



# Central Avian Research Institute

### Izatnagar

### Courses

- 1. Advances in Poultry Hatchery Management
- 2. Advances in Poultry Nutrition and Feed Technology
- 3. Advances in Poultry Processing and Products Technology
- 4. Artificial Insemination Technology for Poultry
- 5. Biotechnological Tools for Poultry Production
- 6. Breeding Strategies for Egg and Meat
- 7. Quail Production for Commercial Exploitation

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*E-mail:* cari\_director@rediffmail.com hpshri@rediffmail.com The Central Avian Research Institute (CARI), the premier Institute of poultry research in the country, was established on 2nd November, 1979 as a commodity Institute of the Indian Council of Agricultural Research (ICAR). It has a Main Campus at Izatnagar, Bareilly (Uttar Pradesh) and a Regional Centre at Bhubaneswar (Orissa). Its mandate speaks as to undertake basic, applied and adoptive research in all disciplines relating to production of diversified poultry; to develop post harvest technologies; to impart specialized training/post graduate education in Poultry Science (PSC) leading to Diploma (National Diploma in Poultry Husbandry-NDPH), Master's (MVSc) and Doctoral (PhD) degrees in PSC in collaboration with the Indian Veterinary Research Institute Deemed University (IVRIDU) Izatnagar; to transfer the proven technologies to the end users and to provide referral/consultancy services.

## 1. Advances in Poultry Hatchery Management

### 2.

# Advances in Poultry Nutrition and Feed Technology

#### **Training Programme**

The course is designated to strengthen knowledge and skill of the participants involving in hatchery operation and management aspects of poultry production from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will constitute the faculty.

Course Coordinator:	Dr H P Shrivastava, PS & Head, PGE&T
Duration :	3 weeks (02-22 January 2009)
Course fee :	US \$ 2500
No. of trainees : per course	5 (maximum)
Boarding & Lodging:	Institute's Trainees' Hostel cum Guest House @ US \$30 per day trainee in addition to course fee.
Eligibility :	Graduate in Agriculture/Animal/ Biology/ Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- Recent developments in hatchery management
- Layout of modern hatchery
- Management of male and female breeders
- Nutrient needs for better fertility and hatchability
- Factors affecting fertility and hatchability
- in ovo feeding of nutrients and vaccination
- Major events in embryo development
- Hatchery operation
- Analyzing low hatchability
- Hatchery waste disposal
- Economics of hatchery plant
- Record keeping
- Visit to farm hatchery

#### **Training Programme**

The course is designated to strengthen knowledge and skill of the participants involving in poultry nutrition and feed technology aspects of poultry production from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will constitute the faculty.

Course Coordinator:	Dr H P Shrivastava, PS & Head, PGE&T
Duration :	3 weeks (03-23 February 2009)
Course fee :	US \$ 2500
No. of trainees : per course	5 (maximum)
Boarding & Lodging:	Institute's Trainees' Hostel cum Guest House @ US \$30 per day per trainee in addition to course fee
Eligibility :	Graduate in Agriculture/Animal/ Biology/ Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- Nutrient needs for growth and production
- Possible interactions among nutrients
- Biotechnology leading to better digestibility
- Antinutrients/Toxicants and amelioration
- Feeding value/quality testing
- Feed additives and nutraceuticals
- Gut health and immunomodulation
- Nutrition of breeders
- *in ovo* feeding
- Juvenile nutrition
- Cost effective formulation
- Feed
- compounding
  Feed processing technology



Visit to feed plant

## 3. Advances in Poultry Processing and Products Technology

## 4. Artificial Insemination Technology for Poultry

#### **Training Programme**

The course is designated to strengthen knowledge and skill of the participants involving in poultry processing and products technology aspects of poultry production from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will constitute the faculty.

	Dr H P Shrivastava PS & Head, PGE&T 3 weeks (03-23 March 2009) US \$ 2500
No. of trainees : per course	5 (maximum)
Boarding & Lodging:	Institute's Trainees' Hostel cum Guest House @ \$ 30 per day per trainee in addition to course fee.
Eligibility :	Graduate in Agriculture/Animal/ Biology/Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- National and global scenario in egg and poultry processing
- Egg processing technology
- Primary and further processing of poultry
- Egg and poultry meat quality evaluation
- Value- added poultry products
- Packaging of poultry products
- Microbiology of fresh and processed poultry products
- Residues of heavy metals/ pesticides in egg and meat
- Byproduct utilization
- Concept and application of hazard analysis and critical control points (HACCP) in egg and poultry processing.
- Visit to egg/meat processing plant





#### **Training Programme**

The course is designated to strengthen knowledge and skill of the participants involving in artificial insemination technology aspect of poultry production from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will constitute the faculty.

