

SOCIAL IMPLICATIONS OF FARM MECHANIZATION

IN RURAL HISSAR

(A Study into the dynamics of technological change)

DISSERTATION

submitted in partial fulfilment of the

requirement for the degree of

DOCTOR OF PHILOSOPHY

IN

RURAL SOCIOLOGY

by

G.S. Sisodia

Haryana Agricultural University

Hissar

1971

To

KAMAL

&

OUR CHILDREN

I am immensely indebted to my wife, Kamal, who bore with good humour the difficulties of life under trying circumstances (managed our house-hold, cared for our children) and curiously stimulated the author to work persistently towards this mission.

The thesis is dedicated to her, with love.

G.S. Sisodia

CERTIFICATE I

This is to certify that this thesis entitled "Social Implications of Farm Mechanization in Rural Hissar - A study into the Dynamics of Technological Change", submitted for the degree of Doctor of Philosophy in Rural Sociology of the Haryana Agricultural University, Hissar, is a bona fide research work carried out by Sh. G.S. Sisodia, under my supervision and that no part of this thesis has been submitted for any other degree.

The assistance and help received during the course of investigation have been fully acknowledged.

M. L. Sh. -
13.7.71
Major advisor

CERTIFICATE II

This is to certify that the thesis entitled "Social Implications of Farm Mechanization in Rural Hissar - A study into the Dynamics of Technological Change", submitted by Shri G.S. Sisodia to the Haryana Agricultural University, Hissar in partial fulfilment of the requirements for the degree of DOCTOR OF PHILOSOPHY in Rural Sociology, has been approved by the student's Advisory Committee after an oral examination on the same, in collaboration with an External Examiner.

M. K. Singh
5/10/77
Major Advisor

S. Singh
External Examiner

~~*M. P. Singh*~~
~~5/10/77~~
Head of the Department

S. Singh
Dean of Post-graduate Studies

ACKNOWLEDGEMENT

The attention, soi disant, guidance, timely legitimization and the constant stimulation exhibited by my advisor, Dr. M.L. Sharma, Associate Professor of Rural Sociology in the pursuit of the present study, which boosted the morale of the author, is acknowledged with sincerity and deep sense of gratitude.

The author feels highly obliged to Dr. Y.P. Singh, Prof. & Head, Department of Extension Education, whose scholarly probe into the science of this study and constructive suggestions were a great source of strength in moulding the character of the study.

The author's sincere thanks are due to Dr. M.V. George and Dr. J.C. Sharma, who carved out time from their busy schedule and gave positive criticism which helped in improving the details of the study.

The author is thankful to Dr. D.B. Mathur and Dr. A.C. Gangwar for the immense help rendered by critically going through the draft of the manuscript and suggesting improvements. Thanks are due to Sh. D.B. Singh and Sh. G.K. Arora for their help in the formulating stage of this enquiry.

The help received in statistical analysis from Sh. K.G. Prasad and Sh. Deepak is thankfully acknowledged. The author is grateful to Dr. K. Kumar, Sh. S.N. Laharia, Sh. Dugwekar and other colleagues in the Department for their varied help.

Without the help of respondents and owners of tractor work-shops, this study could not have been conducted; the author humbly acknowledges their help. Shri Man Chand deserved to be thanked for the typing of the thesis.


G.S. Sisodia

List of Tables

T.No.	<u>Table caption</u>
S ₁	Table showing the Study sample.
1/1	Distribution of Tractor types among the respondents.
1/2	Distribution of Respondents in terms of the duration for which using own tractor.
1/3	Distribution of Respondents as per their Age.
1/4	Distribution of Respondents as per size of operational holding.
1/5	Educational break-up of Respondents.
1/6	Number of pieces into which land was divided.
1/7	Distance of fields from their home.
1/8	Distribution of Respondents in terms of Commanded Tractor H.P. as per size of Holding.
1/9	Possession of Agricultural Implements as per size of Landholding.
1/10	Distribution of Respondents on irrigated land as per its size.
1/11	Tractor Driving as per size of Landholding.
2/1	Motivational Orientation to the purchase of tractor as per size of landholding.
2/2	Extent of price paid for tractor and size of landholding.
2/3	Sources of Money to purchase of tractor as per size of landholding.
2/4	Sources of Money to purchase of tractor as per level of Education.
2/5	Reasons for using other loan sources than self as per education.

