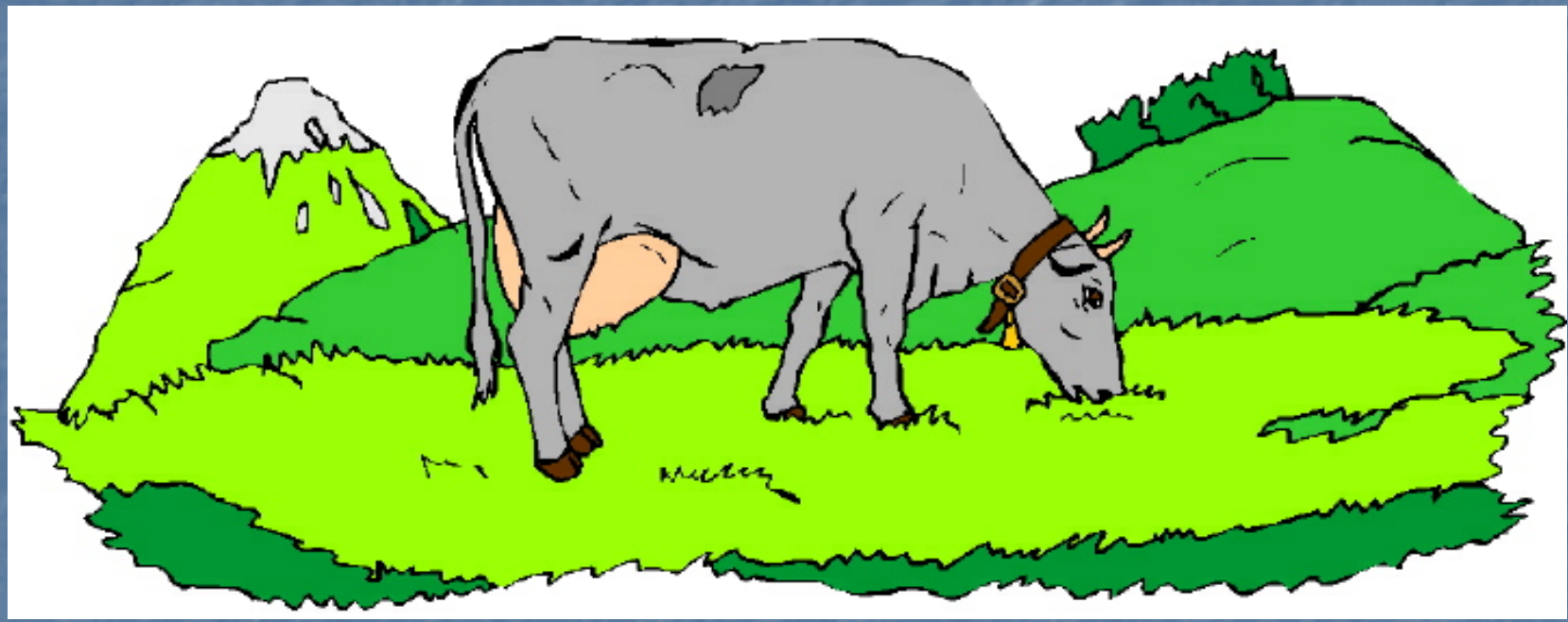
# Pasture, Forage & Sustainable Organic Production



