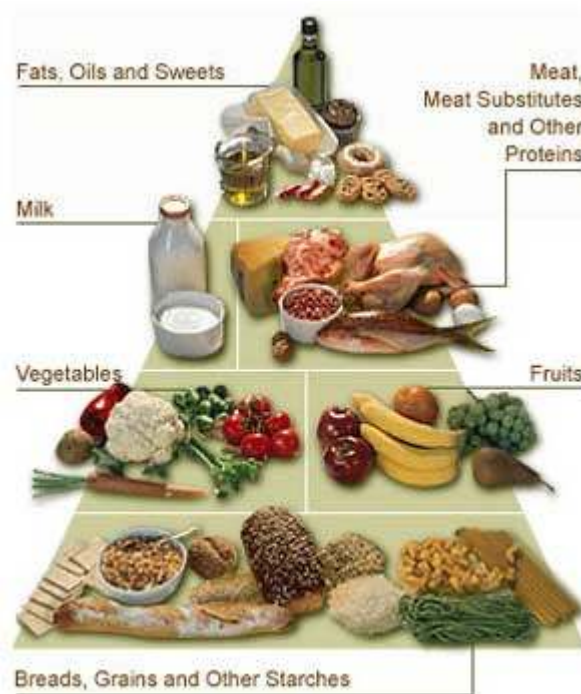
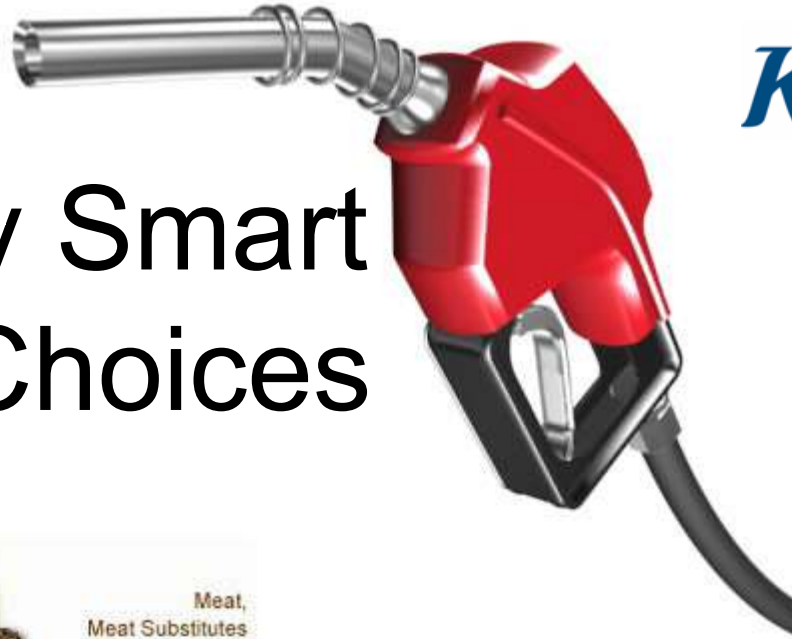




