CONTENTS

Executive Message
The I-2 Story
Messages from KYEEMA People
Staff Profile - Dr Mary Young
Consultant Profile - Dr Brigitte Bagnol
Farewell to Jarrah

KYEEMA Projects undertaken in 2011/2012
- AusAID - Regional Newcastle Disease Control Project, Malawi, Mozambique, Tanzania and Zambia
- European Commission - Reduction and Control of Newcastle Disease in Angola
- Strengthening Livelihood Options for Vulnerable Rural Households in Gaza Province, Mozambique
- GALVmed cooperation
- ACIAR Laboratory Manual Update
- FAO Decision Tools for Poultry Development

Stories from the Field
Financial supporters and donations
Annual Audited Accounts 2011/2012
KYEEMA Foundation Policies
KYEEMA Team and Acknowledgements

Cover photograph by Mary Young, KYEEMA Foundation
Left photo by Sally Inglerton 360 Degree Films
THE I-2 STORY

All of the work that is being undertaken on vaccinating village chickens using thermo-tolerant vaccines would not have been possible if it were not for the work of several dedicated people who saw the need for this type of vaccine and worked to ensure it was created and could be made freely available to those governments wishing to use it domestically for non-commercial purposes. Following is the history of the I-2 ND vaccine as written by Professor Peter Spradbrow, the scientist who led the development of the I-2 vaccine.

In 1926 outbreaks of a “new” disease of chickens occurred at Newcastle-upon-Tyne in the UK and in Java in present-day Indonesia. The disease spread rapidly to involve the developing chicken industries in many countries and became known as Newcastle disease.

The Australian story
Newcastle disease also occurred in Australia in the 1930s but was eradicated by the veterinary authorities. The virus, called the Albiston Gorrie strain, was isolated and preserved. This is probably the oldest strain of Newcastle disease virus still available. In Australia Dr (later Sir) Macfarlane Burnet undertook studies on the Albiston Gorrie virus. He showed for the first time that Newcastle disease virus could be cultivated in fertile hen eggs and that the virus present in allantoic fluid could be detected by a simple haemagglutination test. Some sixty years later we still rely on this test in our studies of Newcastle disease virus.

For many decades Australia was presumed to be free of Newcastle disease but in 1966 an unusual strain of Newcastle disease virus was isolated from a local chicken in Brisbane. This virus, strain V4, was less pathogenic than even the mildest vaccine strains used in other countries. Strain V4 was investigated and proved to be a proficient vaccine, eventually going into commercial production for the commercial industry.

Newcastle disease vaccines for village use
Newcastle disease is a problem in village chicken flocks and in many developing countries is the greatest impediment to productivity of rural chickens. Newcastle disease outbreaks can occur at any time of year but frequently peak during the dry season and devastate flocks, killing between 50 to 100 percent of the flock. However, there has been no tradition of vaccination in village chickens and sophisticated vaccines found little use in village flocks, which are small, multi-aged and scattered. The chickens range freely during the day and are not always confined at night. Cold chains are rarely available. Commercial packaging makes the vaccine quantities too large for village flocks and too expensive for village farmers. Governments have been unwilling to use foreign exchange to import vaccines.

Also the culture of village chicken production has not been conducive to vaccination. The owners of the chickens are usually village women, already overworked and often illiterate, who are largely neglected by government agencies. Extension workers tended to focus on large animals and the men who manage them.

EXECUTIVE MESSAGE

It gives me great pleasure to thank all our staff, volunteers, associates and stakeholders for the support, cooperation and dedication they have shown over the past year to further raise the profile and success of KYEEMA Foundation and its subsidiaries.

We have witnessed that our achievements this year have been well received in many countries and with many donors, in providing improved livelihoods to very poor rural families. In particular our EU project in Angola for the European Commission and our AusAID project in Mozambique, Malawi, Tanzania and Zambia have continued the focus of the International Rural Poultry Centre of KYEEMA Foundation to assist National Veterinary Laboratories to produce I-2 vaccine and to support the set-up of supply chains to get the vaccine into the field where community vaccinators are trained in use of the vaccine.

To all our esteemed colleagues, it is with your efforts that we expand provision of our services to developing countries and we have not been able to excel without the efforts that you relentlessly demonstrate year in year out towards the goals that KYEEMA aspires to.

Let us proceed with excellence in everything we do today, and in coming years in line with the growth and success we have achieved in the past years. Let us continue to grow in delivering the highest standards of service to rural people in many developing countries, allowing them to better support their families nutrition, health and education needs. Together with all our stakeholders we will continue to improve the livelihoods of these people.

In 1926 outbreaks of a “new” disease of chickens occurred at Newcastle-upon-Tyne in the UK and in Java in present-day Indonesia. The disease spread rapidly to involve the developing chicken industries in many countries and became known as Newcastle disease.

