

CENTRE OF ADVANCED FACULTY TRAINING IN AVIAN SCIENCES

DEPARTMENT OF POULTRY SCIENCE

VETERINARY COLLEGE AND RESEARCH INSTITUTE, NAMAKKAL

The Department of poultry Science in Veterinary College and Research Institute, Namakkal was started during the year 1985 and continuously offering undergraduate (B.V.Sc. & A.H.) education. The postgraduate courses viz. M.V.Sc. and Ph.D. were started from 1993 and 1995 onwards, respectively.

Major objectives

- To impart teaching for undergraduate, postgraduate and doctoral programmes.
- To conduct research programmes for M.V.Sc. and Ph.D. scholars.
- Farm advisory services.
- Conducting training programmes to the progressive farmers.

Objectives of CAFT

To enhance the competence to undertake advanced education and research activities and training of scientists / faculty members during each five year plan periods.

Multifaceted activities of the department are

- U.G. and P.G. education
- Centre of Advanced Faculty Training in Avian Sciences (ICAR Scheme)
- Maintaining a modern Poultry Farm Complex
- Maintaining hatchery for supplying day-old chicks of several poultry species
- Conducting Postgraduate researches
- Facilitating researches for other college / university postgraduate students
- Carrying out need based and industry based validation researches
- Conducting PG Diploma in Commercial Poultry Production Management course
- Conducting 5 skill development courses

Courses Offered

B.V.Sc. & A.H.

- Livestock Production and Management (4+2) – First year
 - Unit – 6 Poultry production and management
 - Unit – 7 Diversified poultry production and hatchery management
- Livestock farm practices (0+2) – Third year

M.V.Sc.

- PSC 601 – Poultry breeding and genetics (2+1)
- PSC 602 – Poultry nutrition and feeding (2+1)
- PSC 603 – Commercial layer production (2+1)
- PSC 604 – Commercial broiler production (2+1)
- PSC 605 – Breeder stock, flock health and hatchery management (3+1)
- PSC 606 – Management of poultry other than chicken (2+1)
- PSC 607 – Poultry products technology and marketing (2+1)
- PSC 608 – Poultry economics, projects and marketing (2+1)
- PSC 609 – Physiology of poultry production (2+1)
- LPM 608 – Poultry farm and hatchery management (2+1)

Ph.D.

- PSC 801 – Applied poultry nutrition (2+1)
- PSC 802 – Concepts in commercial poultry production (2+1)
- PSC 803 – Developments in poultry products technology (2+1)
- PSC 804 – Emerging diseases of poultry and flock health (2+1)
- PSC 805 – Advanced poultry breeding methods (2+1)
- PSC 806 – Poultry economics, marketing and integration (2+1)
- LPM 805 – Advances in poultry production management (2+1)

Infrastructure

- A well furnished air-conditioned lecture hall for conducting CAFTAS programme and P.G. classes
- Well equipped U.G. laboratory with sophisticated equipment for estimation of proximate principles, egg internal quality measurement, measuring eggshell strength etc.
- Fully automatic environmentally controlled broiler house for rearing 3000 broilers in all-in all-out system.
- Fully automatic hatchery unit with uninterrupted power system and digitally controlled incubators.
- Modern Japanese quail brooder cum grower house with cage and nipple drinking system
- Modern elevated cage breeder quail house with cage and semi-automatic feeding system

- Modern elevated cage layer house with automatic feeding, watering, climate control and lighting system.
- Modern turkey chick cum grower house with semi automatic feeding and watering system
- Modern turkey breeder house with semi automatic feeding and watering system.
- Modern broiler experimental house to conduct researches in broilers under both deep litter and cage system of rearing.
- Modern cross-bred breeder house with semi automatic feeding and watering system
- Modern chick cum grower house with cage, nipple drinking and semi automatic feeding system.
- An emu unit with automatic watering system
- An ostrich unit with automatic watering system.

Achievements / Excellence

- Revolving fund scheme on "Standardization of nutrient requirements, production and marketing of Japanese quail"
- Conducted an International Poultry Expo and Conference – 2010 from 8th to 10th January 2010.

