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Poultry Skills for Rural Livelihoods
The Potential of Village Poultry

David Bunn, PhD
Potential of Village Chicken

1. Value of Village Chicken:
   - Nutrition
   - Income
   - Practical
   - First business

2. Challenges of Village Chicken

3. Improving Village Chicken

4. Strategies for Intervention
Key Micro-Nutrients & Income
Critical Nutritional Value

• Provide key micro-nutrients for pregnant and lactating women, and infants and children
• Good source of: Iron, Zinc, vitamins A and B12, selenium and choline.
• Eggs are superb source of protein
Accessible Nutrition

- Eggs cook easily and quickly, and can be kept without refrigeration for several days—important attributes in areas without electricity.

- Small size of poultry encourages consumption.

- A chicken can feed an entire family without resulting in leftover meat, which can not be store safely without refrigeration.

- Poultry are a important food source during the dry season.
Income from Eggs and Chickens

- Raising poultry source of income for women – 10-35% or income in Africa

- Woman’s income from eggs and birds used to pay for medicine, clothing, school fees, home repair, and emergencies.
Laying Hens per Household X
Eggs per Hen per Year

<table>
<thead>
<tr>
<th>Hens/ Eggs Per Year</th>
<th>40</th>
<th>50</th>
<th>60</th>
<th>70</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Hens</td>
<td>200</td>
<td>250</td>
<td>300</td>
<td>350</td>
</tr>
<tr>
<td>10 Hens</td>
<td>400</td>
<td>500 (2.5x)</td>
<td>600</td>
<td>700</td>
</tr>
<tr>
<td>15 Hens</td>
<td>600</td>
<td>750</td>
<td>900 (4.5x)</td>
<td>1050</td>
</tr>
<tr>
<td>20 Hens</td>
<td>800</td>
<td>1000</td>
<td>1200</td>
<td>1400 (7x)</td>
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</table>
Annual Income for Household Producer

<table>
<thead>
<tr>
<th>#Eggs/Price</th>
<th>150</th>
<th>200</th>
<th>250</th>
<th>300</th>
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</thead>
<tbody>
<tr>
<td>200 Eggs</td>
<td>30,000</td>
<td>40,000</td>
<td>50,000</td>
<td>60,000</td>
</tr>
<tr>
<td>500 Eggs</td>
<td>75,000</td>
<td>100,000</td>
<td>125,000</td>
<td>150,000</td>
</tr>
<tr>
<td>900 Eggs</td>
<td>135,000</td>
<td>180,000</td>
<td>225,000</td>
<td>270,000</td>
</tr>
<tr>
<td>1400 Eggs</td>
<td>210,000</td>
<td>280,000</td>
<td>350,000</td>
<td>420,000 (14X)</td>
</tr>
</tbody>
</table>
Household Poultry is Practical

- Accessible to rural poor, land not required.
- Village poultry is low risk - requires little investment.
- They are easy to raise and have a short production cycle compared to cattle, hogs, and goats.
- Improvements in production can be accomplished in a few months versus a few years for large livestock.
- Women & children, elderly, disabled or the ill can care for poultry.
- Free-range poultry control pests by eating snails and insects, and
- Manure is good fertilizer for vegetable gardens.
First Business -- Farmer - Entrepreneur

1. Attended classes
2. Copied school demo
3. Invested $1300
4. Has 130-190 birds
5. Sells 50-60 eggs per week
6. Payback 2- years
7. Egg sales supported starting a new Sim Card business
Challenges of Village Chicken

- **Attitude** – low priority of farmers and farm advisors

- **Preventing disease** – it is difficult to implement biosecurity for free-ranging flocks in a village setting, and it is difficult to get access to Newcastle vaccine.

- **Free-ranging** -- local poultry are often free-ranging, which makes them susceptible to predators, theft, and diseases.

- **Lack of poultry housing** – difficult to manage eggs, prevent predation and theft.

- **Securing affordable feed** for supplemental feeding – it may be difficult to find an affordable local feed.

- **Improving Chick Survival** – lack of chicks is a limiting factor for household producers.

- **Market difficulties** – can be difficult to get the best price for eggs and chickens without information about market options.
Package of Interventions
for Improving Chicken & Egg Production

- Attitudes – changing
- Newcastle Vaccination----- good vaccines available
- Chick survival – better chick management & vaccine
- Night shelters for household flock – affordable local designs
- Supplemental feeding – local crop wastes and harvest of termites etc.
- Train CAHW and local veterinary suppliers
Intervention Strategies:

• Train local veterinary suppliers.

• Work with women farmers’ groups.

• Train CAHW and extension staff

• Work through local schools
Poultry Skills for Improving Rural Livelihoods
Extension-Education Strategies
A School-Hub Community Approach

1. Train teachers—livelihood skills lessons
2. 5th and 6th classes taught – learning science with home applications
3. Hands-on school lessons
4. Trainings for parents
5. Connecting veterinary extension with schools
6. Students collect data
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Chicken & Eggs - Low Hanging Fruit of Rural Development