Global Rice Conference

Deliberations on Advances in Rice Research

(GRC 2021)

September 24 - 25, 2021

A Book of

Abstracts

Organized by

TNAU
Tamil Nadu Rice Research Institute
Aduthurai (TNAU)

IIFPT
Indian Institute of Food Processing
Technology, Thanjavur

In Association with

Madras Agricultural Students Union
TNAU, Coimbatore

NABARD
National Bank for Agriculture and
Rural Development

Published by
Tamil Nadu Rice Research Institute (TRRI)
Aduthurai - 612 101
Thanjavur District
Email: dirtrri@tnau.ac.in

Citation: Ambethgar V., C. Anandharamakrishnan, R. Pushpa, P. Anandhi, T. Sivasankari Devi, A. Shanmugam, D. Sassikumar, M. Raju, R. Manimaran, C., Umamageswari, K. Sathiya Bama, R. Suresh, S. Elamathi, K. Chitra, N. Venkatachalapathy, M. Loganathan, R. Mahendran, R. Arulmozhi, M. Dhandapani and K. Rajappan (eds.) 2021. Global Rice Conference 2021: Deliberations on Advances in Rice Research, September 24 - 25, 2021, TRRI, Aduthurai, Thanjavur, Tamil Nadu, India. Pp.386.

Acknowledgement:
The Financial Assistance received from Research and Development Fund of National Bank for Agriculture and Rural Development (NABARD) towards publication of this "Book of Abstracts" of the conference is gratefully acknowledged.

Publisher's Address: Shanlax Publications, 61, T.P.K Main Road, Vasantha Nagar, Madurai - 625 003 on behalf of The Director, Tamil Nadu Rice Research Institute (TRRI), Tamil Nadu Agricultural University, Aduthurai - 612 101.

Printed at: TNAU Offset Printing Press
Directorate of Extension Education
TNAU, Coimbatore - 641 003

First Edition: 2021

ISBN : 978-93-91373-96-3

9789391373963

CM 015

Whether conservation tillage practices for rice fallow sesame crop could sustain low-land rice-sesame production systems in the Cauvery Delta - results of a field investigation

C. Harisudan[1], K. Ramesh[2], K. Subrahmaniyan[1], KV Ramanamurthy[3], BC Dhir[4], Md A Qureshi[2] and Praduman Yadav[2]

[1]Regional Research Station, TNAU, Vridhachalam 606 001, Tamil Nadu
[2]ICAR- Indian Institute of Oilseeds Research, Rajendra Nagar, Hyderabad - 500 030, Telangana.
[3]ANGRAU-Agricultural Research Station, Ragolu, Andhra Pradesh.
[4]OUAT, Dhenkanal, Mahisapet, Odisha e-mail: harisudan@tnau.ac.in

Rice is a predominant *kharif* season crop in Southeast Asia and, in particular, in India, it is grown both under irrigated and rainfed conditions in various cropping systems occupying about 43 mha. But a large chunk of this area remains uncultivated or left as fallow in the subsequent season *rabi* or post-rainy season. In the Cauvery Delta Zone (CDZ) which lies in the eastern part of Tamil Nadu, rice is the principal crop. In the rice based cropping system, it is either single or double cropped. CDZ comprises of Thanjavur, Nagapattinam and parts of Pudukkottai districts – with its alluvial soil, hitherto was popular for rice garden (rice-rice-rice in a single year), is struggling to produce single season rice crop. The single season rice (*samba*) is supported by northwest monsoon and the subsequent season remains fallow due to several constraints. To utilize these areas and to cope up with the increasing demand of oilseeds in the country, being short duration in nature, sesame could be an ideal candidate. Location specific and economically viable technology for better performance of sesame are need to be standardized. It is hypothesised that conservation tillage practices may aid to establish the fallow sesame crop by utilising the residual moisture and nutrients supplied to rice crop. Considering the above and the scope for area expansion in rice fallow areas, a field investigation was conducted to identify suitable tillage method and nutrient management technique for rice fallow/follow sesame based cropping system at TNAU-Tamil Nadu Rice Research Institute, Aduthurai during 2019-20. The study evaluated three tillage practices for sesame *viz*., farmer's practice (Conventional tillage), minimum tillage and zero tillage in the main plot with five levels of nutrient doses (0, 25, 50, 75 and 100% RDF) in the subplot. Rice was sown during 34th meteorological standard week (MSW) and transplanted during 37th MSW (2019) and was harvested during 4th MSW (2020) followed by sesame sowing as the tillage and nutrient dose treatments. The results revealed that sowing of sesame after harvest of rice with conventional tillage (ploughing twice followed by rotavator) recorded the highest sesame seed yield (477 kg/ha) although profitability (B:C ratio of 1.81) was scored by minimum tillage, the intermittent form of conservation tillage. Further, a minimum of 50% recommended dose of fertilizer (RDF) should be applied to the rice fallow sesame, however which yielded statistically on par yield to higher doses. Being rice fallow, the income obtained from sesame will be an additional income with the use of available resources.