



Food Security Innovation Lab

**COLLABORATIVE
RESEARCH**

Adapting livestock systems to

CLIMATE CHANGE

Integrating Livestock into Production Systems: Overview of Livestock- Innovation Lab Activities

Dick Bowen

Colorado State University

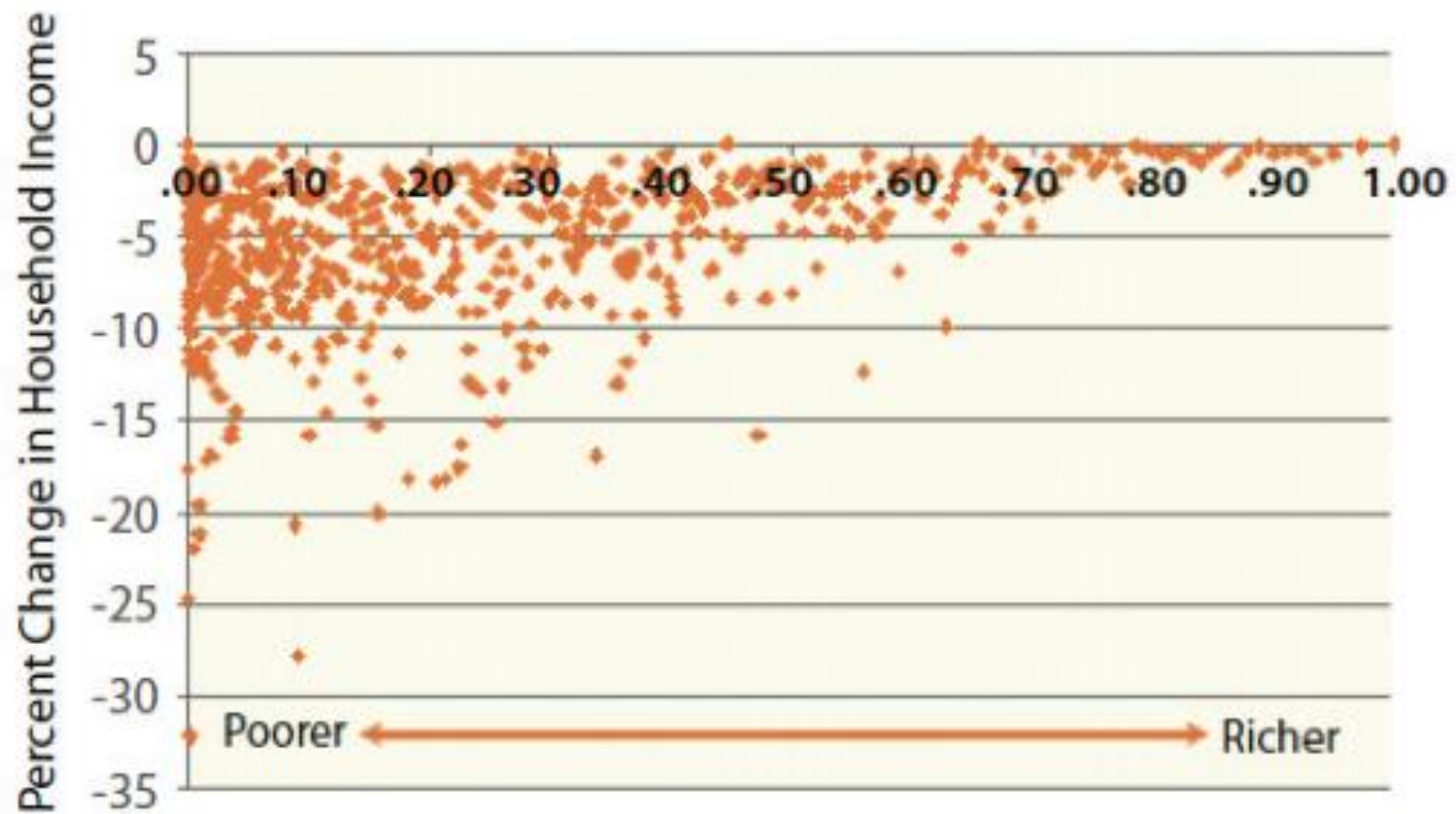
World Meat Consumption Projections from 1983-2017



