

**KARNATAKA VETERINARY, ANIMAL AND  
FISHERIES SCIENCES UNIVERSITY  
NANDINAGAR, BIDAR-585401, KARNATAKA**

## **THIRD CONVOCATION**

**Sunday the 17<sup>th</sup> January, 2010 AT 11.00 A.M.**



### **CONVOCATION ADDRESS**

By

**Dr. S. AYYAPPAN**

**SECRETARY**

**DEPARTMENT OF AGRICULTURAL RESEARCH & EDUCATION  
AND**

**DIRECTOR GENERAL**

**INDIAN COUNCIL OF AGRICULTURAL RESEARCH,  
MINISTRY OF AGRICULTURE, GOVT. OF INDIA,  
NEW DELHI**

# **THIRD CONVOCATION ADDRESS**

**Dr. S. Ayyappan**

Secretary (DARE) & Director General, ICAR, New Delhi

His Excellency, the Governor of Karnataka and Hon'ble Chancellor of the Karnataka Veterinary, Animal & Fisheries Sciences University, Shri H.R. Bhardwaj Ji, Hon'ble Minister of Animal Husbandry and Pro-Chancellor of the University Shri. Revu Naik Belamgi, distinguished Vice Chancellor of the University Prof. Suresh S. Honnappagol, esteemed Members of the Board of Management, Academic Council, Learned Faculty, Officers of the University, Dignitaries, Dear students, Members of press and media, Ladies and Gentlemen!

2. I deem it to be a matter of pleasure and privilege to be here today amongst such a distinguished gathering on the historic occasion of the 3<sup>rd</sup> Convocation of the Karnataka Veterinary, Animal & Fisheries Sciences University, Bidar. At the very outset, I wish to convey my heartiest congratulations to the graduating students for their well deserved degrees and awards. I also would like to congratulate the learned teachers who have worked hard to equip the students with the best education, knowledge and skills as well as the human values. I am happy to share with you that I also graduated from College of Fisheries, Mangalore which is now a constituent unit of this university and that makes me its alumnus.

3. Karnataka Veterinary, Animal and Fisheries Sciences University that was established to serve the mankind through Livestock and Fisheries activities, having completed five years of yeomen service to the state and to the nation, is entering

the sixth year today. I take this opportunity to compliment Vice Chancellor, Members of the Board of Management, Officers of the University, Faculty members, Students and Staff of this University and all those who have contributed in development and in promoting good educational standards in this University.

4. Karnataka is located in the Western half of the Deccan Plateau and forms a part of two well defined macro regions of Indian Union; the Deccan Plateau and the Coastal plains and Islands. Karnataka enjoys a salubrious climate throughout the year. The state experiences typical tropical climate comprising of three distinct seasons and being a vast state with varied geo-environmental conditions, has as many as ten agro-climatic regions.

5. Agriculture is an important sector in Karnataka's economy and sizeable, 71% population of the state is engaged in farming. The state has rich endowments of natural resources, physical, floral and faunal. Karnataka is known for famous draft cattle breeds like Amrithmahal and Hallikar, famous mutton breed of sheep the Bannur breed and vast water resources for fish farming. The state is the largest producer of coffee, raw silk and sandal wood in the country. Karnataka is also among the leading states in production of fruits and vegetables. In view of the rich agricultural potential, the Council has established five research institutes and ten regional research stations of institutes located elsewhere in the country that deal with crop insects, horticulture, animal disease surveillance, nutrition and physiology, veterinary sciences, cashew & fisheries, besides supporting the State Agricultural and Veterinary Universities. Of the 569



Krishi Vigyan Kendras established, as many as 27 are in Karnataka.

