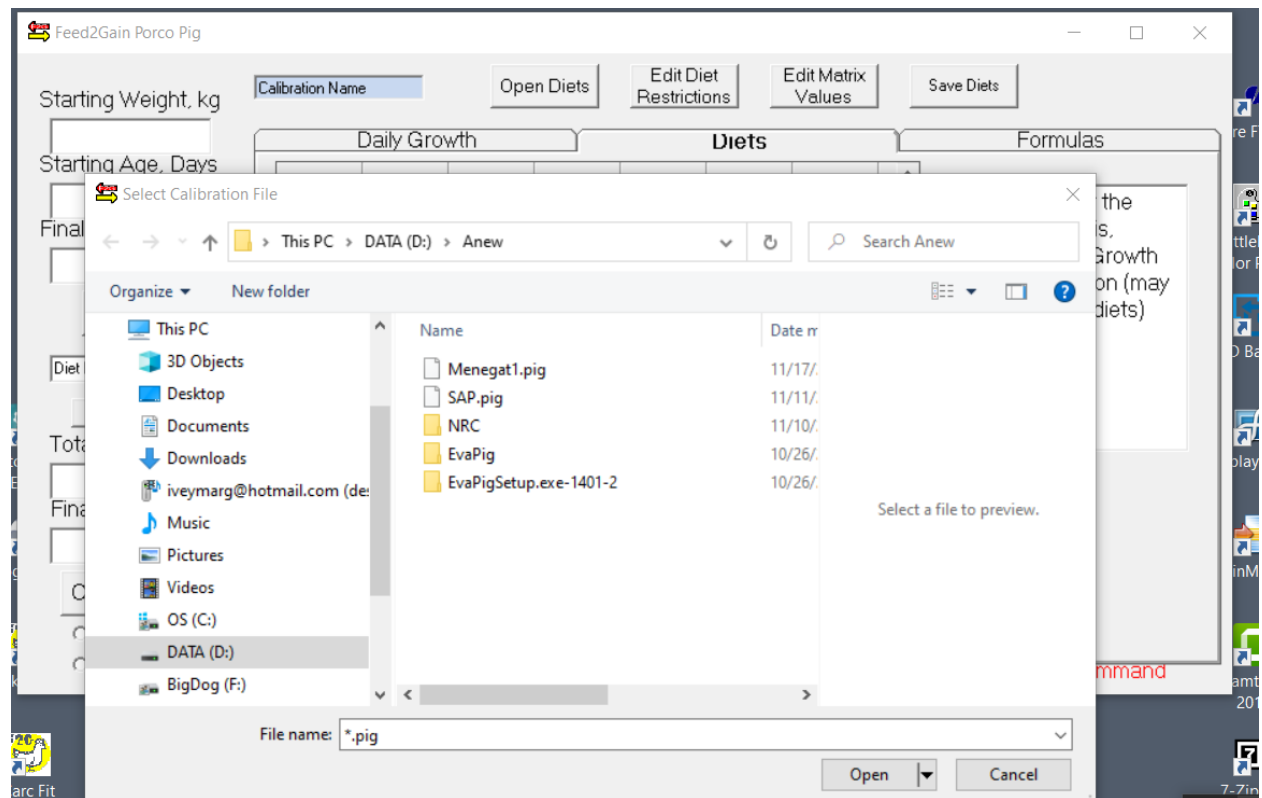


Feed2Gain, LLC has been supplying a Cost minimization Program to the Poultry Industry for over 10 years. This is our first program for swine. The Matrix used is from Brazil, values Metric. Costs are made up, not U. S. based. Growth is from a Research Trial.

These Slides are what you should see 😊

- Click on the Calibration Name to open an existing calibration. They are the .pig files.... Select a .pig file. If the program cannot find it, you will get a warning. This lets you create a new one.
- The live weight we use will be 23 kg or 50.6 lbs to a final weight of 120 kg or 264 lbs.



If there is a diet file, it will fill the diets on the main form. If there is no restriction file, you will get a message. This also fixes the program to only use the input diet, no least cost formulation.

- To open Diets, Click on “Open Diets” and then enter the number of the diet in the left column and the diets are transferred to the diet grid. You can make a diet from ingredients on the other tab. Also, can use button to open other existing feeds.

The screenshot shows the 'Feed2Gain Porco Pig' software interface. At the top, there are buttons for 'Open Diets', 'Edit Diet Restrictions', 'Edit Matrix Values', and 'Save Diets'. Below these, there are input fields for 'Starting Weight, kg' (containing '23.05') and 'Starting Age, Days' (containing 'SAP').