New strains released by this department

- Namakkal quail – 1 : A meat-type Japanese quail strain, evolved by 4-way crossing
- Namakkal gold quail : An egg-type Japanese quail strain, evolved by 5-way crossing
- Namakkal chicken – 1 : A back-yard multicoloured chicken variety for egg production purpose, evolved by 4 way crossing.

Faculty (As on 20.01.2020)

Dr. M.Moorthy, Professor cum Director

Dr. R.Amutha, Professor

Dr. D.Kannan, Professor

Dr. K.Rajendran, Assistant Professor

TRAINING PROGRAMMES CONDUCTED (2017 – 2020)

S.No.	Title of the training programme	Duration	No. of Participants
1.	Prospects of diversified poultry and its impact in enhancing the rural economy	08.11.2017 to 28.11.2017	14
2.	Advances in poultry production and its impact on changing global scenario	07.02.2018 to 27.02.2018	23
3.	Exploring the technological approaches for enhancing the nutritive value and marketing of poultry products	28.11.2018 to 18.12.2018	10
4.	Strategies to overcome the challenges in diseases, nutritional and managerial practices for poultry production	06.02.2019 to 26.02.2019	24
5.	Practical knowledge sharing on nutrition and value addition in commercial poultry	06.11.2019 to 26.11.2019	20
6.	Integrated approach on climate, biosecurity and health management in commercial poultry farming	19.01.2020 to 18.02.2020 (to be conducted)	-

RESEARCH WORK COMPLETED (2017 TO 2020)

M.V.Sc. RESEARCH PROGRAMMES COMPLETED

1. Optimization of energy and amino acid requirements for “**TANUVAS NAMAKKAL QUAIL-1**” (*T. Diwagar, 2017*)
2. Feeding dehulled soybean meal on the production performance of commercial broiler chicken (*Y. C. Kirubakar, 2017*)
3. Optimization of energy and protein requirement for straight-run crossbred “**TANUVAS NAMAKKAL CHICKEN-1**” (*P. Parthipan, 2017*)
4. Effect of dietary nano zinc oxide on production performance of cross-bred chicken (*D. Anitha, 2018*)
5. Dietary supplementation of Triphala on performance of broiler chicken (*V. Madhupriyau, 2018*)
6. Influence of tannin on the production performance of commercial broiler chicken (*R Prabhavathi, 2018*)

7. Assessment of different water sanitizers on the performance of commercial layer chicken **(P.V.Sangeetha, 2019)**
8. Evaluation of rice polish on the production performance of commercial broiler chicken **(K.S.Shubhankar, 2019)**
9. Performance of commercial broiler chicken fed with soya oil cake **(Sonale Nagesh Sambhaji, 2019)**

Ph.D. RESEARCH PROGRAMMES COMPLETED

1. Standardization of energy and lysine requirements for “*TANUVAS Namakkal gold Japanese quail*” **(K. Shibi Thomas, 2019)**

INFRASTRUCTURES DEVELOPED (2017 TO 2020)

1. ESTABLISHMENT OF HATCHERY UNIT –II

Hatchery unit - II



Hatchery inner view



Incubator capacity

Chicken egg: 30,000

Japanese quail eggs: 1,00,000

2. ESTABLISHMENT OF POST GRADUATE LABORATORY

Equipment purchased for PG laboratory with special emphasis to poultry genetics work

1. PCR
2. Agarose Gel Electrophoresis with power pack
3. Cooling centrifuge

PUBLICATIONS (2017-2020)

S. No.	Authors	Title	Name of Journal	Volume, Page No.	Year of Publication
1	A. Kirubakaran and M. Moorthy	Effect of fenugreek, garlic and black pepper powder supplementation on serum lipid profile	The Indian. Vet. Journal	94(05): 43-45	May 2017
2	K. Sukanthiya, K. Mani, K. Rajendran, K.Sangilivikramkumar U. Prabhakaran and T. Sasidhar	Influence of dietary supplementation of sodium diformate on the intestinal histomorphology of broilers in environmentally controlled housing system	International Journal of chemical studies	5(6): 842-843	May 2017
3	P. Sivakumar, R. Amutha and S. Karthika	Physico-chemical characteristics of turkey (m.gallapavo) meat balls enriched with oat fibre	Journal of Environment and Biosciences	30(1): 139-142	June 2017
4	S. Gobirau, P. Vasan, M.R. Purushothaman, K. Rajendran, S. Senthilkumar, P.C. Sakthivel, G. Gomathi and A. Ajantha	Turmeric as an antibiotic alternative in commercial broiler diets	International Journal of Science, Environment and Technology	6(3): 2118-2123	June 2017
5	K. Rajendran, K. Mani, P. Shamsudeen, V.Ramesh saravana kumar and A. Natarajan	Influence of energy and protein on serum biochemistry of broilers reared in environmentally controlled houses	The Indian. Vet. Journal	94(8): 79-80	August 2017
6	K. Rajendran, K. Mani, P. Shamsudeen, V.Ramesh saravana	Influence of different levels of lysine and methionine on cumulative feed	The Indian. Vet. Journal	94(9): 40-43	September 2017

