input type="checkbox"/>	6.358	5.786	125.000		76.717	146.71	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1070	CornGrainGrndFine	<input type="checkbox"/>	4.203	3.699	120.000		81.853	188.87	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1258	CalciumCarbonate	<input type="checkbox"/>	0.227	0.226	100.000		-90.304	204.20	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1579	Urea281CP	<input type="checkbox"/>	0.044	0.044	350.000		-75.447	636.73	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1510	SmartamineM	<input type="checkbox"/>	0.001	0.001	9500.000		4169.23	26192.	AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1132	AlfHy20Cp40Ndf17LN	<input type="checkbox"/>			90.000	87.369	87.369		AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1238	GrssSil16Cp55Ndf6Ln	<input type="checkbox"/>			40.000	27.306	27.306		AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1121	MolassesCane	<input type="checkbox"/>			150.000	85.822	85.822		AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1545	SoybeanHullsGrnd	<input type="checkbox"/>			95.000	72.770	72.770		AF Amt	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1317	CornGlutMeal60%	<input type="checkbox"/>			350.000	252.023	252.023		AF Amt	

**Hide Unavailable:** The Hide Unavailable check box will hide all of those ingredients that are not available to the ration to use for formulation.

**Sub-Rat:** This box is only necessary to check for those ingredients that are a sub-ration. Checking this will enable the UnMix box and the sub-ration can be un-mixed.

**A/U:** This indicates if an ingredient is Available or Unavailable. If an ingredient is available, it is checked and it will be utilized for the ration optimization.

**Code:** The code indicates the specific ingredient code that is being utilized. These are maintained in the Master or Customer Ingredient Maintenance section.

**Ingredient:** This field indicates the ingredient name. These are maintained in the Master or Customer Ingredient Maintenance section.

**SR Item:** Ingredients that are checked will be assigned into a mix. Checking this box will highlight the ingredient field blue and enable the Mix button. See the Creating a Sub-Ration (Mix) section for more information on this.

**Amount:** The yellow Amount field indicates the as fed ingredient amount that is being utilized in a ration. When a ration is either optimized or the analysis has been manually calculated, the sum of these values will be the same as the As Fed Weight value that is listed above the ingredient grid.

	As Fed	Dry Matter
Weight (Lbs.)	106.778	49.155
Cost (Formula):	2.532	2.532
Cost (CWT):	2.371	5.151
Cost (Ton):	47.427	103.024

**DM Amount:** This indicates the dry matter amount that it is being utilized for a ration. The sum of these values will be the same as the Dry Matter Weight value.

**\$/Ton:** The price column displays the price for a given ingredient in the format that is set within the Data Control options. This price is used for the least cost optimizer.

**Shadow:** A shadow price is displayed for ingredients that were not used in a least cost optimized ration. The shadow price indicates the price the feed ingredient would need to be in order for it to be utilized in the ration.

**Lower Price and Upper Price:** The upper and lower prices indicate the upper and lower price limits of an ingredient that are being utilized for the ration parameters. If the ingredient price falls below the lower price or rises above the upper price, the amount of the ingredient that is being utilized in the ration will change.

**Req Type/Minimum/Maximum:** These fields work in conjunction to set the minimum and maximum ingredient constraints. By placing the cursor in the Req Type field, a drop down menu will appear. The choices to set ingredient Minimum and Maximums are as fed amount (AF Amt), dry matter amount (DM Amt), as fed percent (AF %), and dry matter percent (DM %). These settings can

Req Type	Minimum	Maximum
AF Amt		
AF Amt		
AF Amt		
DM Amt		
AF %		
DM %		
AF Amt		

be controlled for individual ingredients. A value that is keyed in the Minimum or Maximum field will respect the Req Type field and that value will be used as an ingredient constraint when the ration is optimized.

**Min As Fed/Max As Fed:** These fields are the original fields that were included in the Consulting Nutritionist for setting up ingredient constraints. Amounts placed in this field are restricted on an As Fed Basis only.

**Min (DM)/Max (DM):** These fields are the original fields that were included in the Consulting Nutritionist for setting up ingredient constraints. Amounts placed in this field are restricted on a Dry Matter Basis only.

**Ratio Basis/Ratio Min/Ratio Max/Ratio Denominator:** These fields work in conjunction to group two or more ingredients together to balance ratios.

Placing the cursor in the Ratio Basis field will bring up a drop-down menu that indicates as fed (AF) or dry matter (DM). The Ratio Min and Ratio Max field can

Ratio Basis	Ratio Min	Ratio Max	Ratio Denominat
AF			
AF			
AF			
DM			
AF			
AF			
AF			

be set up for two or more ingredients with the desired feeding parameters. If Ratio Min and Ratio Max are not the same for an ingredient, the ratio will be allowed to float within the parameters defined.

Placing the cursor in the Ratio Denominator field will bring up the choices of all the ingredients in the customer library. The ratio denominator should be chosen as that ingredient that will be fed in the least amount of the ratio group.

In the example below, a ratio is set up for 2 ingredients and locked in at a 2:1 ratio. GrssSil1 is the ratio denominator and will be used at one part in the ration.

Ratio Basis	Ratio Min	Ratio Max	Ratio Denominat	F
AF	2.000	2.000	GrssSil1	
AF				
AF	1.000	1.000	GrssSil1	
AF				

**AF Percent/DM Percent:** The values in these fields indicate the amount of the ingredient that is included in the ration on either a percent of the as fed feed or as a percent of the feed dry matter.

**Ratio 1/Ratio 2:** These fields are the original ratio fields that were included in the Consulting Nutritionist. Ratios set up within these fields are only using As Fed amounts. Two sets of ratios can be set up by using either the Ratio 1 or Ratio 2 columns.

**Ratio 1 (DM)/Ratio 2 (DM):** These fields are the original ratio fields that were included in the Consulting Nutritionist. Ratios set up within these fields are only using Dry Matter amounts. Two sets of ratios can be set up by using either the Ratio 1 (DM) or Ratio 2 (DM) columns.

## Nutrient Grid and Requirements

The right grid on the Ration Work Screen displays the information pertinent to the nutrients of the ration. For information on adding or deleting columns to this grid, see the Grid Preferences section.

Nutrient Requirements (100% Dry Matter Analysis)										
Code	Name	Req Type	Minimum	Conc.	Maximum	Units	Amount	Units	Ratio Min	Re M. ▲
1	Feed Intake (Amount)	DM Intake ▼	49.155	46.787	49.155	%	49.155	lb		
2	Protein	DM Conc		17.715		%	8.708	lb		
3	RUP (%CP)	DM Conc		37.786		-		-		
4	RDP (%CP)	DM Conc		62.214		-		-		
5	SOL (%CP)	DM Conc		31.800		-		-		
211	NPN %SOL (%CP) 6.1	Amt		52.721		-		-		
6	NPN	DM Conc				%		g		
7	ME CNCPS	DM Conc	1.170	1.169		Mcal/lb	57.484	Mcal		
79	NEI Level 1	DM Conc		0.762		Mcal/lb	37.446	Mcal		

The nutrient requirements of the ration are either displayed on a Dry Matter or As Fed analysis. The current display is indicated on the gray line at the top of the grid. The global default display is found in the Data Control tab within the Customizing options. Individual customers or rations can be defaulted differently at the customer and ration set-up sections.

The screen can be toggled to display either the dry matter or ration analysis by clicking on the Analysis Basis icon found at the top of the ration work screen.



While all nutrients that are in a given species are optimized for and calculated within the ration, for simplicity, they do not all have to be displayed. For this reason the list of nutrients can change. The nutrients listed are controlled by which list is defaulted to display at this screen. The default list to display is found in the Rations tab of the Customized Options section.

To determine which nutrient list is currently displaying on the ration work screen, use the mouse and hover over the nutrient list icon. A box will pop-up and display the current nutrient list.



The list can be changed by clicking on the drop down to the right of the icon. This will display all the nutrient lists that are available to the user. At this point, a different list can be selected for display on the Ration Work Screen.

For more information on adding and editing lists, see the List sections of this manual.

**Code:** The code indicates the specific nutrient code that is being utilized. These are maintained in the Master Ingredient, Ingredient Description section.

**Name:** This field indicates the nutrient name. These are maintained in the Master Ingredient, Ingredient Description section.

**Req Type/Minimum/Maximum:** These fields work in conjunction to set the minimum and maximum nutrient constraints. By placing the cursor in the Req Type field, a drop down menu will appear. The choices to set ingredient

Req Type	Mini
AF Intake	100
DM Conc	
DM Conc	
Amt	
AF Conc	
DM Conc	
AF Intake	
DM Intake	
Amt	
Amt	
Amt	
DM Conc	

Minimum and Maximums include amount (Amt), as fed concentration (AF Conc), dry matter concentration (DM Conc), as fed intake (AF Intake), and dry matter intake (DM Intake). These settings can be controlled for individual nutrients. A value that is keyed in the Minimum or Maximum field will respect the Req Type field and that value will be used as a nutrient constraint when the ration is optimized.

