Breaking down the Livestock-Nutrition Pathway

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INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE

CGIAR RESEARCH PROGRAM ON Livestock

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Contents and key messages

Pathways essential for understanding (and attaining?) nutrition impact

Many pathway models (only one for ASF): all are wrong, all are useful

Preferred pathway approach is context specific

What's new?

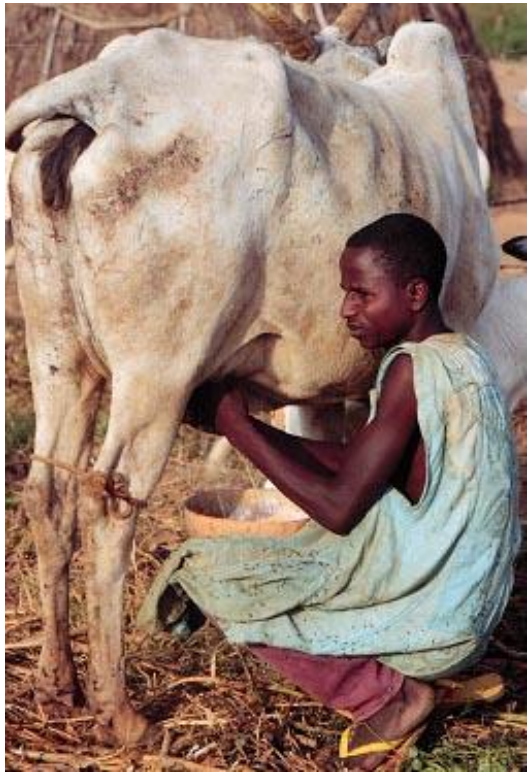
Livestock keeping and the poor

A common feature of resource-poor households

- 2/3 of resource-poor rural households keep livestock

Multiple roles

- Producing food
- Generating income
- Providing manure
- Producing power
- Financial instruments
- Enhancing social status



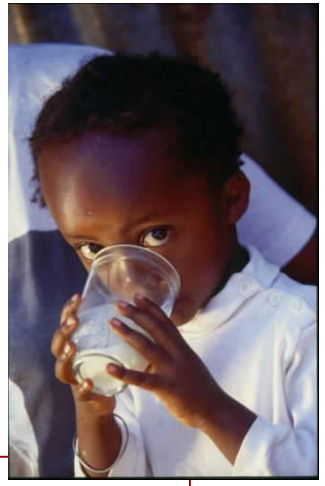
The presumed logic

A
Livestock keeping

creates

B
Animal-source food

improves



C
Health & Nutritional Well-being

The presumed logic

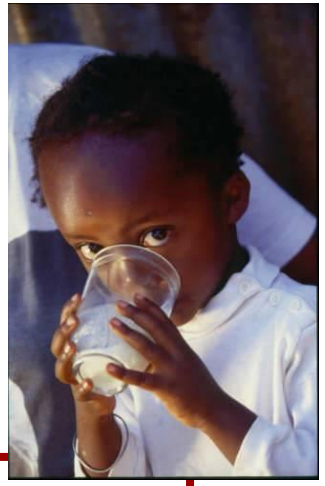
And hence…

A
Livestock keeping

creates

B
Animal-source food

improves



improves

QED !

C
Health & Nutritional Well-being

The evidence

Major reviews on agriculture and nutrition (including livestock) found no overall evidence for nutritional outcomes (Carletto et al., 2015; Webb and Kennedy, 2014; Ruel and Alderman, 2013; Masset et al., 2011 ; Webb Girard et al., 2012)

More recent papers show emerging evidence but ambiguous and dogged by poor design

The Reality: Subsistence Pathway

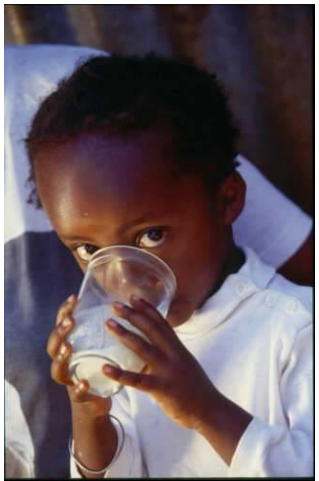
creates

B
Animal-source food

A
Livestock keeping

improves

improves ?



