

# PROTEIN COMPLEMENTATION DEMONSTRATION

7 November 1994, rvsd 6 Nov. '95, 19 Sept '97, 8 Nov 04, 2 Nov 07, 7Nov08

## 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 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)
1/2 tsp salt	timer
1 cup brown rice	enough spoons for all students to taste
melted butter	1 quart measuring cup to hold spoon
soy sauce	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	pop 400 mL of kernels in 2 Tbl coconut oil
2 Tbl melted butter (30 mL)	drizzle with shaking to distribute
2 Tbl popcorn seasoning (30 mL)	sprinkle with shaking

## PREPARE POPCORN SEASONING IN FRONT OF CLASS:

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

## Food analysis of yeast versus several foods:

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