

Use of Enzymes in BroilerOpt™ Feed Program

One must add enzymes as ingredients. Then give them nutrient values and a cost.

Now you can use them in two ways.

First, we can put an ingredient restriction of the dosage, for example, 0.05 % in BOTH the minimum and maximum values. If you put it in the minimum only, the program will use more, if possible, generating more benefits than possible. If we put the value only in the maximum level, there is the chance that the least cost program would solve to less than the expected dose, expecting a linear response from the treatment, which may not happen.

Also, any unused enzyme should be eliminated from use with a -1 in the max column for each diet.

Second, the enzyme can be added after formulation. That is to say that one can solve to an existing dietary specification and then the enzyme added “On Top” of the existing specifications. This can be done but the outcomes have been hard to predict.

To do this with BroilerOpt, here is the procedure. Have the enzyme in the matrix as an ingredient, then click on the button on the “Current Flock” tab below “View Report”. A window opens, enter the matrix number of the ingredient (it can be seen by opening the “Show Ingredient Info” window and hovering the mouse over the ingredient, or count the rows to the ingredient. When you enter the number, the name will appear. If needed, you can use the ingredient name

to search for the right ingredient number.

Diet Type	Starter	Grow
Diet Change	1/8/2014	1/8/2
Feed Cost	1014.3	
Feed Weight	0.550	
Energy	2950	
Protein	23.00	
Arginine	1.411	
Histidine	0.564	
Lysine	1.209	
Tryptophan	0.271	
Phe + Tyros	1.059	
Phenylalani	1.805	
Met_Cys	0.780	
Methionine	0.480	
Threonine	0.776	
Leucine	1.828	
Isoleucine	0.876	
Valine	0.992	
Ether Extrac	5.355	
Dry matter %	86.77	

ADD an Enzyme onto the Existing Formulation

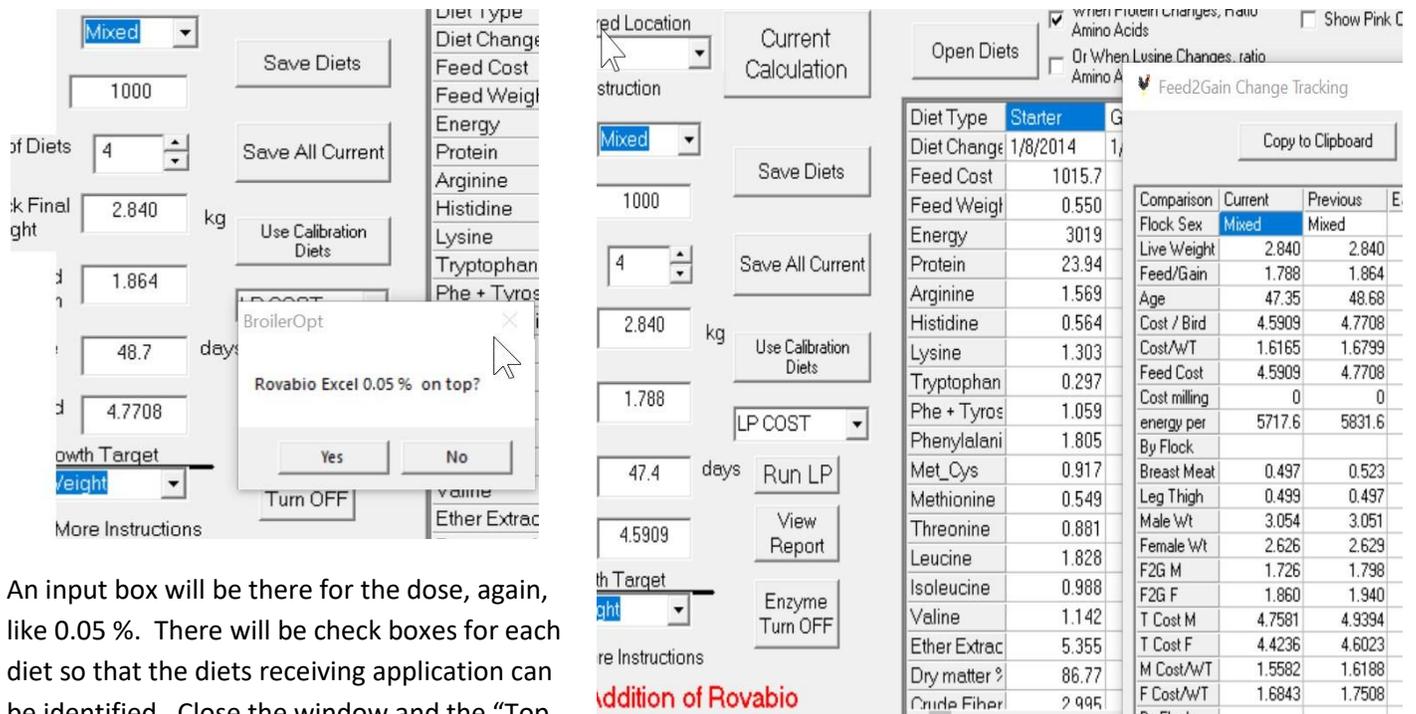
Ingredient No. Zero or No Nu
Ingredient Nu
Click Cancel to
treatment

Dose

Diets to receive Treatment Diet #1 Diet #3
 Diet #2 Diet #4

Click Current Calc for Impact of Enzyme on Current Diets.
Will continue to be used for optimization until turned off.
Return and enter ZERO to turn off Enzyme Top Off.

Feed2Gain LLC



An input box will be there for the dose, again, like 0.05 %. There will be check boxes for each diet so that the diets receiving application can be identified. Close the window and the “Top Off” button will say “Enzyme Turn off” so you can turn off the addition later. The use of the enzyme in formulation will be turned off while the Top Off application is used.

When you run the “Current Calc”, you have an option to use the enzyme or not. A yes or no on the window that opens determines if the enzyme is used or not. Here it says “Rovabio Excel 0.05%” on top. The “Rovabio Excel 0.05%” is the name I gave the enzyme.

If the “Top Addition” is used, the growth is determined and placed in the Current Flock window. Also, it is put in the current column of the “Keep Track” Window.

You can see that the picture on the left you can see the feed conversion and weight before use of the enzyme and on the right, the results with the enzyme “on top” of the same formulas. The Nutrient table on the left has the total nutrition from that diet, the formulated values and the “top” application of the enzyme, plus the cost of the enzyme added to the feed formulation. I have the “Keep Track” window as well, where the last treatment is in the left most column. You can see the enzyme improved the cost (growth was stopped at the target weight) and feed conversion was lower.

With the “Top Addition” on, the optimization tab operates with the enzyme addition to the diets chosen. The enzyme cost is part of the determination.

Frank