Energy Smart Food Choices

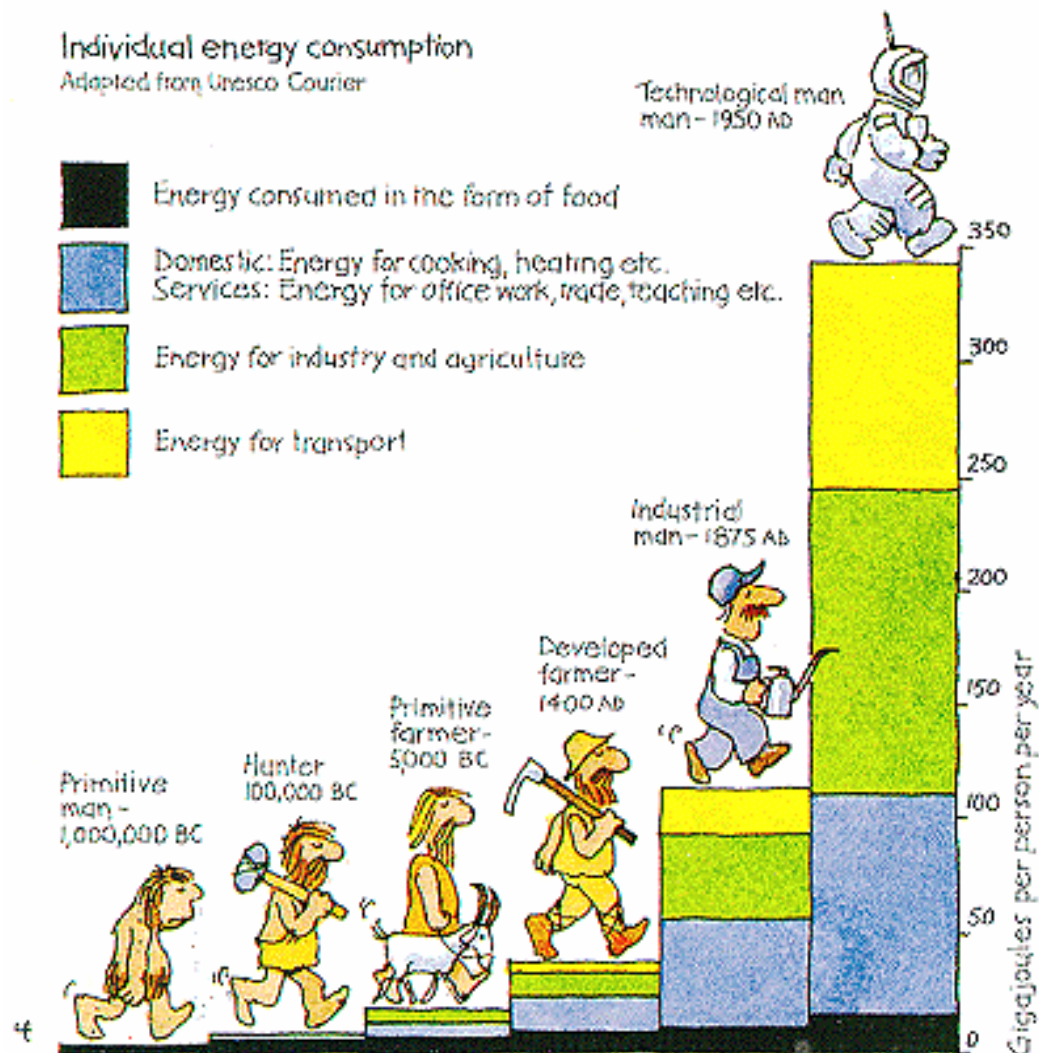


Michael Bomford, PhD
Kentucky State University

Community Research Service

Individual energy consumption

Adapted from Unesco Courier

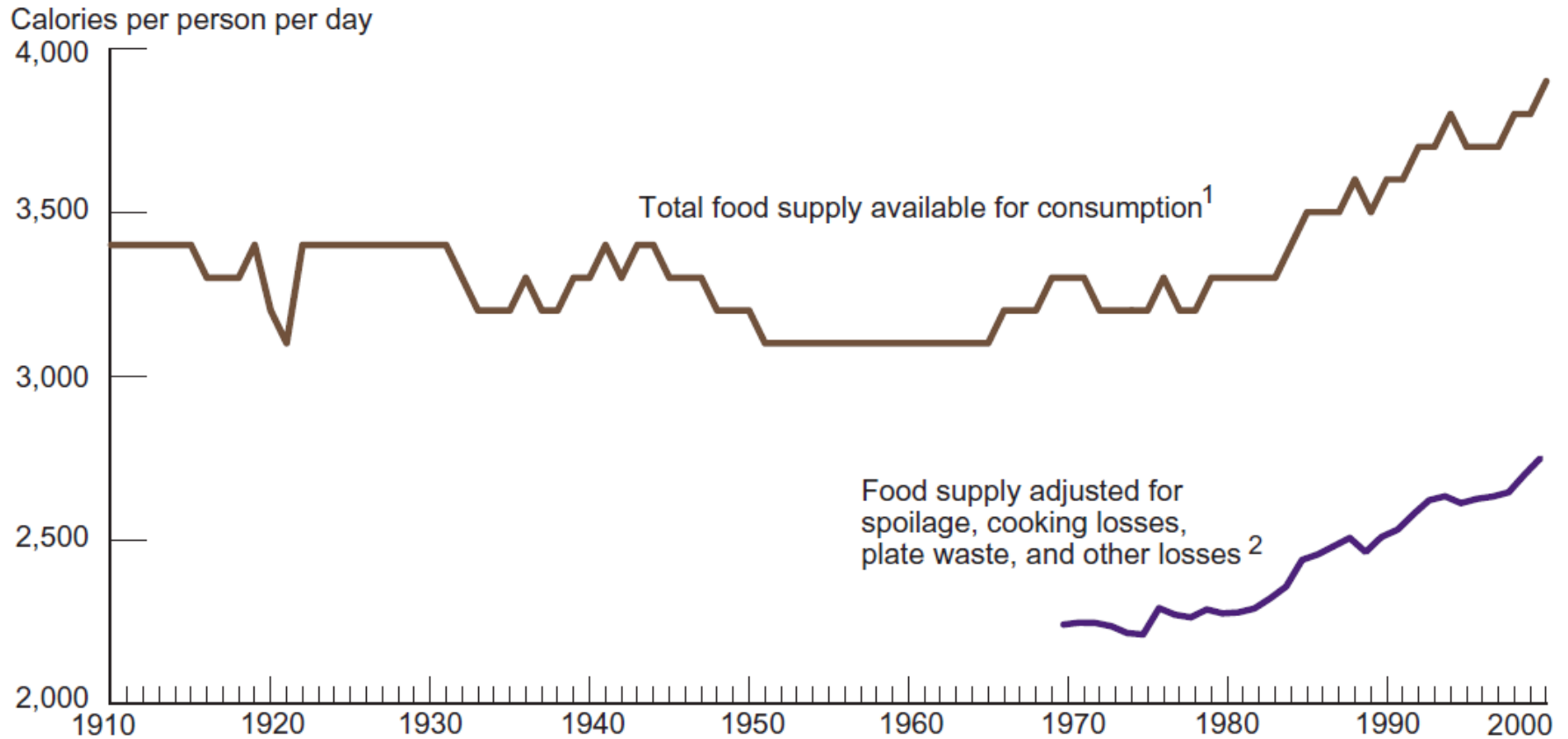


