



NEWSLETTER



Social-Economic Improvement through an Integrated Crops & Livestock System (ICLS) in Rwanda (NICHE/RWA/173).

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Introduction

By Carel Jaspers, Director Q-Point BV



The project "Social-Economic Improvement through an Integrated Crops & Livestock System (ICLS) in Rwanda" (NICHE/RWA/173) started in

March 2013. The pig and poultry sector in Rwanda is very promising and there is need for improvement of these value chains. During the project implementations, staff, teachers and students of the University of Rwanda, consultants, specialists and other stakeholders will inform you on progress and project activities. If any interest in the projects, please inform us, so we can see how we can collaborate to improve the pig and poultry value chain in Rwanda. I hope you enjoy reading.

Carel Jaspers, director Q-Point

Content

• Introduction	1
• Summary of the project	1
• Characterization of pigs and poultry production systems in Rwanda	2
• Bridging the gap between 'theory and practice'	4
• Progress in first project year	4
• Gender mainstreaming	5
• Report on a countrywide survey on pig and poultry production systems in Rwanda	6
• Study on existing poultry production systems in Rwanda	7
• Labour market need assessment training	7
• Rwandan lectors visited The Netherlands	8
• Partners	10
• Requesting organization	10
• Donor	10
• Colophon	10

Summary of the project

By Carel Jaspers, Director Q-Point BV



Livestock production in Rwanda is under developed. The livestock sector is mainly confined to unproductive pastoral cattle systems and small scale dairy production. Poultry production is limited to back yard systems. Pig production is low.

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To contribute to socio-economic development and food security in Rwanda by increasing production and income generating capacity in the animal feed, pig and poultry livestock sectors.

With a rapidly growing population, the demand for meat protein particularly among the emerging middle classes offers

an expanding market opportunity for livestock producers in Rwanda and a means of income generation and poverty reduction for rural families.



Pig production

The project assists UR Nyagatara campus to develop demand driven trainings, extension and research programs in pig

and poultry production. Equiped graduates and demand driven research/extension programs can help develop the pig and poultry sector in Rwanda. Trainings must

also be available to farmers in the form of short courses and extension programmes at village level and targeting women.

Characterization of pigs and poultry production systems in Rwanda

By Venuste Rusharaza, National Consultant supporting project activities



The initial phase of the NICHE/RWA/173 project on "Socio-Economic Improvement through Crop and Livestock Integration Systems (ICLS) in Rwanda" was about carrying out a "Study to characterize the existing pig and poultry production system in Rwanda"

In this study, I in collaboration with Dr. Frans Doorman (Q-Point's Technical Coordinator) provided support to UR Nyagatare campus team for the development and implementation of research tools for the identification of technically and economically feasible pig and poultry production systems.

The field experience and technical advice provided, played a significant role in improving the research skills of UR staff. Such skills included designing and application of research tools, and appreciation of the realities on the ground of pig and poultry producers within the identified predominant pig and poultry production systems.

The results of the survey on the pigs and poultry production sub-sectors of Rwanda classified pig and poultry management into five distinct production systems. The pig production system comprising (i) Low input pig production, synonymously referred to as "Extensive or Free range", and (ii) Semi-intensive pig production systems, whereas, poultry production has three different production systems (i) Low input poultry production, also referred to as "Extensive or Free range", (ii) Intensive

broiler, and (iii) Intensive layer, production systems.

The methodological approach applied includes (i) Extensive desk studies on pig and poultry sub sectors of Rwanda, (ii) Diagnostic survey using a structured questionnaire designed to characterize the five pig and poultry production systems, within the Rwanda farming systems, (iii) Case studies executed on all five production systems, aimed at capturing the detailed socio-economic characteristics of each of the production systems within selected locations, and (iv) Modelling of the five pig and poultry production systems, so as to come up with clear and comparable results that would enable UR Nyagatare campus to give informed recommendations to the pig and poultry farmers of Rwanda.



Poultry production systems in Rwanda are characterized by poor productivity.