	kumar and A. Natarajan	consumption and feed conversion ratio of broilers in environmentally controlled housing system			
7	R. Amutha and K. Mani	Production performance of broilers as influenced by dietary inclusion of fish oil with different vegetable oils	The Indian. Vet. Journal	94(11): 41-43	November 2017
8	R. Amutha and K. Mani	Meat quality characteristics of broilers as influenced by dietary inclusion of fish oil with different vegetable oils	The Indian. Vet. Journal	94(11): 77 -78	November 2017
9	A. Kirubakaran, M. Moorthy and T. Sathyabama	Effect of combinations of phyto additive supplementation in diet on serum lipid profile of commercial broilers	The Indian Veterinary Journal	95(3): 77-79	March 2018
10	Sathish Kumar M, Kannan.D, Mani.K and Selvaraj.P.	Dietary L-valine on production performance of commercial layer chicken	The Indian Veterinary Journal	95(3): 77-79	March 2018
11	G. Gomathi, S. Senthilkumar, A. Natarajan, R. Amutha and M.R. Purushothaman	Effect of cinnamon oil and sodium butyrate on growth performance of broilers	Indian Journal of Poultry Science	53 (1) : 64 – 69	April 2018
12	G. Gomathi, S. Senthilkumar, A. Natarajan, R. Amutha and M.R. Purushothaman	Effect of dietary supplementation of cinnamon oil and sodium butyrate on carcass characteristics and meat quality of broiler chicken	Veterinary World	11 (7) : 959 - 964	July 2018
13	T. Diwagar, K. Rajendran, K. Mani and D. Santhi	Different levels of energy and lysine on body weight and body weight gain of TANUVAS Namakkal quail - 1	The Indian. Vet. Journal	95 (08) : 11 – 13	August 2018

14	V. Madhupriya, K. Rajendran, M. Moorthy, D. Anitha, R. Prabhavathi and P. Prabhad	Glucose and electrolytes feeding to the Japanese quail chicks to enhance their body weight	The Indian. Vet. Journal	95 (08) : 68 - 69	August 2018
15	K. Shibi Thomas, R. Amutha, M. R. Purushothaman, P. N. Richard Jagadeesan and S. Ezhil Valavan	Effect of quality of TANUVAS Namakkal quail (<i>Coturnix coturnix japonica</i>) fed with different levels of energy and lysine	International Journal of Science	7 (5) : 1597 – 1602	October 2018
16	K. Shibi Thomas, R. Amutha, M. R. Purushothaman, P. N. Richard Jagadeesan and S. Ezhil Valavan	Effect of feeding of different levels of energy and lysine on egg quality characteristics of TANUVAS Namakkal quail hens.	International Journal of Science, Environment	7 (6) : 1893 – 1898	December 2018
17	K. Rajendran, K. Mani, P. Shamsudeen, V. Ramesh saravana kumar and A. Natarajan	Influence of different levels of lysine and methionine on serum biochemistry of broilers reared in environmentally controlled houses	The Indian. Vet. Journal	96(03): 9-11	March 2019
18	K. Rajendran, K. Mani, P. Shamsudeen, V. Ramesh saravana kumar and A. Natarajan	Influence of different levels of lysine and methionine on cost of production of broilers in open sided deep litter housing system	The Indian. Vet. Journal	96(03): 18-21	March 2019
19	K. Rajendran, K. Mani, P. Shamsudeen, V. Ramesh saravana kumar and A. Natarajan	Influence of different levels of energy and protein on physical properties of broilers in environmentally controlled housing system	The Indian. Vet. Journal	96(03): 29-31	March 2019
20	K. Rajendran, K. Mani, P. Shamsudeen, V. Ramesh saravana kumar and A. Natarajan	Influence of different levels of energy and protein on carcass characteristics of broilers reared in environmentally controlled housing system	The Indian. Vet. Journal	96(03): 37-40	March 2019
21	R. Prabhavathi,	Tannin	The Indian. Vet.	96 (04) :	April 2019