C
Health & Nutritional
Well-being

① Subsistence Link

The Reality: Market Linkages

creates

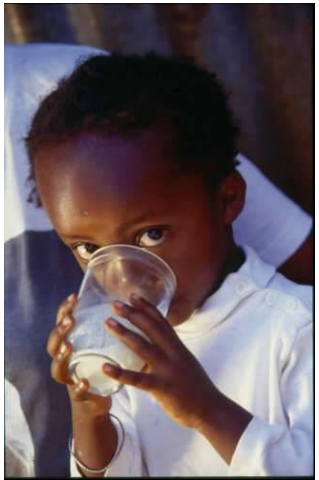
B
Animal-source food
& other products

A
Livestock keeping

Market sales
& purchases

improves

improves ?



C
Health & Nutritional
Well-being

②
Market
Path

Exposure to Zoonoses & Food-borne Disease

B
Animal-source food & other products

creates

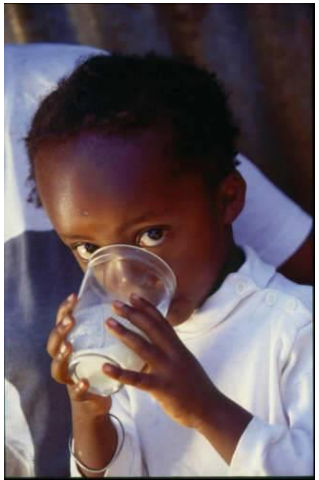
A
Livestock keeping

Market sales & purchases

❸
Disease Path

threatens

improves



C
Health & Nutritional Well-being

Numerous Indirect Linkages

creates

B
Animal-source food

A
Livestock keeping

Market sales & purchases

❹

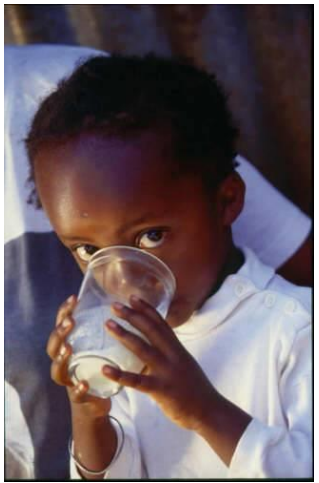
Indirect Effects (crops, labour, care)

(+) or (-) ??