The Australian story
Newcastle disease also occurred in Australia in the 1930s but was eradicated by the veterinary authorities. The virus, called the Albiston Gorrie strain, was isolated and preserved. This is probably the oldest strain of Newcastle disease virus still available. In Australia Dr (later Sir) Macfarlane Burnet undertook studies on the Albiston Gorrie virus. He showed for the first time that Newcastle disease virus could be cultivated in fertile hen eggs and that the virus present in allantoic fluid could be detected by a simple haemagglutination test. Some sixty years later we still rely on this test in our studies of Newcastle disease virus.

For many decades Australia was presumed to be free of Newcastle disease but in 1966 an unusual strain of Newcastle disease virus was isolated from a local chicken in Brisbane. This virus, strain V4, was less pathogenic than even the mildest vaccine strains used in other countries. Strain V4 was investigated and proved to be a proficient vaccine, eventually going into commercial production for the commercial industry.

Newcastle disease vaccines for village use
Newcastle disease is a problem in village chicken flocks and in many developing countries is the greatest impediment to productivity of rural chickens. Newcastle disease outbreaks can occur at any time of year but frequently peak during the dry season and devastate flocks, killing between 50 to 100 percent of the flock. However, there has been no tradition of vaccination in village chickens and sophisticated vaccines found little use in village flocks, which are small, multi-aged and scattered. The chickens range freely during the day and are not always confined at night. Cold chains are rarely available. Commercial packaging makes the vaccine quantities too large for village flocks and too expensive for village farmers. Governments have been unwilling to use foreign exchange to import vaccines.

Also the culture of village chicken production has not been conducive to vaccination. The owners of the chickens are usually village women, already overworked and often illiterate, who are largely neglected by government agencies. Extension workers tended to focus on large animals and the men who manage them.
The initial ACIAR projects

In 1984 the problem of Newcastle disease in village flocks came to the notice of the Australian Centre for International Agricultural Research (ACIAR). They saw the need for a new vaccine appropriate for the task, rather than trying to utilise the existing commercial vaccines with the deficiencies noted above. The concept for the initial ACIAR projects arose from discussions between Dr John Copland of ACIAR and Professor Latif Ibrahim from the new veterinary faculty in the Universiti Pertanian Malaysia. Prof. Spradbrow became involved because of previous collaborative work with the Malaysian group on V4 vaccine. Following successful laboratory and field trials, ACIAR with support from then ADAB (now AusAID) undertook a regional approach with confirmatory studies in Indonesia, Philippines, Thailand and Sri Lanka.

In the initial trials, V4 vaccine was presented to chickens on food. This was a concession to the lack of physical control over the chickens at the time. Eye drop vaccination has proved more effective and is now the preferred method for application method.

When V4 became a commercial vaccine, a new vaccine strain was required for village use to avoid legal complications. ACIAR sponsored the development at the University of Queensland of a new vaccine master seed. Prof. Spradbrow and his team looked at a collection of 45 contemporary Australian isolates but found none to cause disease in chickens (Spradbrow et.al., 1995). These 45 isolates contained the strain now known as I-2, an avirulent virus that had properties, including heat resistance, similar to V4. The master seed, controlled by ACIAR and held at the University of Queensland, is made available without cost to developing countries who wish to produce it.

Tests with the heat resistant vaccines V4 and I-2 have been undertaken in many countries in Asia and Africa. Some of the countries have adopted one or other of these vaccines and produced them on a large scale for vaccination of village flocks.

Networks and training

Agencies other than ACIAR have become involved in the projects, supporting vaccine activities in country or training projects at home or in Australia. The Australian Agency for International Development (AusAID) funded the Southern Africa Newcastle Disease Control project which ran from June 2002 to November 2005 in Mozambique, Malawi and Tanzania. FAO, EC, UNHCR, World Bank, IAEA and many NGOs have supported projects leading to improved control of Newcastle disease.

Vaccine production and testing was only the foundation for the successful projects. Sustainable vaccination campaigns have required vaccine production in-country and this depended on appropriate training at international workshops or at the University of Queensland. Also essential to the success of projects has been the development of new extension materials and activities. These have targeted all the stakeholders - the women who are the traditional keepers of village chickens, the people who will do the vaccinations, and all the levels of bureaucracy where pertinent decisions are made.

I-2 master seed has gone from the University of Queensland to many countries in Asia and Africa, with a number of countries now regularly producing this vaccine for sale to village farmers. Many more countries are trialling the vaccine, with the aim of larger scale use for village farmers. The impact on livelihoods for poor rural female and child-headed households has been significant, and is the reason why KYEEMA Foundation’s work with the I-2 vaccine continues.