Today **28%** of the world's population consumes **77%** of the world's energy production.

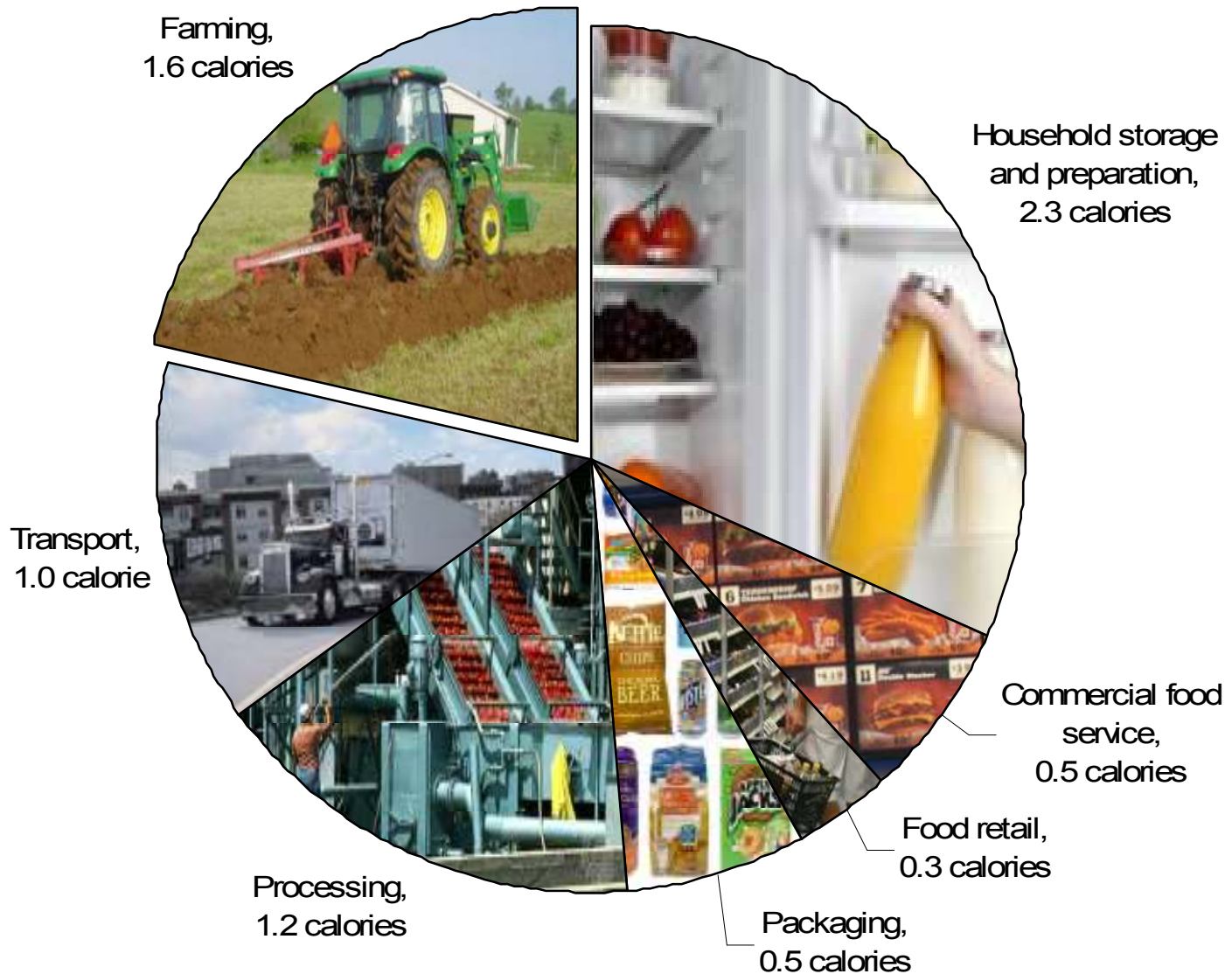
Or $\frac{3}{4}$ of the world's population uses less than $\frac{1}{4}$ of the energy produced