**Conc/Units:** The yellow concentration field is the nutrient concentration calculated for a given ration. There is a Unit field indicating the measurement of concentration for each nutrient.

**Amount/Units:** The yellow amount the amount of the nutrient calculated for a given ration. There is a Unit field indicating the measurement for each nutrient.

**Ratio Basis/Ratio Min/Ratio Max/Ratio Denominator:** These fields work in conjunction to group two or more nutrients together to balance ratios. Placing the cursor in the Ratio Basis field will bring up a drop-down menu that indicates amount (Amt) or percent (%).

Ratio Min	Ratio Max	Ratio Denominator	Ratio Basis
			Amt
			%
			Amt
			Amt

The Ratio Min and Ratio Max field can be set up for two or more nutrients with the desired nutrient parameters. If Ratio Min and Ratio Max are not the same for a nutrient, the ratio will be allowed to float within the parameters defined.

Placing the cursor in the Ratio Denominator field will bring up all of the nutrients. The ratio denominator should be set to that nutrient that will be fed at the least amount of the ratio group.

2.000	3.000	20	Amt	0.660
1.000	1.000	13	eff-NDF	
		14	TDN	
		100	NFC CNCPS 6.1	
		15	NFC CNCPS	
		147	NFC NRC	
		16	Vit A	
		17	Vit D	
		18	Vit E	
		19	Calcium	
		20	Phosphorus	

In the example below, a ratio is set up for 2 nutrients and it will be allowed to fluctuate between a 2:1 and 3:1 ratio. Nutrient number 20, Phosphorus, is the ratio denominator.

**Min (Conc)/Max (Conc):** These fields are the original fields that were included in the Consulting Nutritionist for setting up nutrient constraints. Amounts placed in this field are restrict a nutrient on a Concentration basis.

**Min (amt)/Max (amt):** These fields are the original fields for setting up ingredient constraints that were included in the Consulting Nutritionist. Amounts placed in this field are restricted on a Dry Matter Basis only.

**Sugg. Min/Sugg. Max:** These values are entered within the Suggested Nutrient section of the Species Maintenance section. In many cases they are set up as a reference only; however, custom packages may be able to set individual suggested nutrients as a requirement.

Code	Name	Nutrient Requireme	
		Sugg. Min	Sugg. Max
19	Calcium	0.660	
20	Phosphorus	0.410	
24	Magnesium	0.250	0.400
33	Chlorine	0.250	
22	Potassium	1.000	3.000
32	Sodium	0.180	
23	Sulfur	0.200	0.400
29	Cobalt	0.100	10.000
27	Copper	10.000	100.000
30	Iodine	0.600	50.000
26	Iron	50.000	1000.000
28	Manganese	40.000	1000.000
31	Selenium	0.300	2.000
25	Zinc	40.000	500.000

## Master Ingredient Maintenance

Ingredients that reside within the Master Feed library are available for any customer to select, use, and edit. Several of the sections within the Master Ingredient Maintenance section function the same as the Customer Ingredient Maintenance section. Additional settings for sections are listed below.

### *Ingredient Description*

**Skip Amt?:** This setting will only be necessary to use in the data set of a user that is submitting data for a corporate build. If this box is checked for an ingredient, the nutrient analysis for a master ingredient with an identical code will not updated when a corporate update is deployed.

### *Analysis*

### *Analysis All*

The Ingredient Description, Analysis, and Analysis All tab all function the same as described in the Customer Ingredient Maintenance section. Changes made to these ingredients will not affect the ingredients of existing customers

### *Nutrient Description*

Detailed information about the nutrients such as the codes, names, and formulas are in the nutrient description tab.

**ID:** The nutrient ID is coded within the system and you do not have the availability to change this value.

**Code:** Nutrient codes can be changed if necessary. Use caution so that you do not have two nutrients of a similar code.

**Name:** Nutrient names are added or edited within this field.

**Abbr:** Nutrient abbreviations are added or edited within this field. Nutrient abbreviations are used in the graphing portion of this program.

**Order:** The number in this field determines the order for which the nutrient displays in the Master or Species nutrient list.

**Amount Unit/Concentration Unit:** The unit in these fields indicates how the system is storing the value. To set-up or edit the nutrient display, you should follow the instructions found in the Species Maintenance section.

**Ingr Formula:** Formulas for calculated nutrients of individual ingredients are entered within this cell. The formula references the Nutrient ID.

**Ration Formula:** Formulas for calculated nutrients referencing the total ration nutrients are entered within this cell. The formula references the Nutrient ID.

**Conv?:** Checking the conv? box indicates that the nutrient will convert a value between and As Fed and Dry Matter concentration. This box should not be checked for nutrients that are calculated as something other than a dry matter percent (i.e. percent crude protein).

**Neg?:** Checking the Neg? box will allow a nutrient to go negative. CA Balance is one example of this type of nutrient.

**Skip Amt?:** This is used for calculated nutrients. Checking the Skip Amt field will skip the calculation of nutrients using as fed values. Instead, it will calculate the concentration and convert it to and as fed based on the ration dry matter.

**Req Type:** The Req Type field sets the default requirement for the nutrient to use when a minimum or maximum is applied at the ration work screen. The value can be changed on the ration work screen to override the default

?	Req Type	
	DM Intake	
	DM Conc	
	Amt	
	AF Conc	
	DM Conc	
	AF Intake	
	DM Intake	
	DM Conc	
	DM Conc	
	DM Conc	

**Numerator/Denominator:** The numerator and denominator fields are set for those nutrients that are using two other nutrients to calculate a ratio. By placing your cursor in either the Numerator or Denominator field, a drop down box will appear that will have all the nutrients that are available to select.

Numerator	Denominator	F
<None>	<None>	^
<None>	<None>	^
38 RUP %DM	2 Protein	
34 Ca:P Ratio	2 Protein	
35 Cations	2 Protein	
36 Anions	<None>	^
37 CA Balance	<None>	^
38 RUP %DM	<None>	^
<None>	<None>	^
<None>	<None>	^

**Ratio Basis:** The ratio basis field determines the basis for nutrient ratios set up using the Numerator and Denominator fields. Placing your cursor in the field will allow this field to be set up on an Amt or % basis.

Ratio Basis
Amt
Amt
<input checked="" type="checkbox"/>
Amt
%
Amt

**Non Linear:** The Non-linear box is checked for those nutrients for which the dynamic models are applied.

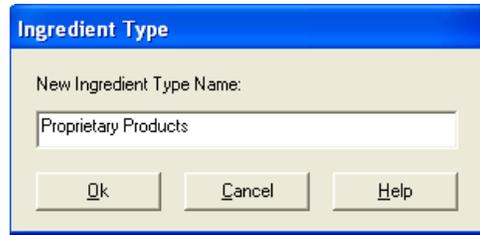
**Group Flag:**

*Ingredient Type*

Ingredients can be assigned into various categories or types. These types can be used for sorting ingredients. In addition, security can also be set up by ingredient type allowing users varying degree of access to these ingredient types.

Access to the Ingredient type section of the program may vary with user levels.

To Add a new ingredient type, click on Add. A screen will appear to add the new type.



The ingredient type grid will display a code for this type. It is not necessary to change this code.

Names of types can be changed at any time by placing the cursor within the Name field and changing the name.

The order field will determine the sort order of the types within the different sections of the program where the types are referenced.

To delete a type, place the cursor on the gray box to the left of the desired type and the row will be highlighted. At this point, click the Delete button.

	46	Energy-By Products	8
	44	Energy-Fats	9
	34	Protein-Plant	10
	47	Proteins-Animal	11
	49	Commercial	12
▶	35	Other	13
	38	MinVit	14
	48	Custom	15
	39	SubRation	16
	40	Duplicate	17

## Adding Nutrients

Nutrients can be added to the system. To do this, go to the Master Ingredient Maintenance section and to the Nutrient Description tab. If there are empty nutrient slots, these can be used for the new nutrients. (To add Nutrient Slots, go to the Adding Nutrient Slots section)

The nutrient name can be added into the empty nutrient slot. **DO NOT** add the units at this screen. Other items such as the formulas, DM conversion check box and the Req Type setting can be entered at this time. When this is complete, click on the Save and Done button in the lower right hand corner. Continue to the Nutrient Units section.

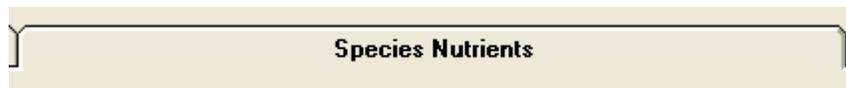
163	163		163
170	170	Vitamin K	170
171	171		171
172	172		172
173	173		173

## Nutrient Units

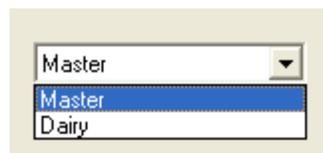
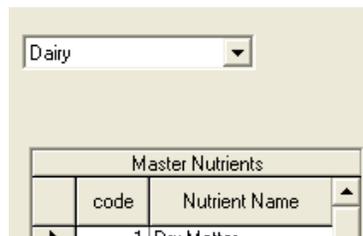
To associate or change units nutrient units, click on the Species Maintenance icon.