P. B. Spradbrow
Professor Emeritus, Formerly of John Francis Virology Laboratory
Department of Veterinary Pathology
School of Veterinary Science
University of Queensland, Brisbane, Australia

NB. The full article is contained on the KYEEMA Foundation website in Newsletter 12:
http://www.kyeemafoundation.org/content/userFiles/file/news/12eNews_fan2009.pdf

Photo: Mary Young, KYEEMA Foundation
I have worked as a consultant with KYEEMA since its inception, convinced that our work with village poultry can make a difference to individuals and communities. I am now working full-time with KYEEMA in Brisbane, providing technical support to all our projects.

On a recent visit to Tanzania I had the opportunity to listen to people in villages where Newcastle disease control is now routine. One of the women told me:

"In the past it was common to see children in this area with swollen bellies. Through this and the government programme there is increased consumption of egg and others without eggs are prepared to buy eggs. It is very rare to see a malnourished child in the village now."

Our work really has made a difference!

I have a PhD in anthropology and lived in Mozambique for many years. I have been an independent consultant since 1994, working in Mozambique, South Africa, Tanzania, Zambia, Malawi, Angola, DRC, Eritrea, Laos, Indonesia and Vietnam and have provided training, designed and evaluated many projects and conducted research on many activities over this time.

In 1999, I was requested by the Australian Centre for International Agricultural Research to do the evaluation of the first Newcastle disease vaccination campaigns carried out in Gaza Province with the I-2 vaccine whose production had recently started in Mozambique at the National Veterinary Research Institute. The evaluation blew my mind. After years of experience working in development interventions I had never seen such a straightforward and cost-effective intervention. Farmers were satisfied; women in particular were happy. One woman told me:

"The chickens are like a husband for me, with chickens I can get food and clothes".

I understood that Newcastle disease control was making a difference for poor female farmers. I realized that a chicken represented the smallest bank available, the bank of the poor in contrast to cattle so common in Southern Mozambique. It was necessary to promote a radical change in paradigm among development stakeholders, to shift the attention from cattle to chickens. I became a strong supporter of village chickens and vaccination campaigns against Newcastle disease, not only as a means to empower women, but also to promote food sovereignty.

Since then I have been active with KYEEMA as a medical anthropologist dealing with issues related to rural development, monitoring and evaluation, participatory methods (Participatory Rural Appraisal, Participatory Impact Assessment), communication, One Health and gender, specifically in the context of Newcastle disease control and highly pathogenic avian influenza (HPAI). I think that the genuine belief that we can make a difference through supporting village chickens is a strong characteristic of KYEEMA’s work.
In February this year we learned of the tragic death of Jarrah in Namibia.

Following her graduation from the School of Veterinary Science, The University of Queensland, in 2008, Jarrah worked as a clinical veterinarian in Brisbane. In 2010, having developed an interest in research, she applied for a 12 month volunteer assignment with the Australian Youth Ambassadors for Development (AYAD) program in Kenya, Africa. Jarrah’s Host Organisation for the assignment was the International Livestock Research Institute (ILRI) in Nairobi where she made valuable contributions to a World Bank zoonotic disease project, an impact assessment on the World Bank Avian Influenza project in Nigeria and a study on disease interaction between wildlife and livestock in Kenya. She also undertook a major study on understanding adoption of vaccines by small-holder farmers, using control of Newcastle disease in Kenya and Tanzania as case studies.

The impact and calibre of Jarrah’s work with AYAD was reflected in her being accepted for an additional twelve month volunteer assignment at ILRI as a volunteer with the Australian Volunteers for International Development (AVID) program. She was looking forward to continuing her work and using the findings of the study to identify and implement appropriate strategies which could be used to improve vaccine adoption.
REGIONAL NEWCASTLE DISEASE CONTROL PROJECT, MALAWI, MOZAMBIQUE, TANZANIA AND ZAMBIA

The project is being implemented in Malawi, Mozambique, Tanzania and Zambia and aims to strengthen the capability of, and relationship between, stakeholders in order to successfully implement Newcastle disease control programs and achieve a decrease in chicken mortality rates caused by Newcastle disease in project areas. Through these activities village poultry production will be increased and this will contribute to food security and poverty alleviation of the population in project areas. KYEEMA staff have been involved with this program since 2002. Phase 2 has been operating since 2009 and will continue through till 2013. Phase 3 commenced in July 2012 as a one-year design phase for a collaborative program with the African Union.

Project Partners
The Ministry of Agriculture /Livestock Development and Fisheries in Malawi, Mozambique, Tanzania and Zambia; the Central Veterinary Laboratories in Malawi and Tanzania; the Central Veterinary Research Institute in Zambia and the Directorate of Animal Science of the Mozambican Agricultural Research Institute.

Funding source
The Australian Agency for International Development (AusAID)

Project activities have contributed to a more robust approach to addressing Newcastle disease control by supporting I-2 vaccine production and human resource development at the central veterinary laboratories, raising awareness of Newcastle disease control and implementation of regular vaccination campaigns in the four countries involved.

