



NUISLETA BLONG...

# PLANTING MATERIAL NETWORK

Planting Material Network is the farmers network supported by Kastom Gaden Association

Spring Edition 2007 — PO Box 742 Honiara SOLMON ISLANDS — P: (677) 39551



## SPESOL KOKORAKO NIUS

### FEEDING VILLAGE POULTRY

About 40 to 60 per cent of families in Solomon Islands keep kokorako. They might have only a few living freely in the trees, or they might have up to a 100 living in a bush material house. To these, they might provide food like coconut, white ants and water.

Many people are somewhere in the middle. Their kokorako are free in the village but they provide a box or basket for broody hens in the kitchen or under the house. They keep an eye on the young chicks when they hatch and give them extra food and protect them from dogs and other predators.

Chickens can be an important source of income and help families to contribute to parties, fundraisers and weddings. From time to time the kokorako provide the families with protein food.

#### EGGS EVERY DAY

Only very few families eat the eggs from their kokorako very often. But more successful kokorako farmers prove that it is possible to get eggs every day from local kokorako if they are cared for and well managed.

With a bit of time each day, you too can have eggs to eat or sell.

#### THE PROJECT

The Feeding Village Poultry Project helps families improve the feeding and management of local kokorako so they can produce meat and eggs for the family to eat and sell.

The three year project is a partnership between Department of Agriculture & Livestock, Kastom Gaden Association and Solomon Island College of Higher Education, all working with SARDI — the South Australia Rural Development Institute. The project finishes in mid 2008.

The project researches the better feeding of kokorako using feed ingredients that are easily available in villages or that can be grown by farmers themselves.

Farmer schools were chosen to help with feed trials in villages. Sausama, Gwaunafiu Farmer School, Turusuala CBTC, Kastom Gaden farmer school, Tanagai Kastom Gaden and Kuzi Youths Farmer School provide training in:

- the care, breeding and management of kokorako
- carrying out of trials in villages
- keep records when starting the trails based on resource available to their area/place.

The training is coordinated from Burns Creek farmer school.



# TOK TOK BLONG EDITORS

## ***Hello new and old members!***

In this issue of the *PMN News* there are some articles which will remind you, about the organic farming techniques that PMN are promoting.

We hope you are happy with the seeds enclosed with the newsletter. We test our seeds before we send them out – but you need to plant them soon and in the right way.

In this issue we focus on local kokorako. About half of all households in the Solomon Islands keep village kokorako and they can be an important source of food and income and they provide manure (waes blong kokorako) for organic farming. We have articles about farmers experiences with local kokorako, some early research about better feeding, kokorako training nius and opportunities and a handout for farmers on improved management of kokorako.

Please write to us by post or email to give us feedback about the newsletter. If you try any of the ideas that are in the newsletter, please tell us how they worked in your garden. We encourage farmers, especially young people, to do an attachment with Kastom Gaden at Burns Creek. Apply by writing to us.

PMN staff would like to kindly ask all PMN member's to please remember to pay their yearly subscription fee of \$15 in order to keep receiving seeds and the newsletters.



## **WELKAM LONG SPESOL KOKORAKO NIUS**

This edition of the PMN news is supported by the ACIAR-funded Feeding Village Poultry Project. The project is working with farmers interested in keeping local kokorako and who want to improve how they feed their kokorako so they grow healthy and lay plenty of eggs.

The project is assisting Department of Agriculture and SICHE to set up a centre to do research on local feed. It is also helping farmer schools as well as Kastom Gaden Association to improve the training of farmers in managing local kokorako.

### **Project updates**

Searm Niu Plant Long Garden Project is working with rural training centres and leader farmer throughout the Solomon Island. The project encourages the bulk production of different varieties of sweet potato, cassava and African yam.



### **Farmer fresh project**

Goodbye to Nancy and Henrieta who have left Farmer Fresh after years of hard work.

