

The history of rice in a blessed location

On the island of Bali the combination of fertile volcanic soils and abundant water led to methods of wet rice cultivation with extremely high and stable yields.

Agriculture became a much more efficient activity than it was elsewhere on the planet because farmers found that it was to their advantage to cooperate closely with their neighbors and the Balinese are deservedly well-known for their efficient collective use of irrigation water.

The highly sophisticated system of irrigation management as it developed over the centuries revolves around local organizations called 'subak'. The subak is in fact a collective of all the farmers who cultivate land within a clearly defined territory, based on fundamental principles of cooperation, mutual help and solidarity. The subak 'elders' have the task to manage the intricate irrigation infrastructure of dams, canals and aqueducts. In the subak we find one of the most highly developed forms of collaboration in the world and a clearly defined set of rules that regulate the rights and the duties of its members. Throughout the seasons the representatives from adjacent subaks engage in negotiations to distribute the precious water resources most fairly from one area to the next.

As a system of governance the subak is soundly based on democratic principles, but it is also a vital component of Balinese Hinduism. The universal Balinese philosophy of "Tri Hita Karana" guides farmers to keep the harmony between God, the people and nature and as a religious organization the subak organizes the ceremonies that guarantee a good harvest.

Presently the subak system is under pressure. The unstoppable growth of the tourism industry and the relentless urbanization of the southern part of Bali is not only affecting the physical landscape but also changing the economics. Highly productive arable land gets lost at an accelerated rate due to excessive building activities. High land prices tempt more and more farmers to sell their plots and villa developments in the middle of the rice-fields disrupt the natural flow of water to downstream paddies, destroying what had been painstakingly perfected over hundreds of years. In addition a whole generation of young Balinese is turning away from rice cultivation because it is possible to earn higher wages in the tourism and hospitality industry. Since the younger generations do not follow their parents into the rice fields anymore, a significant treasure of knowledge is being lost.

Recent History

Until 1969, the Balinese grew and ate at least a dozen traditional varieties of rice known as "Padi Bali", which took about 210 days to mature, the length of the Balinese year. Throughout the history of the island Padi Bali had traditionally been a subsistence crop but in the seventies the Suharto Government introduced

nationwide policies to boost production and turn rice into a cash crop. In this “Green Revolution” farmers were encouraged to plant as much rice as possible, without considering traditional irrigation schedules and rotational cropping patterns. With the support of the World Bank the Government introduced a hybrid white rice variety called IR36, which matured in 120 days. All Indonesian farmers were ordered (top-down) to grow this new miracle crop, which was heavily dependent on chemical fertilizers and pesticides. The results were disastrous. Although yields increased substantially, water shortages and unprecedented outbreaks of rice pests and disease reduced most of the gains.

The very structure of the system was designed to return the greatest profit possible, not to the farmers but to the producers of the chemicals they use and the seeds they plant. And because those chemicals depend on fossil energy, the entire system was inherently unsustainable. It is understandable that after the fall of Suharto farmers did not hesitate to return (bottom-up) to the old methods and planting schedules that served them so well for a thousand years. Crops grow better, with fewer weeds and pest problems, if they are rotated in a careful sequence.