The main window is titled 'Feed2Gain Feeds - Diet Display' and has a tabbed interface with 'Daily Growth', 'Diets', and 'Formulas'. The 'Diets' tab is active, showing a table of diet data under the heading 'Nutrient Based Diets and LP Restrictions'. The table has columns for Diet No., Diet Type, Diet Change, Feed Cost, Feed Weigh, and several unlabeled columns. The data rows are as follows:

Diet No.	Diet Type	Diet Change	Feed Cost	Feed Weigh		
	GA		120.00	40.000	2563.0	19.250
	GI		115.00	40.080	2549.0	18.790
	GII		114.00	29.130	2553.0	18.840
	GIII		113.00	25.080	2560.0	18.850
	TI		112.00	40.030	2563.0	17.410
	TII		110.00	48.440	2546.0	17.040
			0	0	0	0
			0	0	0	0

Below the table, there is a checkbox labeled 'See Min and Min Restrict:'. To the right of the table is a vertical menu with buttons: 'Hide', 'Import from Clipboard and Replace Diets', 'Import from clipboard and Add to Existing', 'Open Other Feed Files', 'Import Specs from Clipboard', and 'Save As'. At the bottom of the window, there is a text box that says 'Enter Diet Number (1 up to 8) in left column to identify the diet contents to be transferred to the current diet grid on the main program.' and a 'Clear Diets on Main Form' button.

At the very bottom of the screenshot, there is a red text overlay: 'Total Feed Intake and Final Age are needed for Calibration but Calculated by Growth Command'.

If there is no Matrix or no Restrictions, The button above “Run Least Cost” will show “Use Diets on the Grid”. Any time you want to run growth with just these values, use this setting. Click on the Growth button and The program will calculate growth, with the nutrients on the grid.

Open Diet Data Save Files Set Temperature Finishing Report

D:\Feed4Pig\SAF

Open Diets Edit Diet Restrictions Edit Matrix Values Save Diets Run Optimization

Starting Weight, kg
22.00

Starting Age, Days
64.00 Mixed

Final Weight, kg
120.0

Growth Use Diets on Grid Run LP

Final Age, Days
168.0

Total Feed Intake
208.0

Cost Per Pig Calibration

Calibration Data Loaded

Daily Growth		Diets					
	1	2	3	4	5	6	
Diet Name	In	GI	GII	GIII	TI	TII	
Diet Cost	120	115	114	113	112	110	
Weight	18	40	30	20	40	60	
NE	2563	2549	2553	2560	2563	2546	
Crude protein	19.25	18.79	18.84	18.85	17.41	17.04	
Arginine	0	0	0	0	0	0	
Histidine	0	0	0	0	0	0	
Lysine	1.16	1.05	1.01	0.96	0.86	0.83	
Tryptophan	0.19	0.18	0.19	0.19	0.17	0.17	
Phe + Tyrosine	0	0	0	0	0	0	
Phenylalanine	0	0	0	0	0	0	
Met_Cys	0.93	0.81	0.75	0.69	0.64	0.6	
Methionine	0.46	0.4	0.37	0.34	0.32	0.3	
Threonine	0	0	0	0	0	0	
Leucine	1.2	1.2	1.21	1.21	1.2	1.19	
Isoleucine	0.66	0.65	0.66	0.66	0.62	0.6	
Valine	0	0	0	0	0	0	
GE	0	0	0	0	0	0	
DE							
ME							
Dry Matter							
Crude fiber							
Ether extract							
Acid ether extra							
Δch							

To formulate with an open matrix and restrictions files, change the circled box to “Least Cost Formulas”. When you click on Growth, the least cost feeds are determined and then growth.

Here we see the Ingredients in the Least Cost formulas.

The restrictions are the responsibility of the user.

- To run the Least Cost program just to see the results, click the Run LP button.

Open Diet Data Save Files Set Temperature Finishing Report

D:\Feed4Pig\SAF

Open Diets Edit Diet Restrictions Edit Matrix Values Save Diets Run Optimization

Starting Weight, kg
22.00

Starting Age, Days
64.00 Mixed

Final Weight, kg
120.0

Growth

Least Cost Formulas

Run LP

142.6 173.9
Final Age, Days Total Feed Intake

21.92 1.775
Cost Per Pig Feed/Gain

Calibration Calibration Data Loaded

Daily Growth			Diets						
NO	Ing. Name	In	GI	GII	GIII	TI	TII		
1	Blood Meal	7.6078	7.6078	6.1382	1.0000	1.0000	0		
2	Blood Plasm	0	0	0	1.0000	1.0000	0		
4	Corn, Yellow	61.853	61.853	62.235	59.260	65.981	60.741		
10	Soybean Me	0.6948	0.6948	2.5685	10.061	9.4843	0		
11	Soybean Me	23.494	23.494	23.265	25.050	21.018	35.462		
15	Poultry Fat	1.1805	1.1805	1.1152	0.7991	0	0		
23	Magnesium	4.6065	4.6065	4.1825	2.4882	1.1959	3.4893		
26	Sodium chlo	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500		
31	L-Thr	0.2323	0.2323	0.1794	0.091195	0.071446	0.057911		
34	L-Ileu	0.080913	0.080913	0.06603	0	0	0		

Clicking just the Run LP will generate the nutrients in the least cost formula on the Diets Tab and the actual formula of ingredients on the Formulas Tab

- You can stretch these windows out to see them more clearly.

