

# THE CARI NEWS

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## FROM THE DIRECTOR'S DESK

Many activities took place in the beginning of New Year 2012. Research on molecular sexing on quails and integrating *in-ovo* feeding with *in-ovo* IBV vaccination to developing chicken embryo were achieved by the scientists of the Institute. During the period, one of the scientists was selected for Norman E. Borlaug Award-2011. The visit of UK delegation consisting of nine scientists under DBT-BBSRS Livestock Health and Disease Scoping Workshop opened the scope of collaborative research in addressing key challenges in viz. molecular approach for immunocompetence and safety of poultry products. Under NAIP, a Workshop on "Backyard poultry and duck production for sustainable livelihood and food security" was organized at CARI Regional Centre at Bhubaneswar.



Under technology transfer activities, a farmer awareness programme on poultry husbandry at Block level and three sponsored training programmes for farmers and army soldiers were organized to motivate them for adopting poultry farming. The Institute disseminated its innovative technologies through IARI Krishi Vigyan Mela and Exhibition at NASC Complex, New Delhi. The Institute is committed to fulfill its mandate with the consistent guidance and support from the Council and concerted efforts of its scientists and other staff members. I wish the CARI fraternity and readers a happy and prosperous New Year 2012.

**(R.P. Singh)**  
Director

## SECTORAL NEWS

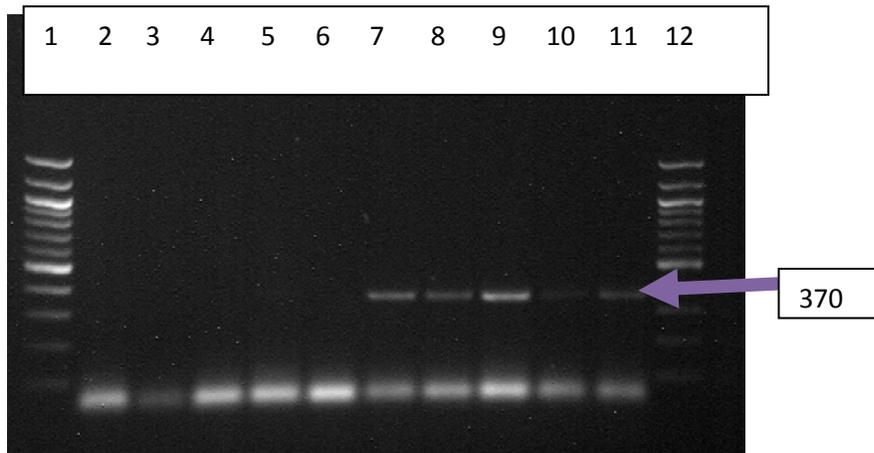
### Steps to Reduce In-Feed Antibiotic Use

The health ministry is to specify withdrawal periods for antibiotics in poultry, livestock and shrimp, as the result of pressure from the EU, in order to reduce the risk of the development of antimicrobial resistance. The Union health ministry is inserting a new norm in the Drugs and Cosmetics rule that will specify the withdrawal period, or the timeframe for poultry, livestock and marine products to be kept off antibiotics before they enter the food chain. According to the new insertion in Rule 97, eggs and milk products will have to be off antibiotics for seven days before they enter the food chain. The corresponding figure for poultry and livestock items will be 28 days. The official explained: "Rules will be formulated, and then cleared by the law ministry. This will be followed by a gazette notification. Subsequently, state drug controller generals will be informed that under the Act, they can check with poultry and livestock farmers on whether they are adhering to the withdrawal timeframe." The policy has named common antibiotics like tetracycline, oxytetracycline, trimethoprim and oxolinic acid, and clearly mentions that it "shall not exceed the prescribed tolerance limit". The use of over 20 antibiotics or pharmacologically active substances has been prohibited in seafood and poultry products.

## RESEARCH HIGHLIGHTS

### Molecular Sexing in Quail

Japanese quail (*Coturnix japonica*) commonly known as 'Bater' in India, is one the smallest and economically important avian species, alternate to the commonly reared chicken. Conventional methods of sexing viz. vent sexing, laproscopy, steroid sexing and karyotyping are not applicable in quails at day old or early stages increases rearing cost of unwanted sex and limits full exploitation through selective breeding. Investigation carried out to differentiate sex of Japanese quail using polymerase chain reaction (PCR) based on W-chromosome specific DNA sequences, as female is heterogametic (ZW) in poultry species, resolved that all the females demonstrated a 370 bp amplicon, whereas none of the males showed this amplicon. Hence, it was inferred that a simple and rapid method of sexing in Japanese quails based on PCR can be effectively used in systemic selection and breeding programmes targeted to genetic improvement of sex related traits.