You will see three tabs. Click on the center tab that reads Species Nutrients.



The left side of the screen displays a drop down box and a Master Nutrient list.



By clicking on the drop down box, the selection will change between the Master and Species nutrient list. This will control the nutrient list that is on the right grid. The header above the nutrients will change to reflect this setting and will read Master Species or a specific species list of nutrients.

Within the Master and the Species nutrient list, find the new nutrient. If the nutrient is not found in the Species list, it will need to be added. To add the nutrient, highlight the nutrient on the left and click on the arrow to move it to the right.

Master Nutrients	
code	Nutrient Name
167	
168	
169	
170	Vitamin K
171	
172	
173	

Code	Nut. Name	Order	Imperial Amt.
166		166	-
167		167	-
168		168	-
169		169	-
170	Vitamin K	170	-
171		171	-
172		172	-

Set the drop down list on the top to Master. This will change the header on the right grid to Master Species.Nutrients. To add the units, place the cursor in the Imperial Amount cell. A drop down will appear. Click on the drop down and the choices of units will appear. If a unit does not appear on the selection list, it cannot be added. Repeat this process for the concentration cell in addition to the Metric unit cells.

Code	Nut. Name	Order	Imperial Amt.	Im C
166		166	-	-
167		167	-	-
168		168	-	-
169		169	-	-
170	Vitamin K	170	IU	-
171		171	lb	-
172		172	Cal	-
173		173	Kcal	-
174		174	Mcal	-
175		175	U	-
176		176	-	-

This process needs to be repeated for the Species list. To do this, return to the drop down in the upper left hand corner and select the species. This will change the right grid to the Species Nutrient list. Repeat the process to add the nutrient units.

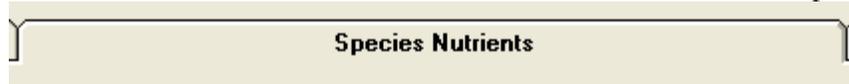
## Adding Nutrient Slots

If no empty nutrient slots are available within the Master Ingredient, Nutrient Description section, nutrient slots will need to be added to the list.

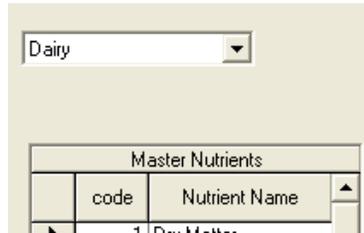
To do this, click on the Species Maintenance icon.



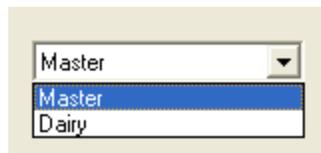
You will see three tabs. Click on the center tab that reads Species Nutrients.



The left side of the screen displays a drop down box and a Master Nutrient list.



The left Master Nutrient Side, does not change. By clicking on the drop down box, the selection will change between a Master and Species.



Select Master. On the left grid, find an empty nutrient and highlight it. Move it to the right side by clicking on the arrow.



Change the drop list on the top to the species. Repeat the process by moving this nutrient from this left to the right.

Once the nutrient slots have been added to the system, return to the Adding Nutrients or Nutrient Units section to add the nutrient names and units.

## List Types

Various types of lists are used throughout this program. Users can assign and order different data to a list. Specific lists can be set as defaults throughout the

program. In addition, a user can call up different lists to change the display for different situations.

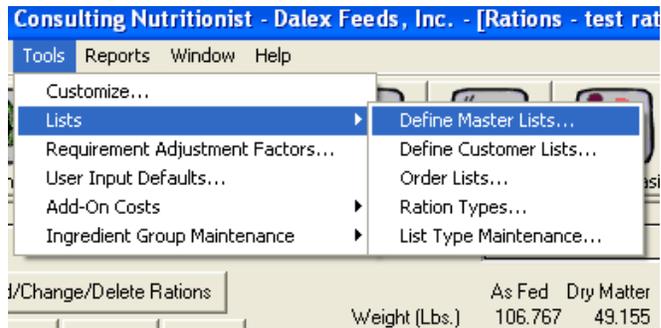
The different types of lists that are within the program are:

- **Nutrients:** Used within the ration work screen, reports, Analysis and Analysis All tab of the Master and Customer Ingredient Maintenance section.
- **Ingredients:** Used to display the ingredients in the Master and Customer ingredient screen.
- **Rations:** Used to display the rations in the report screen and the ration selection screen.
- **Ingredient Selection:** Used to display the ingredients that can be added to a ration within the Customer Ingredient – Select Ingredient tab.
- **Batch Mix Ingredients:** Used to display the ingredients that are found on batch mixes.
- **Ration Ingredients:** Used to display the ingredients in the ration printouts.
- **Ration Template – Nutrients:** Used within the Ration Template section to control which nutrients are used for building a ration template.
- **Ration Template – Ingredients:** Used within the Ration Template section to control which ingredients are used for building a ration template.
- **Animal Inputs:** Controls which Animal Input factors are displayed on Model reports, ration reports, and the Multiple Ration screen.

## Editing an Existing Master List

Lists need to be added or edited within the Master List section before they can be utilized with these changes in the Customer. Customer lists can either be the same as the Master list, or a sub-set of the Master list. Customer lists can also be ordered differently than the Master list.

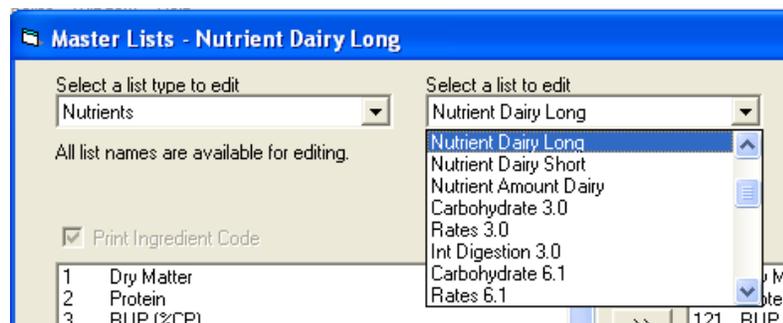
To edit a Master list, go to Tools: Lists: Define Master List.



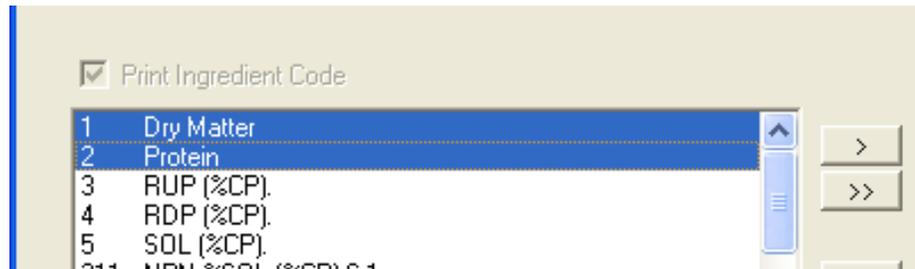
The Master Lists window will display. The drop down window in the upper left hand corner will allow you to select a list type to edit.



If a particular list type is selected, the lists within the Select a list to edit drop down box will only display lists that have been created as this type of list. For example, if 'Nutrients' is the list type selected, only the nutrient lists will be displayed in the Select a list to edit drop down screen.

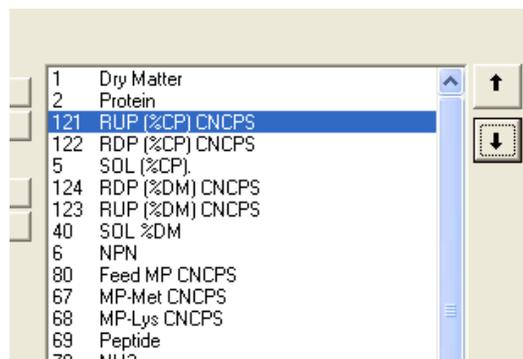


The window displays two different columns of information. The left box has the data that can be added into particular lists. The right box displays the current list. Information can be highlighted on the left side and then arrowed over to the right.



In addition, items can be removed from the right side by selecting them and using the arrow button to move it back to the left side. By clicking on the double arrow, all items will be moved to or from their respective side.

To order items on the list, highlight the item on the right side. Click the arrow button up or down to move the item into the appropriate order.



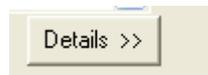
When Master List modifications have been made, click the Save and OK buttons in the lower left hand corner of the window.



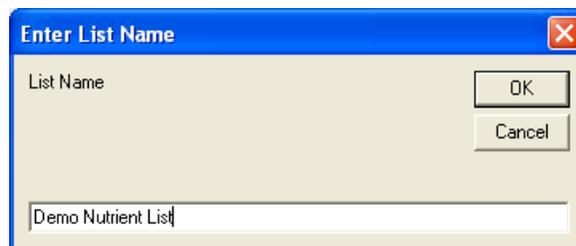
Changes made to the Master list will not go through to existing customer lists without doing a corporate data update. Existing customer's need to be brought up individually and the lists need to be synched to the master list. Go to the Customer Lists section for this procedure.

