

## 水稲再生作では前作稲収穫前後の土壤乾燥が再生稲の収量性を高める

Soil oxidation conditions during the initial growth period of ratoons could contribute to improve the yield performance of ratoons

水稲再生二期作は育苗や代かきを必要としないため、慣行の水稲二期作に比べて生産コストを削減できるが、再生作の単収は本作に比べて40～60%に留まることが知られている。近年、インドネシア国西スマトラ州において、本作と同レベルの収量を連続的に繰り返す多年生稲栽培(SALIBU)が報告された。本研究では、再生作の増収要因を探索するため、SALIBUの特徴的な株二回刈りと収穫前後の土壤水分管理(図1)に着目し、熱帯地域であるミャンマーにおいて、これら栽培管理が再生稲の収量性に及ぼす影響を検証する。前作稲収穫前後を土壤乾燥条件で水管理した再生稲の分けつ再生率や籾収量は、飽和条件で水管理した場合に比べて有意に増加する(図2)。ただし、再生作のための追加的な株刈りには増収効果は認められない(図3)。

Ratoon cropping can reduce production cost because of its advantages in labor savings etc., but the grain yield is low compared to that of the main crop. In West Sumatra, Indonesia, a high-yield perennial rice cropping method called SALIBU, whose unique features are double cutting and humid moisture management during the harvesting stage (Fig. 1), was reported. This study verified the effect of the SALIBU method on yield and regeneration rate in Myanmar. The yield of the dry soil regime increased compared with that of the saturated regime (Fig. 2); however, double cutting had no positive effect on yield, in contrast with the SALIBU method (Fig. 3).

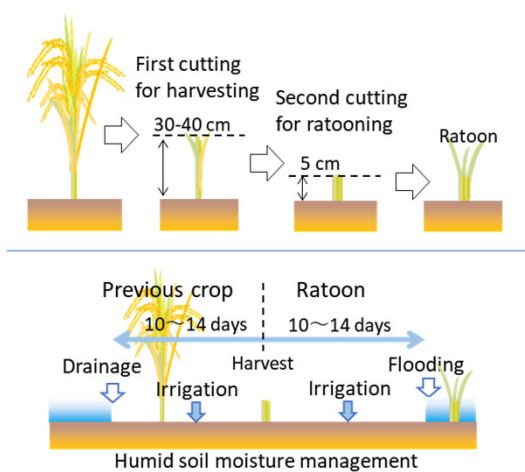


図1 インドネシア多年生稲栽培(SALIBU)における特徴的な栽培管理である株二回刈りと前作収穫前後の土壤水分管理  
Fig. 1. Double cutting of stem and soil moisture management during the harvesting stage, which are unique features of Indonesia's perennial rice cropping system (SALIBU)

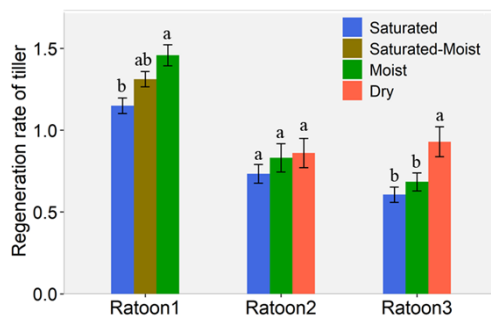


図2 前作収穫前後の土壤水分管理の違いが分けつ再生率(収穫後3週目)に及ぼす影響  
Fig. 3. Effect of soil moisture regime on the regeneration rate of ratoon crops at 3 weeks after the harvest  
Error bars indicate the standard errors (n = 16). Same letters above the bar indicate that there is no significant difference at the 5% level by Tukey's HSD test.

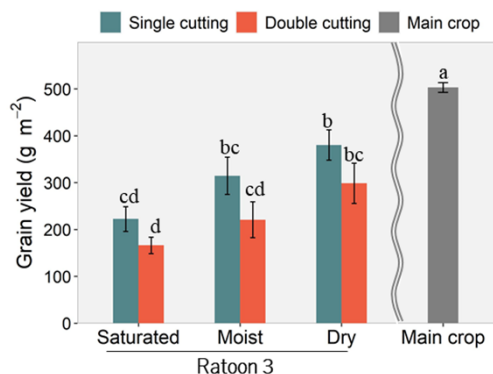


図3 刈取り回数・土壤水分処理の違いが再生稲の籾収量に及ぼす影響(再生作3の例)  
Fig. 3. Effect of cutting times and soil moisture regimes on the grain yield of ratoon, shown by comparing the 3<sup>rd</sup> ratoon with the main crop  
The error bars indicate the standard errors (n = 4). Same letters above the bar indicate that there is no significant difference at the 5% level by Tukey's HSD test.