Achieving Sustainable Global Capacity for Surveillance and Response to Emerging Diseases of Zoonotic Origin. IOM Forum on Microbial Threats Workshop Summary, 2008

Factors Limiting Livestock Production





Cumulative Share of National Income

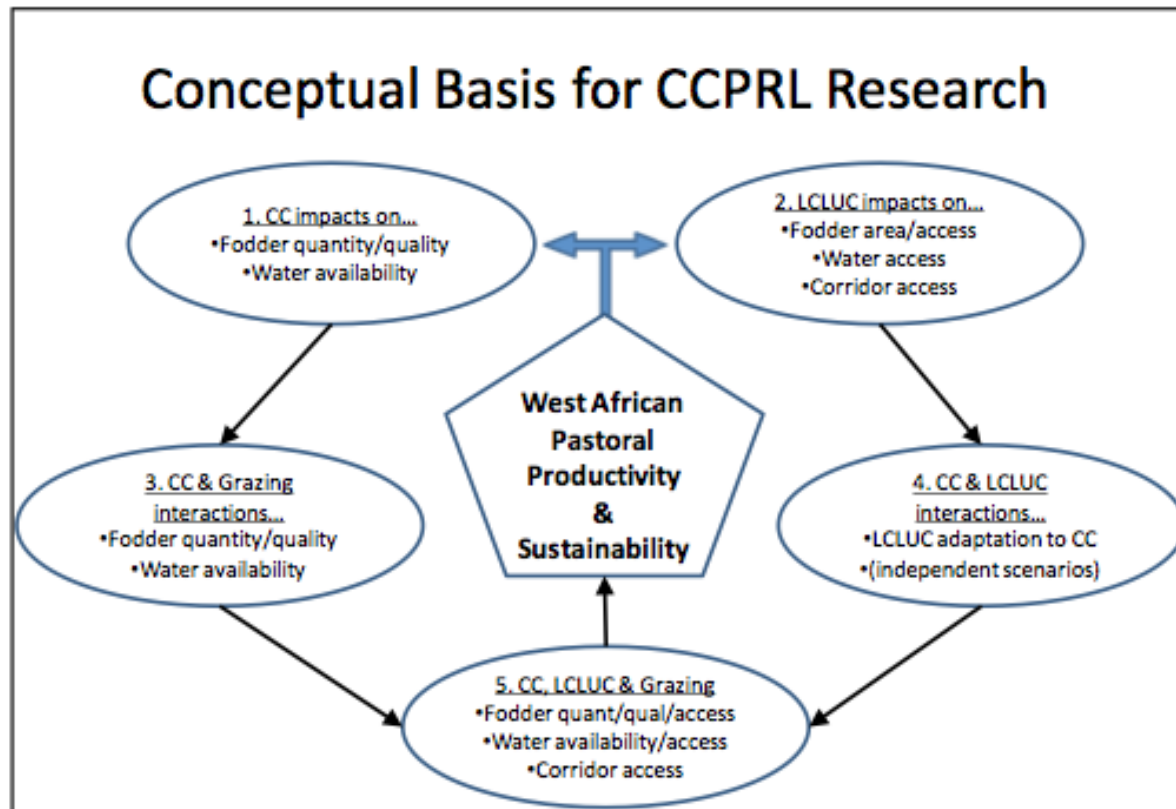
FIGURE 2-7 Household income and expenditure effects of a backyard poultry ban (percentage change in annual income).

SOURCE: Otte et al. (2006). Reproduced with permission from FAO.



