

U.S. Food System Flow

ENVS 662-660

Green Design and the City

Richard W Berman

Industrial Agriculture Today



Consumer consumption behaviors

Distribution activities

Agricultural production methods

Framework for Analysis

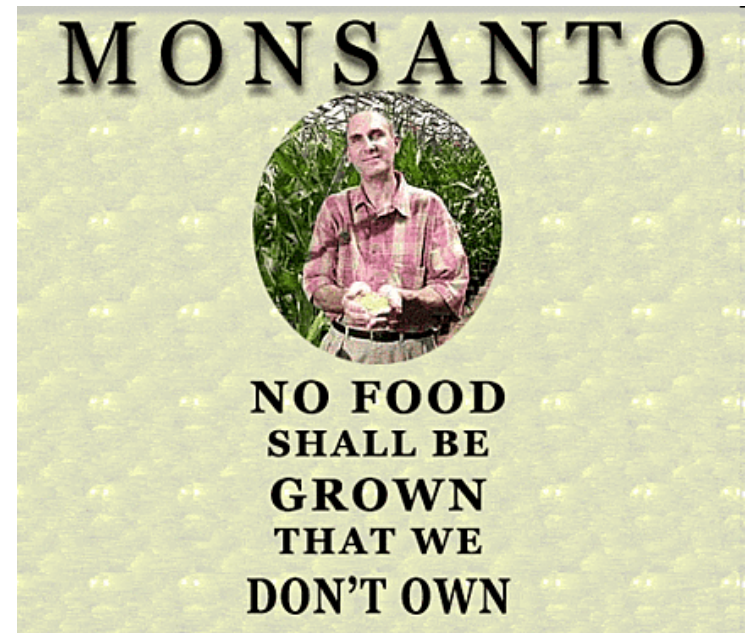
Five LCA Stages

- 1) Origins of Resources (seeds)
- 2) Agricultural Production
- 3) Processing, Packaging and Distribution
- 4) Consumption Patterns
- 5) Disposal



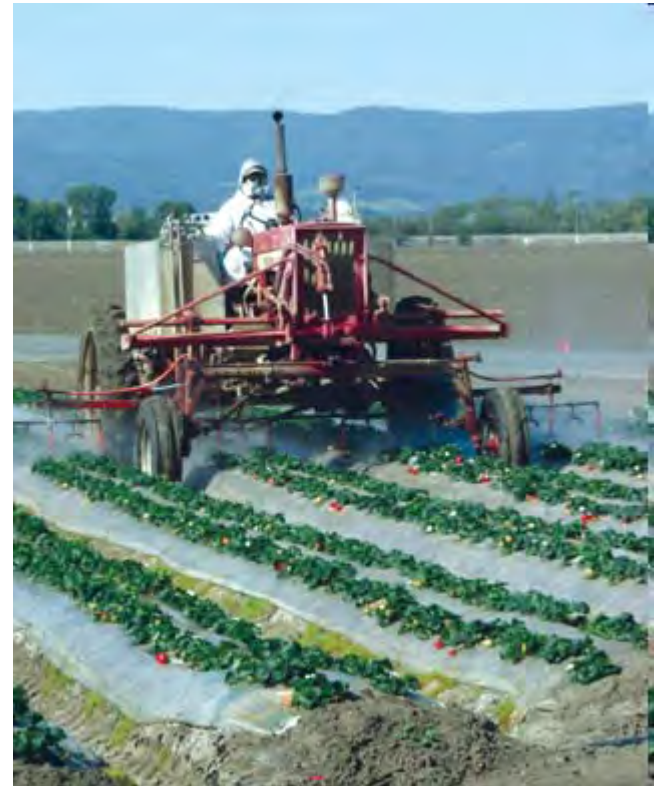
Origins of Resources (seeds)

- Patent-like controls of plant genetic resources
 - ▣ 1930 Plant Patent Act, 1970 Plant Variety Protection Act, 1985 Utility Patents
- Consolidation
 - ▣ seed industry oligopolies
- Genetic uniformity