The image displays two side-by-side screenshots of the Feed2Gain Porco Pig software interface, showing the 'Diets' and 'Formulas' tabs respectively.

Left Screenshot (Diets Tab):

- Starting Weight, kg: 23.05
- Starting Age, Days: 58
- Final Weight, kg: 116.13
- Buttons: Growth, Least Cost Formulas, Run LP
- Total Feed Intake: 211.84
- Final Age, Days: 162
- Buttons: Calibration, Show Input, Turn off Input

Diet Name	GA	GI	GII	GIII	TI	TII
Diet Cost	642.84	642.84	644.00	645.70	612.37	
Weight	40.000	40.080	29.130	25.080	40.030	
NE	2549.0	2549.0	2553.0	2560.0	2563.0	
Crude protei	18.790	18.790	18.840	18.850	17.410	
Arginine	0.5701	0.5701	0.5744	0.5782	0.5369	
Histidine	0.3903	0.3903	0.3934	0.3960	0.3670	
Lysine	1.0500	1.0500	1.0100	0.9600	0.8600	
Tryptophan	0.1800	0.1800	0.1900	0.1900	0.1700	
Met_Cys	0.8100	0.8100	0.7500	0.6900	0.6400	
Methionine	0.5320	0.5320	0.4700	0.4083	0.3774	
Leucine	1.9936	1.9936	2.0116	2.0271	1.8559	
Valine	0.7102	0.7102	0.7168	0.7225	0.6599	
GE	4242.6	4242.6	4246.9	4249.0	4214.6	
DE	3569.4	3569.4	3576.9	3587.1	3554.5	
ME	3438.7	3438.7	3445.3	3454.8	3433.1	
Dry Matter	85.904	85.904	85.862	85.784	86.356	
Crude fiber	5.4745	5.4745	5.5267	5.5717	5.0751	
Ether extrac	8.6505	8.6505	8.8586	9.1192	8.0758	

Right Screenshot (Formulas Tab):

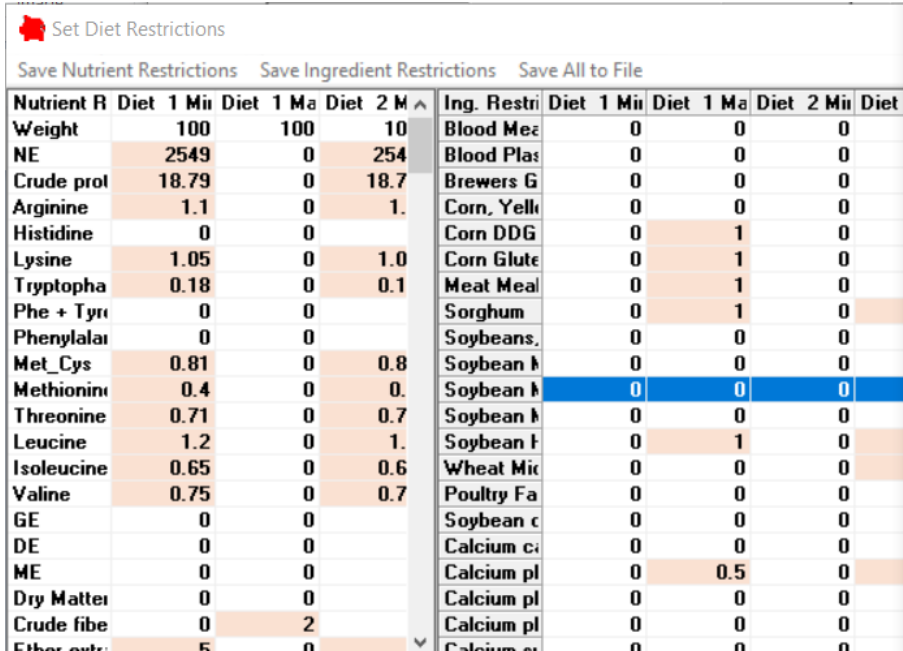
- Starting Weight, kg: 23.05
- Starting Age, Days: 58
- Final Weight, kg: 116.13
- Buttons: Growth, Least Cost Formulas, Run LP
- Total Feed Intake: 211.84
- Final Age, Days: 162
- Buttons: Calibration, Show Input, Turn off Input

NO	Ing. Name	GA	GI	GII	GIII	TI	TII
4	Corn, Yellow	48.249	48.249	47.469	46.733	54.420	56.870
5	Corn DDG	47.671	47.671	48.384	49.013	42.169	40.351
15	Poultry Fat	2.9163	2.9163	3.0949	3.3337	2.5953	2.0196
29	L-Lys-HCL	0.8564	0.8564	0.8014	0.7343	0.6479	0.6198
31	L-Thr	0.2071	0.2071	0.1416	0.076869	0.072596	0.043317
32	L-Trp	0.099983	0.099983	0.1094	0.1089	0.094915	0.096424

Red Text Overlay: Total Feed Intake and Final age are Needed for Calibration but Calculated by Growth Command

You can edit the Restrictions and Matrix with the buttons at the top, save the changes. Then “run lp” to see the changes or just run growth to reformulate and see growth. Same as in BroilerOpt®. Exe.

