

Entry No. 8RGS-0076

Category	: 8th Rice Genetics Symposium
Select Theme	: Sustainable and equitable farming systems
Endorsement email	:
Keyword 1	: System of Rice Intensification (SRI)
Keyword 2	: Sustainable intensification
Keyword 3	: Soil and soil health
Title of Entry	: Perennial rice: Sustainable Rice Production System
Presenting author	: Fengyi Hu
Presenting author email	: hfengyi@ynu.edu.cn
Co author 1	: Shilai Zhang, Guangfu Huang, Liyu Huang, Jing Zhang
Co author 2	: Shiwen Qin, Feifei He, Jing Gao
Affiliation presenting author	: Yunnan University, School of Agriculture, Perennial Rice Engineering and Technology in Yunnan
Affiliation 1	: Yunnan University, School of Agriculture, Perennial Rice Engineering and Technology in Yunnan
Affiliation 2	: Yunnan University, School of Agriculture
Select only one type of presentation	: 15 minute oral presentation
Abstract	: Two serious problems during the rice production should be solved, not only in China, but also in all over the world. Firstly, some environmental problems such as the soil erosion caused by annual rice (especially for upland rice) production system, although we get ideally yield. Secondly, as the development of the economy, the shortage of labor force in rural regions is becoming more and more severe. To solving these issues, the idea of developing and using perennial rice production system was proposed since 1991. Perennial Rice, as its name implies, is the rice that could be harvested many years for ideally yield continually without re-

sowing due to the regeneration of rhizome. *Oryza longistaminata*, is a perennial wild rice species from the same genus as cultivated rice (e.g. *O. sativa*). It considered to be the ideal perenniality donor for perennial rice as it has strong rhizome (vegetative propagation). A F1 individual with strong rhizomes was bred from the cross between RD23 and *O. longistaminata* in 1997. Breeding for perennial rice were carried out many years. So far, four good selections (PR23, PR24, PR25 and PR107) were bred. PR23 was used in 9 provinces of south China, 4 countries of south and southeast-Asia. It has been test more than 3 year for perenniality and yield, now the applied area size was over 100 hectares in Yunnan. The result shows that the regrowth was over 85% at least after 6th harvesting, and it was maintained over 15 tons/ha per year as the average yield. PR23 is ready to be released to farmer in China. Compared to traditional rice production, the perennial rice production process saved cost as less chemical fertilizer, water and crop management input after 2nd season (saved ~50% for each season), meanwhile it also need less labor input and reduce labor intensity. Perennial rice technology is a simplified, green and sustainable agriculture technology, it will have a far-reaching impact on social, economic and environmental level. And it will change the mode of rice production and it helps us to find the balance point among environment protection, economy development and food security.

[Read Less»](#)

Uploaded Files »

No files found.