Training was a major focus of the project this year. Key staff from partner laboratories participated in a training programme on laboratory quality assurance, laboratory biosafety, classical and molecular techniques for the diagnosis of Newcastle disease at IZSVC, Italy and a Training Workshop on Newcastle disease and Vaccine Quality Control at the Pan-African Veterinary Vaccine Centre of the African Union, Debre Zeit, Ethiopia. Training of government livestock and extension officers in Newcastle disease control and improved poultry husbandry, vaccine handling and cold chain continued. During this year the project trained 144 new extension and livestock officers, and community vaccinators.

Major activities implemented during this period included the mid-term review; annual data collection survey and Participatory Rural Appraisal; statistical analysis of survey data; reviews of actual cost of vaccine production, quality assurance and distribution and the cost of vaccination per bird; distribution of extension materials (in national language) and broadcast of radio spots on district and local networks.

In Tanzania, Malawi and Mozambique there is a significant increase in participation in vaccination campaigns and, in general, an increase in the flock size and percentage of households owning chickens. Farmers reported fewer deaths in chickens since vaccination and Newcastle disease is no longer identified as the main cause of death. In Zambia the laboratory trials on vaccine have been completed and vaccine has been prepared for the field trials. The cost of vaccine production and distribution was estimated. Community vaccinators and community leaders were trained in Newcastle disease control in preparation for the field trial.

STRENGTHENING LIVELIHOOD OPTIONS FOR VULNERABLE RURAL HOUSEHOLDS IN GAZA PROVINCE, MOZAMBIQUE

This project commenced in February 2010 and concluded in September 2011. The main aim of the project was to contribute to food security and poverty alleviation through the improvement of poultry husbandry practices and the control of Newcastle disease in village chickens.

Partner
Ministry of Agriculture (particularly the District Services of Economic Activities, Provincial Livestock Services of Gaza Province, Animal Science Directorate of the Mozambican Agricultural Research Institute, and Provincial Department of Agriculture), Institute of National Disaster Management in Mozambique.

Funding Source
Save the Children (funded by the European Commission).

This project aimed to strengthen the capacity of Ministry extension and district staff who are fundamental to the implementation of a sustainable Newcastle disease control program. The project provided training of trainers workshops for Ministry staff to equip them with up-to-date knowledge and resource materials, thereby enabling them to train community vaccinators and support vaccination campaigns more effectively.

At a more strategic level the International Rural Poultry Centre (IPRC) of the KYEEMA Foundation focused on improving the coordination of activities from vaccine production, vaccine distribution, vaccination campaigns to the collection and reporting of vaccination data.

A range of activities were implemented during the project including cold chain analysis and training, development of extension materials, initial training and refresher training of community vaccinators and extension officers, and community awareness raising activities. Four vaccination campaigns were conducted during the project period.

The project fostered community involvement and ownership by sensitising communities and community leaders to the importance of village poultry as an asset to income generation. Project awareness campaigns were conducted throughout the project and during the participatory rural appraisal, vaccination campaigns, and the trainings. To improve communication practices, extension materials were printed and distributed and a radio program was broadcast promoting the Newcastle disease vaccination campaigns. With additional funding the project took a complementary approach at village level to communicate with the rural population using theatre performances, sports competitions and workshops in primary and secondary schools.

The project had a significant influence in development of a more robust approach to addressing Newcastle disease by emphasising project awareness, raising awareness of Newcastle disease control, and the implementation of regular vaccination campaigns in participating villages.

REDUCTION AND CONTROL OF NEWCASTLE DISEASE IN ANGOLA

This project commenced in November 2009 and officially ended on 17 May 2012. The program was based in Lubango in the south of Angola and worked directly with the Angolan Veterinary Services Institute of the Ministry of Agriculture and Rural Development. The main objective was to set up a program to reduce and control outbreaks of Newcastle disease, which is a major concern for disadvantaged rural communities in Angola. This entailed working with the Veterinary Services Institute and the Veterinary Investigation Institute to implement an efficient I-2 vaccine and set up vaccine laboratory and field trials.

Partner
Angola Veterinary Services Institute of the Ministry of Agriculture and Rural Development.

Funding source
The European Commission.

Robyn Alders joined the project in Angola as Team Leader in July 2011. The Angola Minister of Agriculture, Rural Development and Fisheries inaugurated the laboratory on 3 May 2012. This year tenders were launched according to EU guidelines for the purchase of additional laboratory equipment, consumables and the rehabilitation of the laboratory electrical system and the cool room. The importation of equipment and reagents has taken longer than expected and the final phase of the process was completed by the Veterinary Services Institute. The company which supplied the equipment will install the equipment in Lubango and provide training on its use before the end of August 2012 using funds provided by the EU project.