The Energy is Net Energy and the Amino Acids are Available. Price is a major driver of least cost growth. The values can be copied and pasted. Use the right click button to copy the whole grid.

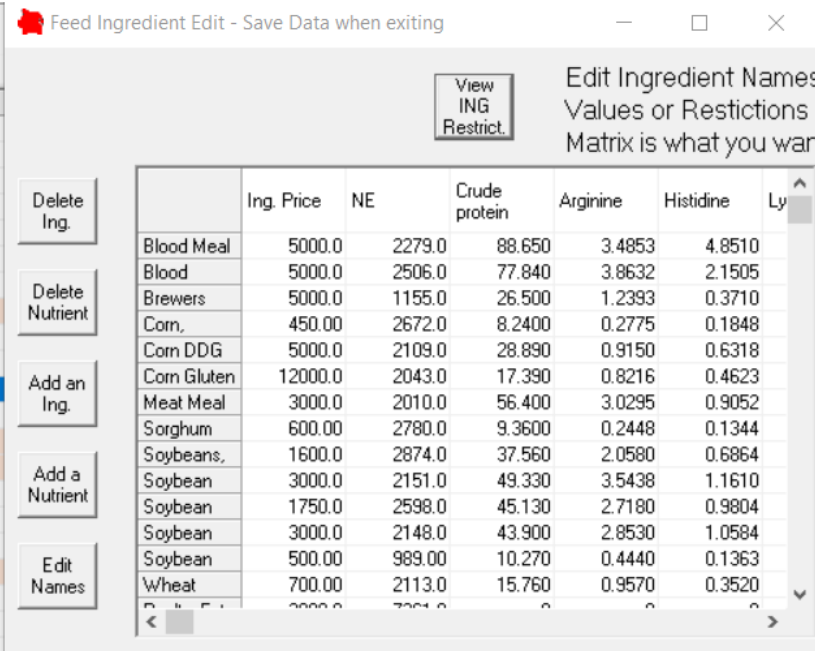


Set Diet Restrictions

Save Nutrient Restrictions Save Ingredient Restrictions Save All to File

Nutrient R	Diet 1 Mii	Diet 1 Ma	Diet 2 M
Weight	100	100	10
NE	2549	0	254
Crude prot	18.79	0	18.7
Arginine	1.1	0	1.
Histidine	0	0	
Lysine	1.05	0	1.0
Tryptopha	0.18	0	0.1
Phe + Tyro	0	0	
Phenylalala	0	0	
Met_Cys	0.81	0	0.8
Methionini	0.4	0	0.
Threonine	0.71	0	0.7
Leucine	1.2	0	1.
Isoleucine	0.65	0	0.6
Valine	0.75	0	0.7
GE	0	0	
DE	0	0	
ME	0	0	
Dry Matter	0	0	
Crude fibe	0	2	
Ether exte	5	0	

Ing. Restr	Diet 1 Mii	Diet 1 Ma	Diet 2 Mii	Diet
Blood Meal	0	0	0	
Blood Plas	0	0	0	
Brewers G	0	0	0	
Corn, Yell	0	0	0	
Corn DDG	0	1	0	
Corn Glute	0	1	0	
Meat Meal	0	1	0	
Sorghum	0	1	0	
Soybeans,	0	0	0	
Soybean M	0	0	0	
Soybean M	0	0	0	
Soybean M	0	0	0	
Soybean F	0	1	0	
Wheat Mic	0	0	0	
Poultry Fa	0	0	0	
Soybean c	0	0	0	
Calcium ci	0	0	0	
Calcium pl	0	0.5	0	
Calcium pl	0	0	0	
Calcium pl	0	0	0	
Calcium pl	0	0	0	



Feed Ingredient Edit - Save Data when exiting

View ING Restrict.

Edit Ingredient Names, Values or Restrictions
Matrix is what you want

	Ing. Price	NE	Crude protein	Arginine	Histidine	Ly
Blood Meal	5000.0	2279.0	88.650	3.4853	4.8510	
Blood	5000.0	2506.0	77.840	3.8632	2.1505	
Brewers	5000.0	1155.0	26.500	1.2393	0.3710	
Corn,	450.00	2672.0	8.2400	0.2775	0.1848	
Corn DDG	5000.0	2109.0	28.890	0.9150	0.6318	
Corn Gluten	12000.0	2043.0	17.390	0.8216	0.4623	
Meat Meal	3000.0	2010.0	56.400	3.0295	0.9052	
Sorghum	600.00	2780.0	9.3600	0.2448	0.1344	
Soybeans,	1600.0	2874.0	37.560	2.0580	0.6864	
Soybean	3000.0	2151.0	49.330	3.5438	1.1610	
Soybean	1750.0	2598.0	45.130	2.7180	0.9804	
Soybean	3000.0	2148.0	43.900	2.8530	1.0584	
Soybean	500.00	989.00	10.270	0.4440	0.1363	
Wheat	700.00	2113.0	15.760	0.9570	0.3520	

