Co-ordinated Research Project on “Integrated Approach for Improving Small Scale Market Oriented Dairy Systems” (D3.10.23)

REPORT ON
THIRD RESEARCH CO-ORDINATION MEETING

14-18 March 2005
Pretoria, South Africa
1 Introduction

The FAO/IAEA Co-ordinated Research Project (CRP) on “Integrated Approach for Improving Small Scale Market Oriented Dairy Systems” (D3.10.23) was initiated in October 2001, with the award of ten Research Contracts, four Research Agreements and one Technical Contract. The first Research Co-ordination Meeting (RCM) was held at IAEA, Vienna, Austria from 8 to 12 April 2002 and the second RCM in Asunción, Paraguay from 21 to 25 July 2003.

2 Third Research Co-ordination Meeting

The third RCM was organized by the Onderstepoort Veterinary Faculty of the University of Pretoria and held at the Kwalata Game Ranch, Pretoria, South Africa from 14 to 18 March 2005. It was attended by nine of the ten Research Contract (RC) holders (the RC holder from Venezuela had suffered an accident immediately prior to the meeting), all four Research Agreement (RA) holders and the Technical Contract (TC) holder. The local organizer was Dr. Leon Prozesky, the RC holder from South Africa. The meeting was conducted by the IAEA Project Officer (PO, Dr. Paul Boettcher) and an IAEA consultant (Dr. Oswin Perera). The meeting agenda is given in Annex 1 and the list of participants in Annex 2.

The objectives of the meeting were to:

a) Review results of diagnostic investigations, interventions and partial budget analyses conducted by each RC holder since the second RCM;
b) Summarize major achievements;
c) Develop individual work plans for the remainder of the project;
d) Discuss methods to assess the impact of the interventions made and proposed, including economic analyses; and
e) Make conclusions and recommendations.

Before the meeting, the RC holders were requested to prepare a written report and an oral presentation containing the results from their work. The RA and the TC holders were requested to prepare a review or technical paper, in line with the specific expertise for which they were invited to participate in the CRP, to serve as resource materials and guidelines for specific activities in the work plans of RC holders.

The meeting was formally opened by Prof. N. P. J. Kriek, Dean of the Onderstepoort Veterinary Faculty. Dr. Boettcher welcomed the participants on behalf of FAO/IAEA and thanked the host Government and the Onderstepoort Veterinary Faculty for their assistance in organizing the meeting.

The scientific proceedings commenced with a presentation by Dr. Perera outlining the background to the CRP, its objectives, planned activities and the expected outputs from the third RCM. This was followed by presentations from the RC holders and discussions after
each presentation. The presentations by the RA and TC holders focused on aspects of eco-regional research, use of databases in field livestock research and farmer services, nutrition-reproduction interactions and cost-benefit assessment of reproductive technologies and interventions. A general discussion of the presentations was then undertaken and the final programme for the rest of the meeting was defined.

At the halfway stage of the meeting a field visit was made to the Onderstepoort Veterinary faculty, where the veterinary hospital for small and large animals was toured, and to a breeding farm for cheetahs and other wildlife, where various animal conservation activities were discussed.

During the later stages of the meeting each RC holder worked with his/her assigned RA or TC holder to further develop and refine their individual work plans, including the protocols for continuing integrated interventions and cost-benefit analyses. The progress and achievements of each RC were reviewed, and is summarized in Annex 3. Based on this and the future requirements of the project, a set of conclusions and recommendations was drafted. Among the major recommendations made were that an IAEA TECDOC be prepared that will present the results of the Participatory Rural Appraisals (PRA) and Economic Opportunity Surveys (EOS) that each RC holder performed in his/her respective country during the initial stages of the CRP. A timeline for delivery of initial and final drafts was established. In addition, it was decided that a CD-ROM detailing the recommended protocol for performing PRA and EOS, together with the related software (e.g. Microsoft Excel spreadsheets), be produced. The CD-ROM will then be made available to other scientists wishing to perform similar surveys in their countries.