Calories per person per day

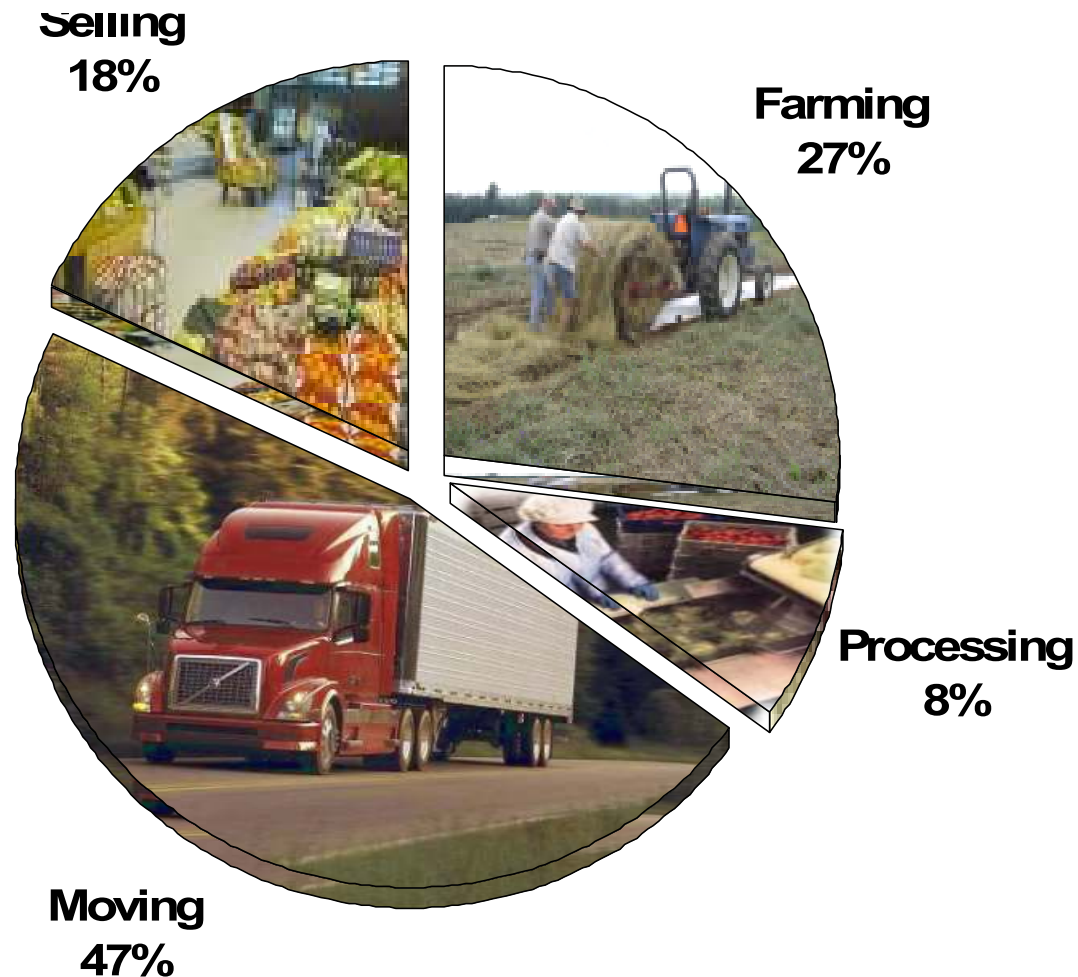


US Food System: 7.3 Calories Expended for Each Calorie of Food Energy

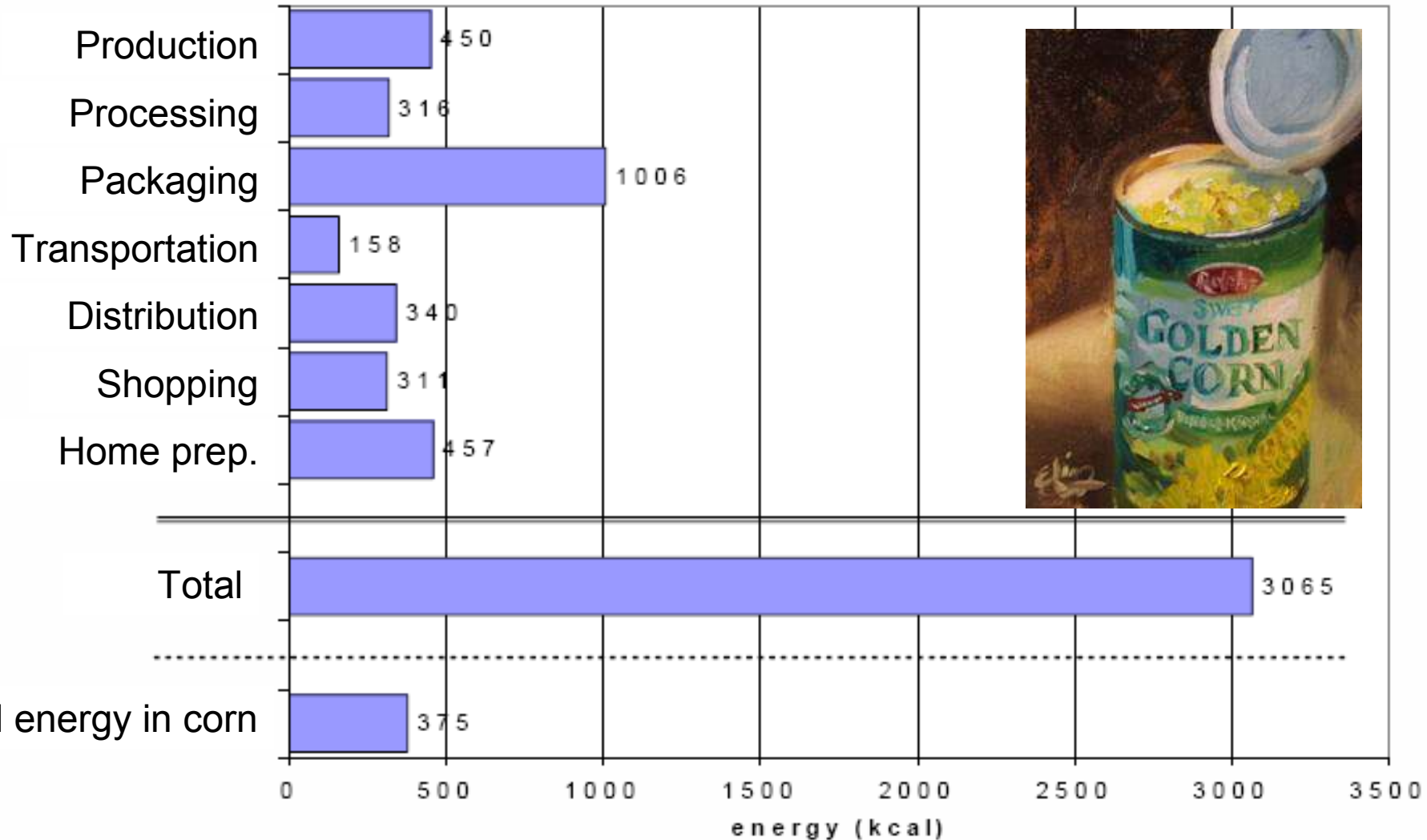


Energy in Food (UK)

