

15TH FOUNDATION DAY

March 19, 2015

Foundation Day Address

By

Hon'ble Justice Giridhar Malaviya

High Court, Allahabad



CENTRAL AGRICULTURAL UNIVERSITY

College of Horticulture and Forestry

Pasighat-791102, Arunachal Pradesh



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1. Esteemed Vice Chancellor, Prof. M. Premjit Singh, Prof. S.N. Puri former Vice Chancellor, Central Agricultural University, Imphal Manipur, Prof. G.N. Pandey, Vice Chancellor, Arunachal University of Studies, Namsai, Arunachal Pradesh, Ms. Nidhi Srivastava, Deputy Commissioner, East Siang district, Dean of the college Prof. A.K. Pandey, distinguished guests, Learned faculty members and staff of the college, dear students, representatives of Press and Media, ladies and gentlemen!
2. First of all I thank the University authorities for inviting me to address on the occasion of 15th

Foundation Day of the prestigious college of Horticulture and Forestry under the umbrella of Central Agricultural University, Manipur Imphal. It was a land mark decision of Government of India to establish Central Agricultural University in NEH region of the country by an act of Parliament which came into effect on 26th January 1993 with the issue of necessary notification by the [Department of Agricultural Research and Education](#) (DARE), Government of India. The jurisdiction of the university extends to six Hill States: Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Sikkim and Tripura.

3. On this very auspicious occasion, I would like to congratulate all the meritorious students who received medals and certificates for their significant excellence in academic pursuit. I am well confident that with the same spirit and enthusiasm they will continue in future to maintain the significant edge over others. I also appreciate the employee who is the recipient of Best Employee Award of the College, 2015. All

these give me extreme satisfaction that the organization is moving in right direction and shouldering the assigned responsibility in serving the society as well as the nation. I feel this achievement is the outcome of each and every employee who day and night works for betterment of the organization.

4. Enriching the human resource is key to economic growth of any region, especially in the agricultural sector which is the backbone of the Indian economy. In this regard, I would like to congratulate Central Agricultural University for its dedicated efforts in promoting quality education across the NE region. It definitely takes a lot of hard work and dedication to establish and run campuses across different states in the region. Today, I am extremely happy to learn that College of Horticulture and Forestry has completed 14 years of its educational journey and created example for other academic institutions in imparting quality education, maintaining national and international standard as I have

been informed on the success of students in various competitive examination and scoring prestigious ranks in JRF, ARS and other national organization. I was informed that CAU bagged IInd position in JRF ranking and for that sake Hon'ble Prime Minister Shri Narendra Modi Ji honoured Vice Chancellor of this University. For this excellent performance, I congratulate all faculties including non-teaching, administrative and supporting staff that made possible this achievement through their dedicated efforts.

5. I am proud to say that Arunachal is a sentinel of our nation in the east, having an international border of almost 1680 km with China, Myanmar and Bhutan. The brave people of this State have always stood shoulder to shoulder with the rest of the country in safeguarding the integrity of our geographical boundaries. This state is considered one of the greenest states in the country having enormous potential of nonconventional sources of energy and claiming to be possessing highest hydro-power potential. This State is a mega bio-

diversity hot-spot of the world and has been recognized by the travel icon *Lonely Planet* as the 4th best tourism destination in the world in 2012.

6. While citing the famous quote of the Great Father of Nation Mahatma Gandhi that "There's enough for everybody's need and not for any body's greed", **this** further reminds us that protecting the environment is everyone's responsibility. There are many conservation movements and initiative in India, which have saved the precious natural resources. Despite all threats, diversity of the species and diversity within the species still continue to survive. Their continued existence is due to farmers and other communities living within the forest. Their cultural practices and knowledge systems have helped nurture biodiversity. Nature worship is a tribal belief based on the promise that all creations of nature have to be protected. Such beliefs have helped preserve several virgin forests in pristine form called **Sacred Groves** (the forests of God and Goddesses). These patches of forest or parts of

large forests have been left untouched by the local people and any interference with them is banned. The practice dates back to about 3000 to 5000 B.C. I came to know that several cultures are in vogue in Arunachal Pradesh which has made **it** possible to maintain green lustrous verdant forest of the region. The National Mission for a Green India, recently announced by the Prime Minister, is one of the eight National Missions under India's National Action Plan on Climate Change. Its major focus is to increase cover and density of India's medium density forests and degraded forests. This mission will have repercussions for livelihoods of people and biodiversity.

