



## **Speech at Tamil Nadu Agricultural University (TNAU) Convocation for ODL Learners, 11 July 2023**

*B. Shadrach, Director: CEMCA*

Dear Vice Chancellor, Professor Dr Geetha Lakshmi; Director, ODL, Dr P Balasubramaniam; Registrar, Dr Tamizh Vendan; Dr Balasubramani, Dr Raveendran, Mr Mohan, Mr Sathyamoorthi, Dr Lakshmi, dignitaries, graduates, ladies, and gentlemen!

I am pleased to be able to join the convocation of learners who graduated through the Open and Distance Learning system of TNAU. Some 450 plus learners are being bestowed with their hard-earned diplomas and some students who completed their master's degree are being bestowed with their degrees. Congratulations all!

As a representative of the world's one and only institution that promotes Open and Distance Learning at a global level, especially in each of the 56 Commonwealth nations, I am pleased to be able to join this effort. In the year 1987, at CHOGM in Vancouver, the heads of Commonwealth governments instituted a world body, the Commonwealth of Learning as an international intergovernmental organisation that promotes Open and Distance Learning. Their visionary effort has resulted in the formation of not only Open Universities world over, but also Directorates of Open and Distance Learning in the education system.

I am glad to have received this invitation from Dr P Balasubramaniam and the honorable Vice Chancellor to attend this event that recognises each of you for your accomplishments. This is phenomenal. I am told that in Coconut technology alone, some 500 such entrepreneurs have been created by TNAU and in the field of Agri inputs, more than 15,000 people have been awarded their diplomas since the inception of the ODL programmes. And, today, you are basking in the glory by successfully completing your programmes. Congratulations once again!

The world of Agriculture needs you more than any other time; and the Indian Agriculture sector requires your service desperately. In India, the Agriculture sector contributes about 16.5 percent to the Country's overall GDP and employs nearly 43 percent of country's workforce. With an average size of 1.08 hectares, our farmers are farming world's 11.24 percent of arable land and are responsibly managing 4 percent of world's renewable water resources. India produces food, feed, and fiber to sustain nearly a fifth of world's population. In recent years, India has turned into a net trade surplus nation in terms of Agriculture gross domestic product.

We remember the days from the infamous Bengal famine to the 1960s when India was afflicted with poverty and lacked the abilities to produce food and fiber. Professor M S Swaminathan, the father of Indian Green Revolution, with whom I had the privilege of working closely, turned that begging bowl into a breadbasket, thanks to the farmers of India who adopted the Green Revolution. What followed thereafter was the Training and Visits (T&V) system and knowledge-based agriculture that embraced the entire nation. And, we have come a long way from being dependent to independent in farm produce and their value addition. We have diversified from solely on-farm production to also embracing non-farm entrepreneurship, thanks to the Agricultural Scientists and the Agropreneurs of the modern day. Dr Swaminathan also pronounced the evergreen revolution by intensifying knowledge-based agriculture in the form of knowledge transfer between land and land (farmer to farmer); land to lab (farmer to scientist); lab to land (scientist to farmer) and, lab to lab (scientist to scientist). And his formula has been phenomenal.

Last time, I was here on 17 February 2007 at the invitation of Professor C Ramaswamy, the then Vice Chancellor, to recognise the role of farmers in Mission 2007: Every Village, a Knowledge Centre programme that we launched nationwide. Together with me, Professor Swaminathan and Professor Ramaswamy, people in high office showed solidarity; and, we had Smt D Purandeshwari gracing the occasion. We were proposing that each of the 600,000 villages will have a village knowledge centre which would be run by people such as the ones who are graduating today. The dream is yet to be realised although the government started what today one calls the Common Services Centre programme. The programme was seen to be evolving into what one called the Grameen Gyan Abhiyan. We were

supported by Professor Abdul Kalam, who attended the graduation of this kind in Delhi at the NAAS complex and at the Agricultural University in Hyderabad.

The second programme I had the privilege of leading in India was Lifelines India programme, a call centre for farmers – something like the Kisan Call Centre. We developed an IVRS system to help farmers to pose their queries and experts answering those. We included the Agropreneurs and Agriculture workers as experts who answered queries.

