



# ICAR-DPR NEWS



SARDAR PATEL OUTSTANDING ICAR INSTITUTION  
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## Director's Column ...



It gives me immense pleasure to present the Newsletter of ICAR-DPR for the period January to June 2019. During this period, the institute made tremendous progress on research front as well as in areas of transfer of technologies, extension and skill development. Nano form of zinc was found beneficial over inorganic zinc even at lower dietary concentration in combating heat stress in broilers and *Vanaraja* chicks. Continuous improvement in the performance of pure lines of chicken is being made. Important indigenous chicken breeds are being conserved and characterized. *Vanashree* (PD-4), an improved indigenous chicken evolved from Aseel is being supplied to the farmers. Disease resistance studies involving *Pasteurella multocida* infection showed that indigenous breeds are more tolerant to fowl cholera infection.

Apart from research activity, the institute conducted various training programs on different aspects of poultry rearing for rural farmers. Scheduled Caste Sub Plan (SCSP) was launched during this period, in which improved chicken germplasm was distributed. A total of 100 farmers of ST and 30 farmers of SC were imparted the hands-on training on rearing of improved chicken varieties in their backyard. Under Tribal Sub Plan (TSP), grownup chicks of *Vanaraja*

and *Gramapriya* were distributed to farmers in various tribal villages of Adilabad district, Telangana. Temporary night shelters were also provided to the beneficiaries of TSP to protect birds during night time. A total of 8,63,244 improved chicken varieties and indigenous chickens were supplied during the period from the Institute and various centres of AICRP on Poultry Breeding and Poultry Seed Project. Scientists of the Directorate participated and presented papers in conferences and symposia at national and international levels and received awards for papers presented. The staff of the institute actively and regularly participated in the Swachh Bharat Abhiyan activities.

(R.N. Chatterjee)  
Director

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## Nano zinc showed stress modulating effects in heat stressed broiler and *Vanaraja* chickens

Zinc plays vital role in several metabolic pathways to minimize the ill effects of heat stress in chicken. Nano form of the mineral was reported to have higher availability than inorganic salts in chicken. An experiment was conducted with a total of 450 male broiler chicks, which were allocated to nine treatment groups having 9 replicates of 5 in each. Inorganic Zn (ZnO) was supplemented at 80 mg/kg diet, which was considered as the control diet. Eight experimental diets were prepared using different concentrations of Zn (7.5, 10, 15, 20, 30, 40, 60 and 80 mg/kg) from nano Zn (nZn). Experiment was conducted during early part of summer (February and March), where the maximum and minimum temperature and humidity ranged between 35.13 to 26.48 °C and 52.87 to 29.87%, respectively. The performance of commercial broilers fed lower concentration of nZn (7.5 mg/kg diet) in place (80 mg / kg diet) of inorganic Zn (ZnO) was not affected, except the FCR at day 21. The feed efficiency in broilers fed the lowest concentration of nZn (7.5 mg/kg) was significantly higher than those fed the ZnO based diet and other higher concentrations of nZn. Though the CMI response was not affected, the antibody titre against Newcastle disease vaccine improved quadratically with reduction in concentration of nZn in the diet. Lipid peroxidation in spleen and liver reduced in broilers fed nZn. Similarly, the activity of GSHPx in liver and spleen and the activity of SOD in spleen improved in broilers fed different concentrations of nZn. In general, higher activities of anti-oxidant enzymes were observed in broilers fed lower concentrations of nZn (7.5 to 20 mg/kg). Results of the study indicated significant improvement in stress combating ability in broiler chicken fed lower concentration of nZn compared to the recommended concentration of inorganic Zn in the diet.

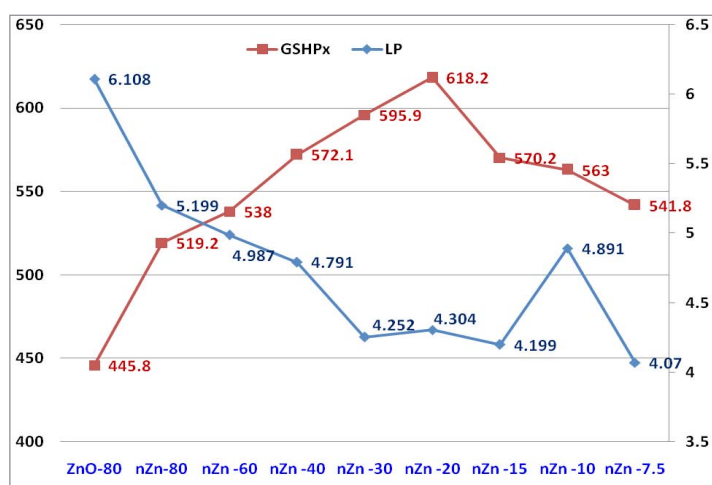


Fig. 1. Effect of graded dietary concentrations of nano Zinc (nZn) on glutathione peroxidase (GSHPx) and lipid peroxidation (LP) in broiler diets