On the final day of the meeting the RC holders made presentations on their updated work plans and provided electronic copies to the PO. The overall project work plan and schedule of activities were reviewed and updated in accordance with individual work plans. According to the original plan of the CRP, the venue for the final RCM was expected to be in Asia at the end of 2006. The RC holders from Bangladesh, Pakistan, and Sri Lanka each offered to host the meeting. Based on a vote of the participants, the recommendation was for Sri Lanka, and the dates will be 4-8 December 2006. Possible topics for a new or follow-up CRP were also discussed, but no definite conclusions were reached and all participants were asked to continue to consider and discuss possibilities in the coming months. An informal e-mail discussion forum was recommended as a medium for continuing contacts and exchange of information in future.

Finally, the conclusions and recommendations given below were presented, discussed and adopted. The meeting was closed with Drs. Paul Boettcher and Oswin Perera thanking the host institute, local organizer and all participants.
3 Conclusions

3.1 The third RCM reviewed the work conducted by each RC holder.

3.2 The project has resulted in increased research capacity within participating institutes. It has established new linkages with national stakeholders and other international donor agencies.

3.3 The holistic approach was considered feasible and appropriate for achieving the goals of the project.

3.4 The participatory and multidisciplinary activities were consistent with the holistic design of the project.

3.5 The interventions were developed based on the farmers’ needs and opinions.

3.6 Preliminary results indicate that the interventions based on the holistic approach are showing economic benefits.

3.7 The participating farmers have developed confidence in the research teams.

3.8 The contribution of RA and TC holders from different disciplines was essential.

3.9 The RCMs were essential for exchange of experiences among participants.

3.10 Procedures for conducting Participatory Rural Appraisal (PRA) and Economic Opportunity Survey (EOS) were developed, validated and applied in all participating countries. A computer database Livestock Information Management Application (LIMA) was also developed and is being used in all countries.

3.11 The project highlighted the necessity of record keeping by farmers for day-to-day farm management. Simple recording procedures are being developed.

3.12 The project has already generated several scientific publications and presentations.

3.13 The training activities conducted in each country have been an integral part of the project.

4 Recommendations

4.1 The results from PRA and EOS should be published as an Agency TECDOC. The time schedule for submission of manuscripts is:
   - First draft to RA and TC holders and to IAEA: 1 July 2005
   - Comments of RA and TC holders sent back to RC holders: 15 July 2005
   - Final manuscripts to IAEA: 1 October 2005
• Submission to IAEA Publications Committee: December 2005

4.2 A CD-ROM that can be used by other researchers and stakeholders should be prepared containing the following:
  • PRA – Guidelines and references
  • EOS – Guidelines and software
  • LIMA – Description and demonstration

4.3 Collection of data from interventions must be completed by July 2006 for final assessment.

4.4 The results from investigations and interventions should be included in the manuscript prepared for the final RCM. The schedule for submission of manuscripts is:
  • First draft to RA and TC holders and to IAEA: 1 September 2006 (mandatory for travel approval)
  • Comments of RA and TC holders sent back to CHs: 15 September 2006
  • Updated manuscripts to IAEA: 15 November 2006

4.5 Final RCM should be held 4-8 December 2006 in Kandy, Sri Lanka or Mymensingh, Bangladesh;

4.6 A simple data recording system should be developed by participants for use by farmers in their own countries.

4.7 Impact assessment, including financial analysis, must be undertaken during the final year of the project;

4.8 Mechanisms for cost recovery for services and inputs provided should be established by all participants.

4.9 Action must be taken for in-country dissemination of methods and results to national livestock services and other stakeholders.

4.10 Participants must ensure that project activities are incorporated in routine practices, in order to guarantee sustainability beyond Agency support.

