

## **Agricultural Education for Entrepreneurship, Excellence and Environmental Sustainability: Agenda for Innovation and Change<sup>1</sup>**

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Having been a product of Agricultural University, I understand and empathize with the leaders of the universities about the problems they face. However, let us accept that the standards that were set decades ago can indeed be surpassed if only we would challenge the students to bring out the best in them. My one line summary of the problem is that we are not challenging the future leaders of our discipline strongly enough. Is it because rise in their expectations will create a stress on us or is it that we have learnt to be helpless?

I remember in this very university in early 70s, five head of the departments, and scores of M.Sc., and Ph.D students will not only attend a one credit course seminar, but also grill the student hard. There was no way a student could be under prepared. Likewise, the assignments would not only be graded but also shared so that quality benchmarks were created through peer appreciation and acknowledgement. There were teachers who used out of date notes but such teachers were few. Majority of the teachers not only updated their syllabus but also created enough pressure on the students to be on the edge. However, the fact is that there was a wide range of commitment among students as well as faculty but the modal values were reasonably high. Coming from an Institute where we get students from various agricultural universities, I do not think that standards of the top quality students are any different from what these were decades ago. If anything, the students are better read. But commitment has certainly become more fluid.

I wish to focus on certain practical steps that can revitalize the educational system and institutionalize pursuit of excellence, social commitment and entrepreneurship.

1. *Education for Entrepreneurship*: The fact that most universities do not have short, medium and long term programme for entrepreneurship indicates how much out of touch we are with the realities of our society. This inadequacy must be overcome urgently and existing undergraduate programmes for agriculture and other disciplines must incorporate content for business development, market research and financial management as optional stream. Every student must have a chance to take one of the three streams, entrepreneurial, extension and research and development. The

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extension may include work with NGOs, international agencies and cooperatives.

2. *Education for Sustainability:* In a study of postgraduate thesis from two dozen colleges and universities in five disciplines in 1984, I had asked a question, “Whether we were building the skills that would be needed in 2004?” For instance, in agronomy, three fourth of the thesis were on fertilizer and 90 per cent of these dealt with chemical fertilizer. Only four per cent theses dealt with conjunctive use of organic and chemical fertilizer. Similarly, the thesis which looked at the problem of crop, livestock, tree and tool interactions were rare. Inter-disciplinary research was almost conspicuous by absence. A student from agricultural college could not take courses in veterinary, animal science, agricultural engineering or home science college. The situation might not have changed a great deal.
3. *Exchange Programme:* We need to develop exchange programme among agricultural and other universities so that students could take courses not only within the campus but also across the campus within India and outside the country for a term or two. IIMA has such exchange programme with 36 international universities in 21 countries. Why couldn't similar arrangements be developed in agricultural universities?  
Internationalisation of agricultural education and research is long overdue. We need to increase the quota for international students on priority so that the cosmopolitan outlook of the campus improves the educational environment also.
4. *Education for emerging markets:* Every student of agriculture knows that when economy grows and incomes increase, the proportion of processed food in the consumption basket increases. How many universities have full-fledged food processing departments and educational programmes? Why should there be such a lag in the need in the market place and the responsiveness of the agricultural universities? The germplasm in our national, regional and state level gene banks has not been characterized for food and agro processing purposes. There is a tremendous opportunity waiting to be tapped and educational reforms are urgently needed. Likewise, programmes in ICT applications in agriculture are offered at Gandhinagar or other ICT institutions but seldom in agricultural universities. This is something where partnership with ICT companies could be an easy option for making up the inadequacy without much extra investment or even time delay. What is required is an openness of mind and concern for the emerging opportunities for our students not just in India but internationally.
5. *Education for professional farmers:* Given the increase in knowledge intensity of agriculture, the earlier trend of young people leaving

agriculture to old people is changing in at least some parts of the country. However, agricultural universities offer little to these returnee graduates or other such professionals who want to pursue part time farming. The folk high schools of Denmark inspired Gandhiji to set up Vidhyapiths in Gujarat. Perhaps we need a mission of agricultural university leaders to go around the world, study the systems of education for full time or part time farmers and develop a niche here.

6. *Education for Executives:* The executive development programmes are also missing from the radar of agricultural universities. These programmes could not only generate revenue but also make the faculty more focused in their research and teaching because the feedback from these programmes would be immediate and precise.
7. *Education for Voluntary Sector:* There has been an upsurge of voluntary organizations in the last two decades funded locally as well as internationally. Do we teach courses on management of non-profit sector?
8. *Education for Human Values and Ethical Conduct:* It is true that values cannot be taught and ethics cannot be inducted. And yet, many leading institutions around the world realize that the ethical compass needs recalibration. Issue is not to deal with right, the challenge is to learn deal with wrong.
9. *Reforms in Educational Process:* Even after teaching for 24 years at IIMA, I still have to prove myself in every class every year. The feedback of the students collected by the students goes to everybody in the Institute and one knows where one stands. Even otherwise, a teacher always knows whether a class went off well or not. Do we want to be accountable to the students? Should pressure from the peers influence whether or not I should teach a course? If feedback is consistently unsatisfactory, are there any implications? These are difficult questions but answers are simple. If we want quality, we listen to those for whom we work. What is the role alumni have to play in building capacity of the educational institutions? How many distinguished alumni have been invited from different disciplines in various colleges to organize workshops or take classes so far? If not, doesn't it provide answer enough about what is the root of the problem?

There are many other areas where reforms are needed and urgently so. Educational system has to keep pace with changing realities not just in India but also internationally. The exposure to issues in IPR, agricultural health interface, disaster management, etc., needs considerable attention. The innovations at the farmers level have remained ignored to a very great extent. There are not many research programmes building upon the genius at the

grassroots. How many such innovators have been invited to the classroom in various universities in the last decade or so?

I am sure if the questions that I have raised seem pertinent, the answers will not be difficult to find. The problem is that many of you may not agree with the relevance of these questions. To that extent, we have a dialogue to pursue.