6. India has vast resource of livestock, poultry and fish, which play a vital role in improving the socioeconomic conditions of rural masses. According to a recent report of Department of Animal Husbandry, India ranks first in respect of buffalo, second in cattle and goats, third in sheep, fourth in ducks, fifth in chickens and sixth in camel population in the world. India has 57% of the world's buffalo population and is among the top three egg producing countries and among top five chicken meat producing countries in the World. The sector has achieved an annual growth rate of 5% in egg production and 12% growth rate of broiler production. India is the third largest producer of fish in the world and second largest producer of fresh water fish in the world. The fish production is estimated to be around 76 lakh tonnes. Fisheries sector forms the bread and butter along with nutritional source for millions of Indians. India is blessed with a coast line of 8118 km with an Exclusive Economic Zone (EEZ) of 2.02 million square km and a continental shelf of 0.506 million sq. km. The inland water resources include 1,91,024 km of rivers and canals; 2.05 million ha of reservoirs; 2.254 million ha of ponds and tanks and 1.24 million ha brackish waters. The contribution of fisheries sector to Gross Domestic Production (GDP) is 1.5% and 5.0% to agricultural GDP. Fortunately, Karnataka has rich aquatic resources comprising 300 km of coastal line and 2.93 lakh ha of tanks and ponds, 2.27 lakh ha of reservoirs and has a vast scope for both marine and inland fisheries. Karnataka ranks first in inland fisheries resources, ranks 10<sup>th</sup> position in inland fish production, 6<sup>th</sup> position in marine

- production. The present inland fish production is 1.46 lakh tones and marine fish production is 2.18 lakh tones. There is enormous untapped potential in the state that needs to be harnessed.

7. Livestock plays a crucial role in sustaining rural economy and livelihood security especially in the vast rainfed areas of our country. India is the largest producer of milk in the world. About 22.45 million people work in livestock sector. The contribution of livestock and fisheries sector to the total GDP during 2006-07 was 5.26%. The livestock sector not only provides essential proteins and nutritious human diet through milk, egg, meat, etc. but also plays an important role in utilization of non-edible agricultural by-products. Livestock also provides raw material byproducts such as hide and skin, blood, bone, fat, etc.

8. Indian dairy industry reveals that there has been a significant increase in milk production of about 4.5% per annum, over the last three decades. Karnataka ranks 11<sup>th</sup> in milk production in India and growth in milk production is mainly productivity driven. Two-thirds of the growth in cattle milk production resulted due to yield improvements. Population of buffalo has been increasing steadily because of its adaptability to varied climates and their productivity too has been on a rising trend. Thus, genetic improvement in buffalo is likely to provide a big push to the dairy economy.

9. The growth in meat production is faster as compared to milk production. In early 1980s, the small ruminants were the major contributors (44%) followed by large ruminants (35%) and poultry (19%). From 1990 onwards,

monogastrics, especially poultry emerged as major meat contributor (25% in 2003-04). During the past three decades the poultry scenario in the country has changed dramatically. Today, poultry farming has transformed itself into an organized industry. India is the fourth largest producer of eggs and the eighth largest producer in broiler poultry in the world.

10. The livestock feed is presently based mainly on dry roughage from crops. The bulk density of fodder, hay and straw after thrashing is very low and hence requires large storage space. For this purpose, farmers neither have sufficient space nor time between harvesting of mature crop and sowing of next seasonal crop. As a result, crop residues, which are otherwise suitable for feeding, are quite often burnt in the fields. India produces over 394 million tonnes of crop residues annually, which could be useful for feeding the country's livestock population. Densification of roughage and waste crop residues in compact blocks is an effective solution for livestock feed management.

11. Scientists of National Dairy Research Institute, Karnal have developed the landmark technique, "Handguided Cloning Technique" and have produced the world's first and second cloned buffalo calves. This technique is simpler and is an advanced modification of the "Conventional Cloning Technique" which was used for the production of the cloned sheep "Dolly". The technology of "Handguided Cloning" will go a long way to face the challenge of increasing demand of milk in view of growing human population in the country. There is an acute shortage of outstanding bulls and this technology can decrease this gap and supply the elite bulls in the shortest possible time.



