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Grain Protein Content of Interspecific Progenies Derived from the Cross of African Rice (*Oryza glaberrima* Steud.) and Asian Rice (*Oryza sativa* L.)

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Abstract: The protein contents of the grain of 50 interspecific progenies developed from the cross between WAB56-104, an *Oryza sativa* variety, and CG 14, an *Oryza glaberrima* line, were investigated. In contrast to the higher protein content of *O. glaberrima* than *O. sativa* on the average, the protein content of CG 14 was always lower than that of WAB56-104. However, judging from the average of three seasons, 72% of the interspecific progenies had a higher protein content than the mid-parent and 50% of them had a higher protein content than WAB56-104. Although the actual values of protein content of the interspecific progenies were significantly different among the seasons, a highly significant correlation was always observed in protein content between any two of the three seasons. Protein content therefore was considered character of each interspecific progeny though it was also affected by environment. A significant correlation was not observed between paddy yield and protein content in any season; several interspecific progenies showed higher protein content and paddy yield than the mid-parents. A low paddy yield is likely to be associated with high protein content through physiological regulation without a genetic linkage between the two traits. However, the results suggest that the transgressive segregation of protein content observed in the interspecific progenies is attributed not to this physiological regulation but to a certain mechanism to concentrate protein in grains with a genetic background.

Keywords: [African rice](#), [Interspecific hybridization](#), [Oryza glaberrima](#) Steud., [Oryza](#)



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