



THE KYANJA BULLETIN

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Urban Farming Technology Trials at Kyanja ARC

1. PIG BREEDING UNIT ON THE WAY TO RECOVERY

1.1 Introduction

One year down the road since the African Swine fever outbreak wiped out more than half of the pigs at Kyanja agricultural resource centre including the entire breeding stock. Only 35 piglets survived this calamity and were recruited to replace the breeding herd. In addition, 6 young boars were imported from Kenya to expand the unit. On April 17th, the first of the 17 pregnant sows delivered the new piglets since the outbreak and so far 180 more piglets have been born in a period of 3 months. In March 2013, the pig breeding stock was first imported from Kenya and multiplied to produce 745 piglets at Kyanja and were distributed to 200 farmers around Kampala. The farm specializes in Landrace & Large white crosses because of their added advantages of high prolificacy and good mothering ability.



First Piglets born after the Outbreak

1.2 Artificial Insemination Services

A total of 600 artificial inseminations have been done for pigs in and around Kampala since the introduction of these services at Kyanja in March 2014. Artificial insemination was introduced to help urban farmers improve the genetic quality of their pigs at an affordable cost which saves the small holder farmer the expense of purchasing and maintaining a boar. Since inception, 874 piglets have been born as a result of this service used by 131 farmers. The pig breeding unit has served 280 farmers with superior pig genetics. IMO Pig production system is preferred at the centre as it produces no smell, flies or noise. Suitable for the City.

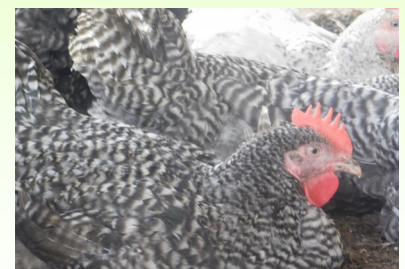
However, African Swine fever outbreaks negatively impacts on adaptability & sustainability of new pig technology such as pig AI services among urban farmers. Biosecurity measures were stepped up to ensure safety of the breeding herd.

2. KUROILOER FARMING IN THE URBAN SETTING

2.1 Introduction

Kuroilers are multi-colored hybrid chicken similar to local birds but were originally bred in India as dual purpose birds for meat & egg production and are more resistant to disease than exotic birds. They are scavenging birds bred to survive in rural areas. However, the trials at Kyanja have indicated the enormous potential these birds have to improve livelihoods in Kampala under semi-intensive farming

feeding them on kitchen left-over's & market waste with commercial feed sup-



- Urban faming technology
- Tips for farmers

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Kuroiler Production Trials in Kampala



A Kuroiler at 14 weeks; Live weight up to 3Kg

2.2 Baseline Survey

KCCA procured and distributed 4,886 chicks to 234 farmers belonging to community based organizations in the 5 divisions of Kampala. The purpose of this was to pilot the project and conduct a baseline survey on performance under the urban setting. The birds performed very well and many of these beneficiaries purchased more birds to continue with the enterprise. Basing on this experience, the project was scaled up to serve more urban farmers in Kampala.

2.3 Kuroiler Brooding Unit

The brooding unit at Kyanja started in February 2015 and has since churned out 16,635 Kuroiler chicks. Over 80% of these birds have been sold and distributed to more than 500 farmers in and round Kampala. These farmers have also received training on Kuroiler management in the urban setting feeding them on kitchen left over's.

2.4 Fattening Trials

Kuroiler fattening trials at the farm were also success-

ful. By the age of 14 weeks, birds 2.5 – 3KG live body weight. Age at point of laying

Age	Live Body weight
6 Weeks	1.2 Kg
8 Weeks	1.4-1.6 Kg
10 Weeks	1.8-2.0 Kg
12 Weeks	2.5 Kg
14 Weeks	2.5-3.0 Kg
16 Weeks	3.5 Kg

varied from 18-22 weeks depending on feeding regime. The carcass weight at 14 weeks was 2.0– 2.5Kg.

