



# ITC Newsletter



International Trypanotolerance Centre  
Banjul, The Gambia

## Editorial

This is the first issue of the quarterly ITC Newsletter and we hope you take some time to leaf through it. The newsletter has been launched with the intention of providing updated information about the Centre and its work. It is published not only for ITC staff, but also for those who are working together with ITC, directly or indirectly, at the national, regional and international level.

By contributing to the flow of information on technical, scientific, organisational and other issues, it is hoped that the newsletter will help to forge even closer links between ITC and its principal national collaborators in the NARS, and all other partners in livestock-based agricultural research and development work in the sub-region.

There is no focus theme in this first issue. This will occasionally be the case in future issues.

We also hope to receive contributions from our direct collaborators in the NARS which will be published under the name of the author and the institution; contributions could be in English or French.

## Message from the Director General

I am pleased to contribute to the maiden issue of the ITC Newsletter to be launched during the 2003 ITC Council Meeting which takes place in the third week of March, 2003. As reflected in the recent official documentation of ITC, communication within the Centre and to the outside world, especially the mandate region, has become a key management tool to keep staff, collaborators and other stakeholders informed of the activities of the Centre. Examples of recent initiatives to keep the larger audience informed include the marketing of the Centre's Medium-Term Plan (2001-2004), the launching of the ITC

One regular feature will be the calendar of forthcoming training activities at national and regional level within the ITC programme. The targeted group training on selected topics is intended to strengthen the NARS, help to implement joint R&D activities and, by improving the capacity of local trainers, facilitate the transfer of new technologies in livestock production, health and management, and their adoption by the ultimate beneficiaries.

The newsletter will be published four times a year. For financial considerations the mailing list of the printed newsletter will be limited to some extent. Thus, it will be regularly mailed to collaborating and other key institutions and partners. However, the newsletter will also be available electronically on ITC's website (<http://www.itc.gm>), from where all published issues can be downloaded at any time.

We will continuously try to improve this newsletter. If you wish to give us your feedback, please send an e-mail to the Editor: [Newsletter@itc.gm](mailto:Newsletter@itc.gm).

**Andreas Schoenefeld**  
Editor-in-Chief

Website in 2002 and the expanded distribution of the ITC Biennial Report 2000-2001.

The production and circulation of the ITC Newsletter is yet another mechanism to reach the goal of making the Centre a household name in the subregion. I congratulate the small Newsletter team whose dedication made the production of the maiden issue possible. It is our expectation that the Newsletter will be produced at regular intervals.

Once again the Centre's Management and Staff have the privilege and honour to welcome the members of the ITC Governing

ITC Newsletter  
No. 1, March  
2003

ITC  
A livestock-  
based Agricultural  
Research  
Institute  
dedicated to  
serve the  
West African  
Region

## In this issue

<i>Editorial</i>	1
<i>Message from the Director General</i>	1
<i>PROCORDEL</i>	2
<i>Cooperation ITC - FUB ended</i>	3
<i>FAO Milk Village System</i>	4
<i>Seminar: "Lait sain pour le Sahel"</i>	4
<i>Farmer Field School Project</i>	5
<i>Urban Agriculture research</i>	5
<i>IFAD sponsored planning workshop</i>	5
<i>Round Table on Ruminant Nutrition</i>	6
<i>Publication on Urban Agriculture</i>	6
<i>New Computer Lab</i>	6
<i>Training Calendar</i>	7
<i>About ITC</i>	8

Council to the 2003 Annual Meeting (17–21 March, 2003). The Council Meeting provides opportunities to members to review the Centre's activities during the past year and to approve work for the next 12 months. In addition, the Centre's finances and policies are reviewed. This year the Council will be welcoming into its midst, new members in the persons of Dr. Safiétou Touré Fall of ISRA, Senegal (the first woman to serve on the Council), Prof. Ola Smith of the Global Forum for Agricultural Research (GFAR), Prof. K.-H. Zessin of the Free University of Berlin, Germany, and Dr. Musa Bojang of NARI, The Gambia.

One of the highlights of this year's Council Meeting will be the official opening of a Training and ICT facility at ITC made possible through funding from the Centre for International Migration and Development (CIM), Germany.

Finally, I wish to take this opportunity to thank ITC Staff members for their dedicated service, and to our donors whose contributions make possible the implementation of research and development activities that benefit the people of the region.