Agricultural Production

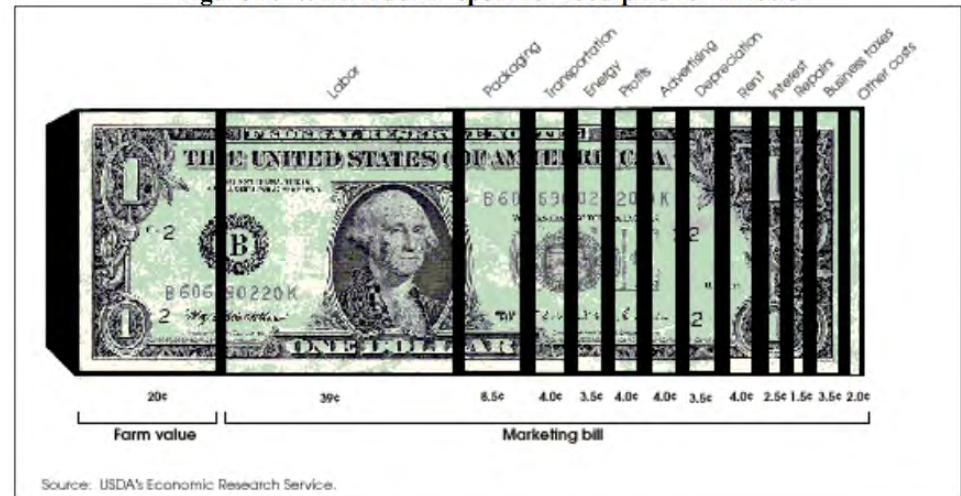
- ▣ Soil erosion
- ▣ Water pollution
- ▣ Pesticides
- ▣ Air quality and greenhouse gases



Processing/Packaging/Distribution

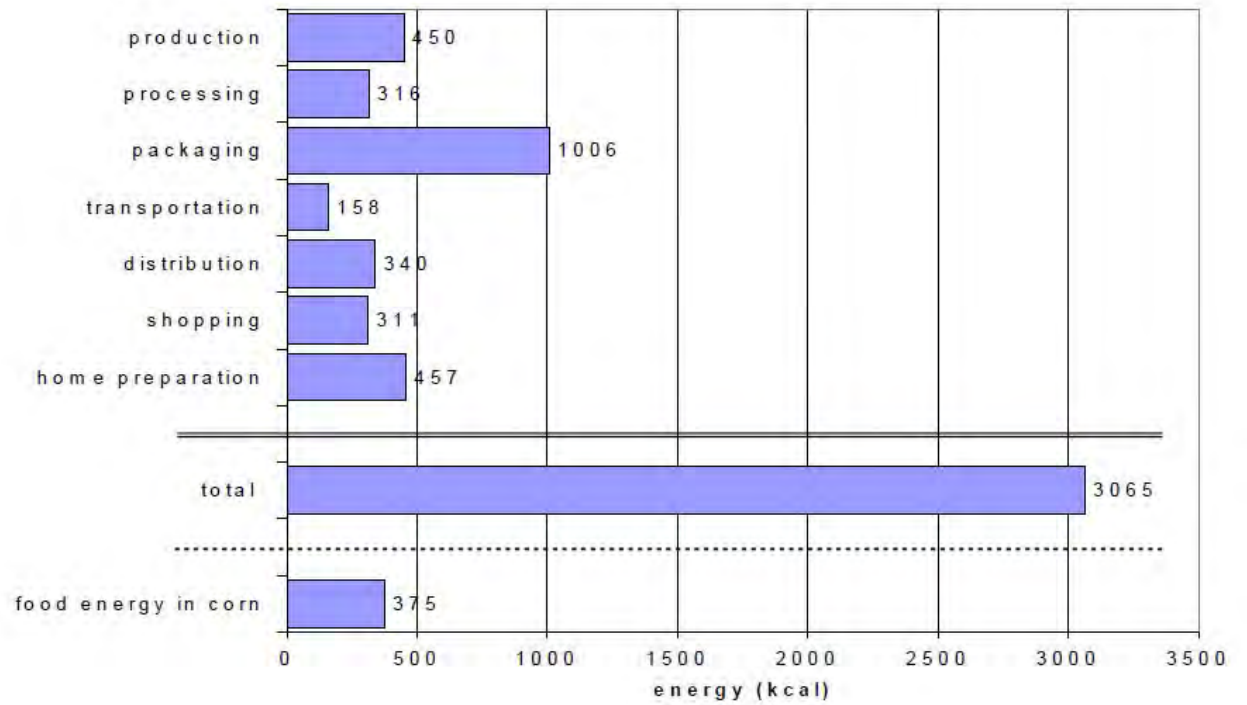
- Marketing costs
- Consolidation and concentration
 - “Hour Glass” structure

Figure 1: What a dollar spent for food paid for in 1998



Cont.