We wish them well in their new jobs. Vaelyn has now taken over the Farmer Fresh operation.

### ***Production and printing of this newsletter is supported by...***



**Australian Government**

**Australian Centre for  
International Agricultural Research**





# Oiketa long SICHE doem research long fidim KOKORAKO LOCAL KAI KAI

The SICHE research facility, which was built under the Feeding Village Poultry project, has:

- 64 hens
- 50 young kokorako
- 2 roosters
- 19 chicks.

There are 16 pens (rooms) in the building and up to 12 kokorako can stay in each pen.

The building has been carefully planned for conducting controlled research trials. Next to the building is a feed garden with:

- 0.2 hectare has been planted to sorghum
- 0.2 ha to mung bean
- 0.2 ha to paw paw
- 0.5 ha to pigeon pea.

The first trial started in April this year.

## KOKORAKO DIET

The diet being tested in the first two trials is:

### **Trial number 1** — diet 1

- mill run 50%
- copra meal 20%
- mung bean 30%.

### **Trial number 2** — diet 2

- mill run 45%
- mung bean 45%
- sorghum 15%
- fish meal 5%.

*SICHE research facility: 16 pens (rooms) in the building and up to 12 kokorako can stay in each pen*



## EGG PRODUCTION

The results of egg production over six weeks on the diet trials are:

diet 1 — 37 eggs

diet 2—174 eggs.

The results are for seven hens per each of the four pens.

## RESULTS

Phil Glatz, the project team leader based at SARDI in South Australia, has been working with Joseph to analyse the results.

Phil reports that, "The body weight of birds fed the commercial diet varied little over the trial (1.55 to 1.62 kg). However, birds fed on the home mix diet (corn, paw paw, mung bean, fish meal and fresh cassava) showed an increase in body weight from 1.32 to 1.50kg.

"Daily feed intake for birds on the commercial diet was significantly higher (99.5 vs 67.8g) in the first part of the trial. No difference was observed later in the trial.

There was no difference in egg weight between treatments, but birds fed the commercial diet produced double the number of eggs compared to the birds on local feed.

The initial lower body weight of the birds fed the home mix diet contributed to their lower egg production. The trial will be repeated with birds of equal weight."

We will bring you more results from the trials in the next newsletter.

# FARMERS RESEARCH COMMITTEE

## Hemi stat nau

In March 2007, a workshop at the KGA conference room, Honiara, led to the formation of the first local kokorako research advisory committee.

The committee will keep farmers involved in the research by DAL/SICHE/KGA setting priorities and in sharing the results.

The committee will meet twice a year and advise on research, receive reports on trials completed on local kokorako from the feed research facility based at SICHE, farmer trials and recommend future research and extension/training priorities on local kokorako.

### Trials planned

Joseph at the SICHE facility has a busy program ahead over the next few months. In the meantime the farmer schools are doing their own farmer field trials on:

- ⊙ the use of white ants as food (Kusi, Makira)
- ⊙ raising of grubs as a means of providing protein (Burns Creek)
- ⊙ growing coconut versus green coconut (Tanagai)
- ⊙ continue with trials of free choice versus mix feeding (Turusuala, Frank)
- ⊙ lucina as kokorako feed (Isabel)
- ⊙ sorghum as kokorako feed (Levi).

### Next meeting

The next Poultry Farmers Research Committee meeting will be in August or September. Contact Thecla for details.

The meeting will consider how farmer schools should look for ideas on reducing problems with eagles and on protecting chickens from birds.

Each farmer school or farmer should bring three healthy hens and three healthy roosters for exchange with other farmer schools. Reasonable freight costs will be paid by the project.



*Using white ants as food*

### PMN kokorako hour on high frequency radio

On the recommendation of the poultry farmers research committee, a weekly radio contact time for all the farmer schools undertaking trials and any other farmers with questions and information about village poultry has been set up.