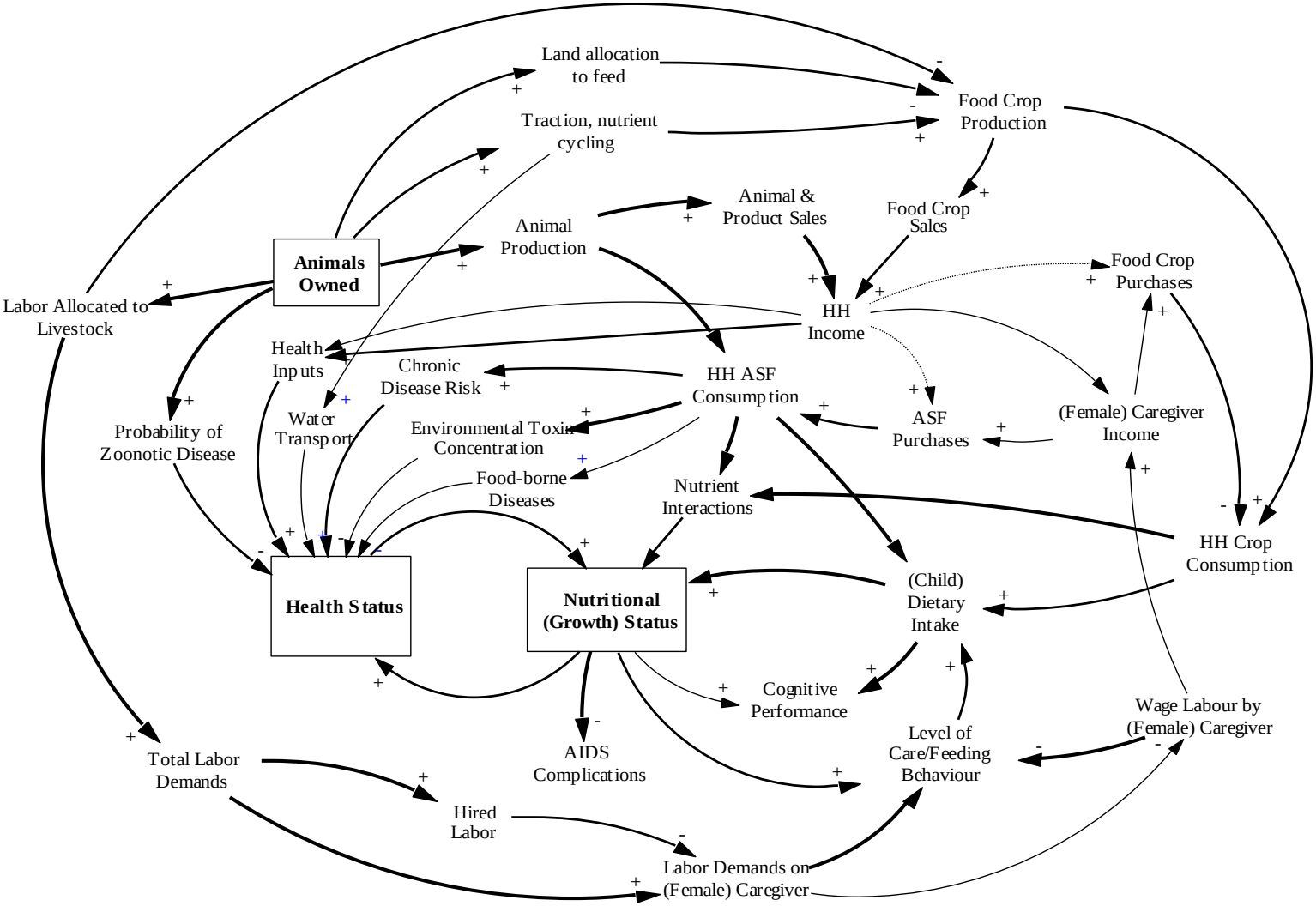
threatens

improves

C
Health & Nutritional Well-being

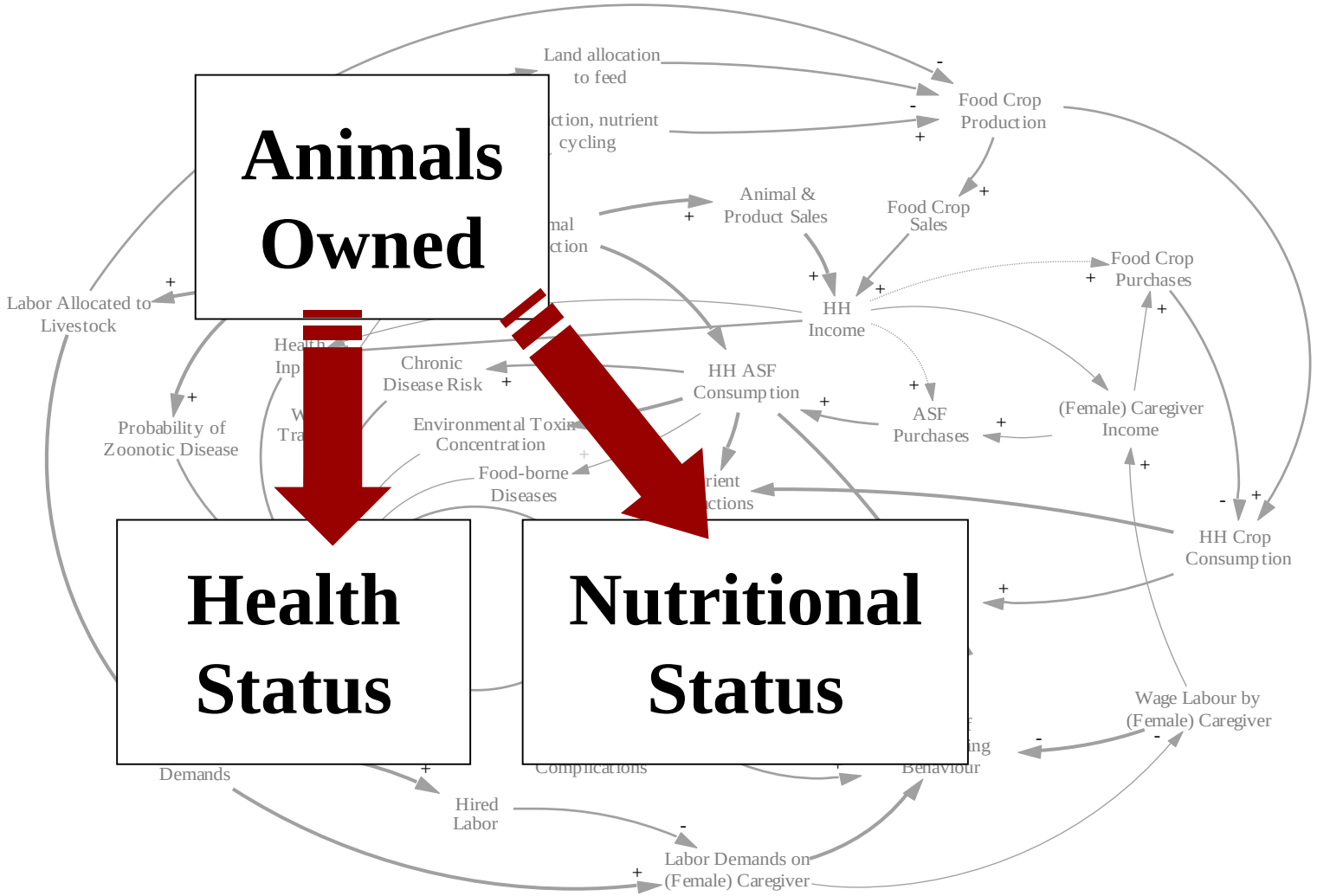


Mapping the Linkages



Arrows between variables indicate hypothesized causal relationships. The + or - signs indicate hypothesized direction of effects.

Mapping the Linkages



Arrows between variables indicate hypothesized causal relationships. The + or - signs indicate hypothesized direction of effects.

Where the pathways lead

No silver bullet pathway – highly context specific

Still limited and ambiguous evidence for most pathways (Herforth & Ballard, 2016)