**Fig.** PCR amplification of W-specific sequences in Japanese quails. Lanes (Left to right): 1 & 12 - 100 bp ladder; 2 - 6 - Male Quail and 7 - 11 Female Quail

-Abdul Rahim, Sanjeev Kumar, Jagdev Singh, L.S. Kokate, Ananta Kumar Das, Anil Kumar  
Mishra, Raj Narayan, Deepak Sharma and M.C. Kataria

### Integrating *in ovo* Feeding and *in ovo* Infectious Bursal Disease Vaccination for Post-hatch Growth and Expression of Immune Genes in Broiler Chickens

Nutrients modulating growth, cellular and humoral immunity were identified and *in ovo* injected in combination with infectious bursal disease (IBD) vaccine to developing chicken embryo on 18 d of incubation. After hatch the chicks were reared till 42 d of age. Growth or humoral nutrients and IBD vaccine injected chicks had consistently better body weight and had 50-70 g higher body weight at marketable age (42 days) than un-injected control chicks. Expression of IL-2 and IFN gene was significantly higher in growth or humoral nutrients injected chicks. However, expression of IL-12 gene was significantly lower in growth or cellular immunity group chicks than humoral or un-injected control chicks. The antibody titer to IBD vaccine expressed as sample to positive ratio (S/P) was significantly higher in the chicks received *in ovo* injection of growth nutrients and IBD vaccine than the un-injected control group chicks on day of hatch and 7 d post-hatch. Humoral nutrient injected chicks had similar

S/P ratio to that of un-injected control chicks, but better than cellular immunity nutrient group chicks. Thus, it can be concluded that growth or humoral nutrients composition along with IBD vaccine can be used as *in ovo* package for improving post-hatch growth and immunity in broiler chickens.

*-S.K. Bhanja, S. Majumdar, A.B. Mandal, A. Goel and M. Mehra*

## **OTHER ACTIVITIES**

### **Institute Management Committee (IMC) Meeting**

The 38<sup>th</sup> IMC meeting was held on February 08, 2012 under the Chairmanship of Dr. R.P. Singh, Director, CARI. Shri H.M. Azad, Member Secretary; Dr. Satish Kumar Garg, Dr. A.B. Mandal, Dr. Sandeep Saran, Shri Ravindra Kumar and Shri P.K. Singh, as members attended the meeting. The Committee was satisfied with the research activities and achievements made by this Institute. Research projects for the year 2011-12 were brought to the notice of all the members and were approved by IMC. The IMC appreciated the administration for maintaining homely atmosphere, as there was no grievance from the employees of the Institute.

### **Republic Day Celebrations**

The Republic Day was celebrated at the Institute on January 26, 2012 with great zeal and enthusiasm. Dr. A.K. Sachdev, Acting Director, CARI hoisted the National Flag and addressed the staff. Sweets were distributed on the occasion under the aegis of Staff Welfare Club.

### **Annual Get Together**

On the eve of New Year's Day, the Staff Welfare Club organized annual get together on January 02, 2012. Dr. R.P. Singh, Director, CARI conveyed his best wishes for a better 2012 to the staff and their families. Shri P.N. Yadav, Secretary highlighted the importance of New Year get together. The Director and other staff exchanged greetings on this occasion.

### **Visit of Dignitaries**

The following dignitaries/delegation visited the Institute as per details.

UK delegation under DBT-BBSRS programme	February 10, 2012
Prof. M.J. Modayil, Member, ASRB, New Delhi	March 10, 2012
Shri Raj Kumar, IPS, DIG, Bareilly range	March 15, 2012