4.11 Regular communication must be improved between RC, RA and TC holders and the Agency Project Officer.

5 Follow-up

Electronic versions of all documents of the meeting, including written reports, PowerPoint presentations, individual work plans, photographs taken during the meeting and field visits, this meeting report and its Annexes were placed on a CD-ROM and distributed to all participants. The meeting report is also available on the Website of the Animal Production and Health Section of the Joint FAO/IAEA Division at: (http://www.iaea.org/programmes/nafa/d3/index.html)
Co-ordinated Research Project on “Integrated Approach for Improving Small Scale Market Oriented Dairy Systems”
(D3.10.23)

Third Research Co-ordination Meeting

14-18 March 2003

Pretoria, South Africa

Monday, 14 March

09.00 - 09.30 Opening:
- Welcome: Prof. Leon Prozesky, RCM Organizer
- Address by Scientific Secretary, IAEA, Vienna: Dr. Paul Boettcher
- Opening Address by Chief Guest: Prof. N. P. J. Kriek, Dean Onderstepoort Veterinary Faculty

09.30 - 10.15 Overview of the Co-ordinated Research Project, objectives of the meeting and expected outputs - Dr. Oswin Perera (IAEA Consultant, Sri Lanka)

10.15 - 11.00 Coffee/Tea

Session I: Presentations by Contract Holders
Chairperson: Dr. C. Devendra


12.00 - 12.30 Improving small scale market oriented dairy systems in Tunisia - J. Rekhis, N. Slimane, A. Ben Younes, A. Mzah, F. Saaidani, M. Laamouri, K. Khlif, S. Jelliti

12.30 - 14.00 Lunch


14.30 - 15.00 Improving Productivity in Small Scale Dairy Systems in Paraguay - N. Ferreira,
Tuesday, 15 March

Session I: Presentations by Contract Holders
(Contd.)
Chairperson: Dr. D. Cavestany

08.30 – 09.00
Integrated Approach for Improving Small Scale Market Oriented Dairy Systems in Pakistan: Economic opportunity survey and diagnostic and surveillance studies - Abdul Ghaffar, Nematullah and M. Qasim Khan

09.00 - 09.30

Session II: Presentations by Agreement Holders
Chairperson: Dr. L. Prozesky

09.30 – 10.15
Farming systems research and ecoregional research - C. Devendra

10.15 - 10.45
Coffee/Tea

10.45 - 11.30
Use of database application to guide data acquisition and improve delivery of on-farm veterinary services in Bangladesh - W.J. Goodger, M. Shamsuddin, A.A. Mamun, H. Momont, G. Frank, R. Klos, T. Bennett

11.30 - 12.15
Observations on nutrition and fertility - D. Whitaker

12.15 – 13.00
Database applications in livestock research - M. Garcia

13.005 - 14.00
Lunch

Session II: Presentations by Agreement Holders and Work Assignments
(Contd.)
Chairperson: Dr. D. Whitaker

14.00 - 14.45
Increasing technology in dairy farms, expenditure or investment? - D. Cavestany

14.45 - 15.30
General Discussion and Update on Revised Meeting Programme
15.30 - 16.00  Coffee/Tea
16.00 - 17.30  Individual discussions between Contract Holders and Agreement Holders
20.30 – 22.30  Individual discussions continued…

**Wednesday, 16 March**

08.00 - 18.00  **Field Visits:**
  - Onderstepoort Veterinary faculty
  - Breeding farm for cheetahs and other wildlife
20.30 – 22.30  Updating individual work plans

**Thursday, 17 March**

**Session III:  Review and Work Plans**
  *Chairperson: Dr. M. Garcia*

08.30 - 10.00  Review of progress and summary of achievements – *Contract Holders (max. 5 minutes each)*
10.00 - 10.30  Coffee/Tea
10.30 - 12.30  Formulation of Conclusions and Recommendations
  - Current status
  - Focus and schedule for future work
  - Improving communication
  - Publication (s); CD-ROM (?)
  - Manuscripts and time schedules
  - Final RCM
12.30 - 14.00  Lunch
14.00 - 15.30  Formulation of Conclusions and Recommendations (contd.)
15.30 - 16.00  Coffee/Tea
16.00 - 17.30  Finalisation of individual work plans