In a different feeding experiment, the effect of supplementing different sources of Zn on *Vanaraja* chicks was evaluated during summer season. Supplemental Zn (40mg/kg) from zinc oxide (ZnO), zinc peptide (oZn) and nano zinc (nZn) was added to basal diet, while another basal diet without supplemental Zn was used as control. A total of 240, day-old *Vanaraja*

chicks were distributed in to 48 replicates at the rate of 5 birds in each pen. Each diet was randomly allotted to 12 pens from day one to 42 days of age. Maximum and minimum ambient temperature and humidity were 38.38 to 28.15 °C, and 52.5 to 18.2%, respectively. Body weight gain and feed efficiency improved significantly in *Vanaraja* chicks fed different forms of supplemental Zn compared to the control. There was no significant difference in performance among Zn sources tested. Immune responses (HI and CMI to PHA-P) were not affected. Lipid peroxidation in spleen reduced significantly in Zn supplemented groups. Among the Zn sources, the lipid peroxidation was significantly less in nZn group followed by oZn and ZnO (inorganic) in that order. Similarly, the activity of GSHPx improved in birds fed supplemental Zn. Among the Zn sources, nZn fed birds had highest enzyme activity. Results of the experiment indicated that nano form of Zn was superior followed by organic and oxide forms for reducing oxidative stress in *Vanaraja* chicken.

S. V. Rama Rao and Co-workers

## Conservation and improvement of indigenous chicken germplasm

The Directorate is conserving and characterizing important indigenous chicken breeds of India such as Aseel, Ghagus, Kadaknath and Nicobari. Under this program, PD-4 line evolved from Aseel breed is being improved for body weight at 8 weeks of age and egg production up to 40 weeks of age through selective breeding during last 10 generations. There was a significant improvement in growth and production performance of this germplasm. Male birds of PD-4 attained body weight of 603, 1612 and 2020 g respectively at 8, 16 and 20 weeks of age, while female birds attained body weight of 536, 1267 and 1548 g, respectively at the corresponding age.



Male and female birds of Vanashree (PD-4)

The shank length recorded at 20 weeks of age was 130.7 and 105.9 mm in male and female birds, respectively. Body weight at 40 weeks of age was 2956 and 2071 g, respectively in male and female birds. The hen housed and hen day egg production up to 40 weeks of age during S-9 generation was 73.74 and 74.52 eggs, respectively with average egg weight of 48.8 g. The liveability of male and female birds observed during 21-40 weeks of age was 92.22 and 92.89%, respectively. Day old chicks and fertile eggs of PD-4 birds are being supplied to the farmers in the name of *Vanashree* for rearing in backyard or free range system of production.

Santosh Haunshi and Co-workers

## Tolerance to *Pasteurella multocida* experimental infection in native chicken breeds and backyard chicken varieties

The native chicken breeds viz., Aseel, Ghagus, Nicobari and an improved chicken variety, *Vanaraja* were evaluated for tolerance to fowl cholera by experimental infection in two different sets of experiments. The birds were inoculated with  $1.9 \times 10^5$  CFU/ml through intra-peritoneal and intranasal routes at 16 weeks of age. Symptoms, mortality rates and lesions in dead birds were observed; serum from surviving birds of different groups were collected at 5, 14, 21, 28, 35 and 42<sup>nd</sup> day and specific antibody titres were measured by indirect ELISA. Differential response was observed in Indian native Aseel, Ghagus, Nicobari and *Vanaraja* backyard chicken breeds/variety to experimental *Pasteurella multocida* (PM) infection. Significantly higher tolerance was observed in Aseel breed than Ghagus and Nicobari in terms of morbidity, mortality, mean death time and severity of the disease via both intra-peritoneal and intranasal routes. Significantly higher levels of PM specific antibodies were induced in Aseel breed in comparison to Ghagus and *Vanaraja* chicken.