Course Coordinator	: Dr H P Shrivastava PS & Head, PGE&T
Duration	: 3 weeks (03-23 June 2009)
Course fee	: US \$ 2500
No. of trainees per course	5 (maximum)
Accommodation	Institute's Trainees' Hostel cum Guest House @ US \$30 per day per trainee in addition to course fee.
Eligibility	Graduate in Agriculture/Animal/ Biology/ Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- Comparative avian reproductive systems
- Spermatogenesis and sperm maturation
- Structure/function of avian spermatozoa
- Biochemical composition of semen
- Follicular growth and atresia
- Ovulation and oviposition
- Optimization of variables influencing male/female reproductive functioning
- Direct *in situ* exposures of different parts of male/female reproductive systems
- Methodology of avian semen collection
- Semen evaluation/ dilution/preservation
- Artificial insemination protocol and testing of its success.



# 5. Biotechnological Tools for Poultry Production

# 6. Breeding Strategies for Egg and Meat

#### **Training Programme**

The course is designed to strengthen knowledge and skill of the participants involving in biotechnological tools for poultry production from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will constitute the faculty.

Course Coordinator:	Dr H P Shrivastava PS & Head, PGE&T
Duration :	3 weeks (04-24 August 2009)
Course fee :	US \$ 2500
No. of trainees : per course	5 (maximum)
Boarding & Lodging:	Institute's Trainees' Hostel cum Guest House @ US \$30 per day per trainee in addition to course fee.
Eligibility :	Graduate in Agriculture/Animal/ Biology/ Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- Merits of biotechnological tools
- Functional genomics
- Molecular techniques
- Marker assisted selection
- Production of recombinant cytokines
- Genetic characterization of poultry
- Breeding for increased disease resistance
- Gene silencing
- Development of immuno-competent stocks
- Proteomics
- Embryo culture and transgenesis

#### **Training Programme**

The course is designed to strengthen knowledge and skill of the participants involving in breeding strategies for egg and meat aspects of poultry production from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will contitute the faculty.

Course Director :	Dr M C Kataria PS & Head, AG&B
Course Coordinator:	Dr H P Shrivastava PS & Head, PGE&T
Duration :	4 weeks (1-29 August 2009)
Course fee :	US \$ 2000
No. of trainees : per course	10 (maximum)
Accommodation :	At a very reasonable cost in the Institute's Trainees' Hostel cum Guest House
Eligibility :	Graduate in Agriculture/Animal/ Biology/ Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- Relevance of poultry breeding research
- Important economic traits
- Selection methods and breeding programme
- Male and female breeder stock
- Artificial insemination techniques
- Incubation and hatchery operation
- Feeding and rearing systems
- Genotype-environment interactions
- Developed avian germplasm
- Record keeping
- Poultry health and biosecurity
- Cost return analysis
- Visit to broiler and layer farm

#### **Training Programme**

The course is designed to strengthen knowledge and skill of the participants involving in quail production for exploitation aspect from developing countries.

#### Faculty

Highly educated and well experienced Scientists in Poultry Science and other allied disciplines of the Institute and invited speakers will constitute the faculty.

Course Director	:	Dr Raj Narayan SS & Incharge, Quail Unit
Course Coordinator	r:	Dr H P Shrivastava PS & Head, PGE&T
Duration	:	3 weeks (2-23 December 2009)
Course fee	:	US \$ 1500
No. of trainees per course	:	10 (maximum)
Accommodation	:	At a very reasonable cost in the Institute's Trainees' Hostel cum Guest House
Eligibility	:	Graduate in Agriculture/Animal/ Biology/ Veterinary Science with practical experience in poultry production. Proficiency in English language

#### **Course Contents**

- Scenario of quail farming
- Breeding programme
- Developed germplasm
- Artificial insemination technique
- Selection and care of hatching eggs
- Incubation and hatching
- Housing and management
- Nutrient needs and feeding
- Nutritive value of quail eggs and meat
- Value added egg and meat products
- Health and control measures
- Economics of quail farming
- Visit to quail farm