Both pig and poultry production systems in Rwanda are characterized by poor productivity as well as low overall

production. The cardinal causes for the poor productivity as revealed by the current research together with previous studies include, but are not limited to (i) Inadequate nutrition, both in terms of quantity and quality, (ii) Poor genetic quality of the pig and poultry breeds reared, especially the indigenous breeds, (iii) High diseases incidences associated with very high mortality rates, and (iv) Undeveloped marketing system.

Some of the more specific findings that characterize the five predominant pig and poultry production systems are highlighted below:

1. Low input pig production system:

- Common pig breeds are (i) Indigenous, (ii) Large White, and (iii) Pietrain;
- Common feeding practice is free scavenging with supplementation (>80%);
- No record keeping;
- Low productivity (litter size < 7 piglets/farrowing, survival rate < 5 weaners/sow), and
- Men with responsibility to manage pigs.



Field survey

2. Semi-intensive pig production system:

- Exotic breeds commonly used, Landrace dominates;
- Non-use of artificial insemination (AI) in pigs, but 81 % would prefer such service if available;
- Commercial pig feeds commonest (66%);
- Mean litter size of 9 piglets/farrowing; weaning rate of 7 weaners/farrowing; weight at slaughter of 78 kg at 9 months of age, and;
- Pig helminthes most prevalent disease, with sporadic incidences of African Swine Fever (ASF), especially in the Southern province.

3. Low input poultry production system:

- Indigenous chickens dominant (>85%);
- Commonest feeding practice is free scavenging (70%);
- Absence of record keeping;
- Diarrhea and ecto-parasites commonest diseases conditions, mostly treated by traditional methods, and;
- Women traditionally with responsibility to manage poultry within Rwandan households.

4. Intensive layer production system:

- Commonest layer hybrids used are Rhode Island Red (RIR), ISA, White Leghorn (WL), and Kruoiler, in that order;
- Commercial layer feeds commonly fed, and mainly purchased from private companies;
- Prevalent disease symptoms (i) diarrheas, (ii) skin diseases, (iii) flue, and (iv) paralysis;
- Routine vaccination program against Marek's disease, Fowl pox, New Castle, and Infectious bronchitis, and;

5. Mean egg production is 5 eggs/hen/week.
Intensive broiler production system:

 - Commonest broiler commercial hybrids reared Cobbs (>85%);
 - Imported broiler DOCs from Uganda (73%);
 - Commercial broiler feeds sourced from private companies;

- Average mortality rate at brooding 12% and <10% from 4 to 8 weeks, and;
- Slaughter at 60 days, average live-weight at slaughter is 2.4 kg, carcass weight of 1.98 kg, dressing percentage, 76%.

Bridging the gap between 'theory and practice'

By Harm Wientjes MSc, Extension and Livestock specialist DLV Dier



Last year in March I've visited Nyagatare to prepare the approach of our Nuffic project together with the team from University of Rwanda Institute

of Livestock. Soon we found that due to the upcoming transition to University of Rwanda, many activities would be 'to be decided on'.



Visit pig sector

Now almost a year later a lot has happened, but also a lot has to happen. In 2013 we visited several stakeholders in the pig & poultry sector, clearly everybody involved is eager to learn and is interested in opportunities to improve their animal production systems.



Visit poultry sector

That is where we can be of assistance. My colleague Tonnie Hilderink visited Nyagatare last autumn to give trainings about primary production systems and also visited several sites. We were impressed by the knowledge level at University of Rwanda Institute of Livestock, but on the other hand we see a gap between 'theory and practice' coming together. Bridging this gap is the main challenge for us !

Progress in first project year

By Carel Jaspers, Director Q-Point BV



The first project year has focused on the identification of suitable poultry and pig production systems for different types of

farms, from small holder farms, especially those managed by women, with limited access to land and capital, to larger commercial production units specializing in either poultry or pig production.