T. R. Kannaki

## Medicinal plants as alternatives to antibiotic growth promoters (AGPs) in broiler production

Two phyto-genic feed additives (PFAs) were formulated for their utilization as alternatives to AGPs in broiler production. An *in vivo* trial was conducted in Krishibro (multicolored broiler) with the two PFAs and the

results showed better clinical and production performance as revealed by gut health and significant reduction in FCR in the chicks.

D. Suchitra Sena

## Sustainable poultry waste management through composting

Disposal of poultry waste (droppings) is one of the major challenges in poultry production. However, poultry droppings can be used as manure by composting with organic waste. A composting unit has been constructed at the institute to carryout experiments of composting poultry droppings with different organic matter to produce manure.



R. K. Mahapatra and Co-workers

# TRANSFER OF TECHNOLOGY

## Introduction of improved chicken varieties in tribal villages of Aspirational Districts Programme under Tribal Sub Plan

ICAR-Directorate of Poultry Research, Hyderabad introduced improved chicken varieties like *Vanaraja* and *Gramapriya* with an aim to improve the income and living standards of tribal farmers in Adilabad district, Telangana under Tribal Sub Plan.

### Mother Unit, ITDA, Utnoor

A mother unit facility was established at ITDA, Utnoor, Adilabad to grow the chicks during nursery phase.



Input distribution program under TSP

A total of 2800 grown up birds were distributed to 170 tribal farmers on 7 February, 2019 during the Nagoba Jathara at Keshlapur by Shri. G. Nagesh, MP and Shri. Koneru Konappa, MLA. District Collector, ITDA Project Officer and Director ICAR-DPR and several officials attended the event.

### Input distribution program

Input distribution program was organized at Indervelly, Adilabad district on 29 May, 2019. A total of 42 tribal farmers from different villages viz. Dodanda, Wadgaon, Sakari, Indervelly, Dehgaon, Gattepally, Utnoor, Wolvadi, Thummaguda, Koyalpandri, Muthnoor, Mankuguda, Jatharla, Kolamguda Dharthanpally and Medaguda were benefited. Most of them were women farmers and already undergone training on "backyard poultry rearing" during 1-2 March, 2019 at ICAR-DPR, Hyderabad. This was an initiative of Government of India under the Tribal Sub Plan (TSP), in Aspirational District Program of ICAR. Team of scientists and officers of this Directorate interacted with tribal beneficiaries. Potential benefits of backyard farming with *Vanaraja* were explained to the tribal farmers. A total of 42 tribal beneficiaries were provided with 10 *Vanaraja* birds (6 weeks of age), 20kg feed, one feeder and one waterer per each beneficiary. As a new initiative for proper safeguarding of birds during night, temporary night shelters were provided to the beneficiaries.



*Input distribution program under TSP*

Another program of input distribution under Tribal Sub Plan was organized at Kolamguda and Thatiguda villages, (Adilabad District) on 22 June, 2019. A total of 13 tribal farmers were benefited. Team of scientists and officers of this Directorate interacted with tribal beneficiaries. Advantages of rearing improved backyard chicken varieties were explained to the tribal farmers. The tribal beneficiaries were provided with about 190 *Gramapriya* birds, feed and medicine kit. For proper safeguarding of birds during night, 'temporary night shelters' were provided to the beneficiaries. Expert team also interacted with tribal farmers of Thatiguda village, who earlier undergone training on "backyard poultry rearing" at this Directorate. About 17 farmers formed a farmer's producer group" and started rearing *Vanaraja* birds. The visiting team monitored the performance of the birds and given suitable suggestions for scientific rearing of birds.

## DPR initiates Scheduled Caste Sub Plan work in Telangana

ICAR-DPR initiated the Scheduled Caste Sub Plan (SCSP) work with a training program to Scheduled Caste farmers from Gudur Village, Shamshabad Mandal, Ranga Reddy district. A total of 30 farmers participated in the training program conducted on 13 March, 2019 at ICAR-DPR, Hyderabad. The farmers were exposed to different activities of poultry rearing.

## ICAR- DPR participated in Exhibitions

### a) Maha Pashudhan Expo 2019, Jalna

ICAR-DPR participated in the Maha Pashudhan Expo, 2019 from 2-4 February, 2019 at Jalna, Maharashtra. About 4500-5000 farmers visited the stall during the 3 days of exhibition. Literature on the improved chicken varieties was distributed to the farmers. The live birds (*Aseel*, *Kadaknath*, *Vanaraja* and *Gramapriya*) and other technologies displayed at the exhibition attracted many farmers and visitors.

