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Select Theme	: Sustainable and equitable farming systems
Endorsement email	:
Keyword 1	: Pest management
Keyword 2	: Sustainable management practices
Keyword 3	: Mechanization
Title of Entry	: Validating and Contextualizing SRI: Advances toward sustainable, productive, profitable and climate-smart rice production systems in Latin America and the Caribbean
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Select only one type of presentation : 15 minute oral presentation

Abstract : Climate change, freshwater limitations, input costs, and changing trade agreements are among the growing challenges to rice-growers in Latin America and the Caribbean (LAC). Despite demonstrated agronomic, environmental and socio-economic benefits and widespread use in Africa and Asia, SRI is still in its infancy in the LAC region, largely due to labor scarcity and costs. Over the past four years, IICA and its partners have set out to validate SRI in different agro-ecosystems throughout the region and to adjust the practices and mechanize to address the needs of LAC farmers. Validation plots (comparing SRI with control practices) were established in both producers' fields and on experimental stations in Chile, Colombia, Dominican Republic and Venezuela. Results indicate that the system is an effective option for reducing crops' vulnerability to climate change as it improves rice plant phenotypes (more, taller tillers; longer, heavier roots; more spikes), increasing productivity and profitability while reducing water (by 15-25%), seed (by 80-90%), and agrochemical use. The use of transplanters with associated tray-filling machines and motorized weeders imported from Korea have greatly increased the net profits of producers and have generated greater interest in SRI given the possibility of reducing labor costs, especially on larger fields. Direct-seeding options are also being explored. Adjustments were required for each type of machinery to adapt it for SRI use. Although machinery design is not yet optimal, adjustments have enabled establishing 1-3 plants per hill and permit effective weeding. SRI is a climate-smart innovation that requires continual learning, adjustments and collaboration among producers, researchers, and technicians. Possibilities for scaling up are substantial, especially considering its potential to contribute to achieving multiple policy objectives, including adaptation to climate change and its mitigation, water use efficiency, food security, and enhancing economic competitiveness. Additional research is needed to continue the mechanization process of SRI, to more fully evaluate the potential advantages of SRI (and contribution of the different practices involved) as an adaptation measure under current and future climate scenarios.

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