**Friday, 18 March**

**Session IV:  Presentation of Work Plans, Conclusions and Recommendations**
  *Chairperson: Dr. W. Goodger*

08.00 - 10.00  Presentations by Contract Holders (each of 10 min + 5 min discussion)
10.00 - 10.30  Coffee/Tea
10.30 – 12.00  Presentations by Contract Holders (Contd.)
12.00 – 13.00  Finalization of conclusions and recommendations
13.00 – 14.00  Lunch
14.00 – 16.00  Finalization of individual work plans and submission of electronic documents to Scientific Secretary
16.00  Closure of meeting
Annex 2

FAO/IAEA Co-ordinated Research Project on “Integrated Approach for Improving Small Scale Market Oriented Dairy Systems”

Third Research Coordination Meeting

List of Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Address</th>
<th>Contact Info</th>
<th>RC Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Mohammed Shamsuddin</td>
<td>Bangladesh Agricultural University (BAU)</td>
<td>Tel: +880 171 156 308 Fax: +880 91 55810 E-mail: <a href="mailto:mohammedshamsuddin@hotmail.com">mohammedshamsuddin@hotmail.com</a></td>
<td>BGD 11806</td>
</tr>
<tr>
<td>Mr. H. D. Bayemi Pougue</td>
<td>Institute of Agricultural Research for Development (IRAD)</td>
<td>Tel:(237) 784 02 73 Fax: Not reliable E-mail: <a href="mailto:hbayemi@yahoo.fr">hbayemi@yahoo.fr</a></td>
<td>CMR 11807</td>
</tr>
<tr>
<td>Dr. C. Devendra</td>
<td>Devendra Consulting</td>
<td>Tel: 603-7987-9917 Fax: 603-7983-7935 E-mail: <a href="mailto:cdev@pc.jaring.my">cdev@pc.jaring.my</a></td>
<td>MAL 11808</td>
</tr>
<tr>
<td>Dr. Abdul Ghaffar</td>
<td>National Coordinator(LRB) Animal Sciences Institute, National Agricultural Research Centre, Park Road Islamabad 45500 Pakistan</td>
<td>Tel: 92-51-9255246 Fax: 92-51-9255034 E-mail: <a href="mailto:parc@isb.paknet.com.pk">parc@isb.paknet.com.pk</a></td>
<td>PAK 11809</td>
</tr>
<tr>
<td>Dr. Mario Garcia</td>
<td>Facultad de Veterinaria y Zootecnia Universidad Peruana Cayetano Heredia Av. Honorio Delgado 430, SMP Lima 31 Peru</td>
<td>Tel: +51(1) 319-0030 Fax: +51(1) 319-0039 E-mail: <a href="mailto:m_garcia_p@hotmail.com">m_garcia_p@hotmail.com</a> <a href="mailto:garciam@terra.com.pe">garciam@terra.com.pe</a></td>
<td>PER 11810</td>
</tr>
<tr>
<td>Dr. Carlos Gomez</td>
<td>Universidad Nacional Agraria la Molina Depto. de Nutricion Avenida la Universidad s/n,</td>
<td>Tel: +3494028 Fax: 3494028 E-mail:</td>
<td>PER 11811</td>
</tr>
<tr>
<td></td>
<td>Name</td>
<td>Address</td>
<td>Contact Information</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
<td>------------------------------------------</td>
</tr>
<tr>
<td>0</td>
<td>Dr. L. Prozesky</td>
<td>University of Pretoria Faculty of Veterinary Science, Department of Pathology, Private Bag X04 Onderstepoort 0110 South Africa</td>