### b) Agricultural Science Congress Expo 2019, New Delhi

ICAR-DPR participated in the Agricultural Science Congress Expo 2019 organized during 20-24 February, 2019 at ICAR-IARI, New Delhi. Secretary (DARE) & DG (ICAR) and DDG (AS & FS) along with other dignitaries visited the stall and appreciated the technologies. About 3000-3500 farmers visited the stall during the 4 days of exhibition.

### c) Southern Region Regional Agriculture Fair at PJTSAU, Hyderabad

ICAR-DPR Participated in Southern Region Regional Agriculture Fair at PJTSAU, Hyderabad on 24<sup>th</sup> May 2019. Around 400 farmers and other stakeholders visited DPR stall and gained knowledge related to scientific rearing of poultry and other technologies developed by the Directorate.

## TRAININGS CONDUCTED / SKILL DEVELOPMENT

### Training program on "Backyard Poultry Management" for veterinary officers

A five days training program titled "Backyard Poultry Management" was organized by the Directorate in collaboration with MANAGE, Hyderabad from 19 to 23 February, 2019. In this training program, 13 trainees from animal husbandry departments of Manipur, Kerala, Himachal Pradesh, Jammu and Kashmir, Bihar and Telangana states, besides one trainee from ICAR-DPR have participated.



*Director and Scientists with trainees of training program on "Backyard Poultry Management"*

The training programme was aimed at the updating of knowledge on recent developments in the backyard poultry production system and its management. The participants were exposed to various aspects of poultry breeding, nutrition, management, health, farm and hatchery operations with special reference to backyard poultry production. The Director of ICAR-DPR and representative from MANAGE have interacted with participants during inaugural and closing ceremonies and received the feedback from the trainees.

### Training on "Backyard Poultry Rearing" to tribal farmers

To impart scientific knowledge on backyard poultry management to the tribal farmers, a training program on "Backyard Poultry Rearing" was organized during 4-5 February, 2019 at ICAR-DPR, Hyderabad. A total of 17 tribal farmers from different parts of Adilabad district, Telangana participated in the programme. Dr. R.N. Chatterjee, Director, DPR interacted with the farmers and highlighted the advantage of rearing improved backyard chicken varieties developed by the Directorate towards doubling the farmer's income. The tribal farmers had hands-on training on farm management including nursery management, grower and breeder management and backyard poultry rearing. The farmers also visited poultry farm and dairy farm of Veterinary College, Rajendranagar.



*Trainee farmers of Backyard Poultry Rearing*

Another similar training program for tribal farmers was organized during 1-2 March, 2019 at ICAR-DPR, Hyderabad.



*Trainee farmers of Backyard Poultry Rearing*

A total of 23 tribal farmers (20 women and 3 men farmers) from different parts of Uttoor block of Adilabad district, Telangana participated in the programme. Dr. R.N. Chatterjee, Director, DPR interacted with the farmers. Tribal farmers participated in the Institute Foundation Day programme on 1<sup>st</sup> March 2019 and interacted with the Chief Guest Dr. Ashok Kumar, ADG (AH), ICAR.

### Training Programme for Poultry Farmers

ICAR-DPR organized a Training Programme on "Scientific Poultry Rearing" during 15-17 May, 2019. A total of 13 poultry farmers/entrepreneurs from Telangana, Andhra Pradesh and Uttar Pradesh attended the programme.



The trainees were exposed to various aspects of poultry production such as nutrition, management and health care. The training module was through practical demonstrations and hands-on experience on farm and hatchery operations.