By the age of 14 weeks a Kuroiler can weigh 2.5– 3 Kg and be sold for 25,000/=

Farmer's Experience with Kuroilers

Under the NAADS program, community based organizations and other individual farmers have benefited from this project. The biggest challenge however is poor quality Kuroiler chicks sold on the market and high feed consumption. With the brooding unit running at Kyanja, these farmers have received good quality birds and technical support. Youth in Kampala that raised these birds registered higher success rates .



A youth in Mutundwe parish with Kuroilers she raised

The youth who reared Kuroilers were 3 times more likely to continue with enterprise production as compared to those that reared exotic



A dressed Kuroilers

birds. On average, Kuroilers have become very popular in Kampala because they are easier to raise, earn a higher income and yet they can be raised in a small City space.

3. HYDROPONIC BARLEY FODDER TRIALS



Barley Fodder on day 5

Hydroponic fodder trials were started to provide alternative feed resources for livestock in Kampala given the expensive commercial feeds and limited space to grow fodder.

Hydroponic farming is the art of growing plants without soil. Cereal grains such as maize, barley, sorghum and millet can be used.

A small shade 1.5M width X 3M Length X 2M Height can

hold 40 trays each with 2Kg of barley grain and can process 80Kg of barley seed to produce 400Kg of hydroponic fodder per week. This is enough to feed 570 birds in the week as an entire feed OR 1,100 birds as a 50% feed supplement.

Barley is preferred due to its high protein content of 22% . Seeds are washed then soaked for 4 hours after which seeds are kept in a

dark warm place for 48 hours and watered twice a day. Place on a plastic or aluminium tray and put under a shade water 3 times daily.

In the next 3 days, the feed will have sprouted and be ready for poultry consumption. At day 6 feed pigs, day 7 -8 feed cattle, sheep and goats. However, mould growth is a big challenge and a few drops of JIK can be used in washing the grain.

Hydroponic Barley Trials

When we first started out these trials in June 2015, we encountered a number of challenges. Poor germination percentage, heavy mould infestation and ineffective temperature regulation which affected yields.



10% germination of barley at the beginning of trials

After 9 months of experiments at the farm, germination rates have gone up to 90% .even though the quality of grain could not be certified. The fodder obtained is fed to pigs and Kuroilers on the farm.



95% Germination of barley

The team at Kyanja came up with a leachate that is used as an organic fungicide to control fungal growths. This compound has achieved 95% success in preventing mould growth.

On the other hand, Maize or sorghum can also be used though it has a lower crude protein content of 13% average and 16% respectively. Maize is cheap and readily available while Sorghum contains anti- nutritional factors and should not be consumed in large amounts.



Hydroponic Fodder Unit at Kyanja

VEGETABLE GARDENING

Gone are the days when farming was only believed possible in rural areas where large pieces of land are available. With the increasing population, rural-urban migration and shrinking space in the city; its vital for urban residents to consider high-value crop farming.

The high unemployment and poverty rates in the city, its absolutely essential for each household to grow vegetables. These require small

space, capital, is easy to manage and has quick returns.



Box gardens with spinach

On the other hand, for those

with a sizeable capital, green house farming is good for commercial vegetable production.



Tomatoes in a green house

'Hydroponic feed can reduce costs of animal production by up to 50%'

URBAN FARMING AROUND THE WORLD

There are Designs for vertical gardens that can serve as decorations and also feed the family. They can be placed on the verandah, in the compound or backyard. Many cities around the world have embraced the idea of urban farming and made innovations such as these.

When it comes to vertical gardening, let your imagination run wild, the sky the limit.





KYANJA AGRICULTURAL RESOURCE CENTRE, KCCA

VISIT US

**Off Gayaza Road, Kyanja Parish
P.O Box 7010, Kampala- Uganda**

For inquiries call:

Tel. 0794661234/ 0794661258

The centre is open to the general public every Wednesday 2-5Pm and Saturday 9am- 1Pm. Study tours are done by experts free of charge in the various fields of :-

- IMO Piggery farming;
- Kuroiler poultry production;
- Aquaculture;
- Green House & Backyard vegetable farming
- Technical support on Urban farming

DIRECTIONS :

Branch off to the right at Cementers on Gayaza road from the city Centre; Behind the Seventh Day Adventist Church. There is a big sign post.

The practical way to farm in the City