

Perennial rice under development

Scientists at the International Rice Research Institute (IRRI), the Philippines, are developing perennial rice. Erik Sacks, leader of the Institute's perennial rice project, revealed that some of the plants could probably live indefinitely, if properly cared for. So far, the plants have been growing for almost two years and have been harvested about four times. Researchers have worked for more than six years to create an upland rice plant that doesn't die at the end of one season, and that can be grown in virtual 'hedgerows' across mountain slopes. The hedgerows would prevent erosion by providing living barriers to soil movement on sloping land, helping to stop the loss of topsoil. In addition, farmers would have a rice crop at least once a year without all the hard labour and expensive inputs of annual cultivation. These plants are the result of traditional breeding efforts involving thousands of crosses of wild and domesticated species from Asia and Africa. One of the ancestors of modern rice, a wild Asian species called *Oryza rufipogon*, is the parent believed to have gifted the new plants with their seeming perenniality.

Some plants not only developed root systems capable of keeping them alive for several years, but have also survived experimental drought stress and, on top of that, yielded more grain than expected. Sacks explained that, in ordinary rice plants, so much of the plant's energy is dedicated to the process of flowering and developing seeds that little surplus remains for vigorous growth after harvest. Hence, the new plants are under close scrutiny to find out how they gathered all their energy. Some of the most promising plants will soon be sent for field trials in China and India for assessment of their reaction to real upland conditions. (AgBiotech Reporter, January 2002)