## Creating a Master List

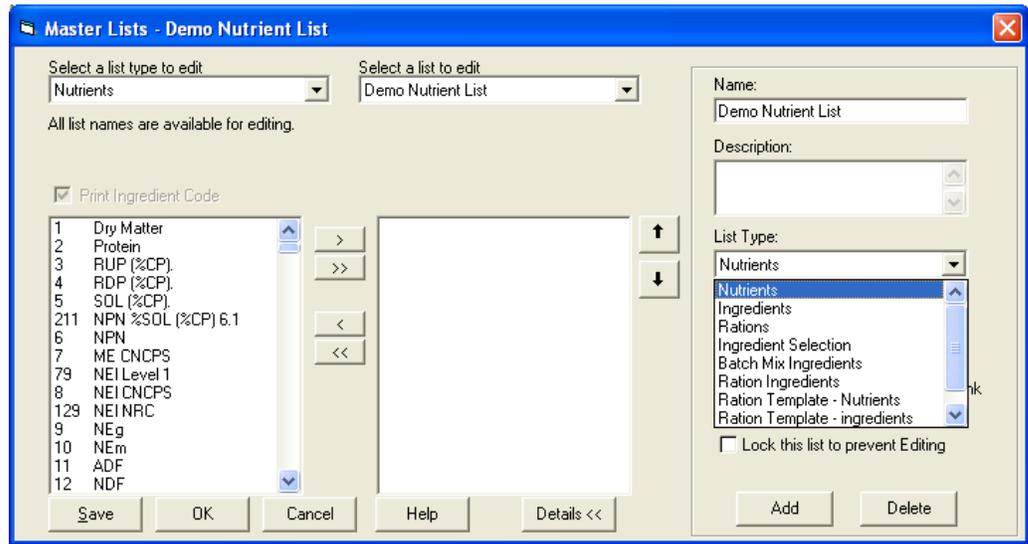
Lists need to be added within the Master List section before they can be used in a Customer. To create a list, go to Tools: Lists: Define Master Lists. Click on the Details box found in the lower right hand corner. This will bring up a new section of the window on the right side.



To add a new list, click on the Add button in the lower right hand corner. A window will appear and the new list name should be entered. Enter the name and click OK.



In order for the list to be referenced correctly, it is necessary to set the List Type to the proper category. For this example, we are setting the list type to Nutrients. At this point, items that can be added to the list are in the left most side of the window.

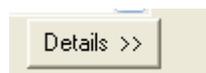


Items that will be added to this new list can be selected individually and then arrowed over. Multiple items on the left side can also be selected by using either the shift button or control button and moving the group of nutrients over with the single arrow. If the double arrow is used, all items will move from the left side to the right.

List items on the right can be reordered by selecting an item and using the up or down arrows to move it.

## List Properties

Several settings on the list detail section can affect the properties of the list. This can be modified when lists are being edited or added. To get to this section, go to Tools: Lists: Define Master Lists. Click on the Details box found in the lower right hand corner.



This will bring up a new section of the window on the right side. There are four check boxes within this screen that will affect the properties of this list.



**Require Complete Customer List:** If this is checked, an existing customer can utilize a list that was edited at the master level. The customer list will still need to be individually synched to the Master list.

**Populate Customer List When Blank:** When this is checked, a new master list will populate customer lists so the list can be used at the customer level.

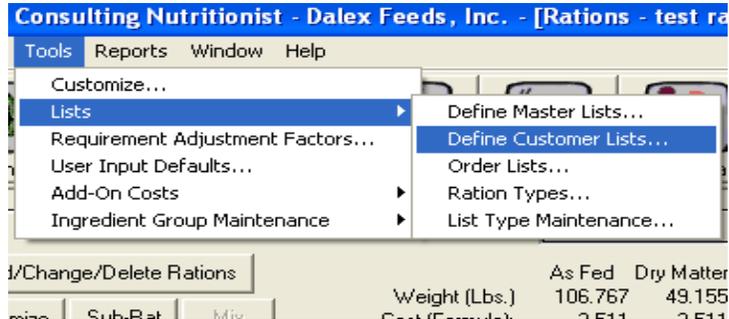
**Lock this list to prevent Updating:** This box can be checked when building lists for corporate use. Lists that have this setting checked will be protected from being updated with a corporate update. This type of lists enables users to have a protected list that does not match the data of the corporate default.

**Lock this list to prevent Editing:** This box can be checked when building lists for corporate use. Lists that have this setting checked cannot be edited by the user and can be updated only through corporate updates.

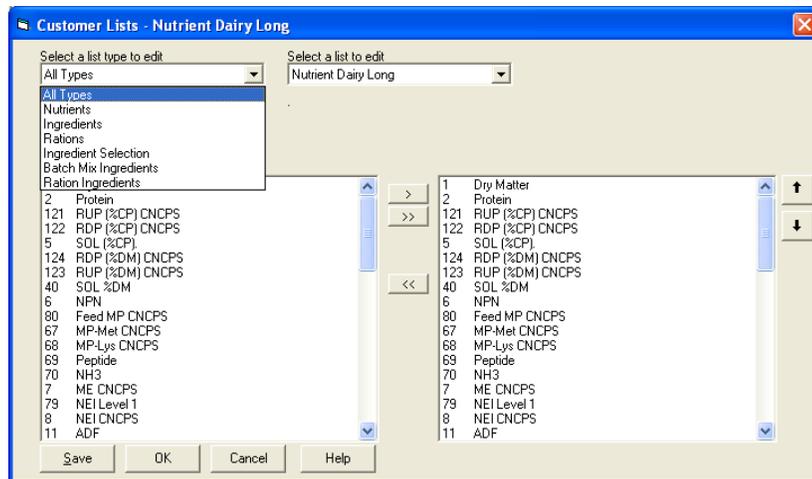
## Editing a Customer List

When a list is created at the master level, it can be used within individual customers. Within each of the customers, there is a specific customer list that references the master list. The customer list can be the same as the master list or a sub-set of that list. Items on customer lists can also be ordered differently than the master list.

To edit a Customer list, go to Tools: Lists: Define Customer lists.



Just like the Master List section, list types are referenced on the left side of the window and the specific lists that exist for the customer are on the right side of the window.



If an item is on the master list, it can be moved from the left to the right to be placed on the customer list. If an item is on the customer list, it can be removed by highlighting it on the right and moving it to the left. To order the list, highlight an item and click on the up and down arrows to move it.

Because all customers can have different lists than those found in the master, when a change is made to the master list, it is necessary to go into every customer list and make the change within every customer. By clicking on the double arrow, the entire list will move from the master list on the left side and onto the customer list on the right side.

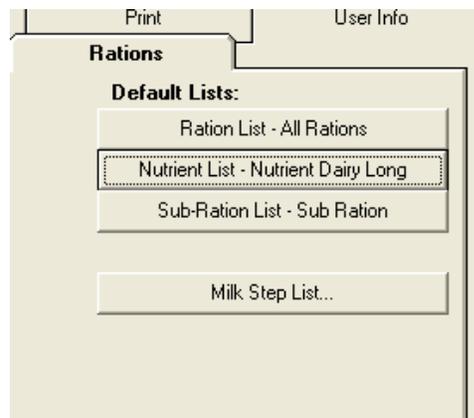
## Using Lists

There are several types of lists that are used throughout the program. This section will go through each of the lists in greater detail, where they are used, and how they can be defaulted within the program.

### Nutrient Lists

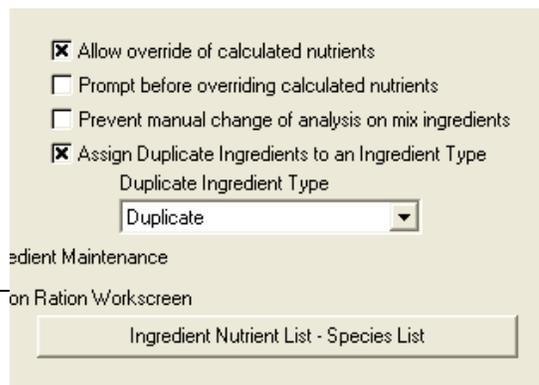
Nutrient lists are used on the ration work screen, the Master and Customer Ingredient libraries, and reports.

**Ration Work Screen.** Nutrient lists used in this section are also referenced in the Ration Optimization section. Lists can be changed by clicking on the drop down button next to the Nutrient List icon. The default list is set at Tools:Customize.. by clicking on the Rations tab. Within this tab, click on the nutrient list box to set the default list.



**Master and Customer Ingredient Analysis.** Nutrient lists used in this section are also referenced in the Customer Ingredient Maintenance – Analysis tab. Lists can be changed by clicking on the drop down button next to the Nutrient List icon. The default list is set at Tools:Customize.. by clicking on the Ingredient Maintenance tab.

Within this tab, click on the Ingredient Nutrient List box at the lower right hand corner to set the default list that will appear in the Customer and Master Ingredient Maintenance section.