<td>Tel: +27 12 529 8054 Fax: +27 12 529 8303 E-mail: <a href="mailto:lprozesky@op.up.ac.za">lprozesky@op.up.ac.za</a></td>
</tr>
<tr>
<td>1</td>
<td>Dr. P.G. Anil Phusphakumara</td>
<td>Senior Lecturer - Animal reproduction and Obstetrics, Department of Farm Animal Production and Health, University of Peradeniya, Sri Lanka</td>
<td>Tele: 0094 81 2380147; Fax: 0094 81 2389136 E-mail: <a href="mailto:pganil@pdn.ac.lk">pganil@pdn.ac.lk</a></td>
</tr>
<tr>
<td>2</td>
<td>Dr. Jamel Rekhis</td>
<td>Ecole Nationale de Médecine Vétérinaire, Departement de Production Animales Nutrition et Alimentation 2020 Sidi Thabet Tunisia</td>
<td>Tel:+21671552200 Fax: +216.71.552441 E-mail: <a href="mailto:jrekhis@yahoo.fr">jrekhis@yahoo.fr</a></td>
</tr>
<tr>
<td></td>
<td>Dr. David Whitaker</td>
<td>Division of Veterinary Clinical Studies, University of Edinburgh Easter Bush Veterinary Centre Roslin, Midlothian, EH25 9RG United Kingdom</td>
<td>Tel: +441314454760 Fax: +441314455728 E-mail: <a href="mailto:David.Whitaker@ed.ac.uk">David.Whitaker@ed.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Daniel Cavestany</td>
<td>Instituto Nacional de Investigación Agropecuaria, INIA La Estancuela C.Correos 39173, 70000 Colonia Uruguay</td>
<td>Tel: (598) 5748000, ext. 109 Fax: (598) 5748012 E-mail: <a href="mailto:dancaves@internet.com.uy">dancaves@internet.com.uy</a></td>
</tr>
<tr>
<td></td>
<td>Dr. William J. Goodger</td>
<td>University of Wisconsin-Madison School of Vet. Medicine, Department of Medical Sciences 2015 Linden Drive West Madison 53706 WI</td>
<td>Tel:608-770-1448 Fax: 608-833-7195 E-mail: <a href="mailto:wgoodger@wisc.edu">wgoodger@wisc.edu</a></td>
</tr>
</tbody>
</table>
|   | USA                      | Tel: 0595 21 586136  
|   | Fax: 0595 21 586136  
|   | E-mail: nidia@quanta.net.py  
|   | nidiabferreira@yahoo.com  | PAR  
| 3 | Ms. Nidia B. Ferreira  | 11817  
|   | Ministerio de Agricultura y  
|   | Ganaderia  
|   | Lab. de Investigacion y  
|   | Diagnostico Veterinario  
|   | (LIDIAV)  
|   | Av. Ciencias Veterinarias y  
|   | Primera  
|   | Km. 10,5 San Lorenzo  
|   | Paraguay  |  
| 4 | Dr. Beda M. Kessy  | URT  
|   | Sokoine Univ. of Agriculture  
|   | Faculty of Veterinary Medicine  
|   | P.O. Box 3020  
|   | Morogoro  
|   | United Republic of Tanzania  | 11878  
| 5 | Dr. B.M. A. Oswin Perera  | Consulta  
|   | 40/9 Deveni Rajasinghe  
|   | Mawatha  
|   | Kandy  
|   | Sri Lanka  |rant  
| 6 | Dr. Paul Boettcher  | Project  
|   | Animal Production & Health Section  
|   | Joint FAO/IAEA Division  
|   | P.O. Box 100, A-1400 Vienna  
|   | Austria  | Officer  
|   | pjboettcher@yahoo.com  | IAEA  |
### Annex 3

**FAO/IAEA Co-ordinated Research Project on “Integrated Approach for Improving Small Scale Market Oriented Dairy Systems”**