	M. Moorthy, K. Rajendran and P. Visha	supplementation can replace antibiotics with no change in body weight and body weight gain of broilers in environmentally controlled housing system	Journal	27 -30	
22	D. Anitha, K. Rajendarn, M. Moorthy and P. Vasan	Organic zinc improve growth performance in crossbred chicken during chick phase	The Indian. Vet. Journal	96 (04) : 34 -37	April 2019
23	R. Kavitha, C. Valli, R. Karunakaran, K. Vijayarani and R. Amutha	Assessment of antioxidant activity of some selected medicinal herbs available in Tamil Nadu	Journal of Pharmacognosy and Phytochemistry	8(6): 2133 - 2135	Nov-Dec 2019
24.	Kavitha, R., C. Valli, R. Karunakaran, K. Vijayarani and R. Amutha,	Assessment of antioxidant activity of some selected medicinal herbs available in Tamil Nadu.	Journal of Pharmacognosy and Phytochemistry	8(6):2133- 2135	2019
25.	Shibi Thomas,K., R. Amutha, M. R. Purushothaman, P. N. Richard Jagatheesan and S. Ezhil Valavan	Energy and protein requirements during various stages of production in <i>Japanese Quails</i> .	International Journal of Science, Enviornment and Technology	8(4):790- 794	2019
26.	Shibi Thomas,K., R. Amutha, M. R. Purushothaman, P. N. Richard Jagatheesan and S. Ezhil Valavan	Performance of “ <i>TANUVAS Namakkal Japanese Quail</i> ” fed diet with different levels of energy and lysine.	Indian Veterinary Journal	96(10):9- 11.	2019
27.	Shibi Thomas,K., R. Amutha, M. R. Purushothaman, P. N. Richard Jagatheesan and S. Ezhil Valavan	Cost effectiveness of different diet fed to “ <i>TANUVAS Namakkal Japanese Quail</i> ”	Indian Veterinary Journal	96(10):81- 83.	2019

EXTENSION WORK

Every week 4000 to 5000 day-old Japanese quail chicks and 200 to 300 crossbred chicks, turkey poults, guinea fowl keets and fancy chicks were given to the needy farmers. The day-old chicks of following Japanese quail varieties were given to the farmers




1.	Namakkal Quail-1	<ul style="list-style-type: none"> • Broiler type quail • Body weight of male at 30 days- 228 g • Body weight of female at 30 days- 247g 	
2.	TANUVAS Namakkal Chicken-1	<ul style="list-style-type: none"> • Multi coloured plumage • High egg production (150 eggs) • No broodiness • Brown shelled eggs 	
3.	TANUVAS Namakkal Gold quail	<ul style="list-style-type: none"> • Layer type quail • Age at sexual maturity-40 days • Egg production/bird-257 eggs • Average egg weight-13.2g 	

Table eggs produced from TANUVAS Namakkal Gold quail are marketed to public with a pack of 12 eggs as given below



BUDGET

Budget under CAFT during 2017 -2020

Head	2017-18	2018-19	2019-20
Two Training Programme	13,13,000	13,13,000	13,13,000
TA &DA	50,000	50,000	50,000
Recurring Contingencies	4,00,000	4,00,000	4,00,000
Books	35,000	35,000	35,000
Non- Recurring	0	7,00,000	0
Total	17,98,000	24,98,000	17,98,000

Expenditure under CAFT during 2017-2020

Head	2017-18	2018-19	2019-20 (upto 31.12.2019)
Tow Training Programme	6,00,277	8,82,743	5,09,240
TA &DA	0	0	0
Recurring Contingencies	4,00,000	4,00,000	2,12,280
Books	35,000	35,000	0
Non- Recurring	0	7,00,000	0
Total	10,35,277	20,17,743	7,21,520