Pastoral Resources in the Sahel

Niall Hanan (South Dakota SU)



Projects in East Africa

- Long term research projects
- Graduate students
- Early career scholars



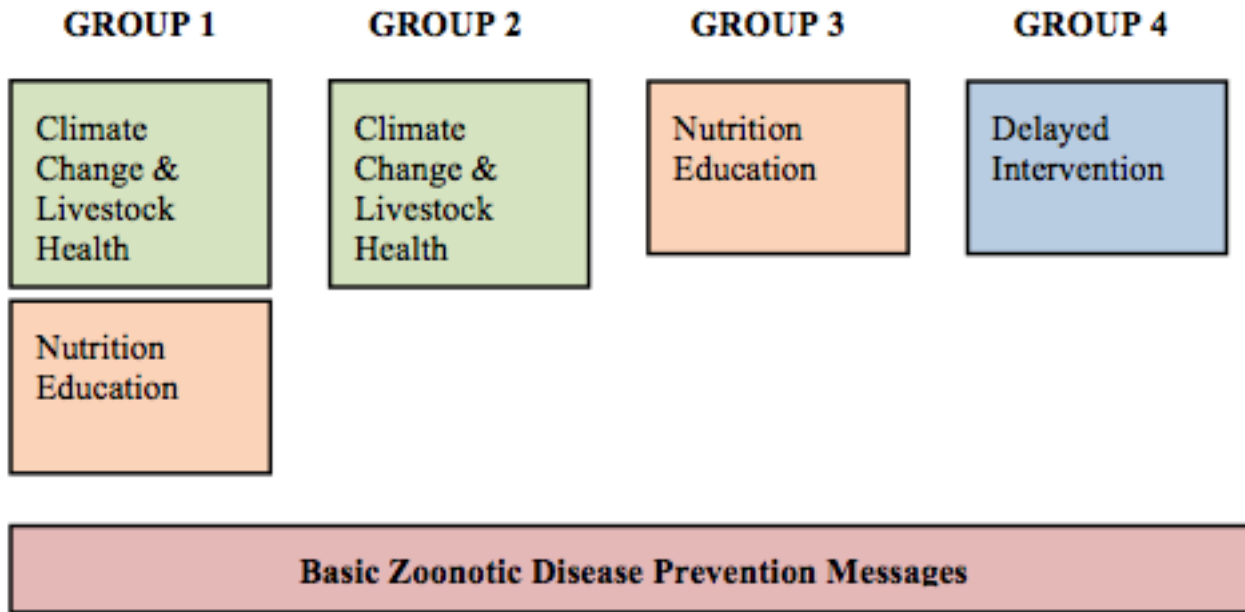
Strengthening Tanzanian Livestock Health (HALI2)

Jonna Mazet (UC Davis) and Rudovich Kazwala, (Sokoine University of Agriculture)

- Assess livestock health services and pathogen diagnosis and response capacity
- Create framework to model adaptation of pastoralist communities to climate change