This will be at 8am every Monday on the Soltrust frequency. If you are an active poultry farmer and have access to HF radio, please join the weekly discussion.

### FARMERS' RESEARCH COMMITTEE:

**Thecla Limai**, Project Team Leader, KGA

**Hilda Karani**, KGA Poultry technician seconded to SICHE/DAL Feed research facility

**Frank Lave**, Sausama Farmer School, Western Province

**Levi Bobo**, Gwaunafu Farmer School, Malaita Province

**Jerry Andison**, Turusuala Community Based Training Centre, Avuavu Guadalcnal

**Donald Saepio**, Kuzi youth farmer school, Kolombangara, Western Province

**Joseph Waha'aniu**, scientist, SICHE/DAL feed research facility

**Anna Fouagau**, Tanagai Kastom Gaden Community Based Training Centre

**Tony Jansen**, Project Adviser, TerraCircle/SARDI

**Gilbert Laemana**, Kaolo Community Integrated Development, San Jorge, Isabel

**Connelly Sandakabatu**, SICHE

**Kamel Gapu**, Kirakira

**Joel A**, Ontong Java farmer school.



# FARM TRIALS AT BURNS CREEK

## Testem 'takem kai kai seleva' and 'mixem kai kai' feeding foa lokal kokorako

Report from Hilda Karani, KGA Poultry Technician

**K**GA has been encouraging farmers to practice free choice feeding. Our experience is that free choice feeding leads to better egg production.

The system was developed by KGA adviser, Russell Parker, as a simple alternative to mixing feeds. It is important because complex feed mixing is unlikely to be reliable in the village situation. In free choice feeding there is no need to decide how much protein/energy/protective should be in a mix. Instead, the chickens freely choose from the three food groups.

### KGA trials feeding methods

KGA decided to conduct a trial to compare the two systems, both using local feed.

Two pens were selected in a house made of local materials on a earth floor. One pen contained two layer hens and the other pen contained six local hens. Each pen was given one treatment (mixed or free choice) for eight weeks and then the treatment was reversed.

The ingredients of the mixed feed were sorghum, pawpaw, fishmeal and japanese kabis. A handful of each was mixed together. In the free choice method, a handful of the food were separated into three different bamboo feeders according to food type:

- protein food — fish meal
- energy food — copra meal/ coconut
- Protective food — pawpaw - ripe - mixed with Japanese cabbage.

### The results: feeding methods

#### Local Hens

The average rate of laying per local kokorako hen on:

- ⊙ mixed feed — 6 eggs per week
- ⊙ free choice — 3.08 eggs per hen per week.

The egg production under mixed feeding was almost double the average rate for free choice feeding.

#### Layer Hens

The average rate of laying eggs per week for layer hens on:

- ⊙ mixed feed — 8.56 eggs pr week
- ⊙ free choice feeding — 9.06.

The results are close but, on average, free choice feeding was slightly higher egg production than mixed feeding, but this difference may not be significant.

When layers changed from mixed feeding to free choice they had a big drop in egg production three weeks after the change but were starting to increase again at the end of the trial. We are not sure why this occurred.

	LAYER HENS	LOCAL HENS
Mixed feeding	8.56	6
Free Choice Feeding	9.06	3.08

Mixed feeding appears to be the better system for local hens, being almost twice as productive as free choice feeding. For layers, the results were inconclusive and it appears that reasonable egg production comes from either free choice or mixed feeding.

An important consideration for the low laying rates of local chickens under free choice may be the need for them to be free ranging for at least one hour per day. This is the KGA model shown to farmers but this was not done during the trial. It could be the subject of a future trial.



Using three different buckets to collect and separate food groups.





# Reports from the FARMER'S SCHOOLS

## TANAGAI TRAINING CENTRE

*Kakabona, Guadalcanal*

Tanagai has a poultry house with 11 rooms. Currently they have 18 hens and 3 roosters and they get about eight eggs a day.