7. While I was tracing the progress of state on education front I was in dismay to note the very low literacy rate of State (66.95%) which is the second lowest in the country. However, when I traced in the background, I came to know that the state had very low baseline levels that it started with at the time of independence when it

had only three schools. The overall literacy rate in 1961 was as low as 7.13% and female literacy rate, only 1.42%. Now the state has made considerable progress and in the last decade, the gap with the national literacy rate has been reduced from 10.5% points to 7.09% points. In this background, I feel immense satisfaction to look at such type of national institute under the umbrella of prestigious Central Agricultural University under the Ministry of Agriculture, Govt. of India which is catering to the need of state's education in field of agriculture, horticulture and forestry by providing quality education up to post graduate level and even Ph.D. degree in some of the disciplines.

8. Agriculture is the back bone of the country supporting livelihood of about 60 percent population and sharing 13.9 per cent contribution in country's GDP. I have been a witness of country's food crisis after independence which often **was** termed ship to mouth. I thank the researchers, planners and

policy makers for bringing the Green revolution in the country which averted the food crisis and problem of hunger. Now the country has **an** all time record of 263.20 million tonnes food grains production estimated to be higher by 6.07 million tonnes than the last year's production of 257.13 million tonnes. Total production of rice in the country is estimated at 106.19 million **tons** which is a new record. Production of wheat **is** estimated at 95.60 million **tons**, is also a new record.

9. In recent past, besides agriculture, country has given major emphasis in production of Horticultural crops including fruits, vegetables, flowers, aromatic and medicinal crops, spices and plantation crops. Horticulture crops cover an area of 23.7 million ha (m. ha) with a production of about 268.8 million MT. Horticulture production has witnessed an increase of about 24% during the period 2007-08 to 2012-13.

10. The country has achieved self sufficiency in food production and there is sufficient food for

everyone, despite of it almost half of the population is facing the problem of malnutrition which is not protein energy malnutrition, in fact it is micronutrient malnutrition. In this context, I am happy that college is having major mandate of research and development on fruits and vegetables which are immense source of vitamins and minerals, capable of addressing the problem of micronutrient malnutrition. On this very important issue, I would like to share that Govt. of India is well aware about this problem and has initiated Pilot Scheme on Nutri- Farms in 9 states during 2013-14 to promote the cultivation of bio-fortified food crops enriched with critical micro-nutrients to improve the nutrition status of the most vulnerable sections of the population in the country. This scheme was implemented in 100 high malnutrition burden districts of 9 states namely Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and Uttarakhand.

11. In Arunachal Pradesh, shifting cultivation (slash and burn cultivation) is still prevailing in some parts of the state. It is a farming practice for which we all know that it is not eco-friendly but it is in vogue since evolution of human civilization. Because of poor yields, this practice does not meet round the year food requirement of the people. It needs more intensive and organized extension effort to sensitize the people on alternatives economic strategies so that they can come out of shifting cultivation. Here I would like to put the responsibility on the scientists and faculties of this College to generate the location specific, appropriate technologies suitable for the said purpose.

12. Farm produce are perishable in nature. In hilly terrain, it is difficult to bring them from production catchments to road or rail heads. Middleman takes advantage of their perishability. With an inadequate post-harvest management infrastructure, handling, packaging and transport, high production and productivity do

not translate into higher net return to the growers, a disincentive to invest and achieve high productivity. Therefore, there is a need to develop processes and equipments through which perishability can be reduced, marketable surplus can be transformed into value added products, which fetch high price, store longer and allow for sufficient time to market them. I understand that Department of Post-Harvest Management and Processing of this College will make necessary efforts in this direction.

13. Climate change is trans-boundary in nature but it is more important for countries like India where more than half the population depends on agriculture which *inter alia* depends heavily on monsoon rains. From the climatic point of view, whole of Arunachal Pradesh is considered very fragile hence we have to opt every action with proper precaution so that ecological balance of the region may not alter. The situation, therefore, warrants technological interventions of advanced nature and highly competent human

resource to counteract the impact of abiotic stresses on agriculture. I trust that this college will have focus in its research agenda on such burning issues of national and international importance.