12. The predominantly tropical climate in our country is also supportive of several pests and every year, a significant part of our animal produce is lost on account of diseases. The climate changes being observed particularly in form of extreme temperatures and precipitation are likely to result in more stressful conditions. We need to develop breeds that are more stress tolerant and are capable of sustaining their productivity. The outbreak of avian flu and mad cow disease are the recent examples that have raised questions about biosafety. Therefore, the research focus must be on creation of disease free zones for FMD, Blue tongue, PPR and Establishment of biosecurity models for healthy livestock production, development of new vaccines against emerging and reemerging diseases, condensed and combined vaccines, and of newer generation drugs and indigenous drug formulations for various diseases, diagnostic tool kits such as mastitis diagnostic kits and estrus detection kits for use at farm level. With the ongoing R&D efforts, India became free from Rinderpest Infection and Contagious Bovine Pleuro Pneumonia (CBPP) Disease and has been declared Rinderpest free country by the Organization for Animal Health (OIE) in 2006. The other thrust areas are to develop viable and cost effective Ethno Veterinary formulations for Veterinary Practitioners and implementation of disease monitoring and surveillance programmes to forecast and control diseases in livestock. There is also a need to carry out research in wild life and pet diseases. Considering the importance of conservation of wild animals, the nature of disease pattern in both captivity and wild need to be investigated. The research activity should also focus on other social problems such as control of dog menace, monkey menace, stray cattle etc. and come out with effective means of solving these problems.

13. In order to optimize and harvest the returns from livestock, dairy, poultry and fisheries sector, there is a need to focus on bridging yield gaps by enhancing productivity through appropriate investments in R&D along with promoting smallholder livestock enterprises. The thrust areas for research include improvement of cattle and buffalo and conservation of indigenous breeds of livestock in their breeding tract. Increasing biomass through integrated 3 tier silvi -pastoral system, developing dual purpose crop varieties and introducing nutritive and drought resistant varieties of fodder crops in the common property resource lands, optimization of small ruminant production through nutritional and physiological manipulations, development of models for manipulation of production system for higher production efficiency, improvement of processing technologies for value addition, quality assurance, shelf life for milk and meat products, process optimization and scale up production designs for indigenous and exotic meat products, biotechnological interventions to improve gut health and nutrient utilization and production of organic milk and meat products are to be undertaken. Further, there is an urgent need to clearly map out the prevalence of various diseases in different zones and recommend the course of action suitable for that particular zone. It is also necessary that greater focus is given to research in small ruminants and pigs, as these animals are source of livelihood for a majority of livestock farming in certain areas of the state.

14. An important issue in aquaculture is the use of wild seeds for culture, particularly in marine sector and Indian scientists need to focus attention on developing technologies for breeding and larval rearing of marine fish. There is a



need to focus on aquaculture of species that do not depend on fish meal and research on alternative to fish meal and animal feeds. The issue of residues of antibiotics and drugs in fishery products is still a matter of concern as fish are at the receiving end of antibiotics used in other sectors. Researchers should focus on applications of vaccines for warm water fish and develop alternatives to antibiotics. In the area of diagnostics for fish and shrimp diseases, there is a need to establish an Aquatic Animal Disease Surveillance System. Further there is a need for collection of adequate data to perform risk assessment for food safety.

15. On its fifth foundation day, I am pleased to note that the university has formulated its vision for the next fifteen years and wish them good luck in achieving the goals set in its vision document. Globalization has created an entirely new landscape for the professionals, scientists and academicians involved in livestock and fisheries sector. Opportunities are abound to meet the formidable challenges presented as animals, people and microbes travel at previously unimagined speed, fuelled by the engine of commerce, resulting in a plethora of new diseases including trans-boundary diseases and demand for safe and hygienic milk, meat and fish products. Hence, there is a need for re-structuring the Veterinary, Dairy and Fisheries education to incorporate aspects of Nuclear Medicine, Epidemiology, Natural Resource management, Bioinformatics, organic farming, value added indigenous dairy products, their processing technology and quality control, Biotechnology, Extraction of Bio-active/Biomedical substances from marine organisms, Environmental impact assessment, Fisheries resource assessment in the curricula. Further, there is a need to start new Undergraduate Degree Programmes in Agri-Business Management, Animal Biotechnology, Food Science and Technology, etc.

