



ನೇಗಿಲ ಮೇಲೆಯೇ ನಿಂತಿದೆ ಧರ್ಮ



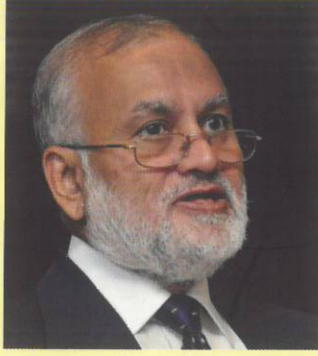
ಕೃಷಿ ಮತ್ತು ತೋಟಗಾರಿಕೆ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಿವಮೊಗ್ಗ
University of Agricultural and Horticultural Sciences, Shivamogga

ಸುಗ್ಗಿ ಸಂಭ್ರಮ ೨

ದ್ವಿತೀಯ ಘಟಿಕೋತ್ಸವ
SECOND CONVOCATION

09-12-2016

ಘಟಿಕೋತ್ಸವ ಭಾಷಣ
CONVOCATION ADDRESS



Handwritten signature of Dr. S. Ayyappan.

ಡಾ. ಎಸ್. ಅಯ್ಯಪ್ಪನ್

ನಿವೃತ್ತ ಮಹಾನಿರ್ದೇಶಕರು ಮತ್ತು ಕಾರ್ಯದರ್ಶಿಗಳು
ಡಿ.ಎ.ಆರ್.ಇ ಮತ್ತು ನಬಾರ್ಡ್ ಛೇರ್ ಪ್ರಾಧ್ಯಾಪಕರು,
ಐ.ಸಿ.ಎ.ಆರ್-ಎನ್.ಡಿ.ಆರ್.ಐ., ಬೆಂಗಳೂರು

Dr. S. Ayyappan

Former Director General and Secretary, DARE and
NABARD Chair Professor, ICAR-NDRI, Bengaluru



2nd Convocation Address

**University of Agricultural and Horticultural Sciences,
Shivamogga, Karnataka**

S. Ayyappan

His Excellency the Governor of Karnataka and the Chancellor of the University of Agricultural & Horticultural Sciences, Shri Vajubhai Valaji; Honourable Minister of Agriculture, Government of Karnataka and Pro Chancellor, Shri Krishna Byre Gowda, Distinguished Vice-Chancellor, Dr. C. Vasudevappa; Members of Board of Management and Academic Council; Esteemed Guests; Deans, Learned Faculty and Staff; Students; Representatives of Press and Media; Ladies and Gentlemen, vb.

2. I deem it an honour to be here for the Convocation of University of Agricultural and Horticultural Sciences, Shivamogga and would like to express my gratitude to His Excellency the Governor, the Government of Karnataka and the UAHS, Shivamogga. I convey my hearty congratulations to the students on their successful completion of their academic programs and being conferred with their hard earned degrees and awards. I also wish to convey my greetings to the learned faculty for their untiring efforts in providing quality education to the students.

3. University of Agricultural and Horticultural Sciences, Shivamogga is the first Integrated University in the state of



Karnataka which has both agricultural and horticultural sciences under its purview. The approach assumes significance in the context of Doubling Farmers' Income, where diversification, enhancing net farm output and value addition have indicated clear possibilities of achieving the goal. It is noteworthy that the recent report of the Karnataka Agriculture Price Commission has drawn our attention to the changing trends in land use for food crops and horticultural crops.

4. With a legacy and efforts in the recent past, it is a pleasure to learn that the University has the necessary institutional capacity in terms of Colleges, Agricultural Research Stations, Krishi Vigyan Kendras and AICRPs to holistically address the aspects of Agriculture, Horticulture and Forestry, in the mandated seven Districts of the State, that is the combination needed for harnessing full farm potentials for food, livelihoods and income. I am happy to inform that I have visited all the campuses of the University and seen how a new and young University can fire the imagination of the youth for taking to agriculture.