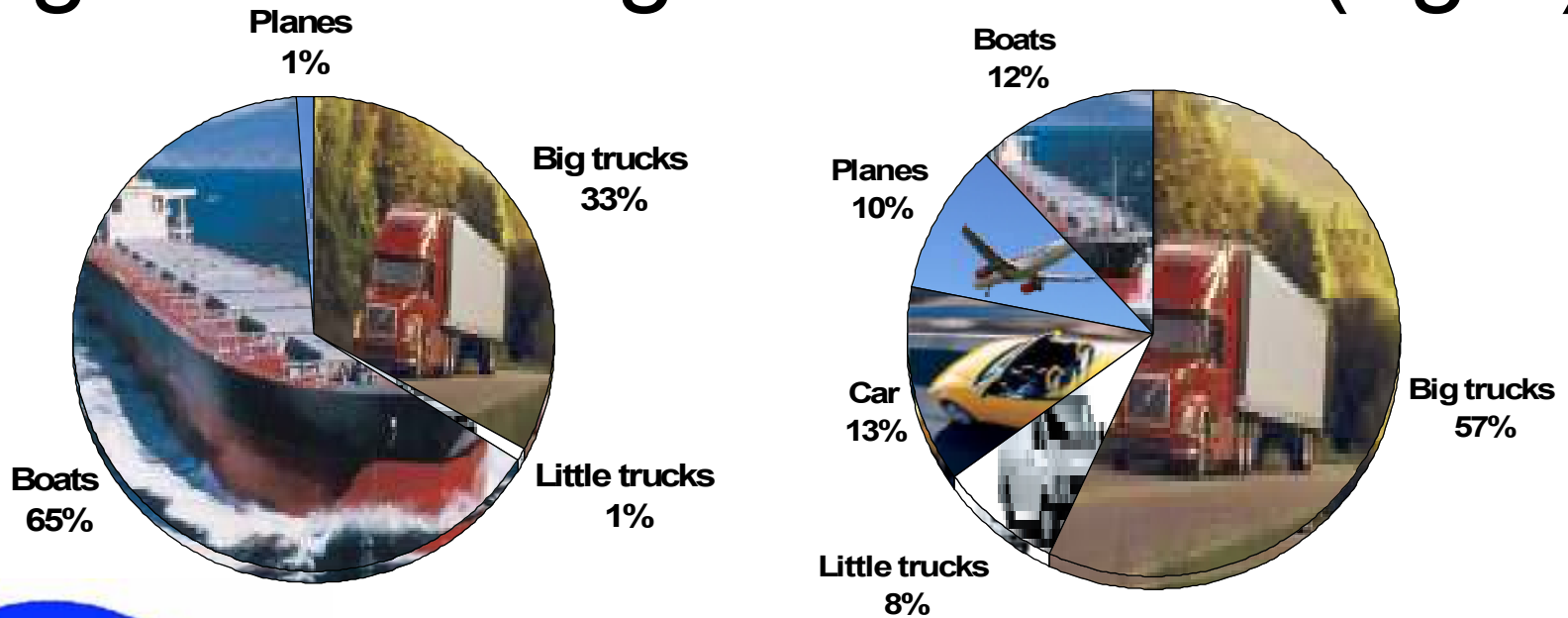
8% of total energy consumption



Energy inputs for a 455 g can of sweet corn



Weight and distance traveled (left) vs. greenhouse gas emissions (right)



The “food mile” is a misleading concept:

How food travels has more impact on energy use and greenhouse gas emissions than how far it travels.



Hamburger embodied energy