The third programme that I had the privilege to lead in Asia was Open Knowledge Network. Dr Sriram of TNAU was my colleague then who supported the Open Knowledge Network programme, which was initiated in Asia and Africa with support from G8 nations' Digital Opportunity Taskforce. We used WorldSpace Radio to transfer knowledge from Indian farmers to the farmers in Africa. And this experiment was followed by the EduSat programme launched by ISRO, which also networked India with Africa through Education programmes.

And, recently, we used the Community Radio in three districts in North India to promote knowledge-based audio programmes amongst farmers on soil health. We call it Listener to learner programme, and my organisation is involved in such programmes, working with the AgMOOC consortium that benefits farm workers and families in India, rest of Asia, Africa, the Pacific and the Caribbean. And, we have now started working closely with farmers and farming families who borrow from Tamil Nadu Grama Bank using audio communication.

In all these programmes, we see people such as today's graduates at the core. These efforts are led by people such as yourselves. You are a very important element in the field of Agriculture, and in the future of Indian Agriculture in particular. There are so many innovations that come out of TNAU such as the expert systems, e-extension services, agri-portals, etc. Being a part of TNAU, you are expected to take this movement forward. To do this, I want you to take an oath today to do the following four things:

**First:** You should become lifelong learners. This means that you have just begun your learning journey, and you need to learn throughout your life. In the recent UNESCO meeting in Bali, Indonesia, I mentioned the fact that when learning stops, life stops, not the other way round. And the Bali Manifesto calls for each person to become lifelong learners. So, you should take the oath to become lifelong learners.

**Secondly:** You are now eligible to manage agri-input centres as certified agents. Some of you are becoming eligible to obtain programmatic subsidy from government bodies, such as the Coconut Board, etc. You can become an entrepreneur in your own right. But you are at the centre of the programmes I mentioned! You are a part of Professor Swaminathan's dream of running knowledge centres in each village of India. You are the one who are a part of India's Open knowledge network. This means, you should vouch for disseminating knowledge to all your clients, customers, fellow farmers, farm workers and all those who live in rural areas. In addition to functioning as agri-input dealers, you should become knowledge workers.

**Thirdly:** The concept of evergreen revolution requires not only transferring passive information to your customers, but an active role of providing value addition to the information; contextualising the information that you access into actionable knowledge capsules; solving local problems with global information. You need to be able to train others; communicate findings; transfer knowledge and become the agents of change. I wish to call you to become an ally to the government system and become trainers.

**Fourthly:** You should become a part of the global transition that is taking place due to various phenomena that we witness. On one hand, the world is witnessing climate change. This means that we need to become climate resilient agriculture knowledge workers and practitioners. On the other hand, the world is embracing Artificial Intelligence. In addition to going through the twin transition of digitalisation and greening, the world is also going through an AI revolution. We are learning about Agriculture robotics, autonomous tractors, IoT in agriculture, setting up of micro-weather stations, AI-enabled soil monitoring, AI-led crop monitoring, AI tools for controlling pests and administering pesticides, AI-based algorithms that predict pest attacks, AI and blockchain-assisted supply chain management, demand forecasting, supply management, inventory management, and, finally in the generative AI era, we are looking at ChatGPT doing many of the things the researchers are able to do. And the generative AI systems can translate simple languages; it can also translate knowledge into digestible forms. We are approaching a new frontier in Agriculture. With the quantum mission announced by the Indian government, we are likely to witness a data-intensive research,

prediction, analysis, forecast and production practice. Quantum computing is the next invention that will transform the world.

So, dear graduates, you should take an oath to follow what is happening in the digital space, what is happening in the AI space and be a party to collecting and making rich and clean data available to these systems. If we wish to keep AI in a sub-servient function, we need to be able to train it. The only way to make AI to be your slave is by providing good data. If the world feeds bad data, the AI systems will become masters and we, human beings, will become slaves. Instead, if we feed good data, train AI on data models, we can solve the numerous issues facing today's agriculture. Not only would we be able to double the income of farmers but mitigate the manpower challenges and combat the many 'M's – merciless moneylenders, greedy middlemen, unpredictable markets and erratic monsoons. In order to do this, we should become digitally fluent.

Again, with these four oaths:

- To become a lifelong learner,
- To become a knowledge worker,
- To become a trainer, an instrument of change and become a changemaker, and,
- To become digitally fluent and be masters of artificial intelligence.

I welcome you to the world of Agriculture, which is the future. As Pandit Jawaharlal Nehru said, everything else can wait, but not agriculture! Thank you!!