5. This area represents a unique mixed farming situation involving field crops (rice, maize, sugarcane, pulses, oil seeds, cotton etc), horticultural crops (plantation crops and fruit crops), animal husbandry (dairy, sheep, poultry), agro-forestry and fisheries. The crop range that the University has released or demonstrated such as the rice variety, KPR-1; onion varieties, Bhima Super and Satara Garva; groundnut



KCG-6; hybrid castor HCH-6; sesame, Navile-1, tobacco SKT-19, KST-28, cardamon Mudigere-1, 2 & 3; Cashew Ullal-1, 2, 3 & 4; Customized farm machinery such as Brahmavar model paddy weeder, Single and Double row Karavali weeder, Modified bullock drawn multipurpose cultivator, Power Tiller operated groundnut Seed drill, Power tiller operated Dozer, Spot Applicator, Modified hand operated Maize Sheller motor operated maize sheller, power operated groundnut decorticator drum seeder for paddy sowing have been well received by the farming community.

6. Further, ingenious initiatives of the University such as the Climate resilient agriculture, Organic agriculture, Sustainable forestry, Western Ghat Biodiversity Research Centre, Dryland horticulture & Aeroponics, Custom Hire Service Centre, Centre for Quality analysis, FMTTI Centre, Apiculture processing unit, Farmers Communication Channel are praiseworthy. I would like to compliment the Vice Chancellor and the Faculty for the visionary planning, guided by the Hon'ble Minister of Agriculture of Karnataka.

7. Like other states of the country, Karnataka also has dominance of marginal and small farmers, who constitute about 77% of the total farmers. With rich biodiversity and related farm endowments, the State has been contributing over 5% to the country's food basket, also with a non-conventional range of items of coarse cereals, millets, fruits and vegetables, that are important in our shifting paradigm of starch to protein and low-value to high value farm produce. In spite of the monsoon vagaries and continuous



be maintained as about 95% of food is grown over soils. The nutrient status of soils determines the quality of farm produce and their importance is best summed up in the words of Dr M.S. Swaminathan, '*Soil anaemia also breeds human anaemia. Micronutrient deficiency in the soil results in micronutrient malnutrition in people, since crops grown on such soils tend to be deficient in the nutrients needed to fight hidden hunger*'.

11. Currently, only 29% of the total precipitation is conserved, that too not optimally utilized. With the existing practices, water use efficiency seldom exceeds 40%. Available estimates indicate that by 10% increase in water use efficiency, country can gain more than 50 million tonnes of food grains from the existing irrigated area. Further, inefficient use of water also leads to inefficiency of all other resources/inputs. Thus, the strategy would be to follow an integrated approach emphasizing greater conservation and enhanced efficiency. At the same time, the cropping intensity that was 111% during 1950 now stands at 138% and needs to be considerably enhanced.

12. Climate change and its variability are emerging as the major factor influencing the performance of Indian agriculture. Long-term changes in shifting weather patterns result in changing climate, which threaten agricultural productivity through high and low temperature regimes, increased rainfall variability, and rising sea levels that potentially deteriorate coastal freshwater reserves and



increase risk of flooding. Each year one or the other part in the country is affected by droughts, floods, cyclones, hailstorm, frost and other climatic events.

13. The climatic impacts could lead to a dramatic scarcity of freshwater in the northern and peninsular regions of the country, fuelling the existing internal or interstate conflicts and heightening the competition among different users. The ocean will continue to warm and acidify, and global mean sea level to rise. Increasing seawater acidity and rising river water temperature will affect fish breeding, migration and harvest. Irrigated wheat and maize yields may decline by 5-10 per cent by 2050. Rainfed agriculture, which covers 60 per cent of all the cultivated land in India, will be particularly hard hit. Although climate change impacts are being witnessed all over the world, countries like India are intensely affected because of the huge population which is primarily dependent on agriculture for livelihood.