16. The existing education system is capable of producing number of technically qualified manpower to maintain science and technology driven growth of agriculture. It, however, is not adequately prepared to generate the kind of human resource that can measure up to contemporary and emerging scene and scenario of agriculture. Guided largely by internal and external pressures, the need for new knowledge and skills is becoming more challenging than ever and the agricultural education system is required to keep pace with the rapid technological, economical and social developments taking place nationally and globally.

17. Reaching the unreached through distance mode is another area where considerable strengthening is required. The online courses being offered through distance education mode has revolutionized the learning process. In societies, where education is in reach for few privileged, school dropouts and farmers get marginalized and excluded. Exclusion of school dropouts dents the self-reliance of an individual, while inclusion teaches them how to participate and contribute meaningfully. Interestingly for people like school dropouts and farmers, distance learning is emerging as a powerful tool to percolate to the grassroots level by reaching out to larger numbers and should be used to reach the unreached for the mandated objectives of the University. Further, the distance education mode should be used for motivation among the takers with the concept of producing job providers, rather than job seekers. Agricultural Universities are our main centres for human resource development. In this endeavour the IV Deans Committee Report on reforms in agricultural education has been implemented. The course curricula of post graduate degree programme have

been fully revised to make them relevant. Serious efforts have been launched on strengthening quality and relevance of agricultural education through in-service training and necessary infrastructure development. With the rapid change in technology environment, there is demand for developing graduates to harness science and technology. This calls for new courses as per changing market demand and new mode of delivery with effective use of electronic media.

18. In its continued efforts towards enhancing and sustaining the standards, quality and relevance of higher agricultural education in the country, the Indian Council of Agricultural Research has instituted International Fellowships with dual purpose of (i) human resource development in cutting edge technologies, and (ii) demonstrating the strength of Indian agricultural system abroad. The objective is to develop competent human resource that are trained in the identified best laboratories in the world (for Indian candidates) and similarly expose overseas candidates to the best Indian Agricultural Universities (AUs) for creating a pool of scientist-envoys for enhanced future co-operation.

19. Now I want to revert back to the graduating students. For many of you, this day will be an extremely happy one. You are graduating from one of the finest Universities and I am sure the education that obtained in the precincts of this University will always stand you in good stead and encourage you to serve the humanity at large and the farming community in particular. Remember that the completion of your formal education is only a beginning. In fact, your real education and its test will start henceforth. Ups and downs will be your companions as you tread the



path of life. You have the option of choosing what kind of work you will do and how you will do it. Please make full use of that choice. At this juncture, I would like to quote from poems by our former President, Dr A.P.J. Abdul Kalam that "As a young citizen of India, armed with technology, knowledge and love for my nation, I realize, small aim is a crime". So have a dream, because dream transforms into thoughts, thoughts result into action, action results in to achieving the mission. As Maharishi Patanjali's thoughts given in Yoga Sutra says "When you are inspired by some great purpose, some extraordinary project, all your thoughts break their bounds, your mind transcends limitations, your consciousness expands in every direction, and you find yourself in a new, great and wonderful world. Dormant forces, faculties and talents come alive, and you discover yourself to be a greater person by far than you ever dreamt yourself to be."

Once again, let me congratulate all the graduating students and best wishes to the Vice Chancellor, Members of the Board of Management, Officers of the University, Faculty members, Students and Staff of the University.

Thank you !