George Kuepper

National Center for Appropriate Technology



# ATTRA

**P.O. Box 3838**
**Butte, MT**
**59701**

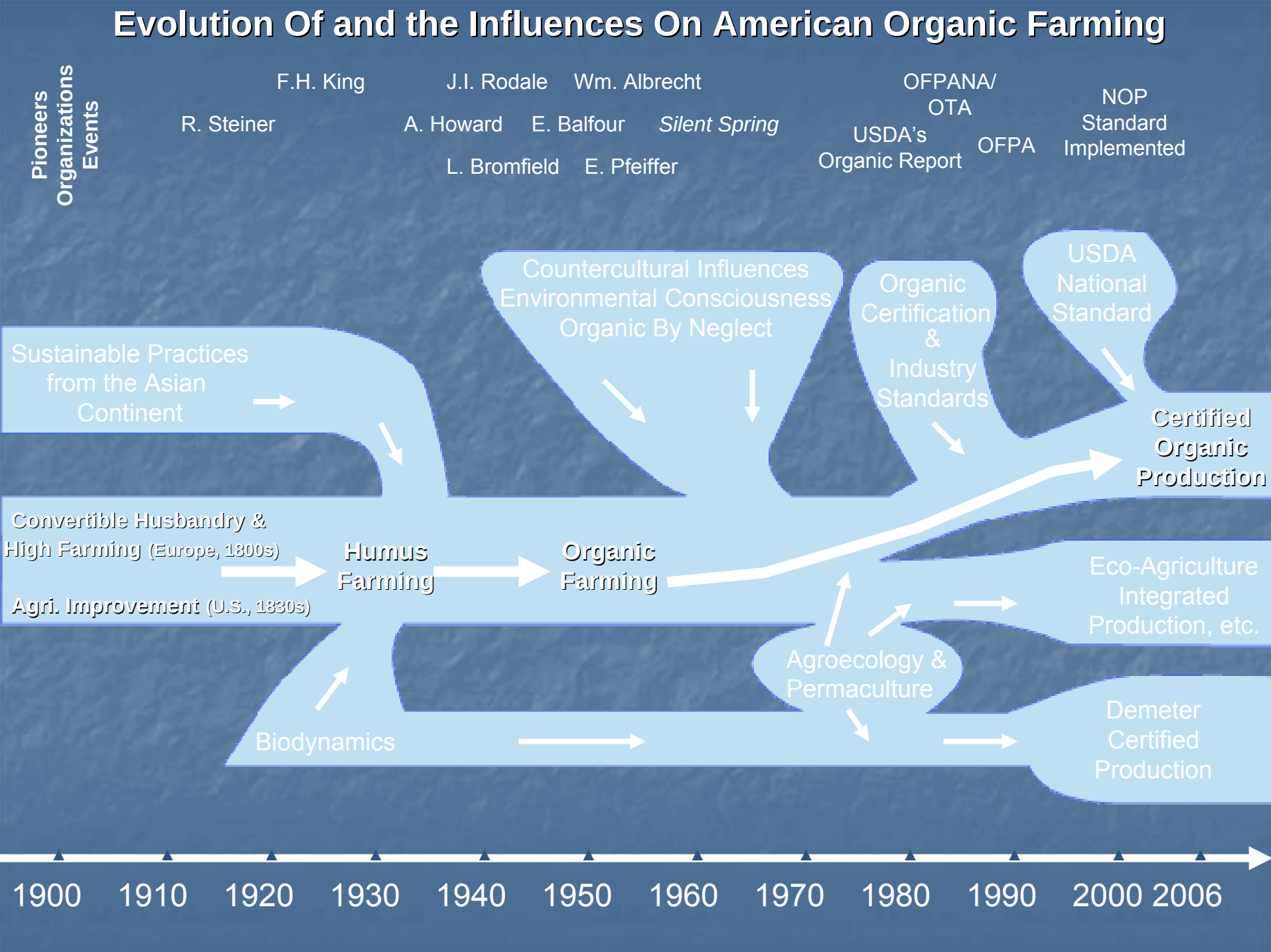
**1-800-346-9140**

**www.attra.ncat.org**



**ATTRA - National Sustainable Agriculture Information Service is created and managed by the National Center for Appropriate Technology (NCAT) and is funded under a grant from the United States Department of Agriculture's Rural Business-Cooperative Service. It provides information and other technical assistance to farmers, ranchers, Extension agents, educators, and others involved in sustainable agriculture in the United States.**

# Evolution Of and the Influences On American Organic Farming



# Washington University Organic Farming Studies *

- **Funding: National Science Foundation**
- **Timeframe: 1974–1978**
- **States in study: Iowa, Illinois, Southern Minnesota, Northern Missouri, Eastern Nebraska**
- **Enterprises: Agronomic crops**

* Studies summarized in Lockeretz, Wm., et al., 1981. Organic Farming in the Corn Belt. Science, Vol. 211. February 6. p. 540–547.