□ Energy Costs



Consumption Patterns

- Vegetarian Advantages
 - “...Providing a 3600 kcal diet with 100kcal from animal products requires about 35,000 kcal of fossil energy whereas a 3600 kcal vegetarian diet (with more than sufficient levels of protein) takes about 18,000 kcal of fossil energy- almost half that of the non-vegetarian diet. A lacto-ovo vegetarian diet (including milk and eggs) require around 25,000 kcal of fossil energy.”



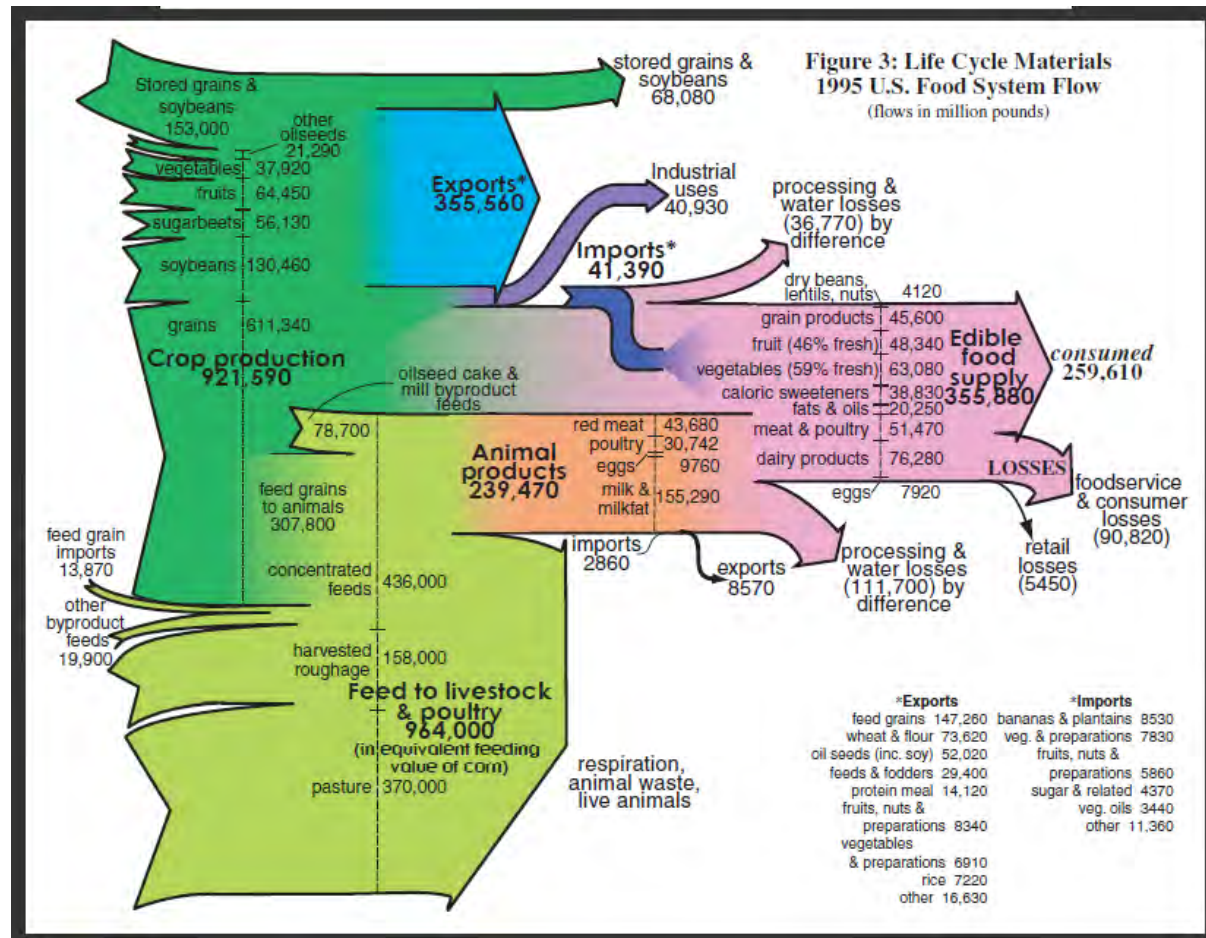
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Disposal

- Composting
- Recovery
- Recycling



Conclusions



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Works Cited

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