14. India has about 18% of the world's population, but has only 4% of world's renewable water resources. With ever increasing population to support food requirement of more than 1.2 billion people irrigation water demand is increasing. The concomitant rapid urbanization and industrialization are also taking a heavy toll on the overall water demand scenario. In the result, the gap between water demand and availability has been progressively increasing. Further uneven distribution of rain fall in different parts of the country is natural phenomena which needs human skill to address such adversity in favourable conditions. We are all aware that NEH region of India receives high rainfall during monsoon season. However, the crops raised in the region suffer from

considerable water stress from November to March during off period of monsoon. This is due to the fact that the soil of the region is sandy and porous in texture having very low water holding capacity. I was very happy to know the technology developed by the college to store water in silpaulin lined low cost water harvesting technology for providing lifesaving irrigation to the crops by using micro-irrigation. Pisciculture has also been found possible in this water harvesting pond. This technology needs to be popularized in other parts of the country to save the precious rain drop. Accordingly, Ministry of Agriculture Govt. of India under his National Mission on Micro Irrigation (NMMI), during 2013-14, an area of 4.03 lakh has been covered including 1.99 lakh ha under drip irrigation and 2.04 lakh ha under sprinkler irrigation.

15. Crop diversification is the need of the hour. Adoption of short duration vegetable crops, spices and other legumes can bring additional benefits to the growers engaged in the perennial

fruit/ plantation crops. I am happy to see the performance of oil palm at this College. This crop is **a** boon for the area where other crops are almost difficult to survive. As the country is deficit in edible production and spending **sizable** money on export of edible oil, the production of oil palm in NEH region can **save** foreign exchange in sizable amount. I hope that all NEH State will develop strategic plan to harvest the potential of this crop. In this context inviting the stakeholder and resource person to finalize the programme from its production to processing and marketing will be very much useful. Hope in this endeavor, this college will provide its research expertise to develop the skill of growers as well as extension functionaries to popularize the crop.

16.Sustainable production is possible when we follow a system that enhances environmental quality and maintain basic resources like land and water on which agriculture depends. These concerns have paved the way to search the need

for some alternative form of agriculture, which rely more on chemical free technologies. One such alternative is organic production system. Initially, the North Eastern States were identified for promoting organic farming. These states were selected because the land is almost virgin and the crops are grown virtually organic. There is lot of scope for organic agriculture in the hills especially in the north eastern region of India including Arunachal Pradesh. Firstly, the use of inorganic fertilizers and chemicals is meagre in the region. The farmers of the region, in general and hill farmers in particular have apathy towards use of agro-chemicals. Secondly, the fruits of green revolution could not benefit the farmers of the hills as the system of production in the hills remained low input, low risk, low yield technology based and the average yield of most of the crop remained far behind. It is assumed that the difference in production gap due to adoption of organic agriculture is expected to be negligible; rather there is scope for

enhancing productivity with good organic management, the organic premiums would boost earning of the hill farmers. Thirdly, it is an added advantage that all the households are maintaining livestock's (pig, poultry, cattle, goats, etc.) producing sufficient quantity of on-farm manures, which could be efficiently used for organic agriculture.

17. In changing pattern of farming, farm mechanization is utmost essential to enhance the production and productivity as well making the produce competitive in the market by reducing the cost of production. The average farm power availability needs to be increased from the current 1.43 kW/ha to at least 2 kW/ha to assure timeliness and quality in field operations, undertake heavy field operations like sub soiling, chiseling, deep ploughing, summer ploughing, etc. Among the states, farm power availability in Punjab, Haryana, Western Uttar Pradesh and western part of Rajasthan is higher than the National average of 1.73kW/ha. In rest of the

country, especially in Eastern and North-East Regions, it is significantly lower which necessitates promotion of farm mechanization as a special Mission. Further, each farmer can't purchase the machinery set-up of his requirement. Therefore, Mechanization and Technology division, of Ministry of Agriculture, Govt. of India has launched a mission where there are centrally sponsored scheme in which centre has 75 percent contribution. In this context, custom-hiring facility can be of significance to both unemployed youth and the farmers. Establishment of such facilities has potential for adoption of mechanization systems. This can be true for processing activities also. Repair and maintenance service providers for agricultural machinery are a need and developing countries may adopt that system by training the upcoming entrepreneurs.