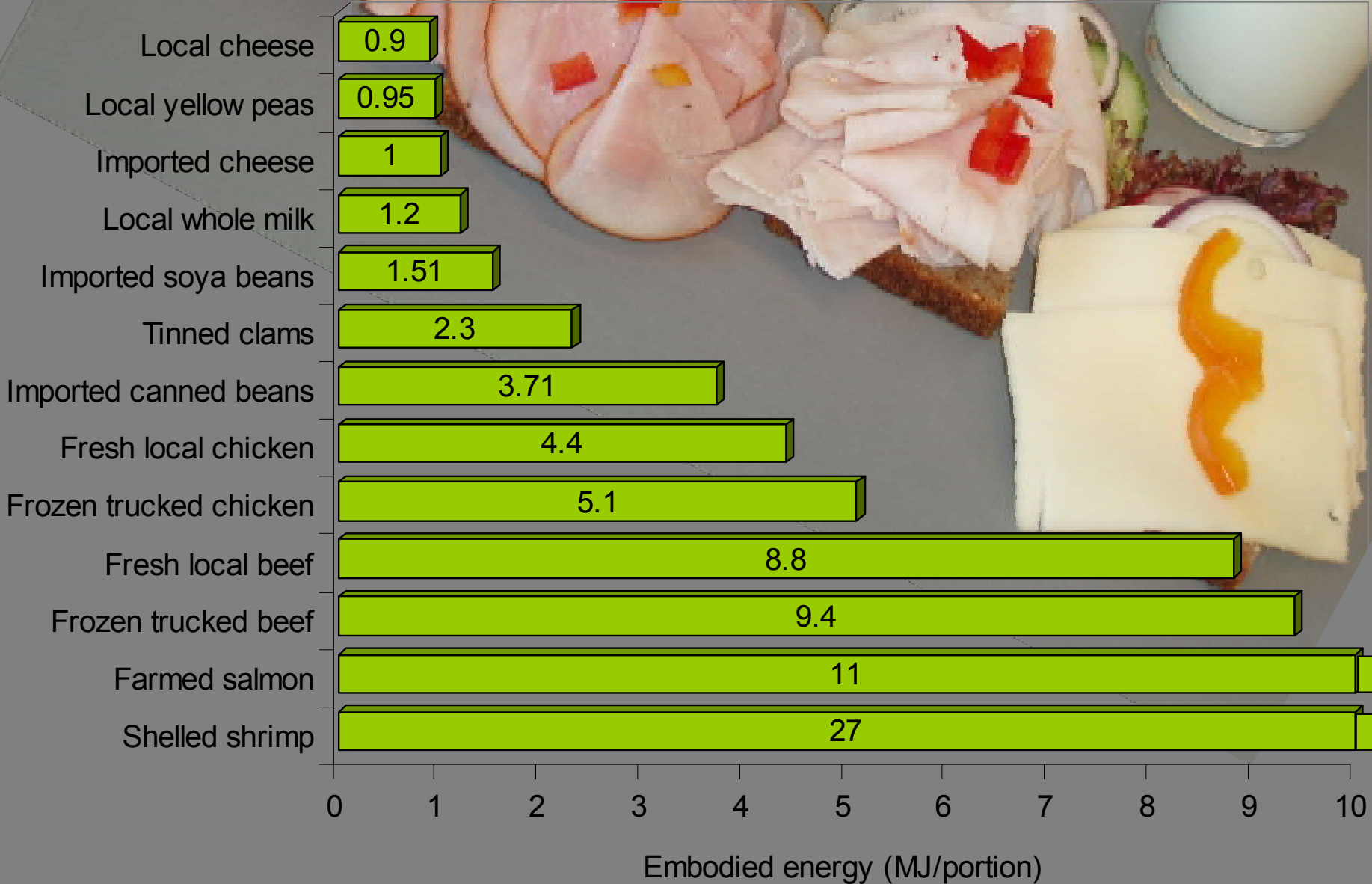
	E (MJ)	
Bun	1-3	Grow/dry: 8-15% Mill/bake: 45-50% Store/transport: 40-45%
Meat	5-10	Animal feed: 50-60% Butcher/freeze: 15% Store/transport: 15-30% Fry: 10-15%
Lettuce	1-4	Growing: 40-98% Truck/store: 2-60%
Cheese	0.5-0.9	Animal feed: 40-50% Dairy process: 30-35% Store/transport: 25%
Pickle & onion	0.1-0.2	Growing: 15% Processing: 30-60% Store/transport: 15-30%