# Washington University Organic Farming Studies:
## –Economic Results–

- **Commercial Organic Farms producing agronomic crops and livestock were a reality**
- **Net income per acre on comparable organic and conventional farms were roughly equal based on conventional pricing***

* Comparable findings in the 1990s in SW Minnesota per: Mahoney, Paul R., et al. 2004. Profitability of organic cropping systems in southwestern Minnesota. Renewable Agriculture and Food Systems, Vol. 19, No. 1. March. p. 35–46.

# Environmental Benefits of Organic Farming

- Reduced energy consumption[1]
- Reduced erosion[1]
- Higher carbon sequestration[1,2]
- No depletion of fertility[1,3]
- Reduced nutrient leaching[2]


[1] Lockeretz, Wm., et al., 1981. Organic Farming in the Corn Belt. Science, Vol. 211. February 6. p. 540–547.

[2] Drinkwater, L.E., et al. 1998. Legume-based cropping systems have reduced carbon and nitrogen losses. Nature. Vol. 396, No. 19. November. p. 262–265.

[3] Davis, J., and J. Daniel. 2004. Long-term organic farming impacts on soil fertility. OFRF Information Bulletin. No. 14. Fall. p. 19–22.

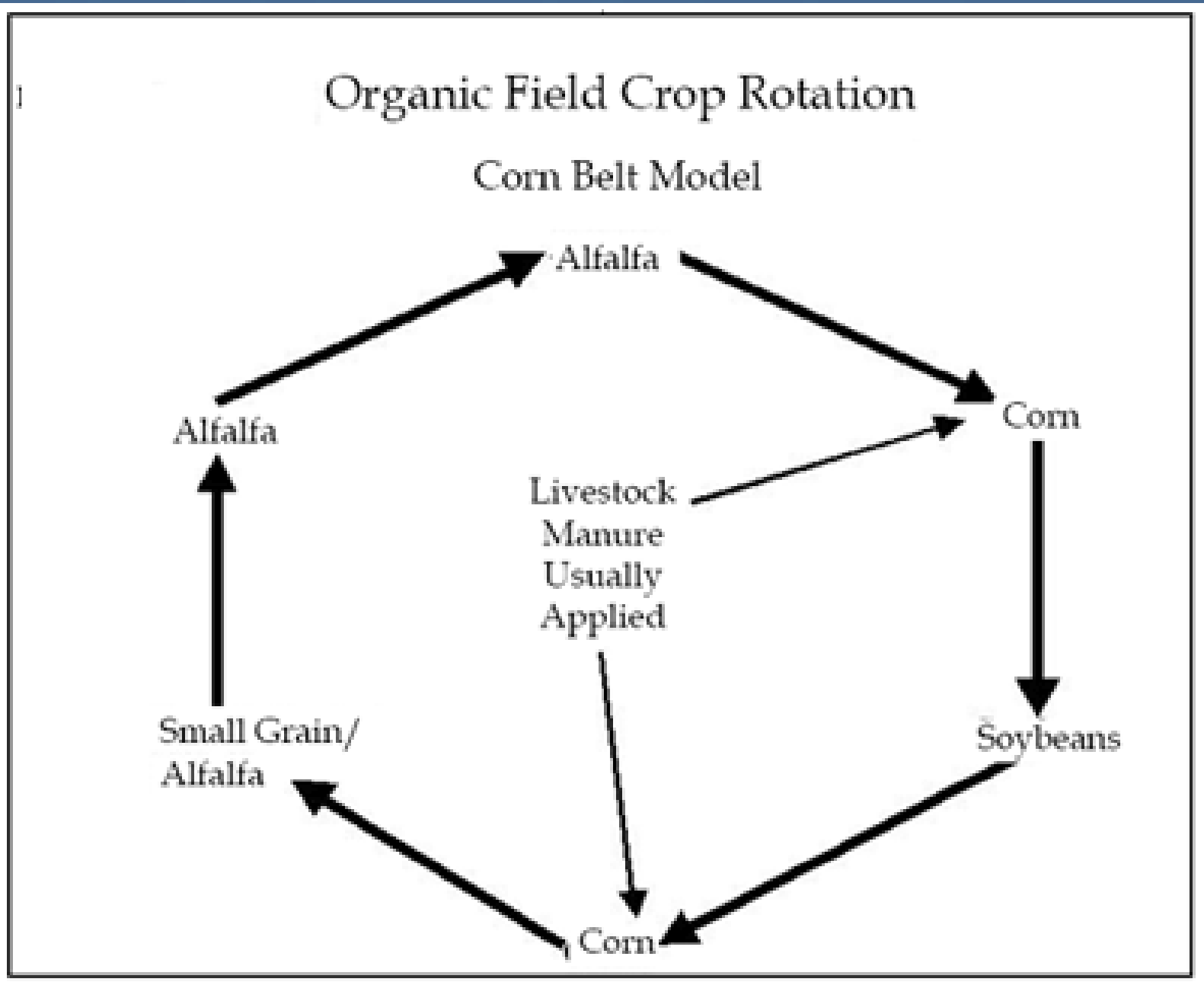
# What do Consumers of Organic Food Look For?