### Training Programs Organized During January to June 2019

Sl. No.	Program	Participants (Nos.)	Duration	Date
1	Training programme on "Scientific Poultry Rearing"	Farmers (8)	3 days	22-24 January, 2019
2	Training for Tribal Farmers on "Backyard Poultry Rearing" under TSP	Tribal farmers from Adilabad district (17)	2 days	4-5 February, 2019
3	Training program on "Backyard Poultry Management"	Veterinary officers (13)	5 days	19-23 February, 2019
4	Training for Tribal Farmers on "Backyard Poultry Rearing" under TSP	Tribal farmers from Adilabad district (23)	2 days	1-2 March, 2019
5	Training on "Backyard Poultry Rearing" to Scheduled Caste farmers of Ranga Reddy district under Schedule Caste Sub Plan (SCSP)	Farmers (30) from Gudur village of Ranga Reddy district	1 day	13 March, 2019
6	Training programme on "Scientific Poultry Rearing"	Farmers (13)	3 days	15-17 May, 2019
7	"Modern Poultry Management" for established agripreneurs (collaboration with MANAGE)	Agripreneurs (15) from different states Farmers (4)	4 days	25-28 June, 2019

### Exposure Visit to ICAR-DPR, Hyderabad

- 1) One exposure visit of Veterinary Officers, Animal Husbandry Department, Tamil Nadu state was conducted on 31 January, 2019. This was the part of refresher training programme on "recent advances in livestock sectors" conducted by MANAGE Hyderabad during 28 January to 03 February, 2019.
- 2) Senior officials representing Afro-Asian and Latin American countries visited ICAR-DPR on 2<sup>nd</sup> March, 2019 to understand the intricacies of poultry breeding. They interacted with scientists of Poultry Breeding and appreciated the institute efforts in developing low input backyard chicken varieties.

### MEETINGS CONDUCTED

#### Research Advisory Committee meeting

The meeting of Research Advisory Committee of ICAR-DPR was held on 24<sup>th</sup> and 25<sup>th</sup> April, 2019 under the Chairmanship of Prof. B.B. Mallick, Founder Vice Chancellor, WBUAFS, Kolkata and Former Director and Vice Chancellor, IVRI, Izatnagar. The meeting was attended by the RAC members, Dr. Arjava Sharma, Former Director, NBAGR, Karnal; Dr. K.T. Sampath, Former Director, NIANP, Bangalore; Dr. J.R. Rao, Retd. HOD, IVRI, Izatnagar; Dr. R.S. Gandhi, ADG (AP&B), ICAR and Dr. R.N. Chatterjee, Director, ICAR-DPR, while Dr. M.V.L.N. Raju, Prl. Scientist

functioned as the Member Secretary. The RAC visited various units of the institute including hatchery, farm and laboratories and had an overview of the infrastructure available at the institute. Dr. R.N. Chatterjee, Director presented an overall view of the activities of the institute and the salient achievements during the past one year. The action taken on previous RAC recommendations and research progress in various ongoing programs were reviewed. The meeting ended with finalization of recommendations.



*RAC meeting in progress*



*RAC visiting farm*

progress of the projects. He also highlighted the need of the farmers and advised the scientists for working hard for the farmers who are directly involved in providing nutritional security to the country.



*Annual IRC meeting in progress*

### IAEC meeting

XXIII Institutional Animal Ethics Committee Meeting was conducted on 2<sup>nd</sup> March, 2019 at ICAR-DPR, Hyderabad, wherein proposals on animal experiments were reviewed and approved.

### Institute Joint Staff Council (IJSC) meeting

The 6<sup>th</sup> and 7<sup>th</sup> meetings of 10<sup>th</sup> IJSC were held at this Directorate on 29<sup>th</sup> March, 2019 and 18<sup>th</sup> June, 2019, respectively.

### Institute Management Committee meeting

The 38<sup>th</sup> and 39<sup>th</sup> Institute Management Committee meetings were held at this Directorate on 6<sup>th</sup> March, 2019 and 30<sup>th</sup> April, 2019, respectively.

## Institute Research Committee (IRC) meeting

The annual IRC meeting for the year 2018-19 was held on 2 May, 2019 under the chairmanship of Dr. R.N. Chatterjee, Director of the Institute. Dr. Vineet Bhasin, Principal Scientist, ICAR Head Quarter, New Delhi attended the meeting as external expert. The progress of all the research projects was deliberated in detail and the Chairman, IRC expressed his satisfaction on the research progress achieved by the scientists. He also emphasized on exploring innovative research work and development of farmers' friendly technologies. Dr. Bhasin took keen interest in deliberations of all the projects and put forward his opinion about the

## OTHER ACTIVITIES

### AKMU

KISAAN (Krishi Integrated Solution for Agri Apps Navigation) Mobile App is envisaged to help e-agriculture in India. It is developed by ICAR-Directorate of Knowledge Management in Agriculture, to drive smart phone based agriculture in India. KISAAN app integrates more than 100 Agriculture related apps developed by ICAR Institutes in a single mobile app which can be accessed through Android smart phones. ICAR-DPR Mobile App is incorporated in this KISAAN App.

