Effective Agricultural Practices Help to Sustain Rural Livelihoods and Promote Rural Transformation within the Loess Plateau of China

The problems of soil erosion, environmental degradation, and rural livelihoods in the Chinese Loess Plateau have always been of deep concern to relevant government departments and academic institutions. Since the "Grain for Green" (GfG) program was launched in 1999, agricultural practices including the conversion of sloped farmlands to terraces and the construction of farm dams have been implemented to promote the ecological restoration in the Chinese Loess Plateau. The impact of agricultural practices on sustainable rural livelihoods and rural transformation, however, has not yet been adequately addressed.

Dr. TANG Qing, Prof. XU Yong, Ph.D. student LI Yang from the Institute of Geographic Sciences and Natural Resources Research (IGSNRR), Chinese Academy of Sciences and Prof. Sean J. Bennett from the State University of New York at Buffalo, designed a conceptual framework for agricultural practices and sustainable rural livelihoods for the Yangou watershed within the Chinese Loess Plateau, and analyzed the impacts of agricultural practices on sustainable rural livelihoods and rural transformation.

They found that agricultural practices that include building terraces, returning sloped farmlands to forestland and grassland, and expanding orchards all have had positive and significant impacts on farmers' livelihood assets, strategies, outcomes, and vulnerabilities. These positive and significant impacts of new agricultural practices on the sustainable rural livelihoods of the Yangou watershed are evident in the community's reduced dependence upon grain and subsidies income, the diversified strategies for livelihood, and the improved environmental indices. For instance, the watershed community experienced 159% raise in per capita net income from 1997 to 2003 and 99% decrease in sediment yield from 1998 to 2007. The successful implementation of new agricultural land management practices and policies in the Yangou watershed strongly suggested that similar transformations can be achieved in similar regions throughout China's vast rural areas of the Loess Plateau.

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Yangou watershed in the Loess Plateau of China, 2009. (Photo by Dr. TANG Qing)