Need to pick nutritional winners

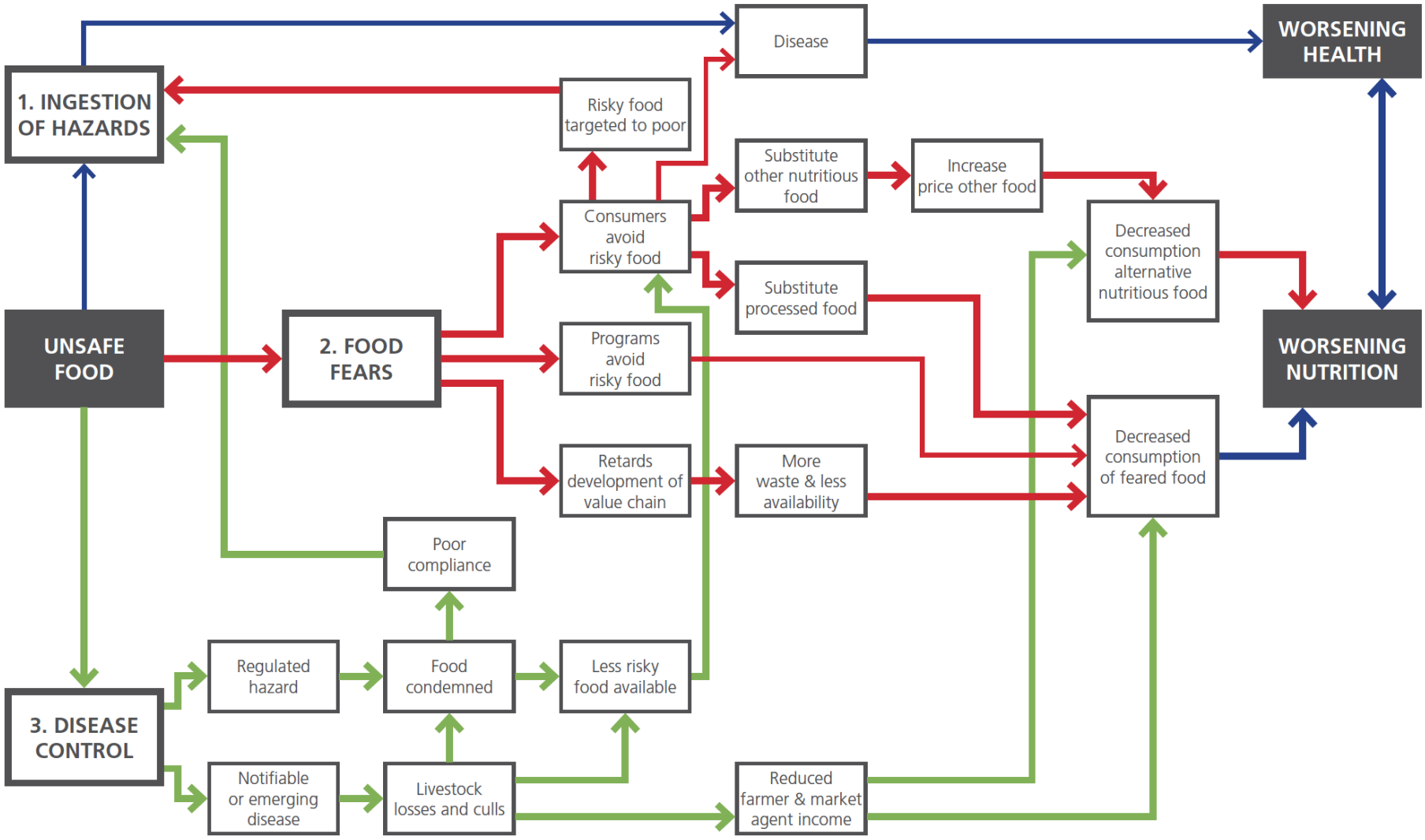
Greater emphasis on market-based approach

What's new?

Missing links
- Microbiome/aflatoxins/sanitation/food safety
- Time/food environment

New purposes for pathways
- Intervention pathways
- Pathways generating testable hypotheses

Pathways for other FSN issues
- Food safety


1. INGESTION OF HAZARDS
UNSAFE FOOD
2. FOOD FEARS
3. DISEASE CONTROL
Disease
WORSENING HEALTH
Risky food targeted to poor
Consumers avoid risky food
Substitute other nutritious food
Increase price other food
Substitute processed food
Programs avoid risky food
Retards development of value chain
More waste & less availability
Decreased consumption alternative nutritious food
Decreased consumption of feared food
WORSENING NUTRITION
Poor compliance
Regulated hazard
Food condemned
Less risky food available
Notifiable or emerging disease
Livestock losses and culls
Reduced farmer & market agent income

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Animal scientist, Nobel Prize Laureate for Physiology or Medicine–1996

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