

## Suggestions for the collaborative breeding program to improve the tolerance of rice varieties to low temperature in Yunnan province, P. R. China

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The rice cropping area in the north-western part of Yunnan province is located at about 2,000 meters above the sea level. The rice growing period coincides with the rainy season, during which low temperatures often occur causing damage to rice plants. Therefore the tolerance to low temperature is the most important characteristic required for the rice varieties distributed in this area during the booting stage or the flowering stage as well as the stage of panicle initiation.

In Kunming many local varieties are highly tolerant to low temperatures compared to some of the cold tolerant Japanese varieties. Suggestions for the collaborative breeding program, based on the results of the joint experiments conducted at Yunnan Academy of Agricultural Sciences, are as follows:

1. Yunnan varieties should be used as basic breeding materials for the development of varieties resistant to low temperatures while Japanese varieties should be used for the incorporation of characters including high-yielding ability and good grain quality.
2. Mass selection and cold tolerance test of breeding materials should be carried out at Shuangshao Station where there is a test field suitable for the selection for cool weather tolerance.