*Third Research Coordination Meeting*

**Summary of Progress and Achievements**

<table>
<thead>
<tr>
<th>Country</th>
<th>PRA (No. Farms)</th>
<th>EOS (No. Farms)</th>
<th>Investigations</th>
<th>Interventions</th>
<th>Econ</th>
<th>Linkages</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>BGD</td>
<td>36</td>
<td>1444</td>
<td>Feed, production, nutritional balance, mastitis, vet service delivery</td>
<td>Training, reproductive management, udder health, nutrition, Napier silage, vet services, training (1444)</td>
<td>Yes</td>
<td>BGD Milk co-op, Dept Livestock Services, AI service, banks, in-campus project</td>
<td>Database, milk chilling plant, farmer training manual, breeding calendar</td>
</tr>
<tr>
<td>CMR</td>
<td>137</td>
<td>61</td>
<td>Recording system, nutrition, progesterone monitoring</td>
<td>Training, feeding package (25)</td>
<td>Yes</td>
<td>Dairy farmers Co-op, veterinarians, NGOs</td>
<td>Review of dairying in CMR, publications</td>
</tr>
<tr>
<td>PAR</td>
<td>15</td>
<td>9</td>
<td>Ovarian activity in heifers</td>
<td>Training, nutritional supplementation and sanitation (2)</td>
<td>No</td>
<td>JICA Dairy Project, Vet Faculty, Extension Service, Dairy Association</td>
<td>LIMA (LF), recording on notebook (SF)</td>
</tr>
<tr>
<td>PAK</td>
<td>80</td>
<td>80</td>
<td>Trace mineral supplementation, progesterone monitoring</td>
<td>Vaccination, de-worming, teat dipping, reproductive management (33)</td>
<td>Yes</td>
<td>Livestock Department, field veterinarians, NGOs</td>
<td>Recording on notebook</td>
</tr>
<tr>
<td>Country</td>
<td>PRA (No. Farms)</td>
<td>EOS (No. Farms)</td>
<td>Investigations</td>
<td>Interventions</td>
<td>Econ</td>
<td>Linkages</td>
<td>Other</td>
</tr>
<tr>
<td>---------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------</td>
<td>---------------</td>
<td>------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>PER</td>
<td>18</td>
<td>6</td>
<td>Testing for diseases, nutrition, record keeping</td>
<td>Training, concentrate feed supplementation (11)</td>
<td>Yes</td>
<td>Ministry of Agriculture, NGOs</td>
<td>Student projects, extension leaflets</td>
</tr>
<tr>
<td>SAF</td>
<td>15</td>
<td>15</td>
<td>Feeding, mastitis control</td>
<td>Training, record keeping, business plan, nutrition, mentoring by commercial farmers (15)</td>
<td>Yes</td>
<td>NW Province Farmers, Regional Laboratory, Veterinary Services</td>
<td>Milk quality improved, student research</td>
</tr>
<tr>
<td>SRL</td>
<td>?</td>
<td>?</td>
<td>Uterine infections and mastitis, incidence of pathogens, ABST</td>
<td>Training, treatment protocols for uterine infections, teat dip and dry cow therapy, fertility clinics, record keeping (49)</td>
<td>No</td>
<td>National Livestock Development Board, Dept Animal Prod &amp; Health, field veterinarians, NGO</td>
<td>LIMA (Large farms), conference presentations</td>
</tr>
<tr>
<td>TUN</td>
<td>60</td>
<td>30</td>
<td>Nutrition, training on reproduction, management, CMT, record keeping</td>
<td>Nutrition, reproductive management, health control (free vs. paid) (10)</td>
<td>Yes</td>
<td>Govt Extension Service, field veterinarians, milk collecting centre</td>
<td>Recording form, student research</td>
</tr>
<tr>
<td>URT</td>
<td>25</td>
<td>25</td>
<td>Nutrition, testing for diseases</td>
<td>Training, record keeping, concentrate feeding, vaccination (15)</td>
<td>Yes</td>
<td>Govt extension services, Livestock Research Institute</td>
<td>Training leaflets, publications</td>
</tr>
<tr>
<td>VEN (Did not attend)</td>
<td>1257</td>
<td>604</td>
<td>Parasite monitoring, detection of cyclicity, suckling</td>
<td>Dietary supplementation, implants</td>
<td></td>
<td></td>
<td>Training sessions</td>
</tr>
</tbody>
</table>