Training of laboratory personnel in the production and quality control of the I-2 vaccine was ongoing throughout the year and ground work was initiated to establish twinning activities between the vaccine production laboratories in Angola and Mozambique. Although the project officially ended on 17 May 2012, ongoing twinning support of activities by staff of the Directorate of Animal Science of the Mozambican Agricultural Research Institute continues with funding from AusAID.
ACIAR LABORATORY MANUAL UPDATE

SUCCESSFUL AND SUSTAINABLE CONTROL OF NEWCASTLE DISEASE IN VILLAGE CHICKENS IS ACHIEVED THROUGH VACCINATION AND DEPENDS ON A RELIABLE, READILY AVAILABLE AND AFFORDABLE SUPPLY OF VACCINE SUITTED TO THE NEEDS OF VILLAGE CHICKEN OWNERS.

Local production of I-2 Newcastle disease vaccine and its use in Newcastle disease control programs is ongoing in a number of countries and has resulted in improved chicken production and improvements in the living conditions of many vulnerable rural families in developing countries.

“Controlling Newcastle disease in village chickens: a laboratory manual” was published in 2002 and has been used successfully in many African and Asian countries that both produce and use I-2 Newcastle disease vaccine. The manual is recognised as a valuable resource of information for laboratory personnel and has formed the basis of practical training workshops for scientists and technicians in vaccine-producing laboratories in Africa and Asia. This increased capacity allows countries to control the quality of both locally produced and imported vaccines, and ensure effective vaccine delivery in areas where cold chains are unreliable.

This year, KYEEMA received funding from ACIAR to update the manual due to increasing interest in local production of Newcastle disease vaccine, particularly I-2. The second edition has also been translated into French and this will ensure that this information is readily accessible to francophone countries in the region. This manual and its companion volumes contribute significantly by enhancing local capacity to control Newcastle disease and improve village chicken production leading to better nutritional, livelihood and environmental outcomes for those living in poverty.

The Decision Tools for Family Poultry Development (DTFPD) aims to help government, NGOs, grassroots organizations and project design personnel with decisions about if and how to plan and implement family poultry programs. It provides a range of information and good practices available on different types and flock sizes of family poultry to assist with the development of appropriate interventions. It will help project designers to build on what has been demonstrated to work at the field level. The Toolkit aims to develop awareness among government, NGO and service personnel about the potential of family poultry in contributing to family incomes, food security and poverty alleviation. It will provide a range of information available on family poultry to assist with the development of appropriate interventions. The KYEEMA Foundation is responsible for managing activities under this project.

It also allows livestock scientists, socio-economists, political office holders, donor administrators and project officers to benefit from field experiences and use the information available to give them the best chance of developing projects appropriate for local conditions.

Funding Source

The Food and Agriculture Organisation (FAO), with primary funding from the International Fund for Agricultural Development (IFAD).

Partners

A range of international poultry experts are contributing chapters for the toolkit. The DTFPD will assist project designers to:

• Have a practical understanding of family poultry production systems and the inputs required as well as the expected outputs;
• Define the objectives of a family poultry project and its criteria for success;
• Conduct an initial situation assessment to determine if a family poultry project is an appropriate option under the prevailing local conditions;
• Determine which interventions are most appropriate in each situation;
• Consider what timeframe would be appropriate to support the implementation of a family poultry production program that has a chance of being sustainable; and
• Formulate robust but cost-efficient participatory monitoring and evaluation.

The DTFPD will be linked to technical manuals and other media from organizations that have successful experiences in the implementation of family poultry projects and programs.

Our work with GALVmed (Global Alliance for Livestock Veterinary Medicine), a UK-based animal health charity, supporting I-2 Newcastle disease vaccine related activities in Africa, continued this year.

KYEEMA was contracted to conduct a Laboratory Workshop on I-2 ND Vaccine Production and Quality Control at the Accra Veterinary Laboratory in Accra, Ghana in October 2011. Five staff members from the Accra laboratory and three from Laboatoire Veterinaire Central Kinshasa, DRC participated. The workshop activities were designed to increase the participants’ understanding of the techniques involved in I-2 vaccine production, testing and distribution; to assist the participants to develop the practical skills needed in vaccine production and testing, and increase awareness of the principles of good laboratory practice, particularly as they apply to vaccine manufacture.

KYEEMA was also contracted to conduct cold chain training for veterinary service providers and Training of Trainers for Ward Facilitators from the Newcastle disease pilot project area in Tanzania. 19 service providers participated in the training on cold chain equipment, vaccine storage, transport, cold chain monitoring and record keeping, cold chain maintenance and risk management. 33 Ward Facilitators attended training on improved poultry management and more specialised training in Newcastle disease control using the thermotolerant I-2 vaccine. Topics discussed included strategies for successful implementation of Newcastle disease vaccination campaigns in rural areas, training of community vaccinators, general husbandry and management of village chickens and formation of Farmer's groups, and marketing of poultry. The training was conducted by KYEEMA’s Master Trainers from the Central Veterinary Laboratory in Tanzania.