To add an ingredient, highlight the row and click "Add an Ing." To Add a nutrient, click on a column ingredient value set, highlight the row and click "Import New Ingredient". Mouse click on a row to see

A Maximum Restriction of -1 prevents the use of an ingredient, zero is no

Calibration Calibration Data Loaded

Calibration is the First Step

- To make it easy here, I will recalibrate the existing location.
- We need the diet nutrients in the Diet Grid along with the amounts of each feed
- The Energy is Net Energy, Amino Acids are available. Energy, protein and at least lysine are required.
- Then, we need the weights of your Calibration Herd when feed is changed.
 - This is because we need to capture the growth curve with the intake of YOUR Diets.
- Set Herd Sex (Male, Female or Mixed).
- Use the Diets on the Grid
- Click Calibration and we get a new window to add starting and final weights of the Herd, and total feed intake of the herd.
- Last we add the age, and weights when feed intake changed. Keeps the growth curve correctly focused.
- In this example, I have used data from a published study. There were six diets and a mixed sex herd.
- We see it on the Windows on Next Page. Calibration does not require feed conversion or pig cost.

A Calibration Set Up ready to Run

D:\Feed4Pig\SAF

Starting Weight, kg:
 Starting Age, Days:

Final Weight, kg:

Final Age, Days: Total Feed Intake:

Cost Per Pig: Feed/Gain:

Calibration Data Loaded

Daily Growth		Diets						Formulas	
	1	2	3	4	5	6			
Diet Name	In	GI	GII	GIII	TI	TII			
Diet Cost	120	115	114	113	112	110			
Weight	18.000	40.000	30.000	20.000	40.000	60.000			
NE	2563.0	2549.0	2553.0	2560.0	2563.0	2546.0			
Crude protein	19.250	18.790	18.840	18.850	17.410	17.040			

Calibration Inputs

Starting Weight, kg: Final Weight, kg:

Starting Age, Days: Final Age, Days:

Total Feed Intake:

Give all the Data you can then click Continue Calibration

Age, Days	Weight, Kg	Feed Intake
64	22	0
77	32	18
101	52	40
117	67	30
126	76	20
143	94	40
168	120	60

Enter Live Weights at an age and feed weight consumed in that period. First weight should be starting with no feed

Enter Diets for the desired analysis. Calibration or optimization use the diets)

Calibration Takes Time. To view quality of fit, click on the Daily Growth Grid and then enter Control-R. The correlations will be shown.

Here are the Final Results.

You can change the name here or cancel. If the results are not close, take the time to run it again. Starting point matters and will be this one.

The screenshot displays a software interface for pig calibration. On the left, there are input fields for 'Starting Age, Days' (22), 'Final Weight, kg' (120), 'Final Age, Days' (165.5), and 'Cost Per Pig' (21.92). A 'Growth' button is highlighted in green. Below these are 'Total Feed Intake' (208.1) and 'Feed/Gain' (2.124), with a 'Calibration' button also highlighted in green. A 'Run LP' button is visible. A dialog box titled 'Calibration Inputs' is open, showing a table of 'WeightKg' vs 'Feed Intake' and a 'Total Feed Intake' of 208. A smaller dialog box asks to save calibration data to 'D:\Feed4Pig\SAP4 OK?'. A red 'WORKING...' label is at the bottom.

WeightKg	Feed Intake
22	0
32	18
52	40
117	67
126	76
143	94
168	120

Final Age 168.1 Final Feed Intake is 208.0 Save this Calibration Data Set to D:\Feed4Pig\SAP4 OK?

Yes No

Continue Calibration

Total Feed Intake 208

Calibration Takes Time. To view quality of fit, click on the Daily Growth Grid and then enter Control-R. The correlations will be shown.

WORKING... Enter Live Weights at an age and feed weight consumed in that period. First weight should be starting with no feed

ACCURACY? Run Growth and Then Click on the Grid, Enter Control-R together and see your calibration numbers and the correlation between Predicted Values which are Above the Given Values.