**According to Hartman & New Hope (1997):**

| **Characteristic** | Percent Rating "Extremely " or "Very Important" |
|---|---|
| Healthfulness | 80% |
| Availability in Regular Supermarkets | 69% |
| Environmental Friendliness | 67% |
| Price | 64% |
| Convenience of Preparation | 53% |

From: Dimitri, Carolyn, and Nessa J. Richman. 2000. Organic Food Markets in Transition. Henry A. Wallace Center for Agricultural and Environmental Policy, Policy Studies Report No. 14.

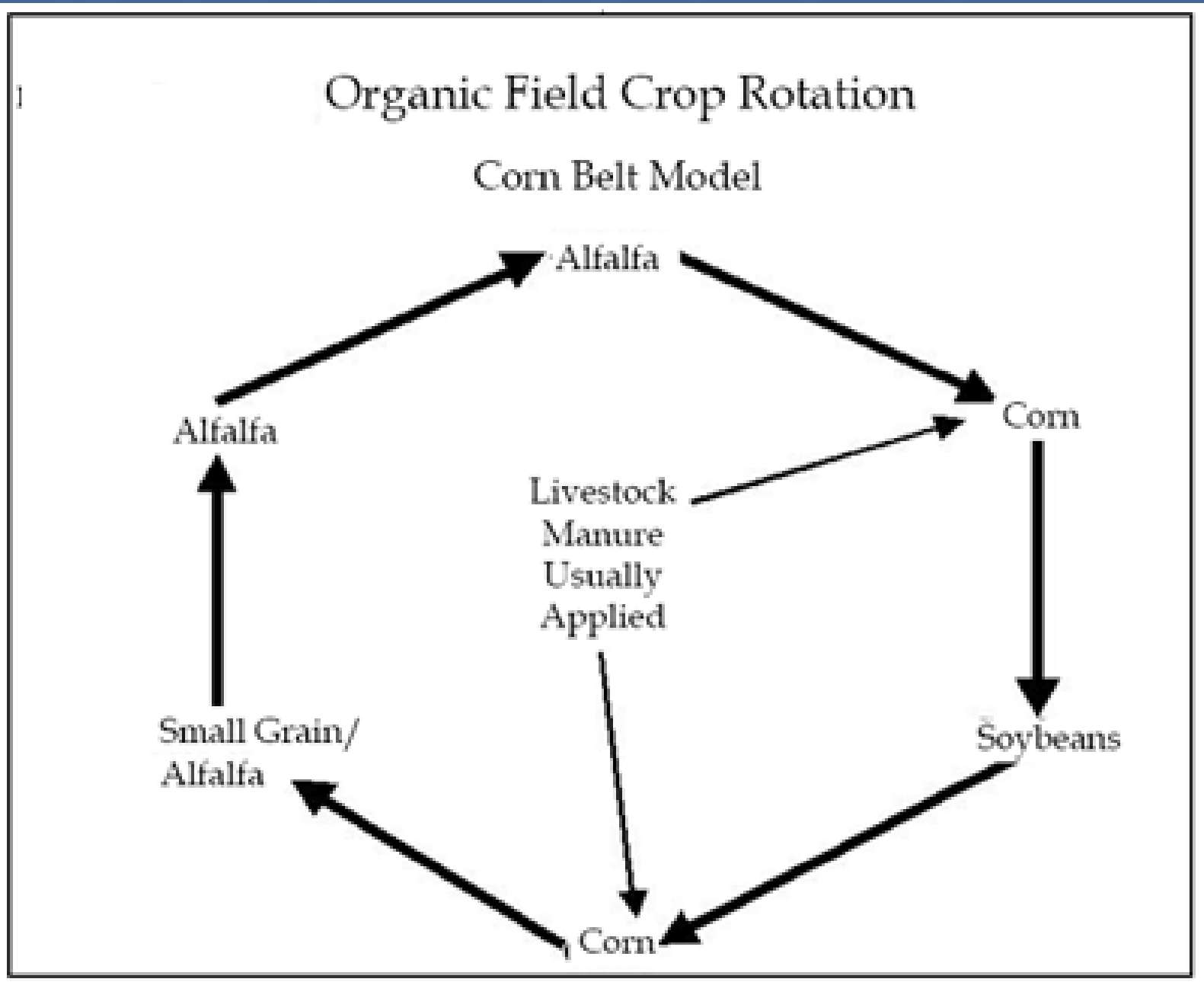
# ??????????????????????????????




From: Kuepper, G. 2004. Organic Crop Production Overview. ATTRA.

# Perennial Forages in Organic Systems: Positive Contributions to the Environment

- N-Fixation supplants energy-intensive synthetic nitrogen
- Carbon sequestration (extended photosynthetic period; no tillage)
- Increased nutrient bio-availability (extensive and deep roots tap natural nutrient pool)
- Reduced erosion (close growing; no tillage)
- Reduced leaching (perennial catch crop)




From: Kuepper, G. 2004. Organic Crop Production Overview. ATTRA.

# ATTRA's Grass Farming Pubs.

- *Nutrient Cycling in Pastures*
- *Assessing the Pasture soil Resource*
- *Matching Livestock & Forage Resources*
- *Multispecies Grazing*
- *Rotational Grazing*
- *Sustainable Pasture Management*
- *Converting Cropland to Perennial Grassland*
- *Nutritional Needs of Ruminants on Pasture*
- *Paddock Design, Fencing, & Water Systems*
- *Solar-powered Livestock Watering Systems*

# ATTRA's Grass Farming Pubs.

- *Grass-based & Seasonal Dairying*
- *The Economics of Grass-based Dairying*
- *Raising Dairy Heifers on Pasture*

- *Pastured Poultry Nutrition*
- *Range Poultry Housing*
- *Poultry Genetics for Pastured Production*
- *Growing Your Range Poultry Business*

# *NCAT's Organic Livestock Workbook*

http://attra.ncat.org/attra-pub/PDF/livestockworkbook.pdf

(Developed with funds from the NOP and Nat'l SARE)

The first 30 pages of this 92 page document deal with pasture and range!

# Another Satisfied ATTRA Client!