- 2/6 Farmers' reasons for having own tractors.
- 2/7 Number of tractors purchased and sold by farmers as per size of landholding.
- 2/8 Reasons for disposing off tractors as per size of landholding.
- 2/9 Farmers' reasons for purchasing a particular make of tractors.
- 2/10 Willingness for tractor training and payment for it as per size of landholding.
- 2/11 Agencies influencing the farmers in the decisions to purchase tractors as per size of landholding.
- 2/12 Family decision maker in Agricultural Work.
- 3/1 Farmers' job preference for Graduate Sons as per size of landholding.
- 3/2 Respondents reasons for the liking of Youth of tractor farming.
- 3/3 Respondents reasons for non-coverage of all their land by tractor.
- 3/4 Respondents mentioned Changes in farm Land Conditions.
- 3/5 Farmers' preference for purchase or take land on share basis as per size of land-holding.
- 3/6 Percentage land under improved Agricultural Technology.
- 4/1 Aspects of Income Utilization as per size of landholding.
- 4/2 *Prospective Intention to purchase implements as per size of holding.*
- 5/1 Purposes for which tractors were being used as per size of landholding.
- 5/2 Non-tractor owners aspirations.
- 5/3 Constraints in custom work.

- 5/4 Tractor demands of non-owners remaining unmet.
- 6/1 Wages paid to Agricultural labour in Haryana.
- 6/2 Skills and power required in agricultural labour.
- 6/3 New jobs available for Agricultural labour.
- 6/4 Farm work where family labour was replaced by hired labour.
- 6/5 Farm work where family labour was replaced by tractor.
- 6/6 Farm work where hired labour was replaced by tractor.
- 6/7 Farm work where hired labour was replaced by family labour.
- 6/8 *Extent of use of marginal labour as per size of holding*
- 6/9 *Hired labour on contractual basis as per size of land.*
- 7/1 Percentage increase in yield after tractor by land-size.
- 7/2 Crops grown as per size of land-holding.
- 7/3 Draft Animals possessed at tractor purchase time as per size of land-holding.
- 7/4 Milch Animals possessed at the time of/^{and after} tractor purchase as per size of land-holding.
- 7/5 Area under fodder before/^{and after} the purchase of tractor as per size of land-holding.
- 7/6 Material possessions at tractor purchase time/^{and after} as per land-size.
- 7/7 *Sources of income now and before tractor purchase.*
- 8/1 Reaction types of Unhappy neighbours.
- 8/2 Farmers' reactions to happy & Unhappy neighbours.
- 8/3 Increase in Service-cum-Jajmani relations as per size of land-holding.
- 8/4 Decrease in Service-cum-Jajmani relations as per size of land-holding.
- 8/5 Reasons for slackening of old relations after tractor purchase as per land-size.
- 8/6 Mutual aid practices of tractor owners with other tractor owners and non-owners as per land-size.

- 8/7 Applicability & extent of old work relations.
- 9/1 Farmers reasons for not stocking the spares.
- 9/2 Farmers plans for keeping their tractor busy.
- 9/3 Constraints to joint ownership of farm machinery.
- 9/4 Handicaps farmers face in keeping the tractor busy.
- 9/5 Reasons accounting for good performance of tractor as per size of land-holding.
- 10/1 Family Organization of tractor owners as per size of land-holding.
- 10/2 Changes effected in the role of family members after tractor adoption.
- 10/3 Things liked more in family house after arrival of tractor.
- 10/4 Distribution of Respondents into family types as per size of landholding.
- 11/1 Farmers' preferences for friendship (personal professional).
- 11/2 Perceived role indices for leadership status as per size of land-holding.
- 11/3 *Self evaluation of Socio economic status.*
- 12/1 Judges Classification of Statements into three categories.
- 12/2 Respondents opinion about values related to family.
- 12/3 Respondents opinion about statements related to agricultural work.
- 12/4 Respondents opinion about value statement related to Inter-personal relations.
- 12/5 Respondents value statements with agreement percentage scores.

CONTENTS

<u>Chapters</u>		<u>Page</u>
Part I	(General)	
	I INTRODUCTION	1
	II REVIEW OF LITERATURE	22
	III METHODOLOGY	50
	IV THE STUDY SETTING	67
Part II	(Results and Discussion)	
	V CONTEXTUAL MATRIX OF TRACTOR OWNING FARMERS	72
	VI MOTIVATIONAL ORIENTATION AND INDEPENDENCE	93
	VII AGRICULTURAL ORGANIZATION AND ORIENTATION	120.
	VIII INCOME INVESTMENT PATTERNS	137
	IX CUSTOM HIRING SERVICE PATTERN	146
	X LABOUR AND EMPLOYMENT	157.
	XI MATERIAL VARIATION	174
	XII INTER-PERSONAL AND WORK RELATIONS	196
	XIII CONSTRAINTS TO MECHANIZATION	215
	XIV FAMILY ORGANIZATION AND ROLE DIMENSIONS	230
	XV PARTICIPATION AND LEADERSHIP	242
	XVI VALUE SYSTEM AND ORIENTATION	256
Part III	(Finale)	
	SUMMARY OF FINDINGS	
	and	
	IMPLICATIONS FOR ACTION AND RESEARCH	272
	BIBLIOGRAPHY	
	APPENDICES	

OLD ORDER CHANGES

YIELDING PLACE TO THE NEW

ed :
hilly from - Courtandse 1969-70