



Local vs. Organic Food

Two Green Movements in Response to
Conventional Agriculture





Sustainable Agriculture: 3 Aspects

- **Environmental Stewardship**
 - **Economically Viable**
 - **Socially Equitable**

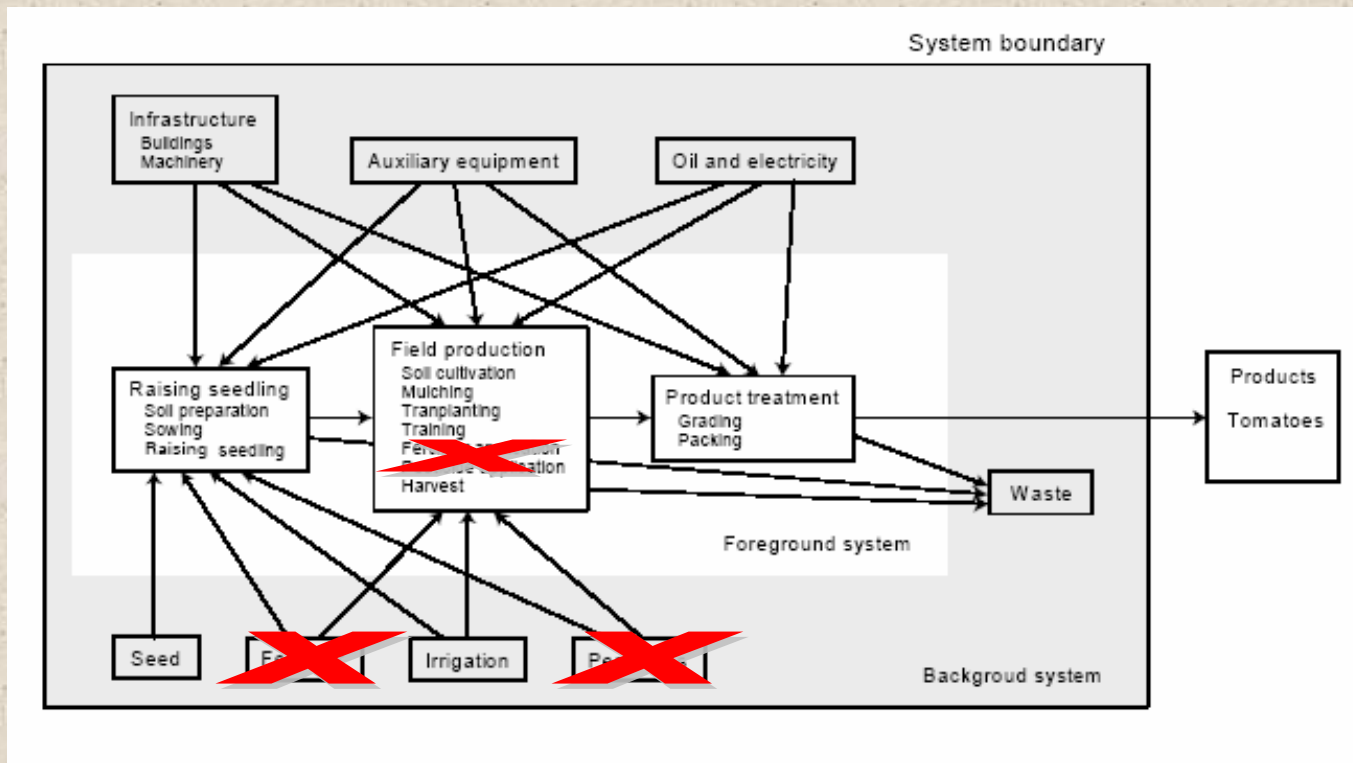


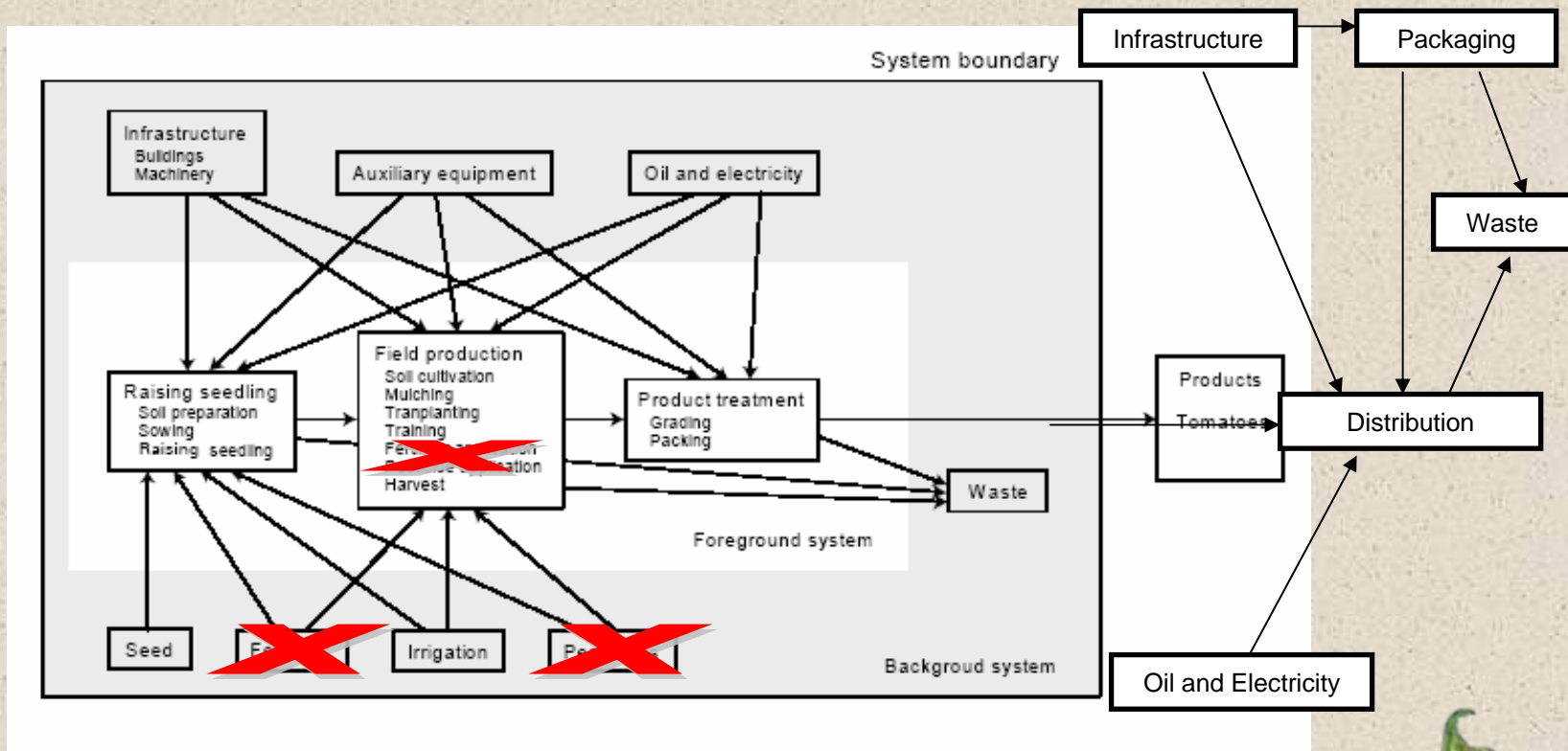


Organic Agriculture

- Heavily Regulated
- No Synthetic Chemicals
- Capital and Energy Intensive
- Expensive Produce
- Increasingly Industrial









Local Agriculture

- No Regulation
- Pragmatic
- Local Farms & Community Gardens
- Direct Farmer-Consumer Relationship
- Time Intensive for Consumer





