

Colleges: Untapped avenues

Concerns regarding the exodus of faculty or poor quality induction in the academic system are often raised in *Current Science*. The reasons for this plight are lack of job opportunities, poor salary and infrastructure, promotion policy, bureaucratic hurdles, internal bickering among fellow colleagues, etc. Solutions, both by governmental committees and discussions in journals and seminars, have been proposed. Yet the overall situation remains the same. If the situation is assessed neutrally, our national laboratories and some university departments are well equipped. Though not equipped with the state-of-the-art instruments available in foreign laboratories and academic institutions, at least they are the second best in many establishments. Procurement or installation delay or non-functioning of instruments is a different matter as this depends upon the managerial quality of the person heading the organization.

As far as job opportunities are concerned, national laboratories and university departments have limited and infrequent job openings and these are generally filled by in-house candidates waiting for these jobs. Out of nearly four lakh faculty, around 15% is employed in universities and the rest work in colleges.

The research performance of college faculty is certainly far below compared with their university counterparts. This is attributed to lack of freedom and a non-conducive academic environment in the college campuses, whimsical behaviour of authorities, preferential treatment to uni-

versity departments in terms of grant release by the University Grants Commission or other funding agencies, promotion policy, poor laboratory and library facilities, lack of quality students intake, apathy to research by government/management and principals or to development in general, psychological complex among teachers, engagement of faculty in non-academic activities and location in remote areas. Yet in terms of salary and allowances, they are at par with university faculty till they get Reader's grade. Currently, college teachers end their career with Reader/Assistant Professor designation in the Government and Government-aided colleges. After a time-bound Reader's tenure university faculty move to Professor level after 18 years of service based on their research and administrative records. Only isolated cases are available where screening committees deny promotions to teachers. Pay Commissions in the past have also recommended selective Professors' posts in colleges but the Governments have not implemented this for various reasons.

The presently practised outright discrimination of college teachers is enough to dissuade them from doing research. It is not true that all college faculty lack the research aptitude. Many teachers are committed to their work and are contributing well to research. Yet, as a whole, colleges carry a negative image in academic and Government circles for the above-mentioned reasons. As a first step to solve these problems, colleges should

be treated at par in terms of promotion, i.e. induction of Professor grade so that best talent should aspire for college jobs. In colleges, initially Professorship can be given on selective basis of performance and screening. Once this avenue with riders is announced, there may be a demand for automatic promotion to all teachers from the teachers' associations. This can be tackled with administrative will. To begin with, a state-level or national-level body may be constituted to implement the scheme. Even if 20% teachers are promoted to Professors post by open interview after implementing transparent assessment procedure, this will suffice to change the academic canvas. Research would get a quantum jump and the emerging competition from college faculty would, in turn, compel the university faculty to upgrade their research performance. Since economy is leaning more towards knowledge and the country is facing shortage of quality output, colleges cannot be ignored anymore. Modest increase in financial burden will improve the quality substantially. Once committed persons become part of the college set-up, they will upgrade the facilities by obtaining research grants. The case of unaided private institution does not fit into this scheme of things.

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Anticrop bioterrorism

The 9/11 happenings have changed the world around us. They have forced us to consider terrorism as a real threat. Bioterrorism is a form of terrorism where a biological agent can be used to unleash terror. All it needs is a perverted mind and the biological agent may be fungi, bacteria or viruses. Here we will deal with agricultural bioterrorism or anticrop bioterrorism. In this form of terrorism pathogens of important crops, biocontrol agents and microbes involved in nutrient

recycling can be used. Iraq had an active bioweapons programme before the Gulf War, part of which dealt with wheat smut, and the likely target was Iran.

Let us also mention a few terminologies which are closely related with this issue. Although the terms bioterrorism and biosecurity can be used interchangeably, it is not so in the case of biosafety. Biosafety measures are actually meant to prevent accidental release of pathogens from research facilities, whereas bio-

security measures are intended to prevent the deliberate use of deadly microbes. In case of pest risk analysis or import risk analysis, we actually deal with the process of evaluating biological or other scientific and economic evidence to determine whether the pest associated with the commodity should be regulated or not.

Advancement in recombinant DNA technology can actually be a real threat in this perspective. Since desirable genes can be transferred from one organism to