Film on profile of DPR "DPR Marching ahead" is available in YouTube in English, Hindi and Telugu languages. YouTube Link: <https://www.youtube.com/channel/UCDL2gnmjtzabrxX39w aOITA>

### QR Code of DPR Film



### Swachh Bharat Activities

Under Swachh Bharat Abhiyan, the Directorate conducted cleaning activities once in a week within and outside the institute premises. Weeding of old files was done in Institute library and Administration sections.

### Webcast of "Mann Ki Bath" and inaugural program of "Pradhan Mantri Kisan Samman Nidhi"

Webcast of the "Mann Ki Bath" and inaugural programme of "Pradhan Mantri Kisan Samman Nidhi" was exhibited in which staff of the Institute, farmers and visitors have participated.



*Webcast of Mann Ki Bath in progress*

## National Science Day

ICAR-DPR celebrated National Science Day on 28 February, 2019. To commemorate this occasion, a host of activities were organized. Dr. R.N. Chatterjee, Director inaugurated the poultry exhibition, in presence of invited guest speakers and school children from various schools. School students were explained about scientific poultry rearing. In the poultry exhibition, school students exhibited models on different scientific themes related to climatic change, cleanliness etc. Posters on institute's research activities were also displayed. Guest speakers delivered lectures on the topics of "Artificial Intelligence and IOT and their applications in poultry rearing". At the end, prizes and appreciation certificates were distributed to school students by the Director for exhibiting scientific models.



*National Science Day celebrations*



*School children depicting models on Science Day*

## Institute Foundation Day

ICAR-DPR celebrated its 32<sup>nd</sup> Foundation Day on 1 March, 2019. Dr. Ashok Kumar, ADG (Animal Health), ICAR, New Delhi was the Chief Guest. He visited the poultry exhibition and labs of the institute. Dr. R.N. Chatterjee, Director ICAR-DPR welcomed the Chief Guest, Directors of different ICAR institutes located at Hyderabad, tribal farmers, and school children. Chief Guest, Dr. Ashok Kumar, applauded the achievements of the scientists of the institute. He emphasized on focused approach towards poultry research. Children from different schools invited on this occasion exhibited scientific models on different themes. On this occasion, games were conducted for the employees of this institute.



*Dr. Ashok Kumar, ADG (AH), Chief Guest for the Foundation Day*



## National Productivity Week



*National productivity week celebration*

ICAR- DPR celebrated National Productivity Week during 12-18 February, 2019 with the aim to generate productivity consciousness among staff of the institute. Dr. R.N. Chatterjee, Director, inaugurated the programme and highlighted the importance of the theme "Circular Economy for Productivity and Sustainability". Dr. K. Alwal Reddy, MD, Venkateshwara Hatcheries and Mr. Shravan Gattu, Senior Engineer, Viven Farms Pvt. Ltd., Hyderabad spoke on topics "Practical Aspects of Poultry Production" and "Usage of Poultry Waste" respectively. Different competitions such as essay writing, quiz and slogan writing were conducted for the staff during the week.

## International Women's Day

ICAR- DPR celebrated International Women's Day on 8 March, 2019. The Director of the institute chaired the meeting and also spoke on the varied responsibilities of the working women. Women employees of the institute discussed issues related to welfare, grievances etc. Some of the employees gave a talk on women's contribution in different fields for the wellbeing of the society.



*Director with women staff*

## Workshop on Intellectual Property Rights

The ITMU, ICAR-DPR organized a workshop on "IPR Management vis-à-vis ICAR Guidelines" on 18 February, 2019. The Director, scientists and technical staff participated in the workshop. The purpose of the workshop was to enhance awareness about Intellectual Property Rights for effective IP management. The programme included two guest lectures by Dr. M. Elangovan, Principal Scientist and I/C ITMU, ICAR-IIMR, Hyderabad and Dr. Poornima Chandran, Prometheus Patent Services, Hyderabad.



*IPR Workshop in progress*

## Patent granted

The first patent for the Directorate was granted by the Indian Patent Office, Chennai in March, 2019.

