

Research and teaching inseparable

I appreciate the suggestions given by Suresh for promoting science in India¹. Most of them are acceptable and worth implementing. However, the following points need reconsideration.

The suggestion given by him that only those students who have cleared exams like UGC/CSIR, NET, SLET and GATE should be allowed to join the Ph D programme will harm the advancement of research in academic institutions. It is a known fact that the introduction of this scheme by UGC has led to a decline in research output in the universities. A student should be admitted for research, irrespective of whether he/she has qualified in the above-mentioned tests or not. In fact, we need a different kind of talent in the students who come in for research. A student may be brilliant, but he/she

may not be interested in research. Here, we need a student who has an inquisitive mind and wants to discover something new. Many a times, an ordinary student has proved much better than a brilliant one. A number of leading scientists fall in this category. A scientist is judged by his research contributions and new thoughts and not by the marks he had obtained. We should evolve some method to search for students who are genuinely interested in research.

The second suggestion, 'make universities as centres for high-quality teaching and national laboratories as centres for research', if implemented, will ruin the very basic structure of universities. Teaching and research go together and they cannot be separated. The best teacher is also the best researcher, bar-

ring a few exceptions. Teaching without research lacks lustre and content. The best researches have been done in the universities. Any university is incomplete without research. Only when teachers and students interact with one another will new ideas emerge. The free and open atmosphere makes the university different from others institutions.

1. Suresh, Y., *Curr. Sci.*, 2002, **83**, 793.

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Transgenic mustard: a cautionary note

The Genetic Engineering Approval Committee in India has postponed the decision to allow cultivation of transgenic mustard in the country. It may be noted that initial approval was based on the claims by the ProAgro Seeds Corporation regarding the safety of GM mustard; however, the welcome intervention of ICAR and concerned people led to a rethinking on the issue. In this correspondence I, wish to caution the policy-makers against the collision of MNCs with the lobby of some of the Indian scientists making misleading claims. It is unfortunate that some of the NGOs opposing GM crops also have their vested interests. In the end, poor farmers and people would be the worst sufferers.

Let me analyse two aggressive arguments put forward by the proponents of transgenics. First, according to the proponents, those opposing GM crops are mostly untrained in biotechnology; therefore their campaign lacks scientific merit. Secondly, the source of their opposition is based on the outdated and flawed ancient philosophy. [In short, this philosophy views matter and mind as manifestations of consciousness, and therefore any vio-

lence to the ecosystem and environment is unacceptable.] Such a philosophy in the modern age of S&T is depriving farmers of the fruits of recent advances in biotechnology.

It is true that a non-specialist cannot make a judgment on scientific aspects; however the issues that are debated pertain to the application and commercialization of scientific knowledge and that too vigorously promoted by the MNCs. Therefore, the social/green activists are competent enough to stress their views having an impact on the people/environment.

In a recent editorial¹, it has been noted that transgenic crops increase yield in rich countries, 'adding to a global grain glut that depresses prices and undermines agriculture in the poorest countries'. The same editorial mentions how some experts suggest 'US should exchange its GM maize with the non-GM grain from India or South Africa, and the latter distributed in famine-hit Africa'. Also in a news item, Dalton² tells the story of MNC manipulation in the case of *Bt*-sunflower. A plant ecologist, Allison Snow, and her team studying this transgenic sunflower

found preliminary evidence of gene flow to wild plants. This would mean that wild plants could proliferate as weeds. The ecologists have been denied support to carry out further research in this subject.

It is unfortunate that while GM food is considered unsafe in Europe, here in India our experts are playing into the hands of vested interests for short-term gains. After the supercyclone 1999 in Orissa, US had airlifted food grains to the people, raising the apprehension that these might be GM grains. The African report, and independent claims by some NGOs that GM grains were sent by US lends credence to these doubts.

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1. Editorial, *Nature*, 2002, **418**, 509.
 2. Dalton, R., *Nature*, 2002, **419**, 655.
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