18. Agriculture, as a production oriented sector, requires energy as an important driver for production. The structure of energy consumption

in the Indian agriculture has changed substantially, with a huge shift from animal and human labour towards tractor for different farming operations and electricity and diesel for irrigation. At present, the contribution of electricity and fossil energy together has gone up to 86 per cent and of agricultural workers and draught animals has come down to 6 per cent and 8 per cent, respectively. The main concerns of our decision makers relate to managing growing demand for energy in agriculture to achieve the target growth and to match the domestic supplies with the demand. Actions will be needed on two fronts. First, on utilization of the available energy resources more efficiently to partially address the supply constraints and obviously, technological solutions have an advantage in this task. But the second approach which is based on non-conventional sources is very much useful and in this direction more efforts are needed to sustain the production system.

19. The availability of quick and reliable market information about the product arrival and prices for different commodities considerably improves the decision-making capacity of the farmers. A need has been felt to improve the existing marketing information system by linking all the regulated market in the country with electronic communication with free access to information. The important communication system will enable the producers to know about market where one can dispose off produce profitably. The producers and consumers can also derive maximum advantages out of their purchases at low communication cost. The State Governments should also make efforts to provide for such improved communication system at various levels in the states. There is no sound and efficient infrastructure for post-harvest operations and there are no large-scale processing technologies. The mandis **do** not have sufficient storage/cold-storage facilities. All these

factors contribute to substantial loss leading to consumer price hike.

20. In recent past, Biotechnology has emerged very effective science possessing great potential in increasing production at reduced cost of inputs. *Bt* cotton has clearly revealed that such technologies are very useful for small holders and resource poor farmers. Similar benefits can be reaped in other crops like soybean, rapeseed, mustard, maize, rice and some vegetables. We need to have a clear policy and Road Map defined on GM food crops as a matter of national priority or else our farmers will be deprived of greater benefits of this new science. Public perception and decisions be based on facts and not otherwise. Current mistrust in biotechnology, especially GM food crops, is detrimental to further growth and development of Indian agriculture. In this **context, media** can play a very pivotal role in developing awareness about the future challenges in respect of depleting natural resources, receding productivity and

burgeoning population compelling to search new tools of technology where biotechnology happens to be **a** new option.

21. Nanotechnology has emerged as one of the most innovative scientific fields in decades. It involves use of materials on an extremely small-scale, usually 0.1 to 200 nanometers. Nanotechnology has the potential to improve food quality and safety significantly. Currently a lot of work is being carried out on nano-sensors targeting improved pathogen detection in food systems. Recent works at University of Arkansas have shown that the carbon nano tubes can enhance germination in tomato seeds. There is a need to harness nanotechnology for the improvement of vegetable crops in a big way.

22. Women farmers are involved in almost all the agricultural and other allied activities such as land preparation, ploughing, transplanting, weeding, harvesting, post-harvest operations, storage, marketing, animal rearing, feeding etc. Such being the centrality of agriculture in the life

of a tribal it is but expected that the community as a whole partake of the activities related to agriculture. But such is not the case. On the contrary, it is almost only womenfolk who put in the maximum 'man-hour' with the men chipping in only where strenuous physical activity is required. Women carrying the load of agriculture produce on their back to sell it in the market are a common sight. In this context much more is needed to work for the welfare of feminine gender. In this context I congratulate the people of the State that they have taken utmost care of their girl child indicating child sex ratio in the state as 960 females per 1000 males. "It is a good trend which exposed that no girl child is being discriminated in the state". It is a lesson for the people of rest part of the country to follow such delicate issues of national importance. I **am happy to note** that in this Colleges of Horticulture and Forestry ratio of male and female students is almost 50:50.

23. Prevailing present agricultural education system requires keeping pace with the rapid technological, economic and social developments taking place nationally *vis-a-vis* internationally. Falling productivity, expanding natural resource degradation, rising unemployment and surfacing of market forces due to phenomenon on globalization and opening of world economies necessitate that henceforth agricultural graduates should not be mere degree holders. They, instead, must be professionals who can envision and interpret problems and devise remedial solutions so that human resource developed by agricultural education suits present-day needs. The change in agricultural education must produce graduates with entrepreneurial skills who can generate employment and not exclusively depend on public-sector jobs. I look upon enormous job opportunity in agriculture sector in this region which has not yet been explored. Protected agriculture, processing sectors, livestock and

fisheries sectors have ample opportunity to tap the potential of rural youth and women. In this direction efforts are needed to incorporate subjects on entrepreneurship to meet demands of diversified agriculture and emerging global markets. I **am confident** that this College will play a catalytic role in this direction and will set a model for others to follow.

