Society Science

**Highest Rice Yield Not the Whole Story When it Comes to Profitability**

Profitability in rice production depends on factors other than yield. Numerous research has evaluated parameters influencing rice yield, but many do not offer an economic analysis on how lodging influences economic return. In the September–October 2016 issue of *Agronomy Journal*, researchers evaluated the economic impact of seeding rate in combination with multiple nitrogen fertilizer strategies and harvest efficiency due to lodging for the rice variety CL 151.

Replicated treatments consisted of a factorial combination of three seeding rates (161, 323 and 483 seeds m⁻²) and 10 combinations of nitrogen (N) rates and application timings. Harvest costs were adjusted using the lodging score assigned to each experimental unit, with combine field speed for lodging score 1 estimated at 4.83 km h⁻¹ and field speed for lodging scores 2 through 5 estimated at 4.02, 3.22, 2.41, and 1.61 km h⁻¹, respectively.

The analysis of net returns above seed, fertilizer, harvest, hauling, and drying costs indicates the highest net returns are for the 201 kg N ha⁻¹ pre-flood application. This is contrary to the yield-only analysis, which does not indicate a difference between the 201 kg N ha⁻¹ pre-flood application scheme and the 252 kg N ha⁻¹ pre-flood application scheme.


**Intercropping a Good Option for Silage Production**

Agricultural management systems are needed to enhance production and improve soil quality. A new article in *Agronomy Journal* reports on the effects of intercropping grass on the production of silage corn (*Zea mays* L.) harvested at 0.20- and 0.45-m heights in the summer as well as subsequent forage, silage soybean (*Glycine max* (L.) Merr.) and on soil responses of a Typic Haplorthox in SP, Brazil. Palisade grass (*Urochloa brizantha* (Hochst. ex A. Rich.) R. Webster ‘Marandu’) was intercropped with corn (Years 1 and 2) while signal grass (*U. decumbens* (Stapf) R. Webster ‘Basilisk’) was the residual weedy species in comparison. Guinea grass (*U. maxima* (Jacq.) R. Webster ‘Aruãna’) was intercropped with soybean (Year 3), with only a residual effect of crop systems from the previous two years.

The team found that silage corn intercropped with palisade grass harvested at the 0.45-m height provided greater leaf nutrient concentrations; agronomic characteristics; forage mass of pasture for grazing by lambs (*Ovis aries*); surface mulch produced; quantity of N, P, and K returned to soil; silage soybean produced; and better soil quality. Therefore, it was the most viable option in this integrated crop–livestock system in tropical region.


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