They feed the chickens pawpaw, pigeon pea, six coconuts a day and then let them free range in a fenced area.

## SAUSAMA FARMER SCHOOL

*Kolombangara, Western Province*

Sausama has 46 hens and one rooster. Egg and meat production are high. They recently sold 16 kokorako and 19 ducks. They feed the kokorako sorghum, pigeon pea, fish, food waste and some mung beans. They have noticed chickens stay healthy if they are let out of the house every day. Local farmers come to visit and they have many visitors from outside. A total of 20 youths were trained in 2007 and are about to start an advanced poultry training for youths. They did a trial and found free choice feeding to be better than mixed feeding.

## GWAUNAFIU FARMER SCHOOL

*Central Kwarae, Malaita Province*

The school has 10 hens, 10 chicks and 5 roosters. A total of 8 eggs a day are laid and the school sells chickens.

The kokorako house has 3 rooms and a fenced area. Chickens are fed potato, cassava and sorghum. Birds killing chickens has been a big problem for Levi who looks after the poultry. In May, they trained 20 youths from the young farmer project.



## BURNS CREEK FARMER SCHOOL

*KGA centre, Honiara*

The local kokorako model here at Burns Creek started in 2002. It is a model for rural farmers and people who want to keep local kokorako for kai kai and income. The lokal kokorako live free-range in the village.

Burns Creek produced 245 eggs in January and 409 eggs in February from layers that are being fed a mix of commercial and local kai kai.

There are only 7 hens and 2 rooster of local kokorako - over 30 were given to the SICHE testing facility for the feed trials.

Scaly leg has been a problem and 10 chicks died from Fowl Pox. They are doing a trial on full commercial and mixed local and commercial feed. Many people have visited so far this year for training.

## TURUSUALA POULTRY WORKSHOP

*Report from Joseph Waha'aniu, DAL Scientist*

Between 21 and 25 May 2007, a workshop was held for farmers and students of the Guadalcanal weather coast community based training centre. The tour was the first planned for each farmer school to help them develop their village chicken model units both for training, research and production. There were 20 participants, 17 students from the training centre and 3 farmers.

The training covered:

- feeding kokorako - including the food groups, methods and calculating feed needs
- housing - site selection, systems, plans and space requirements
- record keeping.

Would you like a improved management of local kokorako workshop in your area? Do you have 20 or more interested and active local kokorako farmers? If you do, contact Thecla at KGA to request a workshop.

### TRAINING IN ORGANIC FARMING AND KOKORAKO KEEPING

Trainee attachments to Kastom Gaden Association in Honiara and at other farmer schools.

Fee: \$600 for three months

**Sponsorships available** from ACIAR and EU Microprojects.

Contact Thecla Limai : PO Box 742 Honiara  
theclav@kastomgaden.org



Kastom Gaden  
recommends improved

# DISASTER RESPONSE

Following the earthquake and tsunami that devastated parts of Western Province and the Ghizo area, a Kastom Gaden Association team carried out a rapid assessment of the agriculture impacts.

As well as the tsunami, earthquakes caused landslides which have damaged bush gardens or made access to them more difficult.

Generally, the production of staple foods remains unaffected but the distribution of emergency rice supplies is no longer required. If continued, it could reduce the capacity for self-reliance among village communities by delaying a return to garden agriculture. An indication that emergency rice is not now needed is the fact that households have not resorted to the use of emergency foods such as kakake or wild yams.

Many small coastal gardens were destroyed, however they are not critical for food supply as the bulk of staples is remains available from bush gardens. There may be some vulnerable individual households, however.

Assistance in the rebuilding of food gardens would be better served through the supply of open pollinated seed and vegetative planting material such as root crops and bananas.

Coconut plantations have not been significantly affected but copra driers and sheds have been damaged or destroyed

Sago palm and bush materials are generally still available but supply may fall short due to the scale of rebuilding of tsunami damaged houses.