**Kwaku Agyemang, DG**

## PROCORDEL – achievements so far and outlook

The *Programme concerté de recherche-développement sur l'élevage en Afrique de l'Ouest* (PROCORDEL) will come to completion of a 4-year term of implementation by March 2004. With funding from the European Union under EDF 8, the project presently expands to 13 West African countries, with the two regional Centres CIRDES in Bobo-Dioulasso and ITC in Banjul coordinating the R&D activities in collaboration with the NARS as national partner institutions.

The year 2003 marks the last year for field-based execution of R&D activities. It is therefore a good point in time to look at major achievements of the work done by ITC in its mandate countries Senegal, Guinea, Gambia and Guinea Bissau, in collaboration with the partner NARS, to date.

### R&D in market-oriented systems

The crossbreeding programme of N'Dama x Holstein Friesian is expanding in the Greater Banjul Area (GBA). By end of 2002, some 250 animals were targeted for artificial insemination. The production is closely linked to the promotion of the dairy sector in GBA. Other funds could be secured to support the development objective *Establishment of a formal dairy sector in GBA* (HIPC funds, FAO-TCP, GTZ special funding).

The performance of F1 animals as draught animals, as compared to N'Dama, was found superior under controlled conditions. The question on how this capacity might change under simulated trypanosomiasis challenge, will be addressed in 2003 to give a better assessment of the potential uses for these animals.

Major advances were made in the optimisation of feed rations for crossbreed and N'Dama cattle in predicting nutritive values for feedstuff based on microbial *in-vitro* gas production.

Prevalence studies on selected zoonotic infections in livestock and livestock products (tuberculosis, brucellosis, salmonellosis) and associated public health risks were expanded to all mandate countries. Interestingly, *M. bovis* does not seem to play an important role, in contrast to the situation in East Africa. Further investigations are planned and additional funding from DFID was secured.

### R&D in Low-input system

The purebreeding programme in The Gambia progressed to the dissemination phase with the successful establishment of multiplier herds and flocks. The purebreeding herd of N'Dama cattle in Guinea (Boke) has been rejuvenated with improved management and output. The programme in Guinea also has a strong agricultural component with feed and crop production, conservation and seed multiplication. The success of this activity has led to co-funding from two Guinea-based projects, namely PAE and PASEL.

The investigations on milk hygiene and related public health risk have been expanded to include all mandate countries, hence allowing for regional comparative analysis of the data. A presentation of the results at the International Dairy Foundation Conference in Paris in 2002 won a prize.

->

*The year 2003 marks the last year for field-based execution of PROCORDEL R&D activities*



**Socio-economic studies**

All technical activities initiated by PROCORDEL have a socio-economic component for monitoring their effects at micro- and macroeconomic level.

**Technology transfer to the beneficiaries**

Another major achievement was the start of technology transfer to the ultimate beneficiaries and stakeholders.

This was initiated through networking between PROCORDEL/ITC, NARS, Government departments and other projects, extension agents, and donor representatives.

Results ready for transfer and dissemination were packaged and extension agents trained using *Train the trainers* techniques. In turn, groups of farmers were then trained by extension agents who made use

of their updated knowledge using modular training materials prepared with the support of ITC and NARS.

**Highlight ahead in 2003**

In January 2003, **Sierra Leone** signed a *Memorandum of Understanding* to join PROCORDEL at last.

More targeted training including packaged training for farmers will be held to increase the momentum of dissemination of research-based innovations.

The Gambia, Senegal, Guinea and Guinea Bissau have agreed to organise *National Conferences* during the last quarter of 2003 with some seed funding from PROCORDEL. An end-of-project evaluation team is expected to assess the outcomes of the project in mid-2003 in all countries associated with the programme.

## Four years cooperation between ITC and the Free University of Berlin, Germany, and its implication for attracting other donors

Proactive, innovative research on the evaluation of *public health risks* resulting from the consumption of animal products (meat and milk) was initiated under a Memorandum of Understanding between ITC and the Free University Berlin (FUB) in 1998. Zoonoses are recognized as emerging diseases of increasing significance with the intensification of agricultural/livestock production systems. A *Collaborative Research Unit* was established to set up the laboratory infrastructure, to identify and train ITC and NARS personnel and to conduct and reinforce research in this field for the benefit of the people of The Gambia and the sub-region (Senegal, Guinea, Guinea-Bissau).

