

# Expansion and Maintenance of Egg Laying Flocks: Iowa State University-Uganda Program

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## Introduction

A vital component of physical growth and cognitive development in children is proper nutrition. Upwards of approximately 1,000 pupils enrolled in Nakanyonyi and Namasagali primary schools in the Kamuli District of Uganda benefit from the school feeding program developed through the Iowa State University-Uganda Program.

Chicken eggs are a nutritionally valuable component of the school feeding program. In order for sustainable production of chicken eggs to occur, a certain measure of husbandry and disease prevention is required.

The poultry project is an interactive program that acts as a platform for hands-on learning of egg production for primary school pupils and university service-learners alike. During our involvement with the Iowa State University-Uganda Program, we participated in many different facets of poultry housing, husbandry, health, and general maintenance of the flock. Our work is a small, yet important piece of a long-term project towards the sustainability and expansion of egg production within school feeding programs implemented by the Iowa State University Uganda Program.

## Objectives

1. Construct ceiling at Nakanyonyi poultry house
2. Poultry house preparations (clean, disinfect and add litter)
3. Prepare brooder for day old chicks
4. Chicken vaccination at Nakanyonyi and Namasagali Primary Schools
5. Build 4 laying boxes
6. Construct poultry run At Nakanyonyi Primary School
7. Feed birds and mix feed

## Results & Discussion

Both Nakanyonyi and Namasagali primary schools have on campus poultry projects. The majority of our efforts were put towards preparing the newly expanded section of the Nakanyonyi Poultry house. The previous house was doubled in size to allow for sanitizing between flocks and for a replacement flock to be raised.



Image 1: Expanded Poultry Unit



Image 2: Papyrus Ceiling



Image 3: Residual construction Material



Image 4: Chick Brooder



Image 5: Vaccination of Chicken



Image 6: Constructed Lay Box



Image 7: Constructed Chicken Run



Image 8: Mixing of Feed

## Results & Discussion (Continued)

1. Papyrus reed ceilings are multifunctional providing insulation from heat and sound, making living quarters more comfortable.
2. Residual materials from construction were removed, the floor was disinfected, and a brooder was created to promote healthy and comfortable housing for the chicks.
3. The brooder allowed for 102 chicks to be accommodated.
4. Vaccination occurred at both schools for Newcastle's disease. Preventative measures for this virus is paramount, it has been known to take out entire flocks in Uganda.
5. Laying boxes were constructed for the replacement flock. There will be a temporary overlap where the two flocks will produce eggs at the same time.
6. Concern of disease and predation was mitigated through the construction of an outdoor run, which prevents free range chickens from coming into direct contact with the flock and prevents predators (including people) from accessing the birds.
7. Proper nutrition is a pertinent component of efficient egg production. With available resources including maize bran, fish meal, cottonseed meal, ground bones, salt, and egg booster mix provided an adequate amount of nutrition to promote regular egg production.

## Conclusion

The existence of the poultry project is a highly valuable asset to the Nakanyonyi and Namasagali primary schools. Maintenance practices of the two poultry flocks along with the expansion of the poultry house in the Nakanyonyi Primary School that allows for strategic flock rotation based on age of the flock, ensure sustainability and longevity of this project within the school feeding program. This system can be looked at as an effective and simple model for the implementation or expansion of poultry programs within other schools associated with the Iowa State University- Uganda Program, and by many other schools in the developing areas of Uganda and Sub-Saharan Africa.

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