D:\Feed4Pig\SAF

Open Diets Edit Diet Restrictions Edit Matrix Values Save Diets Run Optimization

Starting Weight, kg: 22
 Starting Age, Days: 64
 Final Weight, kg: 120
 Growth

Mixed

Use Diets on Grid

Run LP

168.1 207.8
 Final Age, Days Total Feed Intake

21.92 2.121
 Cost Per Pig Feed/Gain

Calibration Calibration Data Loaded

Daily Growth				Diets				Formulas			
Diet Name	Live Wt.	Age	Daily Wt. Gz	Age	Weight	Daily Feed	Tot FEED	No. of Pigs	BackFat		
In	31.19	83.00	0.484	19.13	64	22.		At Final Wt	Depth 10th rib		
GI	54.67	107.0	0.978	58.80	65	22.1	.766	.77 of 20 Pigs	Area		
GII	70.48	121.0	1.129	88.32	66	22.1	.774	1.54			
GIII	80.78	130.0	1.144	108.1	67	22.2	.783	2.32	Starts at 145 Days		
TI	99.72	147.0	1.114	149.5	68	22.3	.791	3.11			
TII	120.0	168.1	0.96	207.8	69	22.4	.8	3.91			
					70	22.5	.808	4.72			
					71	22.9	.951	5.67			
	32	77		18	72	23.4	.88	6.55			
	52	101		58	73	24.	.871	7.42			
	67	117		88	74	24.6	.89	8.31			
	76	126		108	75	25.3	.92	9.23			
	94	143		148	76	25.9	.954	10.18			
	120	168		208	77	26.6	.991	11.17			
					78	27.4	1.027	12.2			
Correl.	0.9968	0.9995		1.0000	79	28.1	1.064	13.26			
					80	28.8	1.1	14.36			
At Finishing*					81	29.6	1.136	15.5			
					82	30.4	1.172	16.67			
Live Wt	123.0	118.5			83	31.2	1.208	17.88			
Feed In.	211.6	204.1			84	32.	1.244	19.12			
Cost	22.32	21.52			85	32.9	1.279	20.4			
Feed/gain	2.10	2.11			86	33.7	1.314	21.71			
Back Fat	23.71	19.76			87	34.6	1.349	23.06			
Longissimus	5.349	8.151			88	35.5	1.384	24.44			
Carc. Lean	59.00	61.12			89	36.4	1.419	25.86			
Carc. Yield	66.90	67.03			90	37.3	1.453	27.31			
					91	38.2	1.487	28.8			
					92	39.2	1.521	30.32			
					93	40.1	1.554	31.87			

CALIB VALUES BELOW

CORRELATION VALUES

CLICK ON THE GRID THEN CONTROL-R

Besides daily Weight and Feed Intake, the Program shows Finishing Weights, Intake Cost, etc. On the lower Left. It also shows the number of pigs reaching Final Weight by age and the etc. below. Double clicking on the Weight and Daily columns also has Data.

\\Feed4Pig\SAF

Open Diets Edit Diet Restrictions Edit Matrix Values Save Diets Run Optimization

Weight, kg
22
Age, Days
34 Mixed
Weight, kg
20
Growth
Use Diets on Grid
Run LP
207.8
Total Feed Intake
2.121
Feed/Gain
Calibration Data Loaded

Daily Growth								Diets			Formulas		
Diet Name	Live Wt.	Age	Daily	Age	Weig.	Daily	Total	No. of Pigs	BackFat	Longissimus	Carcass	Carcass	
In	31.19	83.00	1.484	19.13	64	22.		At Final Wt	Depth 10th rib	Area	Lean	Yield	
GI	54.67	107.0	1.978	38.80	65	22.1	.766	7 of 20 Pigs					
GII	70.48	121.0	1.129	38.32	66	22.1	.774						
GIII	80.78	130.0	1.144	108.1	67	22.2	.783	2 Starts at 145 Days					
TI	99.72	147.0	1.114	149.5	68	22.3	.791						
TII	120.0	168.1	0.96	207.8	69	22.4	.8						
					70	22.5	.808						
					71	22.9	.951						
					72	23.4	.88						
					73	24.	.871						
					74	24.6	.89						
					75	25.3	.92						
					76	25.9	.954						
					77	26.6	.991						
					78	27.4	1.027						
					79	28.1	1.064						
					80	28.8	1.1						
					81	29.6	1.136						
					82	30.4	1.172						
					83	31.2	1.208						
					84	32.	1.244						
					85	32.9	1.279						
					86	33.7	1.314						
					87	34.6	1.349						
					88	35.5	1.384						
					89	36.4	1.419						
					90	37.3	1.453						
					91	38.2	1.487						
					92	39.2	1.521						
					93	40.1	1.554						

At Finishing Wt		
	Males	Females
Live Wt	123.0	118.5
Feed In.	211.6	204.1
Cost	22.32	21.52
Feed/gain	2.10	2.11
Back Fat	23.71	19.76
Longissimus	5.349	8.151
Carc. Lean	59.00	61.12
Carc. Yield	66.90	67.03

Of 20 pigs, 1 will probably reach 120 kg on Day 145, One more is likely on day 148 and half will be at or above 120 on the Final Day.