Key research objectives were to examine the epidemiological significance of zoonotic infections such as *brucellosis*, *bovine tuberculosis* and *cysticercosis*. The hygienic status of locally produced milk, consumed either raw or fermented, along the animal-farm-collector-vendor chain received special attention. Seroprevalence and clinical findings of brucellosis in cattle differed greatly between countries and regions, with high risk areas in Guinea and Guinea-Bissau and low risk in Senegal and The Gambia. For the consumers of these countries, bovine tuberculosis and *cysticercosis* as well seem to be of very little or no

public health risk. Studies carried out on milk hygiene indicated a high risk associated with the consumption with fresh, untreated milk, which is common in the sub-region: a high level of bacteriological contamination was diagnosed with germs like *E. coli*, *B. cereus*, *Staphylococci spp.*, *Clostridia*, *Listeria spp.* and *Salmonella spp.*

Pasteurisation Units already in place in Senegal clearly showed the positive effect of reducing the bacteria count and, thus, reducing public health risk. Sensitisation and awareness of milk producers and processors on hygienic aspects of milk handling receive high attention.

Results of these studies and their implications for consumer safety have been communicated to the national authorities and to the newly created Food Control Board of The Gambia. The results obtained so far are being used as the basis for setting national standards for microbiological quality through the National Codex Committee and were presented at the 26<sup>th</sup> International Dairy Foundation Conference in Paris in 2002.

At the end of 2002 the funding input of the FUB was terminated. FUB's support and that of the Senate of Berlin to ITC is highly acknowledged. The significant out-

*More targeted training including packaged training for farmers will be held to increase the momentum of dissemination of research-based innovations*



*Sero-prevalence and clinical findings of brucellosis in cattle differed greatly between countries and regions*



come of these collaborative studies of sub-regional dimension has attracted *FAO* through its *Technical Cooperation Programme (TCP)* and *GTZ*, Germany, to financially support new and follow-up aspects of ITC's Institutional Programme "Epidemiology and Risk Assessment of Diseases Associated with Consumption of Livestock Products and Public Health Issues" (Consumer Safety and Public Health).

*FAO-TCP* responds to the identified need for an improved processing and marketing system for safe fresh milk in peri-urban areas of The Gambia. This project is carried out in close collaboration with the Department of Livestock Services (DLS) and focuses on establishing two milk pasteurisation units, introducing the Lactoperoxidase-system to farmers and

establishing demonstration and training facilities at ITC.

*GTZ* through its „*GTZ Financed Measures*“ contributes to increase knowledge of the rural cattle owners on milk production, milk processing and milk technology. Improved knowledge and applied technology, improved distribution, marketing mechanisms and improved quality control will have an impact on the availability of animal protein for improved nutrition of the poor.

A follow-up study on the awareness and perceptions of livestock producers in the region regarding zoonotic infections is being funded by the UK *Department for International Development (DFID)*.

### Improving milk safety and farmers income using the FAO Village Milk System

This pilot project, funded by *FAO*, is being implemented in the Greater Banjul Area in support of the Government, EU-financed, and ITC implemented dairy production efforts. It is apparent, that efforts and successes to enhance national milk production in The Gambia need to be complemented urgently by a small-scale milk collection and processing system that can contribute to increased demand and establish a healthy and lucrative market for small-scale dairy farmers in The Gambia. It is expected that the project will trigger a demand in the private sector to take up the technology and spread it to other parts of The Gambia (growing centres) and to the region.

Project activities started in October 2002 and the first pasteurisation and training unit should be operational at ITC before the end of March 2003. Milk producer groups are being organised and two of which will receive a pasteurisation unit, provided they meet the basic requirements defined by *FAO*. Training in milk hygiene will hopefully start in May 2003. The project is closely linked with the *GTZ-funded activities on the Introduction of Appropriate Milk Technologies*, which started in January 2003. This project also covers Southern Senegal, where private mini-pasteurisation units are operational.

### Regional Seminar "Lait sain pour le Sahel" in Bamako, Mali

The seminar "*Lait Sain pour le Sahel*", held in Bamako, Mali from the 25<sup>th</sup> February to 1<sup>st</sup> March 2003, was organised by the Laboratoire Central Vétérinaire, Bamako, Institut du Sahel, Bamako, Swiss Federal Institute of Technology, Zurich and Swiss Tropical Institute, Basel. 44 oral contributions and 8 posters were presented to about 80 participants from eleven countries. The objective of the seminar was to evaluate the current status of milk production, transformation and hygiene in the countries of CILSS (*Comité inter-Etats de lutte contre la sécheresse au Sahel*) and to

elaborate future strategies to increase milk production and to promote milk processing and hygiene.