**Title of the patent:** Diagnostic kit, primers and method for sex determination in chicks and adults of avian species.

**Patent No.:** 309612

**Inventor:** Dr. T.K. Bhattacharya

# HUMAN RESOURCE DEVELOPMENT

## Trainings undergone by ICAR-DPR staff

Sl. No.	Title of the Training	Name of the Staff and Designation	Duration	Place of the Training
1	UK and International Veterinary Vaccinology Network (IVVN) conference	Dr. T.R. Kannaki, Sr. Scientist	9 and 10 January, 2019	London, UK
2	National Symposium on Animal Genetic Resources for food & XVI Annual convention of Society for Conservation of Domestic Animal Biodiversity (SOCDAB)	Dr. Leslie Leo Prince, Pr. Scientist Dr. M. Shanmugam, Sr. Scientist	7 and 8 February, 2019	ICAR-NBAGR, Karnal
3	XIV Agricultural Science Congress	Dr. T.K. Bhattacharya, National Fellow Dr. R.K. Mahapatra, Pr. Scientist Dr. Chandan Paswan, Sr. Scientist	20-23 February, 2019	ICAR- IARI, Pusa, New Delhi
4	Training-Cum-Workshop for unit level data repository for AICRPs (AICRP on Poultry Breeding) under ICAR Research Data Repository for Knowledge Management (KRISHI portal)	Dr. Santosh Haunshi, Pr. Scientist	25 February, 2019	ICAR-IASRI, New Delhi
5	Workshop on 'Understanding the emergence of variant infectious bronchitis virus in chickens in UK and India : shared control strategies'	Dr. T.R. Kannaki, Sr. Scientist	1 and 2 May, 2019	University of Liverpool, Liverpool, UK
6	MDP on Leadership Development (a Pre-RMP)	Dr. Suchitra Sena, Pr. Scientist	11-22 June, 2019	ICAR-NAARM, Hyderabad
7	Training on Hospitality Management	Dr. B. Prakash, Sr. Scientist	26 June-02 July, 2019	ICAR-NAARM, Hyderabad

## DISTINGUISHED VISITORS

1. Dr. A.K. Srivastav, Chairman (Additional Charge), and Member ASRB, New Delhi
2. Dr. J.K. Jena, DDG (AS & FS), ICAR, New Delhi
3. Dr. R.S. Gandhi, ADG (AP&B), ICAR, New Delhi
4. Dr. Ashok Kumar, ADG (AH), ICAR, New Delhi
5. Dr. Panjab Singh, Former Director General, ICAR, New Delhi
6. Dr. B.B. Mallick, Former VC, WBUAFS, Kolkata
7. Dr. V. Ayyagari, Former Director, PDP
8. Dr. R.P. Sharma, Former Director, PDP
9. Dr. K.T. Sampath, Former Director, NIANP, Bangalore
10. Dr. Arjava Sharma, Former Director, NBAGR, Karnal
11. Dr. S. Vaithyanathan, Director (Acting), ICAR- NRC Meat, Hyderabad

## AWARDS / RECOGNITIONS

- Dr. L.L.L. Prince, Pr. Scientist received the oral presentation award (Second prize in Technical Session-1) in National Symposium on "Animal Genetic Resources for Food and Social Security" & XVI Annual Convention of Society for Conservation of Domestic Animal Diversity (SOCDAB) held at ICAR-NBAGR, Karnal, 7<sup>th</sup> and 8<sup>th</sup> February, 2019.
- Dr. M. Shanmugam and co-workers received second best oral presentation in National Symposium on "Animal Genetic Resources for Food and Social Security" & XVI Annual Convention of Society for Conservation of Domestic Animal Diversity (SOCDAB) held at ICAR-NBAGR, Karnal during 7<sup>th</sup> and 8<sup>th</sup> February, 2019.
- Dr. A. Kannan, Pr. Scientist received "Reviewer Excellence Award" from Editor of the Indian Journal of Animal Research.

## PERSONALIA

### New Joinings

- Sri P. Demudu Naidu has joined as Technician (T-1) on 11 January, 2019.
- Sri Shivam Sachan has joined as Stenographer Gr-III on 6 May, 2019.

### Resignation

- Sri P. Demudu Naidu has resigned the post of Technician (T-1) on 15/03/2019.

## EDITORIAL BOARD

Dr. Santosh Haunshi, Pr. Scientist  
Dr. M.V.L.N. Raju, Pr. Scientist  
Dr. M. Shanmugam, Sr. Scientist  
Dr. S.P. Yadav, Pr. Scientist

To



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