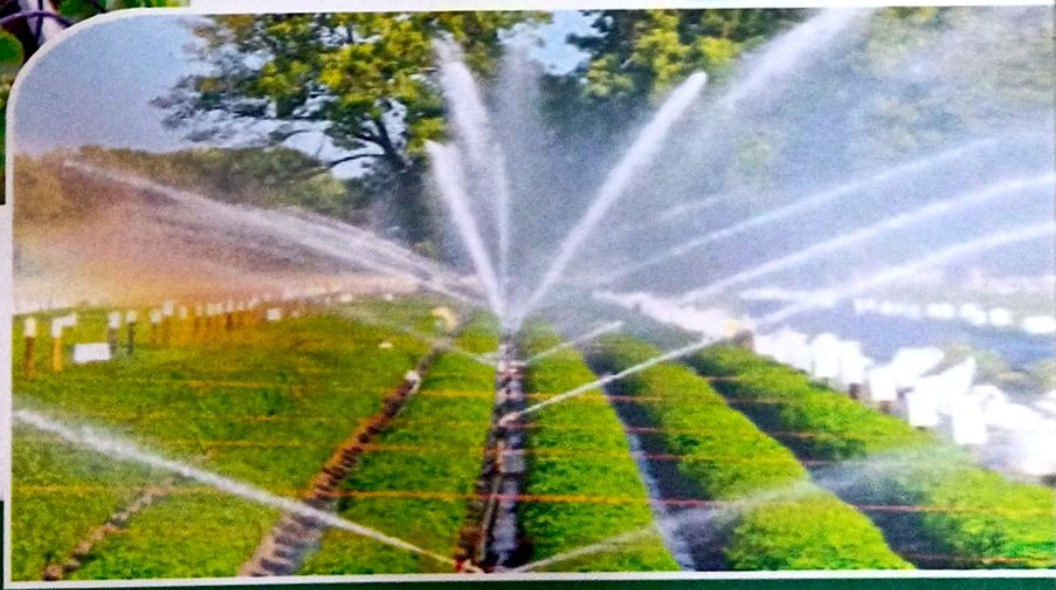
IRRIGATION AND ECONOMIC DEVELOPMENT

Edited by

Dr.S. THEENATHAYALAN
Dr.P. KANNAN



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CHAPTER 40

RICE PRODUCTION WITH DRIP IRRIGATION SYSTEM

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Abstract
The majority of rice production involves growing the crop in flooded fields, but this method is not necessary for cultivation. While flooding fields is an effective way to reduce weeds and other pests, using fresh water for rice production diverts this limited resource away from other uses. Given the estimate that rice production under flooded conditions uses 30 to 45% of the world's fresh water finding ways to reduce water use to grow rice could have a big impact on access to this resource. Rice yield, plant growth, root length, and physiological and leaf gas exchange factors were measured. In general, the use of drip irrigation resulted in 50% water savings and a 29% increase in rice yield compared with aerobic production. Of the 12 drip irrigation treatments, the subsurface drip laid out at a 0.8-m lateral distance with a dripper discharge irrigation system had the best performance in terms of growth, physiology, and rice yield. Drip irrigation appears to increase the length and density of roots, which subsequently increase aboveground growth. This paper aims to present the origin of Rice production with drip irrigation systems.
Keywords: *rice production, drip irrigation, water savings, dripper discharge*

Introduction

The 500 years old assumption that rice gars best anaerobe ally is now being challenged rice growth drip irrigation not only out produces conventional paddy rice, but also use 70% less water, diminishes methane emissions uptake. Rice production is one of the most important staple food crops, which being consumed the billion people around the word. Out of this, more than 700 million live in poverty. The rice production using 2017 in world produced 759.6 million metric tons of Paddies, in 166.0 million second highest cereal produced after corn. The per capita rice consumption is around 54.24kg per year. Rice is considered to be water around 2.5 times of the water used for irrigating wheat or maize is applied for rice fields, whereas rice doesn't needs so much of water. Estimated that 85% of fresh water consumption in Indian Agricultural related out of this, 70% is consumed for growing rice. The produced 150 grams of rice 1000 litters of water is used.

Best Irrigation System of Rice

Drip irrigation enables the precisions of production and water fertilizes limits evaporation. Using drip irrigation in rice is a relatively irrigation system. The production system of rice growth irrigated rice environments worldwide; about so million hectares of irrigated lowland rice provide 75% of the world's rice production. These systems remain the most important rice production systems of food security.

About the Editors

Dr.S. THEENATHAYALAN is presently serving as Associate Professor and Head, Department of Economics and Centre for Research in Economics of The Madura College (Autonomous), Madurai, Formerly Member – Syndicate and Member Convener Committee, Madurai Kamaraj University. He has credibly maintained consistent academic records in his post graduate studies with a University Rank. He started his teaching career in July 1991 with a passion for teaching for more than 3 decades. He has produced 11 Ph.Ds, 32 M.Phil and published 15 books.

He was also the organizing secretary of 10 National Seminars, 1 National Conference and 3 International Conferences. In addition, he has delivered 80 plus invited lectures at the UGC HRDC and keynote addresses in Economics in National, International conferences and radio talks. His research contributions are also outstanding. Under his guidance, eleven students got their Ph.D. degrees. 31 M.Phil graduates and many PG students have completed their projects under his guidance. At present, 7 Ph.D Scholars and one post-doctoral fellow are working under him.

He has published 15 books, 34 research papers and reviews in national and international journals of repute. His academic contributions involve membership and chairmanship of Board of Studies of various institutes. He was also recipient of "Best teacher award", "Best NSS Programme Officers Award", "Senior Economists award" and "Eminent Academician award". Besides he served as NAAC Coordinator, IQAC Coordinator and Dean of Academics and Research in the college.

Dr.P. KANNAN graduated from N.M.S.S.V.N. College, Nagamalai, Madurai and took his M.A, M.Phil., Ph.D. from Madurai Kamaraj University. He began his teaching profession from 2000 onwards. He has been serving for more than two decades as Associate Professor, PG Department of Economics and Centre for Research in Economics, The Madura College, (Autonomous) Madurai.

He has been handling Classes from undergraduate to M.Phil levels with greater reliance on insight, lateral thinking inspiration and sagacity. He has organized and participated in quite a few number of National, State level and Regional Seminars, Workshop and Conferences and has contributed articles in research journals of repute. His academic contributions exemplify his ability towards carrying out high quality teaching, research and extension work with focuses understanding, sanctity of thought and liveliness. Being a Research Guide he produced 13 M.Phil candidates. He is effectively affianced with all the college curricular and co-curricular activities.

To tell the truth is Revolutionary

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