A survey has been conducted to make inventory of existing systems learnt in Rwanda. Also, a study tour to Kenya was organized to get to know Kenyan production systems and the ways in which consortium partner Egerton University handles pig and poultry education, training, research, and outreach to primary producers and other value chain stakeholders.

Capacity building took place in methodology for making inventory of production systems, and in didactical skills and student-centred education. Due to delays in opening a Euro bank account and the thoroughness with which UR has taken on the survey research as well as the restructuring of the Rwanda higher education system, there have been delays in the implementation of various activities originally planned for the first project year.

These activities will be undertaken in the second project year, and will focus on:

- Finalization of the inventory of production systems, and definition of systems to be promoted through UR education, training, research and outreach;
- On the basis of the above, defining the parameters of the training and demonstration facilities to be set up at University of Rwanda, Nyagatare campus;
- Conducting a labour market needs assessment for animal production graduates;
- Conducting of a gender analysis and elaboration or strengthening of a gender policy;
- Curriculum review and development and implementation of a plan for educational strengthening.

Also, attention will be paid to capacity building in and practice of monitoring and evaluation, management and administrative skill, research and outreach, and income generation activities.

Gender mainstreaming

By **Olivia Ansenk, Trainer Q-Point BV**



In line with the Project Outline and NICHE priorities, gender mainstreaming will be promoted as a cross-cutting issue in all project activities. The

consortium gender experts will work with their UR counterparts to identify the gender issues involved for each project component and the best way to address these.

Two main lines of gender issues are distinguished:

1. promoting gender equality at UR, for teaching staff as well as students and trainees;
2. gender mainstreaming in education, training, research and outreach.



Gender team

Two main lines of gender issues are distinguished:

3. promoting gender equality at UR, for teaching staff as well as students and trainees;
4. gender mainstreaming in education, training, research and outreach.

There is a NATIONAL GENDER POLICY, this is leading for all public institutions. This National Policy needs to be mainstreamed in University Rwanda (UR).

The latter involves ensuring that gender issues are incorporated and adequately covered in all education and training (e.g. in curricula, training modules, educational approach), research, and outreach activities. This means that they should assess the implications for women and men of any planned action, including legislation, policies and programs, in any area and at all levels. This will make women's as well as men's concerns and experiences an integral dimension in the design, implementation, monitoring and evaluation of policies and programs in all political, economic and social spheres.

Report on a countrywide survey on pig and poultry production systems in Rwanda

By **Carel Jaspers, Director Q-Point BV**



On Thursday June 5, the results of the country wide survey on pig and poultry production systems in Rwanda were presented. The survey took place in the period of January – May 2014. More than 800 farmers of pig and poultry were involved in the survey.

During the presentation of the outcomes of the survey, ca. 70 stakeholders discussed the results of the survey during a meeting in the Nobleza Hotel in Kigali. Next newsletter, we will present the final outcomes of the survey.



Stakeholders listening to the presentation.



Presentation of the outcomes of the survey.



Stakeholders meeting in Kigali.

Study on existing poultry production systems in Rwanda

By Xavier Rucamumihigo, University of Rwanda



For the study Xavier Rucamumihigo visited many poultry farms.



First, all eggs hand-packed in boxes. Then the eggs are transported by minibus.



Labour market need assessment training

By Olivia Ansenk, Trainer Q-Point BV



In May 2014 Venuste Rusharaza and Olivia Ansenk visited UR Nygarare Campus to assist UR in the development of the labour market need assessment approach. In the framework of the NICHE Programme "Improvement of Food Security in Rwanda through Higher Education Provision" NICHE pays special attention to gender issues and to the link between capacity development and the needs of the labour market.



Sow with piglets at the pig farm.

The labour market need assessment will form the base for the planned demand driven pig and poultry training, research and extension programs. This mission was used to co-develop the aim, methodology, questionnaire, stakeholderslist, workplan, data analysis method for the labour market need assessment.

The short mission was a good success, everyone was very positive of the results booked in only a short period of time (a detailed workplan, clear focus, tested questionnaire, list of stakeholders to be visited and data entry method). The active participation of the UR staff was key in this.