Restoring the population of food animals was noted as a priority. Around 50 to 75 per cent of poultry have been lost and 25 to 50 per cent of pigs.

There is a shortage of garden tools and assistance would now be best directed to



the supply of shelter, water/containers, basic household goods, clothing, kerosene and lamps, tools, canoes for fishing and to access bush gardens, rather than food.

*Sore is one of PMN member affected by earthquake and Tsunami (sasamunga Village)*

## Proposed long term actions

- ⊙ technical training in sloping land agriculture (on Rannonga in particular) to stabilize soil erosion and reduce the risk of landslide
- ⊙ supply of materials for planting of food security crops at household level – eg. wild yam blocks, kakake, etc
- ⊙ improved land use management and planning to reduce disaster risk
- ⊙ strengthening of community organisations and networks to assist in future disasters
- ⊙ improved radio, email station and mobile phone access in rural areas
- ⊙ education about earthquakes and tsunamis
- ⊙ replanting of coastal trees and mangroves to protect coasts from erosion
- ⊙ build a disaster response capability for the Planting Material Network in the form of improved capacity to rapidly bulk up the supply of open pollinated seed and planting material for distribution to households on short term notice.

Kastom Gaden Association is helping farmers in the tsunami and earthquake affected areas over the coming nine months by distributing open pollinated seeds. PMN members on Malaita and Guadalcanal are producing the seed.

Kastom Gaden is also helping with restoring poultry and pigs as well as fruit and coastal trees. Technical training is to be provided to selected farmers to produce planting materials to share with families who lost their trees and animals in the disaster. The training will involve selection of best cultivars for grafting and selection of village fruit trees.

# HELP SAVE OUR SEEDS

## SEED REQUEST FROM MEMBERS

Mifala lusim samfala sids from sid bank. saposen i member iu garem sid long dis fala variety inside long gaden blo iu plis sendem kam for mifala growmu and sharim round long oloketa farmers moa.

List of seeds that we like back from members if you have them:



- soya beans
- dwarf pepper
- gree long cucumbers
- wema tomato
- zebra beans
- whyles stripe melon
- moszey's beans
- strip long snake bean
- alafua large tomato
- big round luffa
- wema cucumber
- black corn
- jack bean
- long bean - spotted white seed.

*Rita in the seed bank*

## SEED FOR TREE EXCHANGE

We would also like to encourage the involvement of PMN members and farmers to conserve and distribute local and useful trees crops across the Solomons. If you have seeds of local fruit and forest trees and some overseas trees, please contact Rita Amiki or Thecla Limai at the head office in Honiara.

## SEED AVAILABLE NOW FROM PMN

- PMN 1 Ground cover - long Bean brown seed
- PMN 2 Ground cover - long Bean black seed
- PMN 3 Sweet Basil
- PMN 11 Snake Bean
- PMN 17 Lucy Long Bean
- PMN18 Red Corn
- PMN 26 Vudutaru Tomato
- PMN 28 Cow Pea
- PMN 30 Single Yellow Marigold
- PMN 31 Velvet Bean
- PMN 36 Mung Bean
- PMN 38 Stripe Eggplant
- PMN 39 Purple Long Eggplant
- PMN 46 Marigold Double Orange
- PMN 47 Marigold Double Yellow - Panarui
- PMN 67 Rosella Kiris
- PMN 89 Sweet Pepper
- PMN 93 Big Red Pepper Chillie
- PMN 100 White Peanut

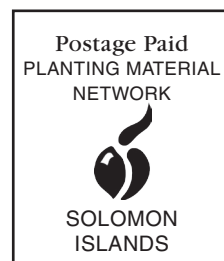
Island Red Tomato, Yellow Corn, Purple Corn, White Corn.



### Planting Material Network (PMN)

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PO Box 742 Honiara Solomon Islands



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Kokorako and attachment enquiries: [theclav@kastomgaden.org](mailto:theclav@kastomgaden.org)