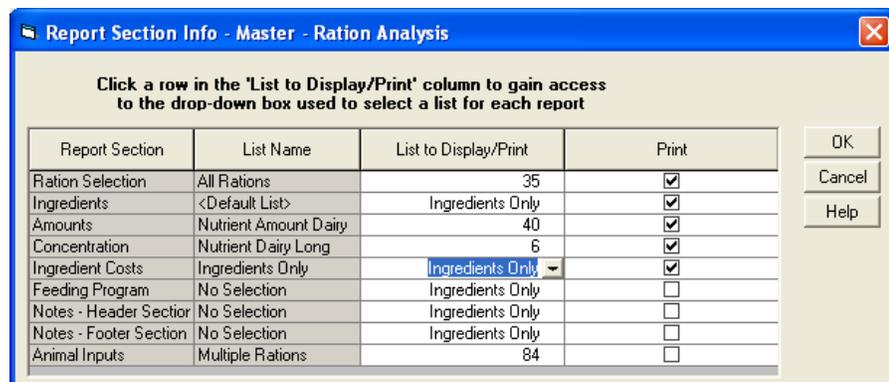
**Reports.** Nutrient lists are referenced in both the Nutrient Amount and Nutrient Concentration section of reports. Nutrient lists can also be set on the Reports printed through the Model Evaluators.

For the ration reports, the list can be changed by going to Reports:Customer Reports and clicking on the Report Section Info box in the middle of the window. This Report Section info box can also be accessed at Tools:Customize and then by clicking on the Print tab. Within this screen, there is a box that reads Report Section Parameters.



To change

Clicking on this will bring up a window that references the different sections of the report.



The Report Section has an Amounts and a Concentration section within the first column. The second column with the header List name is the reference to which list each of these sections are using. The list can be changed within the third column that is the List to Display/Print. Place the cursor within the cell for either the Amounts or Concentration section. A drop down list will appear and the nutrient list can be selected. Click OK to save this list setting.

List Name	List to Display/Print
All Rations	35
<Default List>	<Default List>
Nutrient Amount Dairy	Nutrient Amount Dairy
Nutrient Dairy Long	<Default List>
Ingredients Only	DairyDD CNCPS6.1
No Selection	Dairy DD CNCPS
No Selection	Dairy DD Print
No Selection	Model Comparison
Multiple Rations	Nutrient Dairy Long
	Nutrient Dairy Short
	Nutrient Amount Dairy

**Model Evaluator Reports.** Nutrient lists for the Model Evaluator reports are set within the Evaluation buttons of each of the Models.

Click on the Evaluator button that is found on the Ration Work Screen. There is a Report tab within this section.

Performance/Balances | Reports | Fatty Acid | Amino Acid

Select General Report:

- Summary Report
- Maintenance Requirements
- Growth Requirements
- Pregnancy Requirements
- Lactation Requirements
- Target Weights and ADG
- Duodenal Amino Acids
- Energy and Protein Supply

Select Nutrient list for Summary report:

- DairyDD CNCPS6.1
- Dairy DD CNCPS
- Dairy DD Print
- Model Comparison

Use Envelope Header

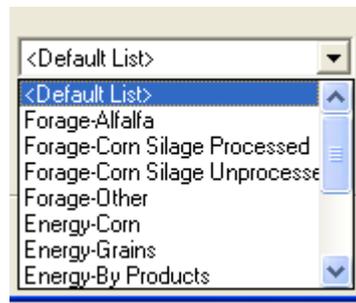
View Report | Print Report

The different reports and the nutrient lists for these reports are found in the middle of this window.

Within some older versions of the program, this list set up may be found within the Edit Input button of the Evaluator screen. By clicking on the Edit Input, a Report tab is present and this has the different reports and Nutrient lists that can be selected.

### Ingredient Lists

Ingredient lists control which ingredients are displayed in Master Ingredient Reports. By going to Reports: Master Reports: Ingredient Nutrient Analysis or Ingredient Information the ingredients for the Ingredient Lists will appear in the lower left hand corner. By clicking on the drop down button, the different Ingredient Lists will appear. On many systems, these ingredient lists may be set up to be the same as the ingredient types that are found in the system.



By clicking on the Report Section Info box, the default Ingredient list will display. Another Ingredient list can be selected in the List to Display/Print column. This Ingredient list will now become the default. The Ingredient Nutrient Analysis and the Ingredient Information report can be defaulted to different Ingredient lists.

**Click a row in the 'List to Display/Print' column to gain access to the drop-down box used to select a list for each report**

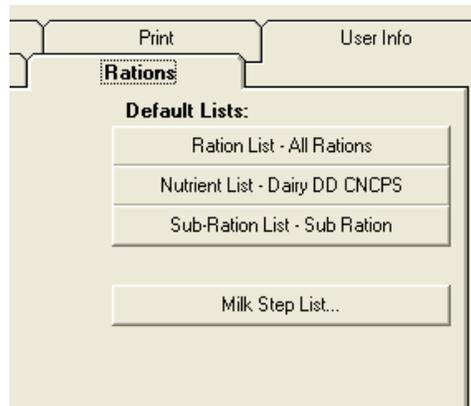
Report Section	List Name	List to Display/Print	Print
Ingredients	<Default List>	<Default List> ▾	<input checked="" type="checkbox"/>

### Ration Lists

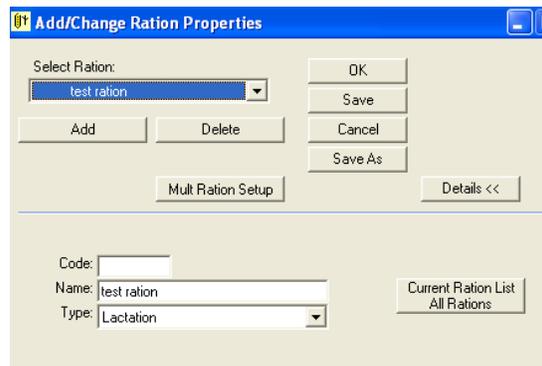
Ration lists affect the order the ration names appear on the select ration section, multiple ration screen, and multiple ration reports.

The default Ration list that rations will be assigned to is set within the Tools:Customize—Rations tab. The Ration List box appears in the Ration List default box. The default Sub-Ration list that Sub Rations are assigned to is also

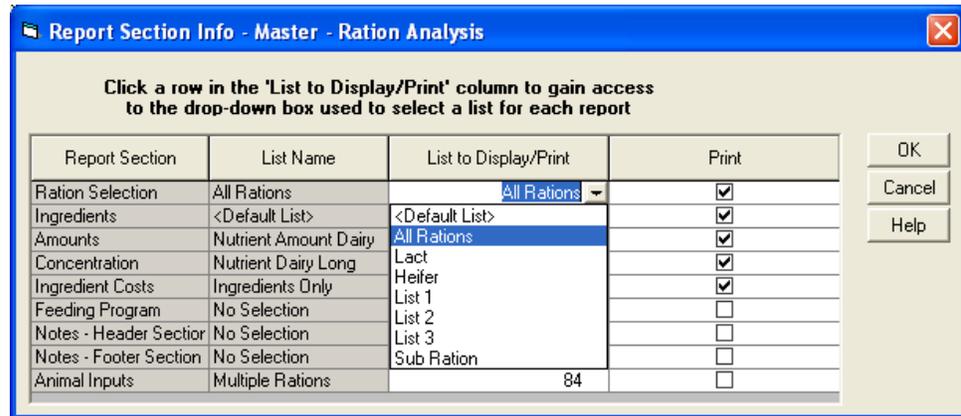
set up on this tab. The names of these ration types is set up within the Tools:Lists:Define Master Lists section.



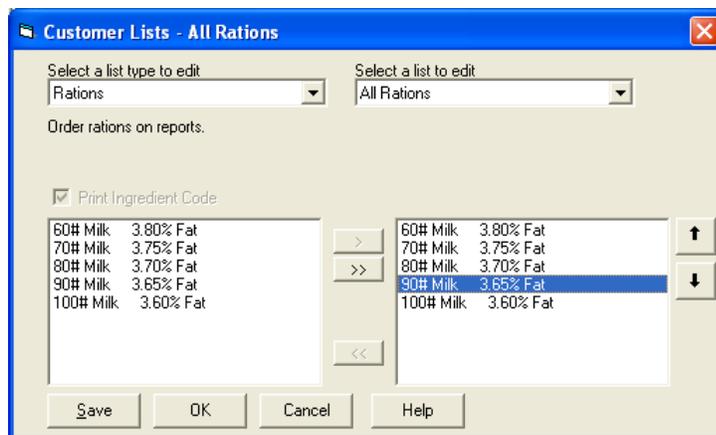
Within the Add/Change Ration Properties Window, the list that the ration will be assigned to is displaying in the Current Ration List box.



The rations set on the Ration Lists also affect the display on reports. Within the Report Section Info box, the Ration list is referenced in the first line of the grid.