14. Continued high emissions would lead to mostly negative impacts for biodiversity, ecosystem services and economic development and amplify risks for livelihoods and for food and human security. Adaptation and mitigation are complementary strategies for reducing and managing the risks of climate change. Most species cannot naturally shift their geographical ranges sufficiently fast to keep up with current and high projected rates of climate change in most ecologies.



15. Substantial emission reductions over the next few decades can reduce climate risks in the 21st century and beyond, increase prospects for effective adaptation, reduce the costs and challenges of mitigation in the longer term and contribute to climate-resilient pathways for sustainable development. Enhancing the resilience of Indian agriculture to cope with climate variability and climate change is imperative to the livelihood security of millions of small and marginal farmers in the country. Devising appropriate adaptation strategies will enable farmers to cope with various climate risks, promote efficient use of natural resources to bring sustainability to farm production and stability to their incomes.

16. In order to build resilience of Indian agriculture to the climate change, there is a need to standardise methodologies for vulnerability assessment and climate smart agriculture; enhance the density of weather observatories; establish rain gauges at block/village level; and enable access to and efficient management of weather related information by modern tools like remote sensing and GIS. Investments are needed in research and development of locally-adaptable crops, management practices, input sources etc., decision support system (DSS), and models for analysing the impact of climate change and mitigation strategies, particularly in arid and semi-arid regions in view of their greater vulnerability.



17. Crop diversification including intercropping of rainfed crops is an important risk minimizing strategy for drought proofing in the scarce rainfall zones and paddy growing areas. In contingency situations such as delay in onset of monsoon, adoption of intercropping for delayed plantings can be remunerative instead of sole cropping. However, availability and access to farm implements for taking up the intercropping systems is to be ensured for wider adoption. In this context, village level custom hiring service centers for making available farm implements can help increase the adoption by small and marginal farmers. Climate change is a threat multiplier. It exacerbates other threats to social and natural systems, placing additional burdens particularly on the poor and constraining possible development paths for all. Development along current global pathways can contribute to climate risk and vulnerability, further eroding the basis for sustainable development.

18. The Sustainable Development Goals with the time frame up to 2030 offer a vision of a fairer, more prosperous, peaceful and sustainable world in which no one is left behind. In food the way it is grown, produced, consumed, traded, transported, stored and marketed lies the fundamental connection between people and the planet, and the path to inclusive and sustainable economic growth. Along with are references to CoP 21 Paris Declaration and the recent Marrakesh, where our agriculture needs to be carbon-smart and indeed 'smart farming for



small farmers' is the pre-requisite for sustainable and profitable agriculture.

19. In our efforts to address the complete paradigm of Agriculture-Food-Health-Nutrition-Environment-Employment, it has become imperative that we look at the health status from soil to plant to animal to humans. The recent FAO State of Food and Agriculture states that people living in poverty and extreme poverty i.e. with per day income of US\$ 2 and less, number over two billion inspite of poverty decline over the past three decades. The report also mentions that the incidence of extreme poverty is disproportionately concentrated in rural areas, and the rural poor are more likely to rely on agriculture than other rural households and that makes agriculture a key to poverty and hunger alleviation interventions. Hence, enhancing the productivity and incomes of small holder family farmers is key to progress. Further, FAO State of Food Insecurity in the World-2015 indicates 72 developing countries having reached the 2015 MDG 1 target of halving the proportion of hungry people, about 795 million people as undernourished globally, down 167 million over the last decade.

20. Our population is increasing and is estimated to stabilise at about 1.6 billion by 2050. The growing population, expanding urbanization and rising incomes have raised a wide range of important issues linked to national food-security, including dietary preferences, especially higher demand for livestock products and consumption of more



processed foods. India has vast resource of livestock and poultry, over 500 million and 730 million respectively, which play a vital role in improving the socio-economic conditions of rural masses, particularly of the marginal, small and the landless. However, there are likely food-feed-fuel conflicts.