KYEEMA’s Master Trainers conducted a similar program for ten Agricultural Technical Officers in Lesotho. The training focused on the use of freeze-dried I-2 ND vaccine applied via eye drop, aspects of village chicken husbandry practices and the cold chain. This was followed by training of forty Community Vaccinators in important aspects of poultry management and more specialised training in Newcastle disease control using the freeze-dried thermotolerant I-2 vaccine.

KYEEMA was also contracted to carry out an assessment of the Central Biological Production Laboratory in Kathmandu Nepal and participated in a Cold Chain Refresher Workshop at a Newcastle disease pilot project area in Nepal. Retailers/ Distributors of veterinary inputs, Community Facilitators, Community Animal Health Workers, Veterinary Experts, and the NGO implementing the project in the project area participated. The important features of the cold chain, cold chain management and vaccine handling were discussed.

GALVMED COOPERATION

The Decision Tools for Family Poultry Development (DTFPD)
Mr Madai is from Unjangwe village in Singida, Tanzania. Around 10 years ago he began to keep poultry but generally kept only a few birds since they would inevitably die of ND around September or October every year. Before the Regional ND control project started, vaccination against ND was haphazard, so there was really nothing that could be done to control ND. When the system of organised vaccination campaigns and community vaccinators was introduced, he was among the first to accept it and has seen the benefits.

Before the project Mr Madai had five chickens. Now he has 150! None of his birds have died of ND since the project started. A major part of his income is from egg sales; generally he sells no fewer than 30 eggs per day (@ TZS 250 per egg).

Mr Madai is a progressive farmer and received training on improved poultry husbandry from the project, together with the Community Vaccinators. The training included preparing supplementary feed for the chickens, based on locally available ingredients such as bulrush millet, a major crop in the area. Mostly Mr Madai’s chickens scavenge for their food but he provides some supplementary feed prepared according to project training and also ‘grows’ termites to feed his birds.

Together with ten of his neighbours (four women and six men) he has formed a small group, each raising 50 to 100 birds to produce eggs. The group is well organised with a Chairperson, Secretary and Treasurer. All group members are doing well.

One of the benefits of being in a group is that buyers are attracted to the village to buy eggs (used mainly for hatching) and the group get a better price for their eggs. They normally also sell a lot of chickens but are now organising for sales in December when the price is high due to festivals.

Mr Madai and his neighbours are extremely thankful for the project – they remember the effects of ND from before the project and now realise the great benefits of vaccination. With vaccination, they are assured that the birds will survive and can now decide when to sell “We sell chickens and eggs when we want to!”

Mr Madai sells eggs from his small village shop.
Grm International has been supporting KYEEMA since its inception, through the provision of office space and administrative and financial support. This valuable support has allowed KYEEMA to establish and expand its work around the world. In addition the GRM “Communities First Fund” and staff personally have made important financial contributions to KYEEMA field project activities since its inception.

We would also like to thank our key donor, AusAID for continued support to ND control activities in Southern Africa.

ACIAR has continued to support us through the provision of ND publications for Laboratory and Field activities. The University of Queensland Veterinary School maintains and continues to provide free of charge the I-2 ND master seed.

Other donors who have supported KYEEMA in this past year and who we would like to thank include the European Commission, Food and Agriculture Organization, International Fund for Agricultural Development and Save the Children Mozambique.

A full set of accounts is available on request.