ITC presented results of two studies: (1) The hygienic status of milk from local markets in The Gambia and the effect of pasteurisation in Senegal and (2) Results of a socio-economic study on milk supply, market structures, consumption preferences and demand in the Greater Banjul Area, The Gambia.

## DFID-funded *Farmer Field School* project

Towards the end of 2003 the UK Department for International Development approved a concept note for a project over a 6-month period (March-August 2003) to develop the introduction of Farmer Field Schools for small ruminant livestock producers in The Gambia. During this period an ITC staff member will go for training to Kenya and visit an ongoing FFS project also funded by DFID and executed and managed by ILRI. There will then be a training course (*Training of trainers*) held in The Gambia for extension workers from DLS, NARI and for ITC staff. It will be conducted over a period of two weeks with two trainers/facilitators from Kenya. Finally, during this period, a concept note will be developed to apply for further funding from DFID for a longer (2-3 year) project to actually set up FFS.

The aim of the FFS is to build the farmers capacity to analyse their production systems, to identify their main constraints and to test possible solutions, eventually adopting the practices identified as being most suitable for their farming system and situation.

The main FFS approaches are:

1. Agro-ecological systems analysis, designed to improve observation skills and to develop decision-making skills through analysis of field situations.
2. Participatory technology development - a process of collective and collaborative enquiry using comparative studies with the purpose of initiating community action on solving local problems.

## IDRC strengthens Urban Agriculture research

The International Development Research Centre (IDRC), Canada, recently provided a research grant to conduct a second phase of the integrated peri-urban systems study in The Gambia and Senegal. This grant is the second benevolent gesture of IDRC of this magnitude during the last five years with ITC as the coordinating institution.

The two-year extension phase will address the consolidation and dissemination of the findings of Phase 1 in order to promote urban integrated horticulture-livestock production systems. In addition, the second phase will provide planners and municipal authorities with a set of arguments for conservation and optimisation of land and natural resources. Some eleven research and development activities

have been put together by a multidisciplinary team that will address the issues raised by the specific objectives of the project to be implemented in The Gambia and Senegal. The major challenge is to advance beyond a model and demonstration farm approach and to disseminate the currently available body of knowledge on improving urban agricultural output while minimizing the risk of exposure to toxic bioaccumulation of agrochemicals and other environmental pollutants.

This second phase will be executed in conjunction with urban farmer associations in the Niayes Region and the Greater Banjul Area with more than 1000 and 1500 farmers in Senegal and The Gambia respectively.

## IFAD sponsored stakeholder planning workshop at ITC to fight rural poverty

On 23-24 January 2003, ITC hosted a two-day workshop sponsored by IFAD for the preparation of a project proposal on the development and dissemination of livestock based technologies and the formulation of policy options that can enhance the contribution of livestock towards the livelihood of poor farmers in West Africa. The main purpose of the workshop was to involve key stakeholders in the formulation of a consolidated single project document based on two different concept notes submitted by ILRI and by ITC. The workshop

brought together key stakeholders including national research organisations (NARS), farmers' organisations, research and extension organisations, IFAD-funded projects from 7 West African countries (Senegal, Gambia, Burkina Faso, Mali, Ghana, Nigeria and Guinea Bissau) and international research institutions (ITC, ILRI, CIRDES).

The workshop resulted in a clear identification of project objectives, expected outputs, activities and management strategies. The preparation of the full project document by ILRI and ITC is underway.