24. Coinciding with the 153rd birth anniversary **Bharat Ratna** Pandit Madan Mohan Malaviya founder of Asia's largest residential university, the Banaras Hindu University (BHU) the Government of India on December 25, 2014 launched a Rs 900 crores scheme for improving teaching quality in the country during the 12th plan in his name **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching**. The Mission would focus on the whole sector of education without fragmenting the programmes based on levels and sectors as school, higher, technical etc. The Mission among its components would have 30 Schools of

Education (in Central Universities), 50 Centres of Excellence for Curriculum and Pedagogy, two Inter-University Centres for Teachers' Education, a National Resource Centre for Education, five Centres for Academic Leadership and Education Management besides provision for innovations, Awards, Teaching Resource Grant, including Workshop & Seminar, Subject Networks for Curricular Renewal and Reforms.

25. Digital technology has enormous power. **However**, we have not harnessed its full potential to transform our learning system. e-Learning and Massive Open Online Courses (MOOCs), which was first initiated in 2008, allow students to hear lectures and read course material on-line, and earn a degree at a fraction of the cost. Both SWAYAM (Study Web of Active Learning for Young Aspiring Minds) and MOOCs could pave the way for speed, scale and efficiency for teaching in the higher education system. The present Govt. and our Hon' ble Prime Minister is

always emphasizing on application of such electronic system across the country.

26. The university has unlimited liability and it is a role-model for society at large. Its persuasive power extends beyond the classroom and teaching. Its influence therefore must be tapped for the greater good. The Central Government has launched several initiatives having enormous socio-economic significance. The *Swachh Bharat Mission* aims at a Clean India by the 150th Birth Anniversary of Mahatma Gandhi in 2019. The *Saansad Adarsh Gram Yojana* (SAGY) envisages the integrated development of selected villages through community participation. Our Hon'ble president of India while addressing the Vice Chancellors' conference on 4th Feb. 2015 appealed to start working with at least five villages each under SAGY to transform them into model villages.

27. Before I sum up my speech on various agriculture and NRM (natural resource management) related issues, I will appeal **to** all

of you that you will never forget to worship mother earth which is fulcrum of all creatures. The UN has also duly emphasized the importance of earth by designating 2015 as the International year of Soils.

*Earth, in which lie the sea, the river and other waters,
in which food and cornfields have come to be,
in which lives all that breathes and that moves,
may she confer on us the finest of her yield.
Earth, in which the waters, common to all,
moving on all sides, flow unfailingly, day and night,
may she pour on us milk in many streams,
and endow us with luster,
May those born of thee, O Earth,
be of our welfare, free from sickness and waste,
wakeful through a long life, we shall become
bearers of tribute to thee.
Earth, my mother, set me securely with bliss in
full accord with heaven,
O wise one, uphold me in grace and splendor.”*

"Atharva Veda"

Here I would like to cite the famous quote of Noble laureate Rabindranath Tagore who said

that “The highest education is that which does not merely give us information but makes our life in harmony with all existence”. And **similarly** Aristotle says that “The roots of education are bitter, but the fruit is sweet”. I would also like to quote the sermon that founder of the Banaras Hindu University, Pandit Madan Mohan Malaviya used to give to his students. It is:- “Satyen, Brahmacharyen, Vyayamen atha Vidyaya, Desh Bhakti Atma- tyagen Sammaanarrah sada bhav. (By adhering to Truth, Celibacy, Regular exercises (to keep you fit and strong), Education, Dedication and love for your country and selflessness, earn the respect from all.) I am sure if you practice what the great leader of this country Malaviyaji had asked the students to remember, you will find a prized place in your society.

I conclude by thanking and congratulating the organizers of 15th College Foundation Day for inviting me to address the faculty and students of this college and

distribute the prize to meritorious students. I would cherish memories of this academic event and warm reception given by the staff and students **to me. Thank you,**

Jai Hind!