## **CENTRAL/DIVISIONAL NEWS**

### **DBT-BBSRC (UK) Livestock Health and Disease Scoping Workshop**

A delegation from UK consisting of nine scientists visited CARI, Izatnagar on February 10, 2012 following the BBSRS-DBT Livestock Health and Disease Scoping Workshop at NII, New Delhi from February 06-08, 2012. The aim of the workshop was to understand the current research landscapes in India and UK in livestock health and disease research and identify the areas of particular strength in both the countries for collaborative research. Dr. V.K. Saxena, convener of the visit briefed the UK delegates about the facilities and scientific strength of the Institute. Welcoming the



delegates, Dr. R.P. Singh, Director, CARI briefly apprised about diversified poultry species available, improved germplasms and other innovative technologies developed at the Institute. He also put forth the scope of collaborative research in the area of molecular approach for immunocompetence and safety against bio-contaminants in poultry products. The chairperson from UK side Dr. Lesley Heppell thanked CARI for arranging their visit and introduced about BBSRS and the scope of the workshop. Moderator, Prof. D. Maskell remarked about the mutual benefits of collaborative research in areas of complementary and synergistic key challenges. Meeting was ended with vote of thanks, followed by exhibition of poultry germplasm available at CARI, Izatnagar.

### **State Level Workshop at Regional Centre**

A Workshop on “Backyard poultry and duck production for sustainable livelihood and food security” was organized at CARI Regional Centre, Bhubaneswar from February 28 to March 01, 2012 as a part of the activities under the on-going NAIP project. Chief veterinary officers and other officers engaged in poultry production from different districts of Odisha, NGOs, technocrats, industry people and more than 80 farmers including 35 women participated the workshop. Series of technical discussions and deliberations were made on the first day after the inaugural ceremony followed by a field visit for the farmers on second day which exposed them to the scientific poultry and duck production under backyard sector. Inter institutional meeting was held on the last day to discuss about the implementation of recommendations of the workshop. Two booklets were released on this occasion namely “Muktaangana Kukutta Palana” in Odia and “Duck Farming for Rural Farmers” in English for the benefit of the farming community. Dr. S.K. Mishra, In-charge, CARI Regional Centre chaired the function and Dr. S.C. Giri, Senior Scientist of the centre organized the said event.



### **Farmer Awareness Meet**

An awareness programme on poultry husbandry was organized by Technology Transfer Section on March 23, 2012 with CARI Scientists and the specialists of KVK, Amriya at Gajrola Farm of Amriya block, Pilibhit district. In this awareness meet, 29 farmers participated. Discussions/lectures between poultry scientists and farmers were held on scientific poultry production. Dr. M.C. Kataria, PS and Head, AGB Division and Dr. Sanjeev Kumar, PS discussed about poultry breeds, their management and proper feeding. Thereafter, a question-answer session was conducted by Dr. Niranjana Lal, Scientist to understand the problems of the farmers in this area and in general.



### **Participation in Exhibitions**

The Technology Transfer Section of the Institute set up CARI stall in the following exhibitions.

Krishi Vigyan Mela held on March 01-03, 2012 at IARI, Pusa, New Delhi.

Exhibition held on March 13-15, 2012 at NASC Complex, New Delhi.

## Training Programmes for Farmers/Soldiers

The Technology Transfer Section organized three sponsored training programmes on poultry production management at the Institute during January and February 2012 for 30 farmers sponsored by Animal Husbandry Department, Patna, Government of Bihar; 11 farmers sponsored by ATMA, Poornea (Bihar); 60 army soldiers sponsored by Gorkha Resettlement Training Unit C/O 56 APO as well as 6 farmers and unemployed youth belonging to Bareilly district of Uttar Pradesh.



## Norman E. Borlaug Award

Dr. Simmi Tomar, Sr. Scientist selected for Norman E. Borlaug International Agricultural Science and Technology Fellowship Programme 2011 by FAS, United States Department of Agriculture, USA and participated in World Food Prize Symposium held at Des Moines, IA, USA. As a visiting scientist, she worked on “Metagenomic analysis of GIT in broiler chicken” at A&M University, College Station, Texas, USA.

## Conferences/Seminars Attended

Dr. R.P. Moudgal, PS and Head, P&R Division attended and presented lead paper during International Symposium on “Emerging challenges in poultry health and disease control” and the First Annual Conference of Association of Avian Health Professionals held on February 03-04, 2012 at PDP, Hyderabad.

Dr. R.P. Moudgal, PS and Head, P&R Division; Dr. Jag Mohan, PS; Dr. Jagbir S. Tyagi, PS and Dr. Sirazudeen, Scientist presented invited talks in an advanced short course for researchers and teachers held on February 28-March 19, 2012 at CAFT in Veterinary Physiology, IVRI, Izatnagar.