## Why FFS?

*Researchers, even when carrying out applied research aimed at having a positive impact on livestock production are not normally involved in the dissemination of their results, except to other scientists through publications and workshops. This, together with the frequent failure of extension services to function adequately, has resulted in adoption rates for new technologies being generally poor. Another reason for low impact is that farmers are insufficiently involved in identifying the problems and constraints that face them in testing the possible solutions. An alternative approach is therefore required.*



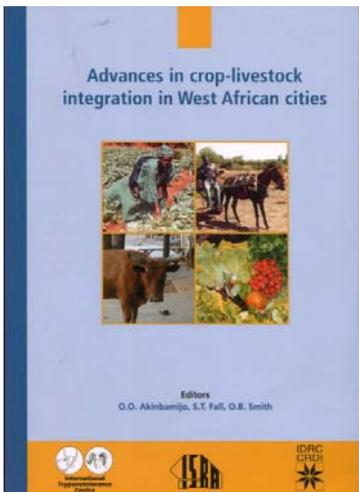
*The need to develop and promote the adoption of sustainable agricultural practices has become a recurrent recommendation of researchers and research results users alike*

## Round Table on ruminant nutrition

On 24-25 February 2003, ITC hosted a round-table conference on ruminant nutrition research and development strategies for West Africa. It was attended by some 15 scientists, mainly ruminant nutrition researchers, from CIRAD (France), CIRDES (Burkina Faso), DLS (The Gambia), ILRI (Ethiopia), ISRA (Senegal) and ITC. As a major outcome, a strategy ma-

trix was developed that summarised perceived defined biophysical and socioeconomic constraints and possible technological solutions in the context of the predominant farming systems. In addition, the ground work was laid for a revision of nutrition research to be carried out by the institutions and the NARS.

## Advances in crop-livestock integration in West African cities – O.O. Akinbamijo, S.T. Fall & O.B. Smith (Eds)



One of the recent publications on urban agriculture came off the press at the end of 2002. Co-published by ITC, ISRA and IDRC, Canada, the book gives an in-depth situation analysis of current issues on urban agriculture including the production environment, environmental safety, public health and system sustainability through efficient utilization of limited resources, using The Gambia and Senegal as case studies.

This 12-chapter book is the outcome of a regional workshop that brought together relevant expertise in livestock, crops, horticulture, economics, sociology, urban

planning, environment and human health issues to share and exchange information on intensive urban agriculture, using the results of an integrated livestock-horticulture production research project carried out in Dakar and Banjul.

This book will hopefully contribute to filling existing information gaps as it touches on land use planning, institutionalisation, gender dimensions and other socioeconomic and policy issues in relation to urban food production systems.

A full-text version in pdf-format can be downloaded from the ITC homepage.

## Opening of ITC's new Computer Lab

ITC has now obtained an excellent Computer-Pool for training. Thanks to generous support from the German "Centre for International Migration and Development" (CIM), it was possible to set up the new training facility in the ITC Training and Documentation Centre. Based on nine networked personal computers equipped with flat screens, uninterruptible power supply units, and a laser printer, this facility significantly adds to ITC's capacity to offer training at

different levels in information and communications technology (ICT) applied to the specific needs of technical and scientific personnel at ITC and the NARS.

Training courses will be organised at various levels (regional, national, in-house) towards more effective management and exploitation of data. This applies to statistical, database, spreadsheet and other customised applications.

Recently, the first training course was conducted on MS Access, with kind training support from the Medical Research Council (MRC) Laboratories in Fajara (Banjul). Some of the upcoming training events are shown on the training calendar in this newsletter.

This facility will also be used for training in accessing internet-based information services, search and retrieval of scientific literature, and internet-supported teaching and training modules (distance learning).



## CALENDAR

### Upcoming regional and national training courses at ITC and in The Gambia up to June 2003 (subject to modifications)

Course title	Description	Duration & tentative date	Target participants
<b>Data analysis and statistics</b>	Workshop on processing, analysis and reporting of animal production and health data	5 days: May 2003	<b>Regional group</b> Scientists, professionals ITC, NARS
<b><i>Moringa olifera</i>: agronomy, processing, feeding / nutritional value</b>	Production requirements, production and conservation for animal and human consumption	5 days: May/June 2003	<b>Regional group</b> Scientists, technicians NARS
<b>Socio-economic data processing and analysis</b>	Workshop on processing, analysis and reporting of socio-economic data	5 days; June 2003	<b>Regional group</b> Socio-economists and associated professionals NARS, ITC

