

# Participatory Technology Development

*A Technique for Indigenous  
Technical Knowledge Refinement*

M. Israel Thomas  
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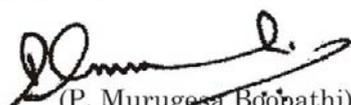
## FOREWORD

Agriculture is the basis of the economic and social fabric of India. A sound agricultural base alone can sustain prosperity and there by the national development. During the past few decades Indian agriculture has undergone tremendous change, mainly due to concrete research and supporting systems, for developing and diffusing the innovations. The diffusion of innovation is being carried out through mass media, extension agencies and others. However, these channels cannot reach all the farmers. To reach all the farmers effectively Participatory Research is the only means.

Farmer participation in agricultural research is a systematic dialogue between farmers and scientists to solve problems related to agriculture and ultimately increase the impact of agricultural research. In the present day context this approach is very important to increase the efficiency and impact of agricultural research and technology. Through Participatory Technology Development (PTD) approach indigenous knowledge available in the system can be identified and integrated in the modern technology development process.

This book brings together highly rich information on participatory technology development and indigenous technical knowledge by giving due emphasis to experiments and field study in the fields of extension, teaching and research. The authors of this book have made a novel attempt to bring together all the important areas in the field of Agricultural Extension under one rubric. I hope the book will be extremely useful to agricultural extension workers as well as agricultural graduates.

I harmonize the authors of this book entitled "**Participatory Technology Development: A Technique for Refinement of Indigenous Technical Knowledge**" and I am sure this effort will be appreciated both at national level and international level.



(P. Murugesu Boopathi)

## **Preface**

In developing countries, traditional methods have special advantages over modern agricultural techniques. The capital and technological skill requirement in the use of traditional technologies are generally low and their adoption often requires little restructure of the traditional societies. These traditional technologies are nothing but indigenous knowledge. By adopting such indigenous knowledge, our ancestors did not face any problem of large scale pest outbreak or economic crisis unlike the today's farmers.

Indigenous knowledge is not confined to tribal groups or the original inhabitants of an area. It is not even confined to rural people. It is dynamic and it changes through indigenous creativity and innovativeness as well as through contact with other system. Indigenous knowledge is available in almost all the agro-climatic zones and in all the farming system.

The traditional practices and their scientific validations were covered in this book and the practices were rationalised. These rational practices will serve the scientists with new technology for test verification and to select the viable technology for field level recommendation.

This book should serve as a valuable tool and provide useful insights to planners and policy makers, research and extension directors, as well as scholars and practitioners who are concerned with agricultural development in poor countries.

This book will also serve as a reference material and highly useful to the community of scholars and scientific workers both in the laboratories and applied fields. This will set the phase for the future generation in this area.

**AUTHORS**

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## Feedback Dharmathupatti



Feed back from the farmers



T8 - Cow dung extract + Zinc sulphate  
sample of results in Red banana



T10 - Urea + Sulphate of potash + Water  
+ fresh cow dung Sample of results in  
Red banana



T8 - Cowdung extract + Zinc sulphate  
Sample of results in Poovan

## Feedback Kondayampatti



Advisory committee interacting with farmer



Assessing the growth of the treated bunch



Examining the treated bunch



Explaining the principles involved



Interaction with experimented farmer

## Feedback Kondayampatti



Observing feed back



T8 - Cow dung extract + Zinc sulphate  
Sample of results in Robusta



T9 - Cowdung extract + Borax sample  
of results in Robusta



T 10 - Urea + Sulphate of Potash +  
Water + Fresh cowdung Sample of  
results in Robusta

## FS Meet Dharmathupatti



Listening the results of the research



Obtaining feed back



Presenting results to the participants



Sharing the results to the farmers

## FS meet Kondayampatti



Displaying the content of workshop



Presenting the views on results



Presenting the results to the participants



Sharing experience - Experimenter

## Key informants workshop



Briefing objectives of research



Discussion between farmers and Scientists at Dharmathupatti



Discussion to finalize the treatment combinations at Kondayampatti.



Farmers scientists interaction in Key informant workshop at Dharmathupatti



Finalize treatment combinations in Kondayampatti



Finalizing the treatment combinations



Group leader sharing his experience at Dharmathupatti



Noting down the treatment combinations at Dharmathupatti

# Treatments in Kondayampatti

TAMIL NADU AGRICULTURAL UNIVERSITY Agricultural College and Research Institute Department of Agricultural Extension & Rural Sociology Madurai - 625 004		
Indigenous Technical Practice in Banana : Refinement through PTD		
No. of Treatments: 12	No. of Replications: 3	Location: K. Dharmasheepatti
T <sub>1</sub> Household Wood Ash + Pregnant Cow Urine	T <sub>7</sub> Cow Dung Extract + Zinc Sulphate + Bone	
T <sub>2</sub> Brick Chamber Wood Ash + Pregnant Cow Urine	T <sub>8</sub> Cow Dung Extract + Zinc Sulphate	
T <sub>3</sub> Panchakavia + Brick Chamber Wood Ash	T <sub>9</sub> Cow Dung Extract + Bone	
T <sub>4</sub> Panchakavia + Household Wood Ash	T <sub>10</sub> Urea + Sulphate of Potash + Water +	
T <sub>5</sub> Urea	T <sub>11</sub> Cow Dung Extract Solution	
T <sub>6</sub> Urea + Sulphate of Potash	T <sub>12</sub> Control	

M. ISRAEL THOMAS  
Ph.D. scholar

Dr. Y. RATHAKRISHNAN  
Professor & Head

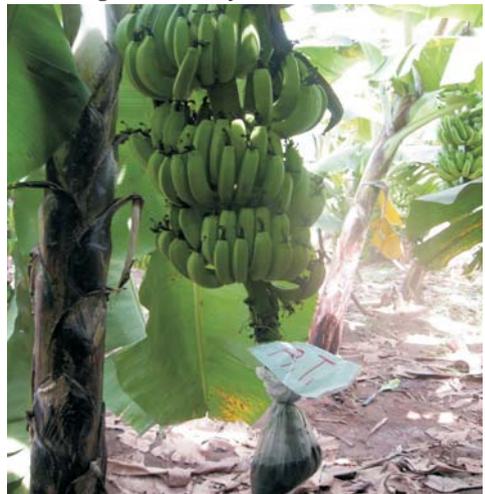
Displaying Treatment details



Enlightening various mixed ingredients by the researcher



Mixing the treatment combinations



T1 - household wood ash + pregnant cow urine



T2 - Brick chamber wood ash + Pregnant cow urine



T3 - Panchakavia + Brick chamber wood ash



T4 - Panchakavia + House hold wood ash

## Treatments in Kondayampatti



T5 - Urea



T6 - Urea + Sulphate of Potash



T7 - Cow dung extract + Zinc sulphate + Borax



T8 - Cow dung extract + Zinc sulphate



T9 - Cow dung extract + Borax



T10 - Urea + Sulphate of Potash + Water + fresh cow dung



T11 - Cow dung extract solution



T12 - Control