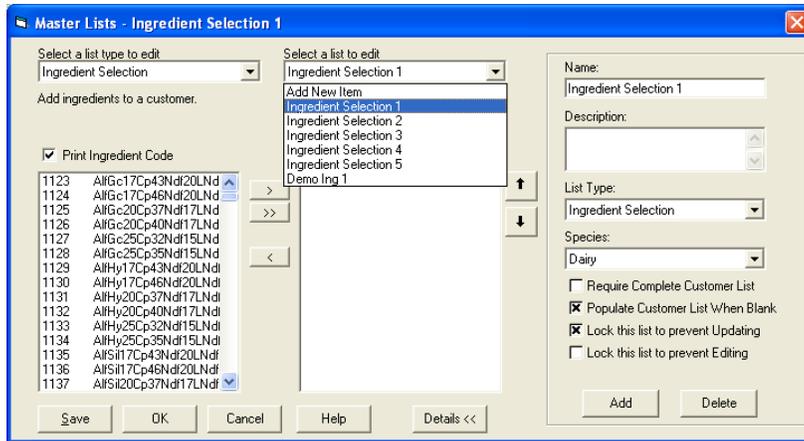
Changing the order of the rations on these lists will can be done within Tools:Lists:Define Customer Lists. Rations can be selected on the left drop down and the actual ration list is selected on the right drop down box. Rations are displayed on the left box. By highlighting a ration on the right, the arrows can be used to move it into the desired position.



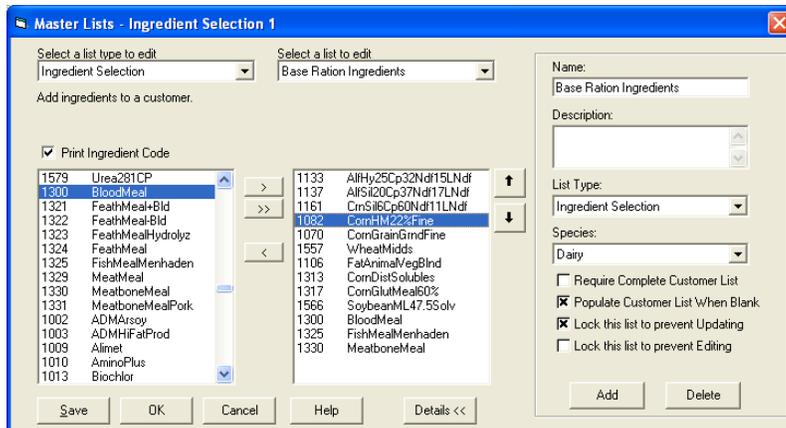
## Ingredient Selection Lists

Setting up Ingredient Selection Lists allow users the ability to easily select groups of ingredients from the Master library and move them into the customer library.

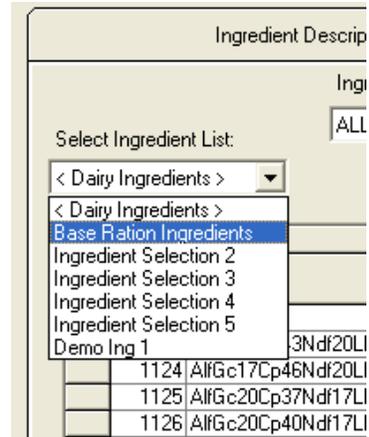
To set up an Ingredient Selection List, go to Tools:Lists: Define Master Lists. On the Select a list type to edit box, choose Ingredient Selection. Within the Select a list to edit drop down, several blank lists are available for users to access. By selecting one of these lists, the user can move ingredients from the Master Ingredients displayed on the left box and over to the right box. By clicking on the Details box, a third section of the window will appear.



Within the Name field, Users can change the name of Ingredient Selection 1 to a more descriptive name.



The Ingredient Selection lists are used in the Customer Ingredient – Ingredient Selection tab.

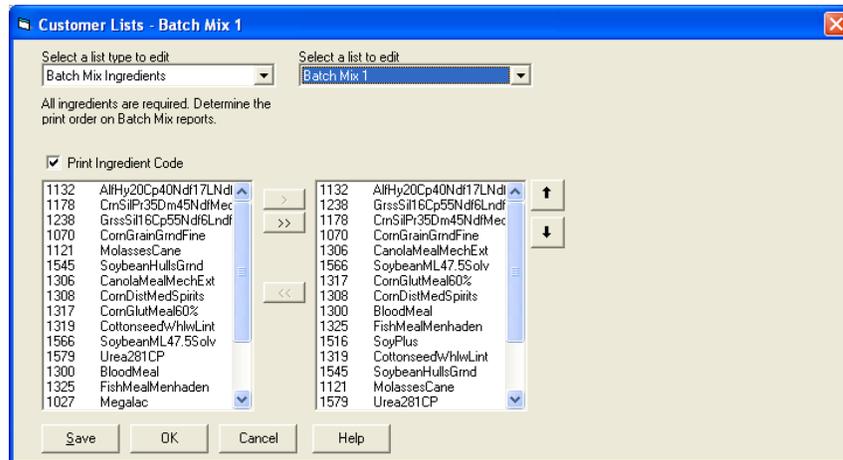


Within the upper left hand corner, there is a Select Ingredient List drop down button. By clicking on this, the Ingredient Selection lists will appear. Select the desired Ingredient Selection List. This list will appear on the left side. By clicking on the double arrow, all ingredients will be assigned into the customer. Ingredients can also be selected individually or by groups and using the single arrow.

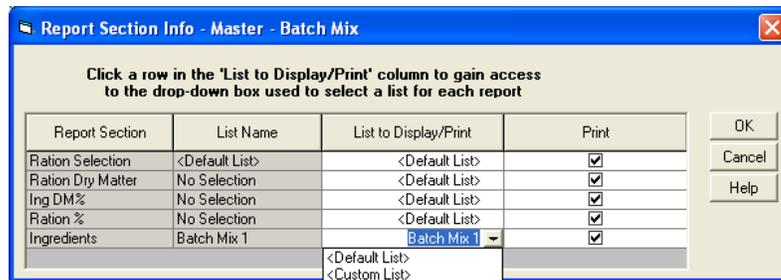


### Batch Mix Ingredient Lists

Batch Mix Ingredient Lists control the order that ingredients display on batch mix reports. The Batch Mix lists are set up within the Tools:Lists:Define Master Lists section of the program. However, the actual order of the ingredients is controlled within the individual customers by going to Tools:Lists:Define Customer Lists section.

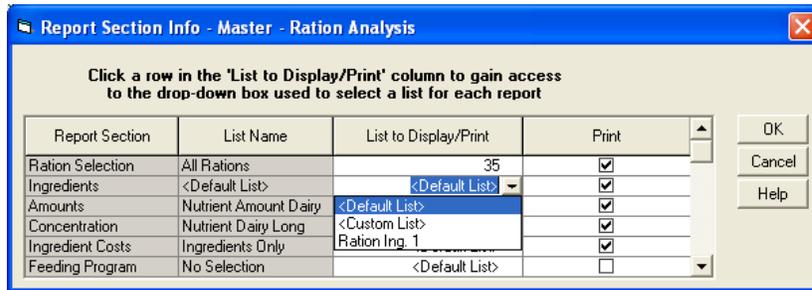


By selecting Batch mix Ingredients on the left, the different batch mix lists will appear on the right. Ingredients can be highlighted and ordered using the arrows. The batch mix list that the batch mix report is referencing is found with Reports:Customer Reports:Batch Mix. A Report Section Info box will appear. The List Name column of the last row is the batch mix list that is currently being referenced. The List to Display/Print column contains a drop down box to enabling the user to change the batch mix list to the one that is set to the desired order.



## Ration Ingredient Lists

Ration Ingredient Lists function in the same way that the Batch Mix ingredient lists do. Ration reports can be set to custom order by using the button found on Reports:Customer Reports:Ration Analysis window. A Report Section Info box is present on this window. The List Name column of the Ingredients row references how the ingredients are ordered. The List to Display/Print column contains a drop down box to enabling the user to change the report order list to that which is set to the desired order.

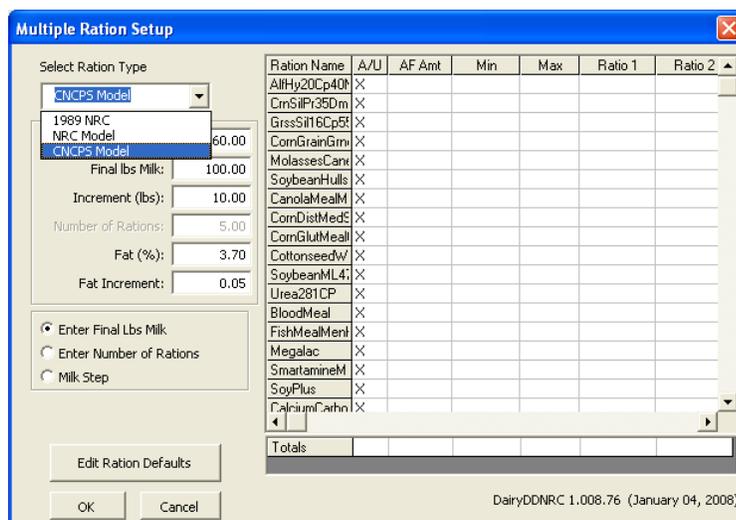


## Ration Template-Nutrients and Ration Template-Ingredients

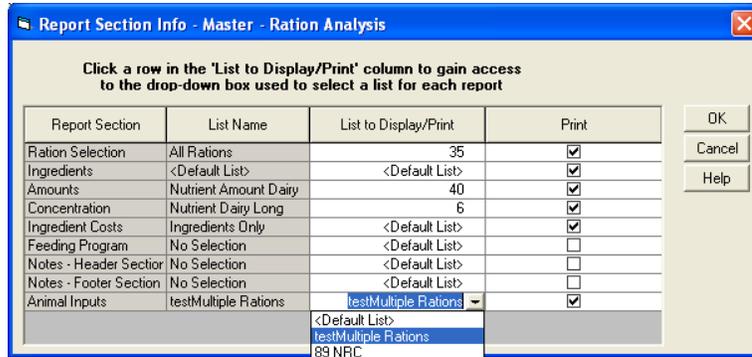
Ration Template-Nutrients and Ration Template-Ingredients are set up the same as described within the previous list types. These lists are only necessary to use for those users who will be setting up templates. Templates are covered within the building templates section of this document.