- Click and hold on the blue 2.713 feed intake on day 150 and the “Tool Tip” will show 2.7667 kg intake for males and 2.667 intake for Females.
- Click and hold on the weight, and see the males expected to average 104.8 and females 101.0 kg

Daily Growth						Diets		Formulas		
Age	Daily	Age	Weight	Daily Feed	Tot FEED	No. of Pigs	BackFat	Longissimus	Carcass	Carcass
						At Final Wt of 20 Pigs	Depth 10th rib	Area	Lean	Yield
		143	95.4	2.517	136.93					
		144	96.5	2.543	139.47					
		145	97.6	2.569	141.04	1 At Final Wt				
		146	98.7	2.595	144.64	1 of 20 Pigs				
		147	99.7	2.621	146.26	1				
		148	100.8	2.646	149.91	2				
		149	101.8	2.689	152.2	2				
		150	102.9	2.713	154.91	3				
		151	103.9	2.738	157.65	3				
		152	104.9	2.762	160.41	3				
		153	105.9	2.785	163.2	4				
		154	106.9	2.808	166.01	4				
		155	107.9	2.831	168.84	5				
		156	108.9	2.853	171.69	5				
		157	109.9	2.875	174.56	5				
		158	110.9	2.896	177.46	6				
		159	111.8	2.917	180.38	6				
		160	112.8	2.937	183.32	7				
		161	113.7	2.956	186.28	7				
		162	114.6	2.975	189.26	8				
		163	115.5	2.994	192.25	8				
		164	116.4	3.012	195.26	8				
		165	117.3	3.029	198.29	8				
		166	118.2	3.045	201.34	9				
		167	119.	3.061	204.4	9				
		168	119.9	3.077	207.48	10				
		168.1	120.0	.361	207.8	10				

20.87	6.573	60.59	66.75
21.05	6.609	60.48	66.80
21.22	6.644	60.38	66.84
21.39	6.679	60.27	66.88
21.54	6.711	60.18	66.92
21.72	6.746	60.07	66.96
21.74	6.750	60.06	66.96

Effect of Temperature is in the Program and can evaluate the impact of a short term temperature change or be added at Calibration.

- The temperature is the “Average Daily Temperature” for each week in Celsius for now. If you enter this at calibration, the predictions of temperature change will be more accurate.
- If you save the temperature and keep the window open, save the temp and close the window or save to file (good idea) and close.

Feed2Gain Puerco Pig

Open Diet Data Save Files **Set Temperature** Finishing Report

D:\Feed4Pig\SAF

Temperature during Gro... Close Save Values Save and Close

Enter your Experienced Temperatures for Calibration or Your Expected Temps for Predictions

Age, days	Calib. T, C	Future T, C
64 - 70	20	20
71 - 77	20	20
78 - 84	20	20
85 - 91	20	20
92 - 98	20	20
99 - 105	20	20
106 - 112	20	20
113 - 119	20	20
120 - 126	20	20
127 - 133	20	20
134 - 140	20	20
141 - 147	20	20
148 - 154	20	20
155 - 161	20	20
162 - 168	20	20
169 - 175	20	20
176 - 182	20	20

Starting Weight, kg: 22.00

Starting Age, Days: 64.00

Final Weight, kg: 120.0

Final Age, Days: 219.3

Cost Per Pig: 168.1

Feed

Made Up Example: Raise temperature 3 ° C from 20 to 26 for 3 weeks (days 120 to 140) . That is 68 ° to 79 ° F

- Back three slides, we see the “cool” outcome. Here the age has gone up from 168 to 172 and feed intake up from 208 to 214.5. Heat reduces intake, slowing growth, but we have to feed the animals more days to get the final weight.
- Costs are up from 219.3 per pig to 225.6. Currency is not US.
- Our first 120 kg pig would be at about 149 days.

Starting Weight, kg: 22.00

Starting Age, Days: 64.00

Final Weight, kg: 120.0

Calibration: Calibration Data Loaded

Run LP

Least Cost Formulas

Final Age, Days: 172.2

Total Feed Intake: 214.5

Cost Per Pig: 225.6

Feed/Gain: 2.188

Daily Growth

Diet Name	Live Wt.	Age	Daily Wt. Gain
In	32.85	85.00	0.517
GI	54.67	107.0	0.992
GII	73.14	124.0	1.086
GIII	80.53	132.0	0.924
TI	97.53	149.0	1.0
TII	120.0	172.2	0.97

Temperature during Gro...

Close Save Values Save and Close

Enter your Experienced Temperatures for Calibration or Your Expected Temps for Predictions

Age, days	Calib. T, C	Future T, C
64 - 70	20	20
71 - 77	20	20
78 - 84	20	20
85 - 91	20	20
92 - 98	20	20
99 - 105	20	20
106 - 112	20	20
113 - 119	20	20
120 - 126	20	26
127 - 133	20	26
134 - 140	20	26
141 - 147	20	20
148 - 154	20	20
155 - 161	20	20

Optimization

- Now, with the program focused on your herd's growth with your diets, it can more accurately predict future outcomes.
- The calibration step requires only a current feeding program and accurate costs. It is your costs, your feeds and your pigs that are important. Nutrient content is often hard to get exact but costs tend to be more important. That said, exact is good.
- The program requires having run the Growth step to have a starting point. It will use the final weight from that step.
- The program has a button to add Minimum and Maximum values for each diet, but be sure to use ones you are comfortable with.

The Optimization Window below shows the button to add Min-Max values. The “Run Opt” button is to get the optimization running. The other two highlights are the check boxes that, if unchecked, keep the program from changing these input values. The other will transfer the optimization result to the Daily Growth Diets.

