

The 20-20 Vision for International Agriculture and Implications for Mountain Agriculture

The increasing concerns about poor agricultural performance were extensively discussed in a recent international meeting, and the issues raised there have important implications for different fragile ecosystems such as the mountains.

The International Food Policy Research Institute (IFPRI), based in Washington, recently organised "A 20-20 Vision for Food, Agriculture, and the Environment" Global Conference in Washington D.C. to discuss the problems of hunger, poverty, en-

vironmental degradation, and the necessary decisions and actions for the next 25 years, in order to deal effectively with the different but related problems (IFPRI 1995). The global meeting was preceded by a series of regional meetings on different continents. Extensive analysis was undertaken, both at IFPRI and outside, to generate a realistic assessment of the food, agriculture, population, and environmental scenario for the region and the world.

It is useful to briefly mention some of the points made by Sartaz Aziz in his presentation on the vision for Asia. He refers to studies by the World Watch Institute and IFPRI. Regarding the conclusion by the Worldwatch Institute, Aziz quotes, *"After nearly four decades of unprecedented expansion in both land-based and ocean-based food supplies, the world is experiencing a massive loss of momentum. The backlog of unused agricultural technologies is shrinking, production of seafood and livestock is approaching its limits, demand for water is pressing against the limits of the hydrological cycle, additional fertilizer in existing varieties has little effect on yields, many countries are losing cropland at a rate that exceeds the rise in land productivity, and social disintegration is undermining effects to increase food production"* (Aziz 1995). Gaps in food grains for six large Asian countries (Bangladesh, Indonesia, Pakistan, Iran, India, and China) are expected to increase from 17 million tons in 1990 to 340 million tons by 2030 (IFPRI 1995, 112).

IFPRI's projection is somewhat less alarming because of the assumptions relating to population growth and the more favourable coverage of new technology. However, it also comes up with a deficit of around 61 million tons by 2020 (IFPRI 1995, 112). In the South Asian Region, three challenges that needed to be met were: (a) sustaining and improving upon the average annual agricultural growth rate of 3.3 per cent achieved in the past two decades, (b) a major part of the incremental growth having to come from higher productivity obtained by wider application of improved technologies, and (c) policy shifts, in favour of agriculture and within agriculture, in favour of small farmers. What needed to be done would obviously vary from country to country, but a number of common strategies and policies for food security was identified (IFPRI 1995, 116).

In the short and medium run, the following were emphasised.

- Innovative programmes to extend high-yielding technologies to a much wider cultivable area
- Larger investment in small-scale irrigation schemes and improved water management
- Avoiding policy discriminations against agriculture
- Strengthening food security programmes for the poor and the disadvantaged, based upon effective policy research
- Actions to improve maternal and child health and nutrition and policies to improve access to clean water and sanitation
- Protecting the poor and vulnerable from the after effects of liberalisation and structural adjustment
- Strengthening policy-relevant databases related to poverty, nutrition, health, and environment

- In the long run, the following actions and policies were emphasised.
- Agricultural research programmes that focus on generating technologies to enhance employment, income, and access to basic needs
- Promotion of environmentally - sound technologies, such as drip irrigation, community forestry, agroforestry, watershed management, and farmer-managed irrigation systems
- A drastic increase in investment in education, especially for women's education
- Implementation of effective land reform to address problems of inequality and landlessness
- Dismantling of policies that lead to environmental degradation
- Expanding trade in agriculture through trade liberalisation measures

A number of other critical issues were raised by other speakers. The most interesting one was the need for a Double Green Revolution. This nomenclature was introduced by Gordon Conway in his address which referred to *"a new Green Revolution - one that will be as productive as the past revolution but will be environmentally friendly, and hence sustainable"* (IFPRI 1995, 47).

Keith Bezanson, President of the International Development Research Centre (IDRC), referring to the difficulties of achieving the Double Revolution, pointed out, *"In addressing the Double Green Revolution there is a need for new and fresh thinking whether it is multidisciplinary, interdisciplinary or intersectoral groups working together, integrating different kinds of knowledge-the hardest thing about new thinking is getting rid of old thinking"* (IFPRI 1995, p140). Discussing the need for prioritisation, Bezanson noted that one of the main priorities emerging from the conference was **for massive investments in the education of women and girls.**

What is the relevance of this discussion on sustainable international agriculture for mountain areas of the Hindu Kush-Himalayas? First, mountain agriculture cannot be neglected, as in the past, with the belief that lowland agriculture will provide adequately for all the agricultural needs of the mountain people. This has not happened in the past, especially for poor areas, and this is not likely to differ significantly in the future. The possibilities for trade, exchange, and specialisation undoubtedly exist between the plains and mountain areas, but this also assumes a mountain agriculture will be developed that has products and services to exchange with the plains.

Second, today there is a greater need to develop and sustain mountain agriculture than ever before. This is not only because of the growing number of people in the mountains, but also because this growing number is predominantly poor, malnourished, lacking in food security, living in very fragile environments highly susceptible to frequent natural disasters, and has been historically marginalised in terms of development. Sustainable development is simply not feasible when an important segment of society continues to suffer in this manner.

Third, an important reason for a stronger focus on mountain areas, including mountain agriculture as an integral part of the 20-20 Vision, is the realisation that increas-

ing pressures on fragile areas, such as the mountains, only result in degrading those environments and transferring pressures to other areas. In a highly interconnected biophysical system, deterioration in upstream conditions has resulted in catastrophes downstream. Managing mountains and mountain agriculture is, therefore, a critical component of the food security system, particularly for large parts of the Asian lowlands that depend on mountain water resources for their lowland agriculture.

Fourth, with emphasis on the “Double Green Revolution”, the experiences of mountain farmers could be critical for improving environmental friendliness, just as mountain farmers could benefit from increased productivity. The emphasis on integrated natural resources and agricultural management (INRAM), on women, biodiversity, small-scale water harvesting technology, etc could be mutually beneficial for the mountains as well as the plains, because of the rich experiences of mountain farmers in these areas. There is greater congruence in the new thinking on the practices suited to different ecosystems, and this is a hopeful sign as there are immense opportunities for mountain farmers to learn as well as to pass on to others their very rich farming heritage.

Fifth, if the present state of agriculture in better endowed areas is not satisfactory, even with all the resources and capacities at its disposal, the problems with mountain agriculture are even more worrisome, as it lacks both the resources and institutional capacities required to bring about necessary changes. It is possible to identify and develop opportunities for sustainable mountain agriculture, and some areas are already doing so. However, the big question is in which areas will the efforts be made? The next section will examine these questions from the point of view of education and research in sustainable mountain agriculture.