21. Timeliness, precision and resource conservation in farm operations are of utmost importance to realise the potential yields of the technologies. For such farmers, farm equipment which are low-cost, light-weight, multi-purpose, gender-friendly reducing drudgery are needed. Therefore, mechanization of small farms is the need of the hour as it can also mitigate labour scarcity during peak season. Karnataka's '*Yantradhare*' has provided some capacitation in this direction and the gap between prototypes and farm saturation needs to be bridged on priority. Indian agriculture is becoming increasingly energy-intensive and hence is the need for introducing energy-efficient farm machinery and irrigation systems, areas that are also relevant to the 'Make in India' initiative. In order to meet the growing demand for energy in agriculture, use of non-conventional and renewable sources of energy would be imperative.

22. In addition to the improvements in the agricultural practices, diversification holds promise by shifting agriculture towards high value crops and intensive cultivation. The success would depend largely on improving the marketing efficiency by attracting investment. Creating markets, especially in rural and peri-urban areas, transport



25. Beginning in 1950 without a single Agriculture University and only 17 agricultural colleges, three veterinary colleges and one agricultural engineering college India has now developed a comprehensive system of agricultural education, consisting a network of 62 State Agricultural Universities (SAUs), two Central Agricultural Universities (CAU), five Institutes having Deemed-to-be-Universities (DUs) status and four Central Universities (CUs) with Agriculture faculty having about 330 constituent colleges. They have embraced education, research and extension education as integral to their functioning and have contributed a great deal in propelling agricultural growth in the country. The AUs impart education in 11 major disciplines at undergraduate and about 95 subjects at post-graduate level. In higher agricultural education, about 55% students are from rural background and, on an average, 40% are girl students.

26. Contribution of trained agricultural human resource is visible in nation's all round progress. Since future expectations on new knowledge will grow in number and complexity, agricultural education will have to become more vibrant, responsible and responsive to attend to national goals of economic growth, rural livelihood security and employability of its graduates. Increasing intensity of application of new knowledge in science and technology will become prime infuser of surge in agricultural production and productivity across diverse agro-ecologies of the country. Additionally, regional inequalities in



development coupled with rise in natural resource degradation, climate change and obligations and challenges emanating from globalization such as free market economies, privatization of education, and associated ethical problems of Trade Related Intellectual Property Rights (TRIPS), genetically modified organisms (GMO) and food, etc. put greater stress on agricultural education. Hence, the new knowledge, skills and innovations, along with attitude and understanding the rural India will be of crucial importance. It will be necessary to orient education in a manner that it measures up to expectations of all stakeholders (students for employability, farm men and women for livelihood security, farmers for new knowledge and skills, and the country for economic growth and meeting international obligations) and concerns of sustainable development. In order to reach these goals, reengineered education (course curricula revision in terms of content and context and change in delivery systems with emphasis shift from passive teaching to active learning) will combine formal degree and informal certificate or diploma courses. In either case, focus is needed to develop individuals whose knowledge and skills match with the needs of job market, professional proficiency and economic growth of the country. Also, with the changing employment scenario, there is need for integrating agricultural education with job creation and entrepreneurship development.

27. Words of *Sarvajna* - '*Kotividyegalalimetividyeyemelu*' are more relevant today than ever before, and we, anyone



involved in agriculture - farmers, students, policy makers, administrators, can lay claim to the legacy of *Annabrahma*, food production systems that are the arteries in a nation's life. We have an opportunity in 'plough to plate', for alleviating hunger, and we must tell the farmers in remote villages that we are with them in rain and shine. Swami Vivekananda says, 'So long as the millions live in hunger and ignorance, I hold every person a traitor who, having been educated at their expense, pays not the least heed to them!'. And further, 'They alone live who live for others, rest are more dead than alive'. Let us stand up and be counted among those who would not only be accepted, but respected.

Once again, I congratulate all the graduating students and wish you all the best in your future endeavours.

God bless and Thank you.

