PROTEIN COMPLEMENTATION DEMONSTRATION
7 November 1994, rvsd 6 Nov. '95, 19 Sept '97, 8 Nov 04, 2 Nov 07, 7 Nov 08

BROWN RICE DEMO:
(Start as soon as class begins so that it is done at end of class.)

2 cups boiling water
   (have boiling before class starts)
1/2 tsp salt
1 cup brown rice
melted butter
soy sauce

1 qt stainless steel pot with tight fitting lid
hot plate, set on 8, preheated
(Turn to high for first 5 minutes to bring back to boiling)
timer

enough spoons for all students to taste
1 quart measuring cup to hold spoon
1 L beaker with soapy water to receive used spoons
two bowls to taste: one for plain rice, one for buttered rice

1 cup rice in ziplock bags to be sold for 50 cents each (at least 15 bags)

Lappe: Diet for Small Planet

Show slides on eight amino acid “star” showing composition
Net Protein Utilization chart
Complementation of beans and wheat
Protein Complementation Chart

NPU: beans 37% (deficient in sulfur containing, strong in lysine)
whole wheat: 58% (strong in sulfur containing, weak in lysine)
 together (about): 75% (estimate)

POP CORN SEASONING:

2 gallons popped corn in grocery bag
2 Tbl melted butter (30 mL)
2 Tbl popcorn seasoning (30 mL)

pop 400 mL of kernels in 2 Tbl coconut oil
drizzle with shaking to distribute
sprinkle with shaking

PREPARE POPCORN SEASONING IN FRONT OF CLASS:

1 cup brewer's yeast
1/2 cup kelp
1/4 cup salt
blender
extension cord
pint jar with lid
table spoon

Food analysis of yeast versus several foods:

<table>
<thead>
<tr>
<th>food</th>
<th>% protein</th>
<th>% fat</th>
<th>% carbo</th>
<th>mg Ca</th>
<th>mg phosphorus</th>
<th>mg potassium</th>
<th>mg thiamine</th>
<th>mg riboflavin</th>
<th>mg niacin</th>
</tr>
</thead>
<tbody>
<tr>
<td>yeast</td>
<td>37.0</td>
<td>1.0</td>
<td>38.4</td>
<td>210</td>
<td>1753</td>
<td>1894</td>
<td>15.6</td>
<td>4.28</td>
<td>37.9</td>
</tr>
<tr>
<td>beef cooked</td>
<td>26.0</td>
<td>23.9</td>
<td>0.0</td>
<td>11</td>
<td>140</td>
<td>370</td>
<td>0.05</td>
<td>0.20</td>
<td>4.0</td>
</tr>
<tr>
<td>WW bread</td>
<td>9.1</td>
<td>3.1</td>
<td>58.7</td>
<td>100</td>
<td>302</td>
<td>305</td>
<td>0.29</td>
<td>0.12</td>
<td>3.3</td>
</tr>
<tr>
<td>red beans ckd</td>
<td>7.8</td>
<td>0.6</td>
<td>21.2</td>
<td>144</td>
<td>148</td>
<td>416</td>
<td>0.14</td>
<td>0.07</td>
<td>0.7</td>
</tr>
<tr>
<td>Brown Rice</td>
<td>7.5</td>
<td>1.9</td>
<td>77.4</td>
<td>32</td>
<td>221</td>
<td>214</td>
<td>0.34</td>
<td>0.05</td>
<td>4.7</td>
</tr>
<tr>
<td>White Rice</td>
<td>6.7</td>
<td>0.4</td>
<td>80.4</td>
<td>24</td>
<td>94</td>
<td>92</td>
<td>0.07</td>
<td>0.03</td>
<td>1.6</td>
</tr>
<tr>
<td>Wh Rice Enrchd</td>
<td>6.7</td>
<td>0.4</td>
<td>80.4</td>
<td>24</td>
<td>94</td>
<td>92</td>
<td>0.44</td>
<td>~1.2</td>
<td>~16</td>
</tr>
</tbody>
</table>