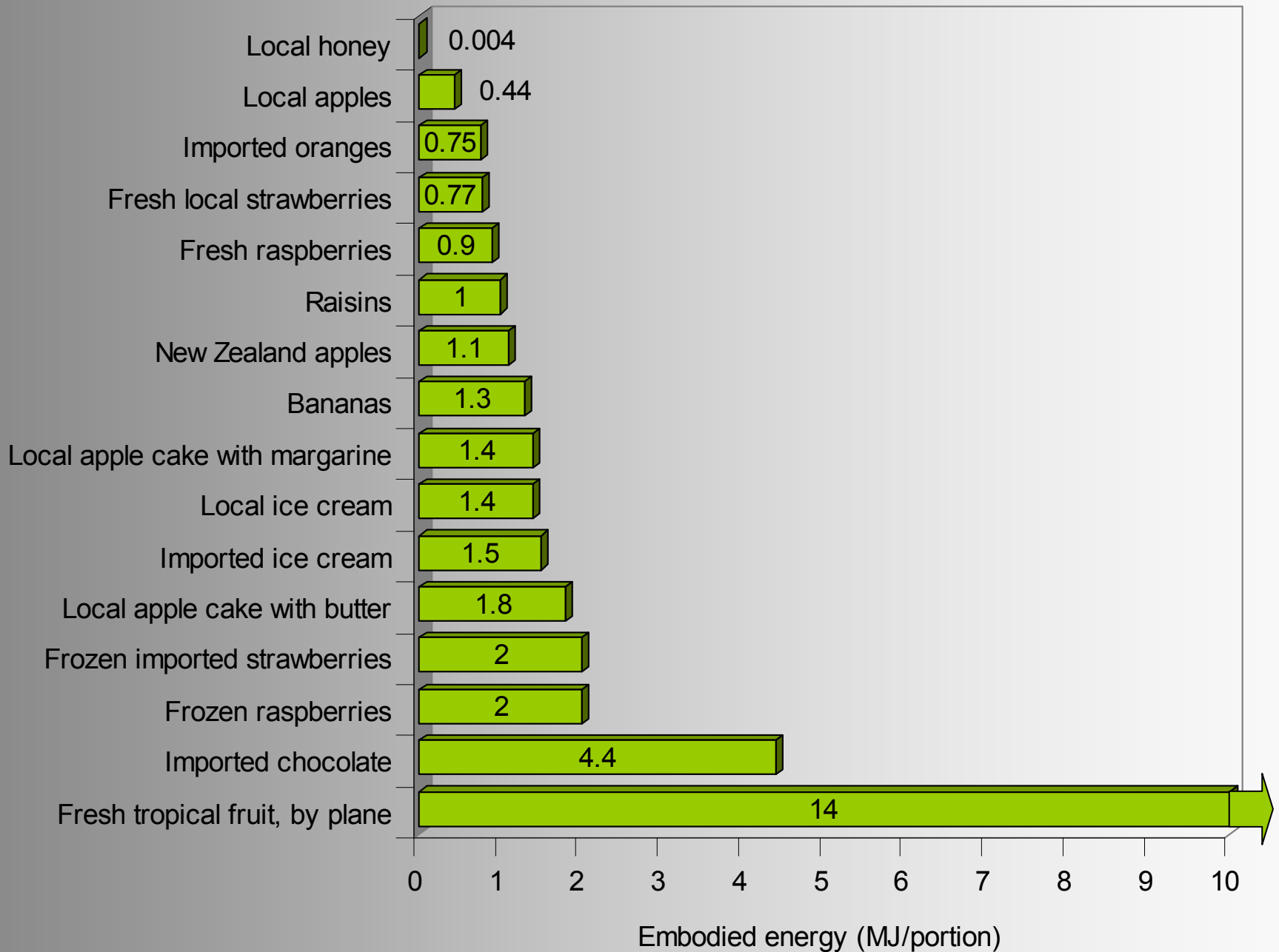
High energy burger (20 MJ)

