Chickens bridging gender divides

Associate Professor Robyn Alders, AO
Faculty of Veterinary Science, Charles Perkins Centre
International Rural Poultry Centre, KYEEMA Foundation

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Food and nutrition security

- Recent reviews have shown little impact of agricultural interventions on childhood nutrition (Masset et al. 2012)

- Stunting remains high in many countries despite increases in agricultural production

- Stunting affects health, physical and cognitive development capacity in children as well as productivity in adulthood

- 11% of gross national product in Africa and Asia lost annually due to malnutrition
Types of undernutrition

Normal

Wasting
Low weight for height

Stunting
Low height for age

Underweight
Low weight for age

Micronutrient deficiencies
(iron, vitamin A, iodine, zinc, etc)

(Kimboka 2014)
Current undernutrition data

- Stunting in Tanzania in children <5 years: 42%
- Stunting in Zambia in children <5 years: 45%
- Stunting in Lao PDR in children <5 years: 48%
- Stunting in Timor-Leste in children <5 years: 58%
Distribution of stunting in Zambia

National average: 45%

Central Province: 2nd highest rate of stunting
*High maize producing area

(NFNCZ 2012)
Why village chickens?

In mixed farming systems in Southern Africa:

• very few households own cattle (~10-20%)

• some own small ruminants (~30-40%), but

• most own village poultry (70-80%)

Frequently under the control of women and children

Credit: Kyeema/Alders
Eggceptional value!

- One egg contains:
  - **Energy** - 315 kilojoules
  - **High quality protein** – rich in essential amino acids
  - **Vitamins** including Vit. A, B12, K & choline
  - **Minerals**
- Sterile inside (usually)
- Easy to store
- Available most of year
- Easy & quick to cook

Credit: FAO/Alders
Key research areas

Gender

• Research indicates that resources under the control of women are more likely to be used to support the education and nutrition of children

Newcastle disease (ND) control

• Most important poultry disease world wide
• Causes up to 80% mortality in village chickens every year
• Thermotolerant ND vaccine and community-based sustainable control model developed with ACIAR support
Impact of Newcastle disease control in village chickens in Tanzania

ACIAR/Crawford Fund/Kyeema Foundation video
Current Crawford Fund Projects

THE CRAWFORD FUND
For a Food Secure World
Collaborative work in Lao PDR

• Honorary Prof Lester Burgess
• Improving durian production, and
• Improving village poultry production to support:
  - manure as a biofumigant
  - food and nutrition security
• Funding: Crawford Fund
Collaborative work in Timor-Leste

- Sustainable improvements to poultry and human health
- Timorese Ministry of Agriculture and Fisheries, Ministry of Health; and Ministry of Education
- USyd Vet Science and Public Health; Australian Department of Agriculture
- Funding: Timorese MAF and Crawford Fund
Benefits of family poultry work to NSW and Australia

- Improved understanding of poultry disease epidemiology and biosecurity in small flocks, e.g. backyard chickens
- Improved control of poultry disease regionally which reduces risk of introduction of exotic poultry diseases into Australia
- Building skills in the next generation: Julia de Bruyn (MVSc; working in Tanzania) Johanna Wong (PhD; working in Timor Leste) Leigh Ann Ackland (BSc(Vet); working in Tanzania)
Thank you for your attention