Things You Would Rather Not Know

- Organic Chicken and Eggs use 30% and 15% more energy than Conventional
- If Dairy Calves were excluded from beef consumption, energy inputs would increase 50%
- Nicotine is a natural pesticide—depending, it's considered organic
- a study conducted by "a private organic food company found low levels of agrochemical residues in ~21% of the samples" (Rigby et al, 2001)
- FAS estimates that imports accounted for 12-18 percent of the \$8.6 billion in U.S. organic retail sales in 2002
- the EPA's pesticide regulation program applies only to synthetic pesticides
- Majority of fecal contamination of fresh, minimally processed food is from small scale growers

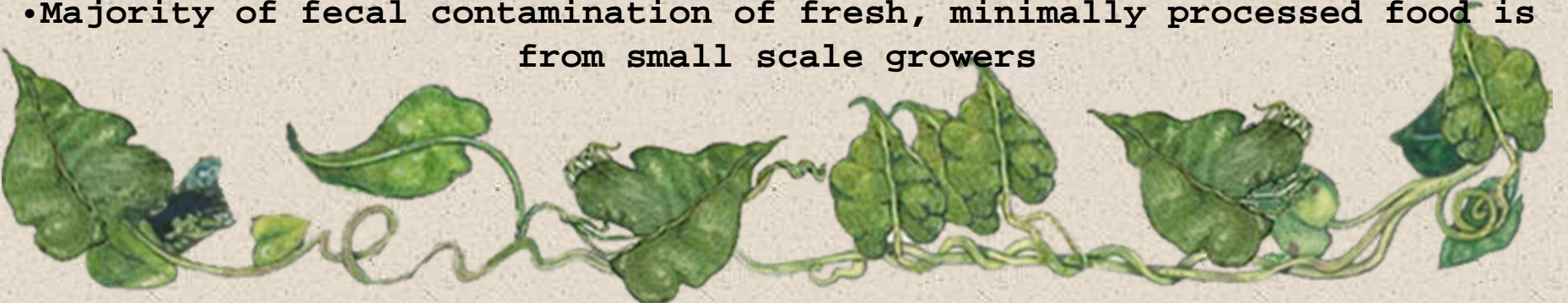




Chart You Would Rather Not See

Table 4 The health risks of some organic pesticides

Substance	Adverse effects	Reference
Rotenone	<ul style="list-style-type: none"> • Causes death in fish. • Induces Parkinson's disease. • Inhibits the mitochondrial electron transport chain. • Induces hepatocyte apoptosis. 	MacKenzie, 1993 Betarbet et al., 2000 Bashan et al., 1993 Isenberg and Klaunig, 2000
<i>Bacillus thuringiensis</i> (Bt)	<ul style="list-style-type: none"> • Remains persistent in soil and plant leaves. • Produces <i>Bacillus cereus</i>-like cytolytic toxins. • Causes cutaneous inflammatory lesions in immunosuppressed mice after subcutaneous injection.^a • Causes lung inflammation, internal bleeding and death in immunocompetent mice after administration by the pulmonary route.^a • Infects wounds from traumatized (and probably immunosuppressed) human patients. 	Smith and Barry, 1998 Tayabali and Seligy, 2000 Hernandez et al., 1998 Hernandez et al., 1999 Hernandez et al., 1998; Damgaard et al., 1997
Natural pyrethrins ^b	<ul style="list-style-type: none"> • Has been implicated in a gastroenteritis outbreak, along with <i>Bacillus cereus</i> and Norwalk virus. • Although some are equally toxic against houseflies (the expected effect), the toxicity to mammals can be more than 40-fold higher for certain pyrethrins than for the respective pyrethroids. • Most pyrethrins are less effective than the respective pyrethroids and have to be used at higher doses. • Several pyrethrins and pyrethroids are equally neurotoxic in rodents. • Residues of both types have been detected in food, but in acceptable amounts. 	Jackson et al., 1995 Aitio, 2002 Trewavas, 2001 Dorman, 1991 Nakamura et al., 1993



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