### ANNUAL AUDITED ACCOUNTS 2011/2012

#### Income Statement for the Year Ended 30 June 2012

<table>
<thead>
<tr>
<th>2012</th>
<th>$</th>
<th>2011</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>1,761,193</td>
<td>1,798,391</td>
<td></td>
</tr>
<tr>
<td>Gain/(loss) on exchange differences</td>
<td>(48,521)</td>
<td>(216,336)</td>
<td></td>
</tr>
<tr>
<td>Employee benefits expense</td>
<td>(654,117)</td>
<td>(794,120)</td>
<td>Cash and cash equivalents</td>
</tr>
<tr>
<td>Laboratory supplies and equipment</td>
<td>(322,882)</td>
<td>(70,670)</td>
<td>Trade and other receivables</td>
</tr>
<tr>
<td>Consulting expenses</td>
<td>(304,337)</td>
<td>(106,076)</td>
<td>TOTAL CURRENT ASSETS</td>
</tr>
<tr>
<td>Total expenses</td>
<td>(1,498,028)</td>
<td>(159,670)</td>
<td>CURRENT ASSETS</td>
</tr>
<tr>
<td>Training expenses</td>
<td>(43,786)</td>
<td>(74,603)</td>
<td>Property, plant and equipment</td>
</tr>
<tr>
<td>Vehicle expenses</td>
<td>(37,187)</td>
<td>(76,158)</td>
<td>TOTAL NON CURRENT ASSETS</td>
</tr>
<tr>
<td>Project expenses</td>
<td>(39,152)</td>
<td>(1,270)</td>
<td>TOTAL LIABILITIES</td>
</tr>
<tr>
<td>Depreciation and amortisation expense</td>
<td>(4,408)</td>
<td>(7,005)</td>
<td>LIABILITIES</td>
</tr>
<tr>
<td>Other expenses</td>
<td>(336,333)</td>
<td>(337,363)</td>
<td></td>
</tr>
<tr>
<td>Profit before income tax</td>
<td>(17,058)</td>
<td>54,631</td>
<td>TRADE AND OTHER PAYABLES</td>
</tr>
<tr>
<td>Income tax expense</td>
<td>-</td>
<td>-</td>
<td>SHORT TERM PROVISIONS</td>
</tr>
<tr>
<td>Profit from continuing operations</td>
<td>(17,058)</td>
<td>54,631</td>
<td>OTHER LIABILITIES</td>
</tr>
<tr>
<td>Profit for the year</td>
<td>(17,058)</td>
<td>54,631</td>
<td>TOTAL CURRENT LIABILITIES</td>
</tr>
<tr>
<td>Other comprehensive income:</td>
<td></td>
<td></td>
<td>NON CURRENT LIABILITIES</td>
</tr>
<tr>
<td>Net gain on revaluation of land and buildings</td>
<td>-</td>
<td>-</td>
<td>TRADE AND OTHER PAYABLES</td>
</tr>
<tr>
<td>Other comprehensive income for the year</td>
<td>(17,058)</td>
<td>54,631</td>
<td>TOTAL LIABILITIES</td>
</tr>
<tr>
<td>Total comprehensive income for the year</td>
<td>(17,058)</td>
<td>54,631</td>
<td>NET ASSETS</td>
</tr>
<tr>
<td>Retained earnings</td>
<td>(40,571)</td>
<td>59,128</td>
<td>EQUITY</td>
</tr>
</tbody>
</table>

#### Statement of Financial Position as at 30 June 2012

<table>
<thead>
<tr>
<th>2012</th>
<th>$</th>
<th>2011</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASSETS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CURRENT ASSETS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>1,931,277</td>
<td>771,379</td>
<td></td>
</tr>
<tr>
<td>Trade and other receivables</td>
<td>-</td>
<td>131,311</td>
<td></td>
</tr>
<tr>
<td>TOTAL CURRENT ASSETS</td>
<td>1,931,277</td>
<td>906,710</td>
<td></td>
</tr>
<tr>
<td>NON CURRENT ASSETS</td>
<td>1,931,277</td>
<td>771,379</td>
<td></td>
</tr>
<tr>
<td>Property, plant and equipment</td>
<td>5,824</td>
<td>10,232</td>
<td></td>
</tr>
<tr>
<td>TOTAL NON CURRENT ASSETS</td>
<td>5,824</td>
<td>10,232</td>
<td></td>
</tr>
<tr>
<td>TOTAL ASSETS</td>
<td>1,937,101</td>
<td>916,942</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2012</th>
<th>$</th>
<th>2011</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIABILITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRADE AND OTHER PAYABLES</td>
<td>62,571</td>
<td>254,815</td>
<td></td>
</tr>
<tr>
<td>SHORT TERM PROVISIONS</td>
<td>1,830,201</td>
<td>707,633</td>
<td></td>
</tr>
<tr>
<td>OTHER LIABILITIES</td>
<td>1,830,201</td>
<td>397,633</td>
<td></td>
</tr>
<tr>
<td>TOTAL CURRENT LIABILITIES</td>
<td>1,895,530</td>
<td>857,814</td>
<td></td>
</tr>
<tr>
<td>NON CURRENT LIABILITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRADE AND OTHER PAYABLES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TOTAL LIABILITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NET ASSETS</td>
<td>40,571</td>
<td>59,128</td>
<td></td>
</tr>
<tr>
<td>EQUITY</td>
<td>40,571</td>
<td>59,128</td>
<td></td>
</tr>
</tbody>
</table>

#### Statement of Changes in Equity for the Year Ended 30 June 2012

<table>
<thead>
<tr>
<th>2012</th>
<th>$</th>
<th>2011</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retained Earnings</td>
<td>40,571</td>
<td>59,128</td>
<td></td>
</tr>
</tbody>
</table>

#### Statement of Cash Flows for the Year Ended 30 June 2012

<table>
<thead>
<tr>
<th>2010</th>
<th>$</th>
<th>2009</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH FLOWS FROM OPERATING ACTIVITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receipts from customers</td>
<td>3,072,711</td>
<td>1,072,637</td>
<td></td>
</tr>
<tr>
<td>Payments to suppliers and employees</td>
<td>(1,915,711)</td>
<td>(1,568,314)</td>
<td></td>
</tr>
<tr>
<td>Net cash provided by (used in) operating activities</td>
<td>1,157,000</td>
<td>493,323</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2010</th>
<th>$</th>
<th>2009</th>
<th>$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CASH FLOWS FROM INVESTING ACTIVITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase of property, plant and equipment</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Net cash used by investing activities</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>CASH FLOWS FROM FINANCING ACTIVITIES</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proceeds from borrowings</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Net cash provided by financing activities</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Net increase (decrease) in cash and cash equivalents 1,157,000 493,323
Cash and cash equivalents at beginning of year 771,379 771,379
Cash and cash equivalents at end of financial year 1,931,277 1,931,277
The vision, purpose and values of KYEEMA Foundation are described in the Constitution and are rigorously upheld. KYEEMA is primarily involved in scientific and educational developmental activities. KYEEMA is not involved in any non-developmental activity.