## Animal Inputs

Animal Input lists are set up and ordered in the same manner as the lists described in the previous list types. Animal input lists can be displayed on the Multiple Ration Screen and on reports. These lists can be changed on the Lists:Define Customer Lists section. The lists available for Multiple Rations are found in the Multiple Ration Setup section within the upper left hand corner.



Animal inputs can be printed on reports by going to Reports:Customer Reports:Ration Analysis and clicking on the Report Section Info button.



Animal inputs are on the last line and the current list name referenced is found in the List Name column. Lists can be changed by selecting the desired list within the List to Display/Print column.

## Reports

Reports are generated through the system that will print ingredients, nutrients, user lists, rations, or batch mixes. Ingredients, nutrients and lists can be printed off at either the Master or Customer level.

To access reports, go to Reports at the top of the screen and then select either Customer or Master. Within Master or Customer, the types of reports available can be selected.



For any of these reports, a report window will appear and users can select the items to print, report details, or change information lists for the reports. These specific reports will be defined within the Types of Reports section.

Within the report window, a Preview button will appear.



By clicking on this, the actual report as it will display will appear in a new window.

## Printing Reports



Several boxes appear in the upper left hand corner of the preview screen. The number of pages of the report is present in addition to arrows used to navigate to different pages. To print the report to your system's default printer, click on the print button.

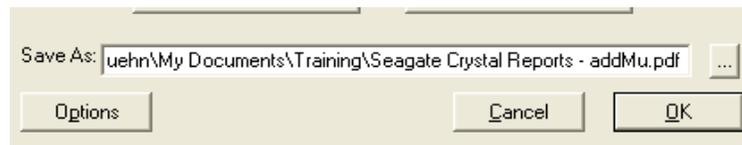
## Email Reports – PDF generator

To email reports, we suggest using a pdf generator (for a free download, go to [www.primopdf.com](http://www.primopdf.com)). If a pdf generator is already on your system, click on the icon with the printer and the wrench (the printer setup button). Select the pdf generator from the Printer Name drop down box. Click OK.

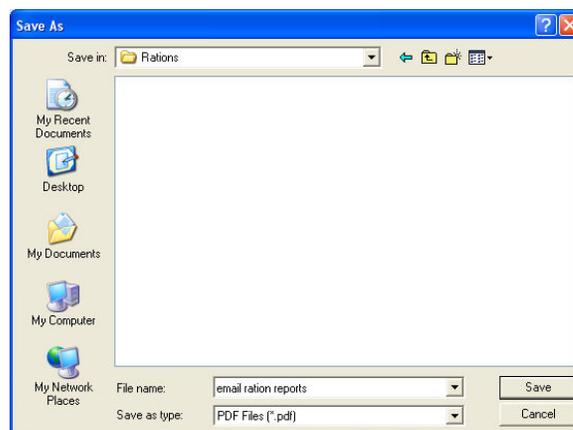


Once this has been set up, click on the printer button. Click OK to send this report to the pdf generator.

The pdf generator information will appear. A Save As box will display with a default directory and name. Navigate to the desired directory in which you will save this file by clicking on the box with three dots.



Provide a descriptive name for this file in the File Name field and click Save.



Click OK within the pdf generator program and the document will be created. At this point, a new window will appear with the report.

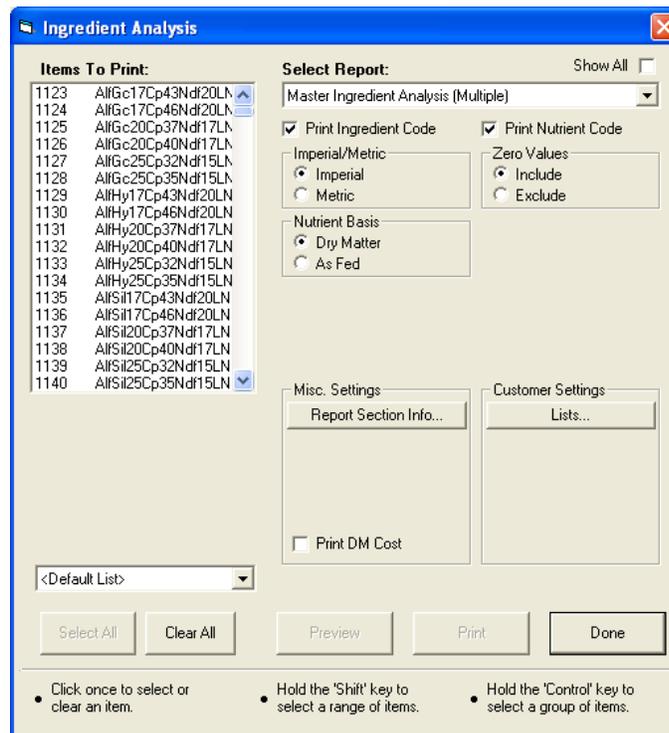
To send this file, navigate to this folder using Windows Explorer and attach it to an email.

## Types of Reports

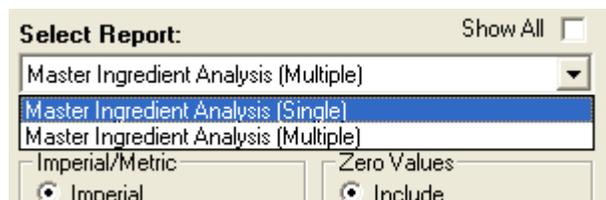
### Ingredient Nutrient Analysis Reports

Ingredient Nutrient Analysis reports can be printed at either the Master or Customer level. These reports will print out the nutrient analysis for a set of ingredients. To obtain these reports, go to Reports and then either Customer Reports or Master Reports. Select Ingredient Nutrient Analysis.

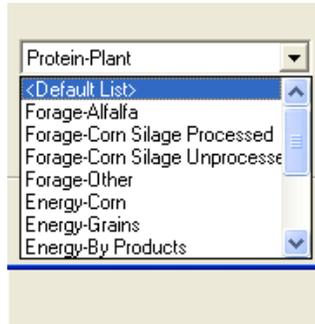
The window for the report information will appear. Ingredients that can be printed will appear on the left side in the Items to Print section.



Within the Select Report box, you can choose the report setting for a Single or Multiple report. Multiple Report templates will allow more than one ingredient to appear on a page.



The list selection at the lower left hand corner limits the display of ingredients to those that are assigned to an ingredient list (see Ingredient Lists within the Using Lists section.) Note that these ingredient lists are not the same as ingredient types that ingredients are assigned to; however, many systems are set up to have these lists and types in synch. To see all ingredients, have this set to <Default List>.



By clicking on the Report Section Info box, the sections of the report will display.

Report Section	List Name	List to Display/Print	Print
Ingredient Selection	<Default List>	<Default List>	<input checked="" type="checkbox"/>
Nutrients	Nutrient Dairy Long	Nutrient Dairy Long	<input checked="" type="checkbox"/>
		<Default List> DairyDD CNCPS6.1 Dairy DD CNCPS Dairy DD Print Model Comparison Nutrient Dairy Long	

The nutrient list can be set up within this section so reports will print only a certain list of nutrients.

Additional information can be included on these reports by clicking on the appropriate check boxes on the report information screen.

Print Ingredient Code       Print Nutrient Code

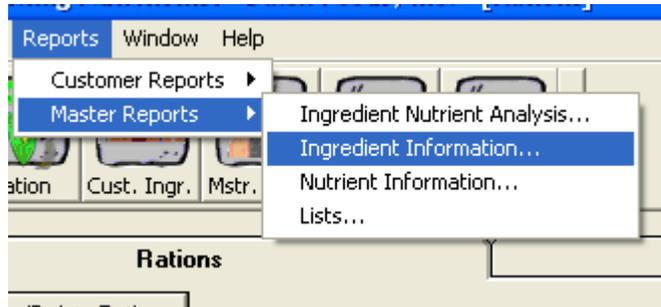
Imperial/Metric  
 Imperial  
 Metric

Zero Values  
 Include  
 Exclude

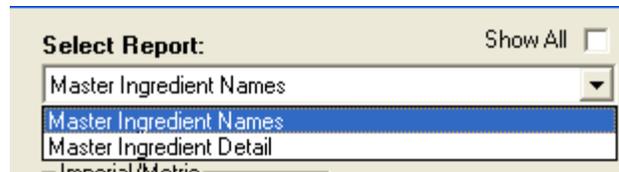
Nutrient Basis  
 Dry Matter  
 As Fed

## Ingredient Information Reports

Ingredient Information reports can be printed at the Master or Customer level. These reports contain information regarding the names or details of the ingredients. To obtain these reports, go to Reports and then either Customer Reports or Master Reports. Select Ingredient Information.