Course title	Description	Duration & tentative date	Target participants
<b>IFG – horticulture, fodder tree and feed bloc production</b>	Workshop on Intensive Feed Garden Management	3 days: April 2003	<b>The Gambia</b> Livestock assistants and livestock farmers
<b>Internet-based literature search</b>	Using the Internet, search techniques, electronic library resources for accessing scientific literature	2 days: April 2003	<b>The Gambia</b> Scientists ITC, NARS
<b>Dairy processing technologies and dairy management</b>	Modular training incl. practical demonstrations on: operation of the milk pasteurising units <i>cum</i> collection centres; production of milk products; packaging of products; labeling; storage	5 days: April 2003	<b>The Gambia</b> Training of trainers DLS/ITC core team
<b><i>Moringa olifera</i>: production requirements, production and conservation</b>	PRA and training on production requirements, production and conservation for animal and human consumption	1 day: April & June 2003	<b>The Gambia</b> Livestock assistants and livestock farmers
<b>Peri-urban integrated agriculture</b>	Modular training on horticulture-livestock integration / Farmers' sensitisation and training	3 days: April & June 2003	<b>The Gambia</b> Livestock farmers
<b>Farmer Field School</b>	Initiation training	10 days: May 2003	<b>The Gambia</b> DLOs, LAs, Extension workers
<b>Dairy processing technologies and dairy management</b>	Modular training incl. practical demonstrations on: dairy management; animal health care, feeding and housing; hygienic milking; sanitation and cleaning, milk collection and transportation	5 days: May 2003	<b>The Gambia</b> Training of milk supplying farmers, collectors, vendors
<b>Research methodologies</b>	Methodological approaches and conditions for on-farm, laboratory and experimental work in livestock research, surveys and monitoring	3 days: May/June 2003	<b>The Gambia</b> Scientists ITC, NARS

**A livestock-based Agricultural Research Institute dedicated to serve the  
West African Region**

International Trypanotolerance Centre  
Banjul, The Gambia

ITC  
P.M.B. 14  
Banjul  
The Gambia

Tel: +220 - 46 29 28  
Fax: +220 - 46 29 24  
E-Mail: [itc@itc.gm](mailto:itc@itc.gm)  
[newsletter@itc.gm](mailto:newsletter@itc.gm) (Editor)

---

You find the ITC Newsletter  
also on our Website:  
<http://www.itc.gm>

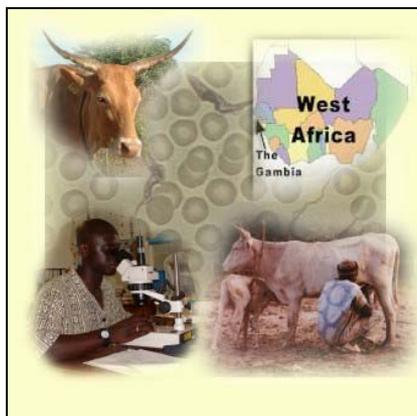
---

## About ITC

The International Trypanotolerance Centre (ITC) is a sub-regional research institution located in The Gambia, West Africa, with livestock rearing and research facilities at Headquarters in Kerr Serigne (Greater Banjul Area) and Stations at Keneba and Bansang. Thus, ITC has access to diverse agro-ecological settings, disease risk areas and livestock production systems in the sub-region.

The mission of ITC is to *contribute to livestock productivity and utilisation in the West African region through the optimal and sustainable exploitation of the genetic resistance of indigenous breeds of livestock for the welfare of the human populations.*

The general objective focuses on the *formulation, implementation and introduction of sustainable socio-economically and environmentally acceptable integrated packages at farmer level, for improved livestock health, production and exploitation.*



### ITC Institutional Programmes and Projects

Programme	Institutional Project (IP) - short title
<b>Low-Input Systems Improvement Programme (LISIP)</b>	<b>IP 1: Disease Risk Assessment</b>
	<b>IP 2: Disease Control Strategies</b>
	<b>IP 3: Stress Factors and Maintenance of Disease Resistance / Resilience</b>
	<b>IP 4: Crop-Agroforestry-Livestock Integration</b>
	<b>IP 5: Genetic Improvement of Indigenous Ruminants</b>
<b>Market-Oriented Improvement Programme (MOSIP)</b>	<b>IP 6: Development of Meat and Milk Systems in Peri-Urban Areas</b>
	<b>IP 7: Feeds and Feeding Strategies</b>
	<b>IP 8: Development and Application of Novel Techniques</b>
<b>Systems' Overlaps and Linkages Improvement Programme (SOLIP)</b>	<b>IP 9: Consumer Safety and Public Health</b>
	<b>IP 10: Socio-Economics Aspects of Livestock Production</b>
	<b>IP 11: Training and Information</b>