The screenshot shows the 'Diet Optimization' window with the following details:

- Location Name:** D:\Feed4Pig\S
- Target Weight:** 120.0
- No. of Diets:** 6
- Table: Enter Diet Restrictions for Least Cost**

		Optimize	Current	Minimum	Maximum
Diet 1	Feed Wt.	<input checked="" type="checkbox"/>	19.13		
Diet 1	Net Energy	<input checked="" type="checkbox"/>	2549		
Diet 1	Protein	<input checked="" type="checkbox"/>	18.79		
Diet 2	Feed Wt.	<input checked="" type="checkbox"/>	39.67		
Diet 2	Net Energy	<input checked="" type="checkbox"/>	2549		
Diet 2	Protein	<input checked="" type="checkbox"/>	18.79		
Diet 3	Feed Wt.	<input checked="" type="checkbox"/>	29.52		
Diet 3	Net Energy	<input checked="" type="checkbox"/>	2553		
Diet 3	Protein	<input checked="" type="checkbox"/>	18.84		
Diet 4	Feed Wt.	<input checked="" type="checkbox"/>	19.82		
Diet 4	Net Energy	<input checked="" type="checkbox"/>	2560		
Diet 4	Protein	<input checked="" type="checkbox"/>	18.85		
Diet 5	Feed Wt.	<input checked="" type="checkbox"/>	41.37		

Buttons circled in the image:

- Program Add Min Max to Current
- Run Opt
- Transfer Optimum to Current

Other visible buttons: Open Existing Opt File, Save Opt File, View Optimization, Set Feed to Gain, Set Carcass, Set Limits on Age.

Footer text: Uncheck the Optimize Box to Fix at the Current Value

If the program is set to “Use Diets on Grid” the Energy and Protein will be unchecked, automatically. This can be useful to see how much to feed.

- 1) The Optimization Results look like this. The Cost/pig is top left. In my made up case, the cost was lowered a lot. Feed2Gain and Age did not change.
- 2) Feed Restrictions, Ingredient Formulas and Diets are shown on the other Tabs.
- 3) Lastly, look at the Optimized Diet Values. The Optimized are below the Initial in all the diets shown. In this made up case, Energy, Protein (and Lysine) and Feed Weights went to the minimum allowed. Like a ball, the minimization usually winds up at at least one min or max value, so these should be carefully considered.

Open Diet Data Save Files Set Temperature Finishing Report

D:\Feed4Pig\SAF

Starting Weight, kg
22.00

Starting Age, Days
64.00 Mixed

Diet Optimization

Location Name D:\Feed4Pig\SAF

No. of Diets
6

Program Add Min Max to Current

Open Existing Opt File

Save Opt File

Optimization Report

Copy to Clipboard Target Wt. 120

Optimum Nutrient Restrict. Ingredient Restrict. Diet Formulation

	COST/Pig	Feed/Gain	Age	Percent Saved				
Optimized	202.90	2.121	168.1	7.437				4332
Initial	219.20	2.121	168.1					4421
Optimized	1.6908		0	16302310				0.3903
Initial	1.8267		0					0.3825
	Optimized	Initial	Maximum	Minimum	LP Restrict.	FEED COST	Single Change Opt Point	Single Change Opt Cost
Diet 1 ENERGY	2498	2549	2600	2498	2498	1093.2	2498	219.20
Diet 1 Protein, %	22.15	18.79	19.73	17.85	17.90		17.95	219.20
Diet 2 Feed Wt.	15.37	19.13	22.96	15.30			15.37	219.20
Diet 2 ENERGY	2498	2549	2600	2498	2498	1093.2	2498	219.20
Diet 2 Protein, %	22.15	18.79	19.73	17.85	17.90		17.87	219.20
Diet 3 Feed Wt.	31.79	39.67	47.60	31.74			31.79	219.20
Diet 3 ENERGY	2502	2553	2604	2502	2502	1062.6	2503	219.20
Diet 3 Protein, %	21.52	18.84	19.78	17.90	17.90		17.92	219.20
Diet 4 Feed Wt.	23.63	29.52	35.42	23.62			23.63	219.20

Under Construction

May not be ready for Prime Time.

- Keep in mind that the program is just getting to the point of being useful. It may fail. We would love to know when and fix it. Temperature and weight conversions are easy for a computer and will be added.
- The USER MUST be comfortable about any change made in the actual feeding program. If the program.
- Look at the outcomes, challenge the extremes of your comfort and then move back to find the best trade-off on cost and comfort.

Let us know what you think.

- Should you have concerns, share them with us.
- If you have good data that can help, let us know.
- If you have ideas of what you would like to see or better ways to present what is here, let us know.
- If you buy feed, keep in mind that the feed supplier is doing his best for you and all their customers. So, what they supply is designed for all level of users without the customized consideration of your Herd's experience.
- This program is designed to help you look at the interaction of your herd and your feeds. More specifically than for all other growers. This is just a light into the issue of what might be best for you.
- Frank Ivey, fjivey@feed2gain.com