

ing the procurement price for grains and free energy supply have monetarily helped everyone, except farmers and consumers. This physical availability without economic access appears as surplus and more recently the government was compelled to reduce the price of stored grains. That is the visible tip of the iceberg. The policy decisions are already published to increase fertilizer use for consumption at levels of 207 kg/NPK/ha by 2011–12 from current 100 during the year 2000 (ref. 12).

To illustrate the global concerns for excessive nitrogen use as global pollutant, a reference to the Second International Nitrogen Conference, at Potomac, Maryland, USA during 14–18 October 2001, and its lessons for India deserve emphasis. (i) Progress to curb nitrate and ammonia leak from farmer's fields and animal wastes. (ii) Nitrate pollution is large in the developed world. But Asia now contributes 35% of the world's total synthetic nitrogen; its output is expected to double by 2030 to 100 ml/t of nitrogen per year. (iii) Even USA is working on new policies to reduce fertilizer N and crackdown on run-off from farms into rivers. (iv) Reduce meat consumption

and reduce the N animal's release through a change in feed composition. The Netherlands is the best example to this end, in addition a drastic reduction in fertilizer use on wheat crop with no loss in yield. (v) Finally, the conference unanimously endorsed 'nitrogen as a global pollutant' to rank with greenhouse gases. An integrated policy to address the entire N-cycle, including the creation of an international scientific body for nitrogen on par with the Intergovernmental Panel on Climate Change (IGPC) was adopted. The conference concluded that 'confronting the unyielding economics of the Haber-Bosch process (synthesis of ammonia) may be the policy-makers biggest challenge'<sup>13</sup>. Even the well-intentioned champion for the cause of fertilizer use in developing countries, perhaps out of despair, observed 'force on them (farmers) cruel doses of fertilizers and chemicals, farmers will die quickly while political barons live longer through food imports' (Norman Borlaug<sup>14</sup>).

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## Unequal opportunity!

This is with reference to an advertisement by National Institute of Immunology (NII) published in national dailies (see, for example, *The Hindu* dated 3 March 2002) inviting applications from students of biology and related sciences for admission to the NII Ph D programmes. According to the advertisement, candidates fulfilling the minimum requirements will be invited for a written test on 31 May 2002 at NII, New Delhi. Short-listed candidates will be called for an interview on 1–2 June 2002 at NII. M Sc (any branch of science), M Tech, MBBS, MVSc or M Pharm candidates who have secured first class or 60% of aggregate marks in all major exams from plus-2 onwards will be called for a written test 'at their own expense'. Out of possibly a large number of candidates only a few students will be selected for interview for the final selection. NII has been making

the same type of announcement for the past many years.

I am sure there will be many students from all over the country desirous of joining NII which is the premier national institution in the country doing 'cutting-edge research' (to quote NII) in immunology. But even for the preliminary written test, students from all parts of the country (e.g. Kanyakumari, Imphal, etc.) have to travel thousands of kilometres and stay in New Delhi for two or three days at their own expense. I think this is a very unfair treatment to all the students who happen to live far away from New Delhi. This requirement of NII is not at all a problem for students from Delhi, UP, Punjab, Haryana, Himachal Pradesh, etc., but it will be a deterrent for students living far away from New Delhi and who may also hail from economically poor families.

Similar national institutions like Indian Institute of Science (IISc), Bangalore, and JNU, New Delhi conduct preliminary tests in a large number of centres across the country for the benefit of students from all over the country (for example, IISc in its recent announcement inviting applications for admission to Ph D provided 18 centres evenly distributed across the country). Equal opportunities must be provided to all the brilliant young men and women of this country who want to do 'cutting-edge research' in immunology.

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