HALI2: Educational Interventions



Livestock Extension Agents: Training and Diagnostics

Ecosystem Health Modeling



Poultry in Tanzania and Nepal

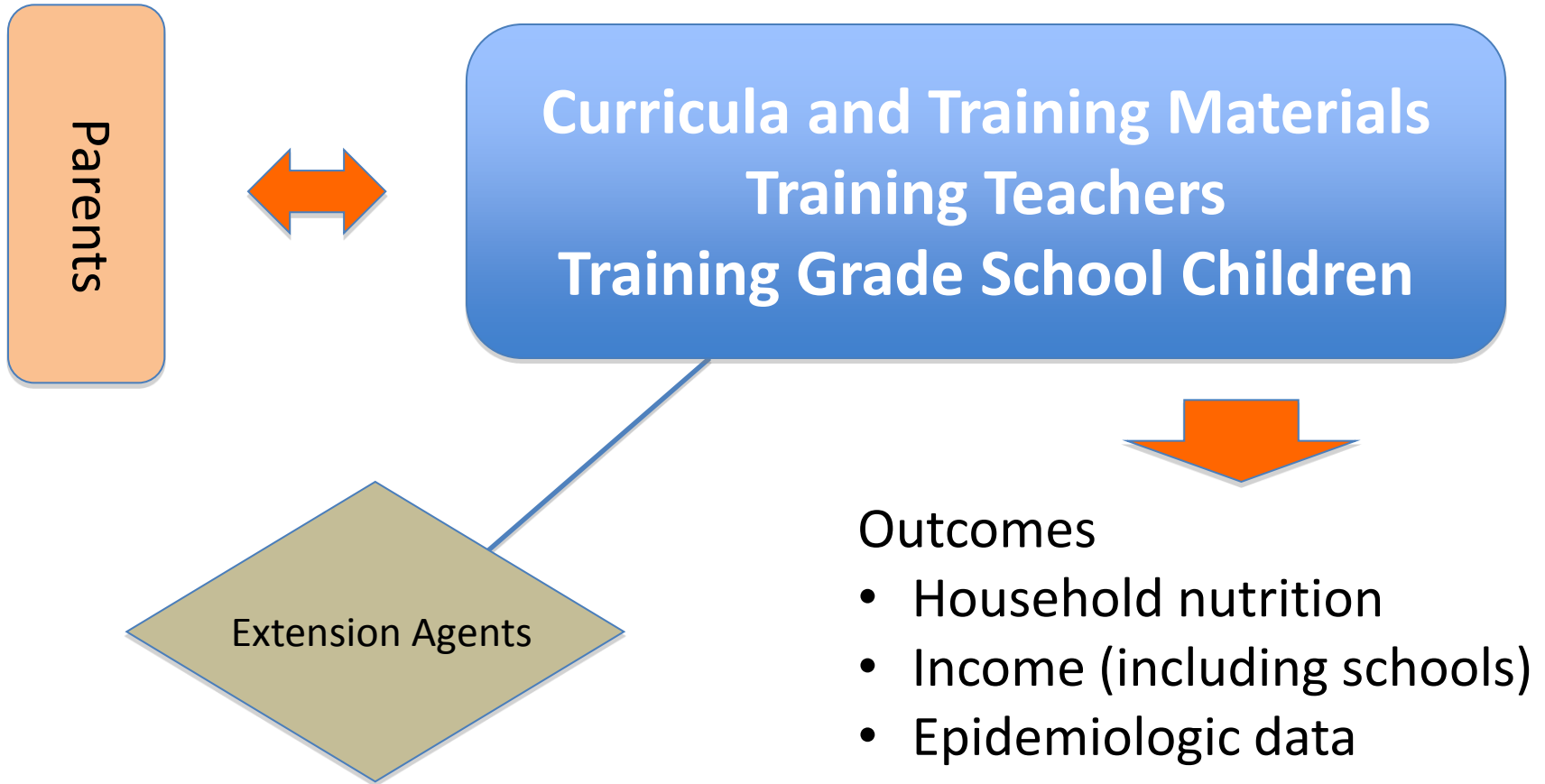
Poultry Skills for Improving Rural Livelihoods

**David Bunn (UC Davis) and Peter Msoffe
(Sokoine University of Agriculture)**

- Develop curriculum and train grade school teachers on chicken management
- Pilot demonstration poultry coops at schools
- Disease management



Poultry Projects



Poultry Project



Ethiopia and Kenya



- Peter Little: *Climate-Induced Vulnerability & Pastoralist Livestock Marketing*
- Layne Coppock: *Sustainable Pastoralism on the Borana Plateau*



Early Career Researchers

- Ethiopia: 6
- Kenya: 3

Women's
Workload

Grazing
Intensities

Livestock
Health and
Zoonoses

Restoring
Landscape



Camels and Resilience



**Drought resistance and live on degraded landscapes
Meat (export) and milk (local consumption)
But ... zoonotic diseases, lack of veterinary care**

