

PhD Thesis

DYNAMICS OF INTEGRATED FARMING IN THE POKKALI FIELDS OF KERALA

Thesis submitted to
MAHATMA GANDHI UNIVERSITY, KOTTAYAM



For the award of the degree of
DOCTOR OF PHILOSOPHY IN ECONOMICS

Under the Faculty of Social Sciences

By
AGILE JOY

Under the supervision of
Dr. K. V. RAJU

Research Centre
**DEPARTMENT OF ECONOMICS,
SACRED HEART COLLEGE, THEVARA - 682013
Kochi, Kerala, India**

March 2019

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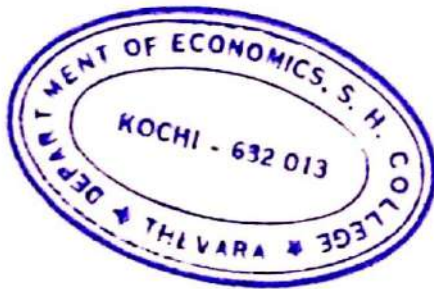
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Certificate

This is to certify that the thesis entitled "DYNAMICS OF INTEGRATED FARMING IN THE POKKALI FIELDS OF KERALA" is a record of bonafide research work carried out by Agile Joy under my supervision and guidance and that it has not previously formed the basis for the award of any degree, diploma, associateship, fellowship or award. The thesis is worth submitting for the degree of Doctor of Philosophy in Economics under the Faculty of Social Sciences.



A handwritten signature in black ink, appearing to be "Dr. K. V. Raju".

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Abstract

Kerala economy is predominantly agrarian in nature and shift from agriculture to non agriculture sector is increasing at an alarming rate. One of the contributing factors is low earnings for the farm households from carrying out agriculture practices. This study put forward an alternative integrated cultivation system which guarantees higher remuneration to farmers and year round labour to farmhands. Integrated farming is mainly undertaken for rice crop cultivated in the wetlands in Kerala and the major cropping regions are Kaipad, Kole, Kuttanad and Pokkali fields. All these wetlands are in the saline coastal tract of Kerala with the potential to grow paddy and prawn/fish in a purely organic way. Pokkali fields are the low lying waterlogged areas in the Alappuzha, Ernakulam and Thrissur district where paddy is cultivated in the low saline phase during June-November followed by a prawn crop in November –April. A symbiotic relationship exists between these two crops and it is a centuries old indigenous cultivation system. The trends in area, production and productivity are analysed and the result shows a significant declining trend. The area under this unique cultivation is dwindling and this necessitates studies to portray this peculiar rotational farming in the Pokkali fields of Kerala. Both primary and secondary data are used in the study. Primary data is collected by using stratified random sampling from the 8 Pokkali producing blocks in Ernakulam district. Various statistical and econometric techniques like regression, CAGR, t-test, Cuddy Della Valle Instability Index, Acreage response model, ABC cost method, profit analyses were used in analyzing primary and

secondary data. CAGR analysis portrays negative trend in area under cultivation and total production. Instability was found in the area and production of Pokkali fields. Profitability of both crops are studied in detail and this study implies that prawn farming is supporting Pokkali paddy cultivation as this crop ensure high returns for farmers. Socio-economic profile of Pokkali farmers are analysed using primary data along with the major constraints in continuing this eco friendly cultivation practice. Study recommends collective efforts to exploit the marketing potential of this GI crop in national and international markets to encourage younger generation to farming.

Key words: wetland, pokkali, GI, organic cultivation, integrated farming, rotational farming, profitability, growth trends, prawn filtration, indigenous cultivation, sluice gate, Alappuzha, Ernakulam, Thrissur, Kerala