FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Feed the Future Innovation Lab for Livestock Systems research project:

Intervention in Low Guinea Fowl Productivity and Related Products Consumption in Burkina Faso

About 90% of the population in Burkina Faso and Niger engage in subsistence (smallholder) farming, living in small villages and farming communities, without access to grid electricity. One consequence of this fragility is stunting of children, an encompassing measure of chronic undernutrition. Increase in animal-source foods consumption has been identified as a viable solution. Increasing the scale of poultry farming among the rural poor, coupled with education to incorporate eggs and poultry meat in household diets and especially for children and their mothers, can be a potent solution to the endemic stunting problem.

Photo taken by William S. Kisaalita

Objectives

We have proposed to address the problem of low animal-source food consumption through expanded guinea fowl farming among smallholder households. We are combining three established practices of:

1. All year-round feeding of birds supplemented with fly larvae for increased productivity
2. Synchronized hatching of guinea fowl eggs by chicken (Rakai Chicken Model, tested in Uganda), to produce many keets at once, yielding lower cost keets, among other advantages
3. Low-cost evaporative cooling egg storage, while waiting for enough eggs to accumulate, for increased fertile egg viability.

Our two specific objectives are: 1) To produce fly larva and establish the optimum percentage of fly larva meal (protein) in guinea fowl diet growth and egg production; and 2) To establish the efficacy of integrating the three practices for year-round production of healthy keets.

Expected Outcomes

The main target of this project is to increase guinea fowl production per year by an order of magnitude, to approximately 50 marketable birds per guinea fowl hen, on participating smallholder mixed farms.

Research Approach

Four separate diets with different levels of inclusion of fly larva will be tested in birds of different ages (0-4, 5-8, 9-24, and over 24 weeks). One hundred birds will be used for each age. By varying the relative composition of larva protein, the optimum inclusion level of fly larva in the diet for each age will be established. Once the optimum fly larva inclusion level is established, it will be fed when the three practices are integrated to demonstrate the potential increase in fowl productivity.

Contacts and Key Partners

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Quick Facts

- Duration: 12 months
- Locations: Gampela, Burkina Faso

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