Dr. S.K. Bhanja, Sr. Scientist attended the Annual Workshop 2012 of NAIP-Comp-4 (Basic and Strategic Research in Frontier Areas of Agricultural Science) held at NASC Complex, New Delhi during March 19-29, 2012.

Shri P.N. Yadav, T-6 (T.O. Rajbhasha) attended Advanced Translation Training Course held on February 27, 2012 to March 02, 2012 at Central Translation Bureau, Dept. of Official Language, Min. of Home Affairs, New Delhi.

## Scientific/Technical Seminars Organized

<i>Ser. No.</i>	<i>Date</i>	<i>Topic</i>	<i>Speaker</i>
<b>Minor Credit</b>			
1.	03.01.2012	Organic farming of poultry in India	Dr. Vipin K. Upadhyay LPM/MVSc/5045
2.	03.01.2012	Layer management upto one laying cycle	Dr. Golher D.M. LPM/MVSc/5048
3.	03.01.2012	Changes required in the poultry industry in India as per WTO strategies	Dr. R. Rangaswamy LPM/MVSc/5050
4.	04.01.2012	Welfare in cage rearing system of poultry	Dr. Mamta LPM/MVSc/5046
5.	04.01.2012	Housing management in poultry	Dr. Leinasehla LPM/MVSc/5049
6.	07.01.2012	Gene mapping	Dr. Jagat Singh Kadian AGB/MVSc/5021

7.	07.01.2012	Stem cells	Dr. Tarun Kumar AGB/MVSc/5023
8.	07.01.2012	Epigenetic	Dr. Mohd. Baqir AGB/MVSc/5026
<b>ORW</b>			
1.	02.01.2012	Effect of heat stress on the performance and gene expression of nutrient transporters in the small intestines of Japanese quail	Dr. I.A. Khan PSC/MVSc/4918
<b>Pre-thesis Submission</b>			
1.	12.01.2012	Short tandem repeats (STR) polymorphism in egg-type chicken and its association with egg production traits	Dr. Rahul Arya PSc/PhD/1107

## STAFF PERSONALIA

### Appointments

Shri Pradeep Kumar appointed as T-1 (Lab. Tech.) w.e.f. 09.01.2012 at CARI Regional Centre, Bhubaneswar (Orissa).

Shri Rakesh Jaiswara appointed as T-3 (Lab. Tech.) w.e.f. 20.01.2012 at CARI Regional Centre, Bhubaneswar (Orissa).

### Transfer

Dr. Deepak Sharma, Principal Scientist relieved from CARI, Izatnagar on 25.01.2012 (F.N.) to join his new assignment as Head, Division of Animal Genetics, IVRI, Izatnagar.

### Retirements

Shri Shiv K. Saxena, Asst. Admn. Officer retired on 31.03.2012 (F.N.).

Shri Anokhey Lal, S.S.S. retired on 31.01.2012.

### SCHEDULE FOR SPECIALIZED TRAINING COURSES (2012-13)

<i>Ser. No.</i>	<i>Courses</i>	<i>Period</i>	<i>Fee (Rs.)</i>
1.	Poultry Hatchery Operation	April 16-28,2012	7000
2.	Quail Production	May -14-26, 2012	7000
3.	Broiler Production	June 11-23, 2012	7000
4.	Guinea Fowl Production	July 16-28, 2012	7000
5.	Layer Production	Aug. 20-Sep. 01, 2012	7000
6.	Poultry Diseases and Bio-security Measures	Sep. 10-22, 2012	7000
7.	Poultry Entrepreneurial Development and Project Formulation	Oct. 15-27, 2012	7000
8.	Poultry Feeding and Quality Control	Nov. 19-Dec. 01, 2012	7000
9.	Artificial Insemination in Poultry	Dec. 10-22, 2012	7000
10.	Poultry Processing and Products Technology	Jan. 14-26, 2013	7000
11.	Backyard Poultry Farming	Feb. 11-23, 2013	7000
12.	Turkey Production	March 11-23, 2013	7000

\*Eligibility: For all courses, the candidate must be a graduate in any stream. \*How to Apply: Brief resume supported by educational records and forwarding/sponsoring note may be sent to the Director, CARI, Izatnagar, Bareilly-243 122 (U.P.) either through post or e-mail (cari\_director@rediffmail.com).