Two types of reports can be selected within this report information screen: Ingredient Names or Ingredient Details.



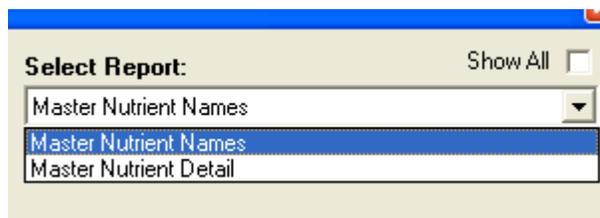
A list of ingredients will display in the Select Items to print section. These reports will print a list of the selected ingredients. Ingredient Detail reports will provide information on the ingredients that are found within the Ingredient Description tab of the Ingredient Maintenance section.

Dalex Feeds, Inc.							
Rolling Meadows				Dalex			
<b>Master Ingredient Detail</b>							
Code	Name	\$/Ton	Order	Type	Base Amount	Is A Supplement	
1123	AlfGc17Cp43Ndf20LNdf	\$0.00	1	Forage-Alfalfa	lb	No	
1124	AlfGc17Cp46Ndf20LNdf	\$0.00	2	Forage-Alfalfa	lb	No	

## Nutrient Information Reports

Nutrient Information reports can be printed at the Master or Customer level. These reports contain information regarding the names or details of the nutrients. To obtain these reports, go to Reports and then either Customer Reports or Master Reports. Select Nutrient Information.

Two types of reports can be selected within this report information screen: Nutrient Names or Nutrient Details.

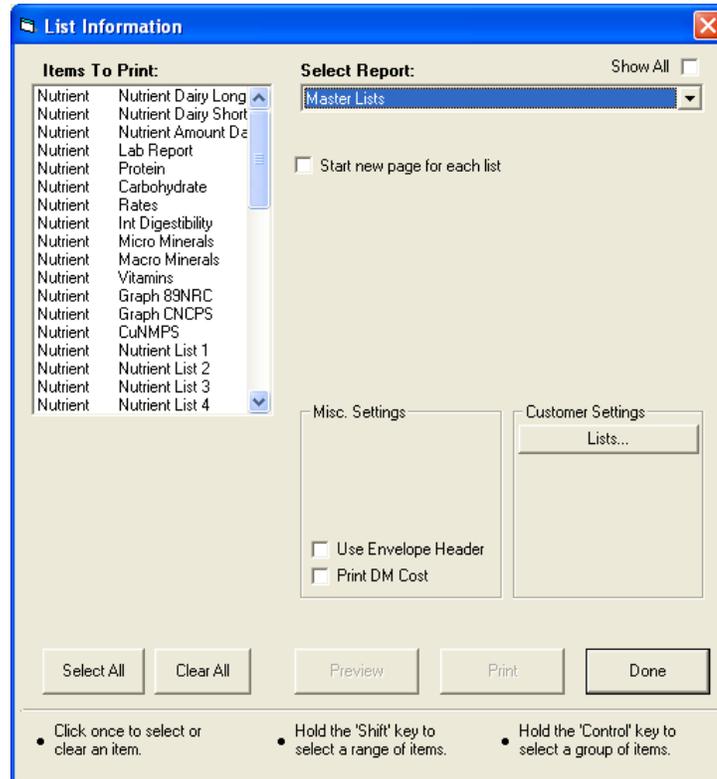


A list of nutrients will display in the Select Items to print section. Nutrient Name reports will print off the nutrient names of the selected nutrients. Nutrient Detail reports will print detailed information about the nutrients in the system.

Dalex Feeds, Inc.								
test						User Name		
						952-442-4251		
Nutrient Detail								
Code	Name	Order	Amount	Conc	Conv	Neg	Secure	
1	Dry Matter	1	lb	%	True	False	False	
147	Ration DM %	147	lb	%	True	False	False	
Ingredient Formula: =DM								
Ration Formula: =N1								
2	Protein	2	lb	%	True	False	False	
3	RUP (%CP)	3	-	-	False	False	False	
Ration Formula: =N38/N2*100								
4	RDP (%CP)	4	-	-	False	False	False	
Ingredient Formula: =100-N3								
Ration Formula: =N39/N2*100								

## List Reports

List Reports can be printed at the Master or Customer level. These reports contain the different lists contained within the system and the information on those lists. To obtain these reports, go to Reports and then either Customer Reports or Master Reports. Select Lists.



The lists that are in the system are displayed in the Items to Print box. Selecting a list and clicking Preview will generate a report that contains the items that are on the list.

Dalex Feeds, Inc.

test

User Name  
952.442-4251

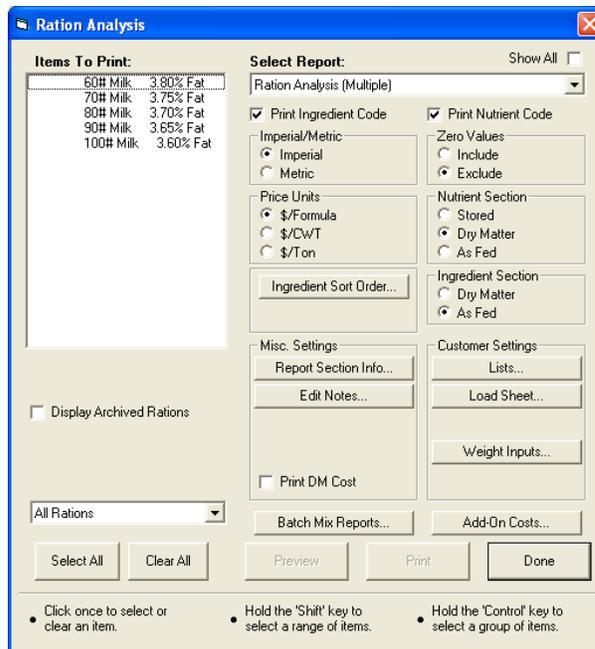
Master Nutrient		Nutrient Dairy Short	
Code	Name	Code	Name
1	Dry Matter		
147	Ration DM %		
45	Moisture		
2	Protein		
3	RUP (%CP)		
4	RDP (%CP)		
5	SOL (%CP)		

## Ration Analysis Reports

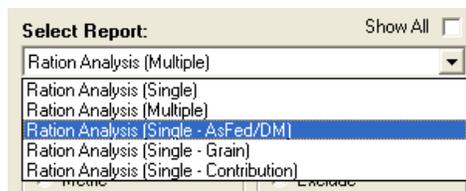
Ration analysis reports can be printed for the rations within each customer. Go to Reports--Customer Reports--Ration Analysis.



This will bring up the Report Information window. The left side displays the Items to print which includes the rations and mixes that are in the customer.



The Select Report section contains the different reports that are available within the system.



Changing the type of report will change the information displayed within the ingredient section of the report.

Items can now be selected from within the left box. Other information can be changed on the report using the other check boxes found from within the Report Window.

Print Ingredient Code       Print Nutrient Code

Imperial/Metric  
 Imperial  
 Metric

Price Units  
 \$/Formula  
 \$/CWT  
 \$/Ton

Ingredient Sort Order...

Zero Values  
 Include  
 Exclude

Nutrient Section  
 Stored  
 Dry Matter  
 As Fed

Ingredient Section  
 Dry Matter  
 As Fed

The sections of the report to print and the lists that the nutrient amount and nutrient concentration sections are displaying are found within the Report Section Info Box.

**Report Section Info - Master - Ration Analysis**

Click a row in the 'List to Display/Print' column to gain access to the drop-down box used to select a list for each report

Report Section	List Name	List to Display/Print	Print
Ration Selection	All Rations	All Rations	<input checked="" type="checkbox"/>
Ingredients	<Default List>	<Default List>	<input checked="" type="checkbox"/>
Amounts	Nutrient List 1	89	<input checked="" type="checkbox"/>
Concentration	Nutrient Dairy Short	31	<input checked="" type="checkbox"/>
Ingredient Costs	Ingredients Only	<Default List>	<input checked="" type="checkbox"/>
Feeding Program	No Selection	<Default List>	<input type="checkbox"/>
Notes - Header Section	No Selection	<Default List>	<input type="checkbox"/>
Notes - Footer Section	No Selection	<Default List>	<input type="checkbox"/>
Animal Inputs	Multiple Rations	65	<input type="checkbox"/>

OK  
Cancel  
Help