In June UR staff will start with the interviews of potential employers in the pig and poultry sector.



Testing the questionnaire at a pig farmer.

Rwandan lecturers visited The Netherlands

By Olivia Ansenk, Trainer Q-Point BV



From 11 till 18 May we welcomed a group of the University of Rwanda Livestock in The Netherlands. Focus of this visit was Inter College Linkage, applied research programs,

linkage private sector and value chain development for the poultry and pig sector.



Dr. Martin Ntawubizi, Dr. Rosine Manishimwe, Mrs. Olivia Ansenk, Dr. Maurice Byukusenge, Mr. Aldrich Enting, Dr. Francis Buza visited CAH Dronten.

Therefore the group had a kick off meeting at HAS Den Bosch. They got information about the educational system at HAS, both theory and practice. They

were informed about involvement of industry stakeholders in education. They also exchanged experiences of directors, lecturers and students of HAS.

Overall objective:

To understudy the Dutch pig and poultry production and nutritional system and educational, research and outreach programs associated with modern livestock production.

On Wednesday they went with Harm Wientjes, from DLV Dier to the Swine Innovation Centre (VIC) in Sterksel. This is Wageningen UR's experimental facility for pig farming research. Wageningen UR uses this facility to conduct research into different aspects of pig husbandry, such as feed, emissions, mineral management and health. After a very interesting morning at the Swine Innovation Centre they went to VION Boxtel, a pig slaughter. At the end of the day they went to Heus Veghel Feed pig and poultry.

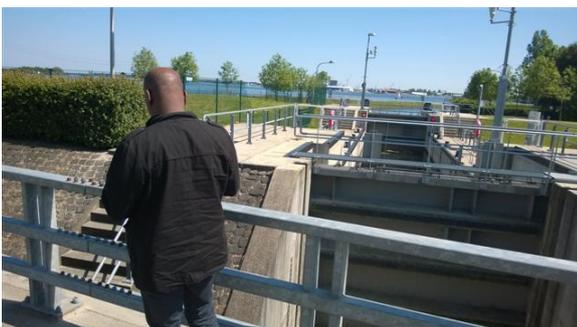
Next day they visit Rondeel Ewijk, Poultry eggs. In the Roundel housing system chickens are raised with respect for animal welfare and the environment, based on conditions that fulfill all the natural needs of the birds. And the box that contains eggs from the Roundel is also unique: a round box, made from biodegradable material that hold 7 eggs.

On Friday Victor Volkers, trainer Q-Point BV, facilitated a lessons learned session. Some examples of activities/lessons from the visit that were formulated by the group to undertake in Rwanda:

- Piloting with some Problem Based Learning PBL modules (f.e. clinical courses, animal production courses);
- Linking with the industry should be strengthened (f.e. guest lecturers, study tours, research projects, member of the faculty board);
- Practical facilities need to be urgently upgraded (need to find funds); demo

Touristic trip

Saturday they did a touristic trip through The Netherlands. They visit the dike of Enkhuizen, the lock at Harderwijk and Amsterdam.



The lock at Harderwijk.

units, labs, audiovisual aids, lessons premises.

Action plan

- **Gert Jan Duives will come to train staff on PBL;**
- **Upgrading facilities: finalizing laboratories requirements, upgrading demo units and designing and constructing new ones;**
- **Technical assistance in designing the new faculty building (inclusion of removable walls: allowing flexible use of space);**
- **In the curriculum review process take consideration of PBL experiences/ methodology;**
- **Short courses should be developed in PBL methodology and using lessons learned of Dutch poultry and pig production systems.**



Impressed by the dike at Enkhuizen.



Sightseeing Amsterdam by bike.

Partners



Q-Point BV
The Netherlands



DLV Dier
The Netherlands



HAS Den Bosch
The Netherlands



Egerton University
Kenya

Requesting organisation



**College of Agriculture, Animal
Sciences and Veterinary
Medicine**

Donor



This project is financed by Netherlands
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Colophon

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