

2016 thesis on System of Rice Intensification (SRI) is awarded master's degree for the first time in Iraq

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In 2016, Mr. Laith Naeem Hassouni from the College of Agriculture in Baghdad University conducted trials on the System of Rice Intensification (SRI) in Al-Mishkhab Rice Research Station for his master's degree. I supervised the trials' implementation in our fields. The title of his research project was "Effects of irrigation scheduling and the application of organic matter on rice yield under the System of Rice Intensification (SRI)."

The trials evaluated three different irrigation regimes (continuous submergence, and intermittent irrigation at 3-day intervals and at 5-day intervals) with three amounts of organic manure (0 ton/ha, 5 tons/ha, and 10 tons/ha) for growing two important rice varieties (Anber33 and Jasmine), comparing these treatments' results with the results of conventional methods of rice cultivation.

Hassouni defended his thesis effectively and obtained a high privilege degree. This was the highest honor obtained by a master's student so far in the Department of Soil and Water Resources at the college. Attending the thesis defense were a large number of students, some professors, and soil and water specialists, in addition to the thesis evaluation committee.

The thesis showed great benefits from water reduction contributing to a yield increase of 29.5%. The water reduction compared with continuous submergence was 57.6% when irrigation intervals were 3 days and 63.2% when they were 5 days. The amount of water consumed with 3-day intervals was 3.67 mm (equal to 36,762 m³.ha⁻¹) and with 5-day intervals, it was 3.18 mm (equal to 31,869 m³.ha⁻¹). With continuous submergence, water consumption was 8.66 mm (equal to 86,678 m³.ha⁻¹).

Also with the intermittent irrigation and SRI crop management (transplanting of young, single seedlings, widely spaced in a square pattern), there were improved soil physical properties, more vigorous root systems, and better plant performance, all with consumption of less water.

The thesis committee recommended to the Soil Department that research on SRI be expanded and that this subject be included for students obtaining MSc and PhD degrees in the future. The full thesis is available in Arabic, with an abstract in English for researchers around the world.

Thesis story in pictures



Seedling preparation



Field preparation



Transplanting of seedlings



Use of organic manure and intermittent irrigation intervals



Development of rice plants with SRI



Snapshots of trials before and after maturity



Taking information from experiment plots at different stages



▲ Soil sample



Water meter ►



Soil analysis



Comparing SRI plant vs. non-SRI plant



With Mr. Laith in front of his trial at the end of tillering stage