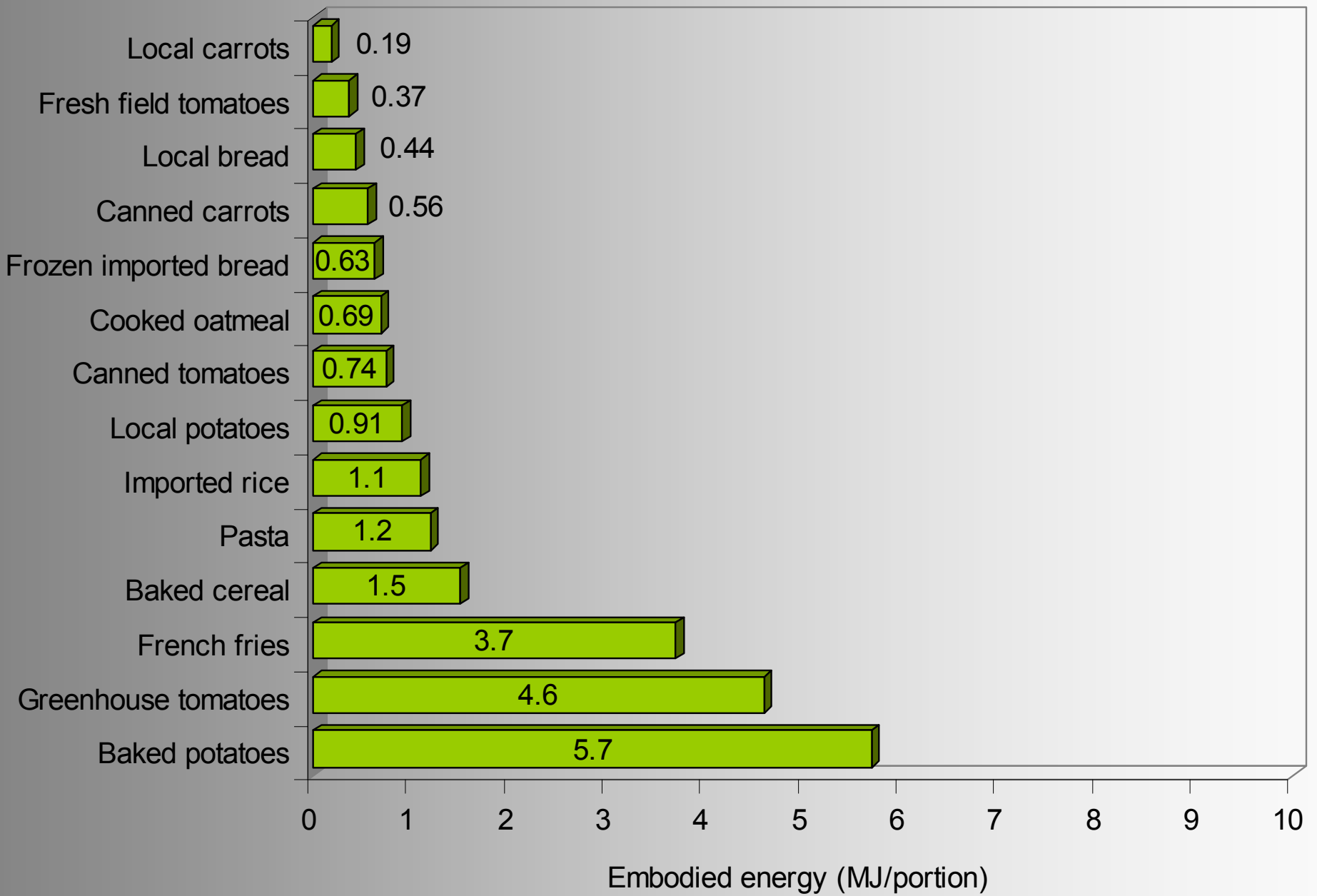


359 Calories
(kilocalories) in a
cheeseburger with
vegetables (1.5
MJ)

Low energy burger (7 MJ)







Two Dinner Menus

(Energy in and out, in MJ)

Item	In	Out
• Beef	9.4	0.80
• Rice	1.1	0.68
• Tomato	4.6	0.06
• Wine	4.2	0.98
Meal	19	2.5

Item	In	Out
• Chicken	4.37	0.81
• Potato	0.91	0.61
• Carrot	0.50	0.21
• Water	0.00	0.00
• Oil	0.30	0.74
Meal	6.1	2.4



Energy Smart Food Choices

- Less meat and seafood
 - Choose poultry and grass-fed animals
- More fruit and vegetables, in season
 - Avoid greenhouse-grown produce
- More local and organic foods
 - Avoid foods flown in
 - Avoid frequent car trips to grocery store
- Whole foods, not processed
- Less refrigeration
- More microwave and stove top; less baking