KYEEMA is apolitical and does not support any religious views or groups, which is stated in the KYEEMA Constitution and is evident in our Annual Reports and website.

KYEEMA is known in Africa for its primary focus on helping to make improved smallholder rural poultry production accessible to all members of poorer communities, primarily through the promotion of ND vaccination campaigns. KYEEMA's interest and capacity are communicated by Newsletters, Annual and Project Reports and the KYEEMA website.

KYEEMA's overall approach is consistent with building up strong mutual respect, transparency, honesty, openness and a two-way learning, communication and support relationship that reinforces the development outcomes and accountability with all our partners. KYEEMA has gained a good reputation for total inclusiveness and the development of open and strong relationships with rural communities and local and national governments in countries where it is working. Our theme is local community partnership and action with KYEEMA providing the catalyst for development as our fundamental approach.

KYEEMA recognises the importance of environmental sustainability. KYEEMA projects build on existing natural resources and KYEEMA is not involved in activities like forestry or fisheries exploitation.

KYEEMA ensures that internationally recognised human rights principles are adhered to in the overall conduct of all KYEEMA activities in the field and throughout the organisation. KYEEMA endorses the principles of child protection and addresses this important issue in their Child Protection Policy. KYEEMA only recruits people who have the appropriate skills and does not discriminate against anyone internationally or in Australia.

KYEEMA places a major emphasis on the rights of vulnerable and marginalised people. This is a major theme and objective as outlined in the Constitution. The past history of KYEEMA activities has focused on smallholder village poultry production systems in Mozambique, Tanzania, Malawi, Zambia and Angola. Mozambique and Angola have suffered major conflicts which have resulted in marginalised families with women and sometimes children heads of household who have been a focus for KYEEMA.

KYEEMA recognises the importance of its Annual Report as an accountable document to stakeholders and donors. KYEEMA currently circulates the Annual Report to Stakeholders. Details of KYEEMA Foundation policies on child protection, non-government activities and complaints are listed on the KYEEMA website: www.kyeemafoundation.org
KYEEMA TEAM AND ACKNOWLEDGEMENTS

Australia
Dr Mary Young - Senior Technical Manager
Celia Grenning - Executive Secretary
Winky Sham - Finance Officer

Mozambique
Dr Judite Monteiro Braga – Country Coordinator
Dr Rosa Costa, Manager - Project Manager; AusAID Phase 2 Regional ND Control Project
Dr Ana Zandamela – Veterinary Project Coordinator
Virginia Licula - Administration and Finance Officer
Odete Sambo - Administration and Finance Manager
Ana Iza Machengo – Mozambique Scholarships Assistant
Armando Romão - Logistics Officer, translator and driver

Angola
Dr Robyn Alders - Team Leader, from April 2011
José Avelino dos Santos - Technical Facilitator
Maria Helena Kritinas - Finance and Administration Officer
Pedro Sozinho Joaquim - Driver
Dr. Josefina Coucelo – Consultant from April 2011

Tanzania
Dr Halifa Mussa Msami - Country Coordinator

Malawi
Mr Richard Mgomezulu - Country Coordinator

Zambia
Mr Benjamin Muchanga - Country Coordinator

KYEEMA Foundation Board of Directors
Stewart Routledge - Adviser to the Office of HH The President of the UAE, Consultant to the Abu Dhabi Food Control Authority, Member of Board of Trustees of the University of Wollongong in Dubai and Non-Executive Director of ITC Group - University of Wollongong, Australia.

Dr Robyn Alders - Team Leader, Angola Project and Adjunct Associate Professor, Cummings School of Veterinary Medicine, Tufts University, USA
Dr John Copland - Consultant and former Research Program Manager for ACIAR
Celia Grenning - Senior Manager, GRM International and Voluntary Executive Secretary, KYEEMA Foundation

We would like to also acknowledge the expertise, support and assistance of the following list of hard-working volunteers who have been critical to keeping KYEEMA and its projects operating.

Professor Peter Spradbrow - Technical support
Louise Grayson - Communications support
Dr Joanne Meers – Technical support
Dr Zuhara Bensink – Technical support
Sri Thillailingam – Financial management
Wayne Kendall - Financial management
Bobby Lane - Financial administration
Karen Black - General administration